UNIVERSITY of INDIANAPOLIS

College of Health Sciences

DETERMINING THE RELATIONSHIP BETWEEN LEVEL I FIELDWORK PERFORMANCE, LEVEL II FIELDWORK PERFORMANCE, AND COMPETENCE EXAM SUCCESS

Submitted to the Faculty of the
College of Health Sciences
University of Indianapolis

In partial fulfillment of the requirements for the degree
Doctor of Health Science
By: Jayson Zeigler, MS, OTR

Approved by:

Stephanie Kelly, PT, PhD
Committee Chair _____

Elizabeth D. DeIuliis, OTD, MOT, OTR/L, CLA
Committee Member _____

Elizabeth S. Moore, PhD
Committee Member _____

Accepted by:

Laura Santurri, PhD, MPH, CPH
Director, DHSc Program
University of Indianapolis _____

Stephanie Kelly, PT, PhD
Dean, College of Health Sciences
University of Indianapolis _____

Determining the Relationship Between Level I Fieldwork Performance, Level II Fieldwork Performance, and Competence Exam Success

Jayson Zeigler

University of Indianapolis

Abstract

A dilemma occurs when occupational therapy students earn perfect scores on level I fieldwork assessments, but fail future level II fieldwork experiences. The purpose of this study was to determine differences in level I fieldwork assessment scores, level II fieldwork assessment scores, Occupational Therapy Knowledge Exam (OTKE) competency scores, student demographics, and level I fieldwork factors in 21 Masters of Occupational Therapy (MOT) and 52 Occupational Therapy Doctorate (OTD) students from a private Midwestern university. Methods included parametric and non-parametric testing to determine these differences with no regression modeling warranted based on limited results. Results revealed statistically significant differences ($p < .05$) between two OTKE domains and tasks and one-week level I fieldwork assessment scores. Future research should address the psychometric development of level I fieldwork evaluation tools to ensure that these instruments are truly measuring clinical skills and professionalism criterion as intended. Implications of this study focus on expanding the scholarly agenda of the academic fieldwork coordinator to better understand the science of fieldwork education measurement, particularly during early experiential learning such as level I fieldwork. These actions then facilitate better identification for students at risk for level II fieldwork failure and validate better skill competence to provide high quality and value-based care by future occupational therapy practitioners.

Table of Contents

Determining the Relationship Between Level I Fieldwork Performance, Level II Fieldwork Performance, and Competence Exam Success

Occupational therapy students demonstrate entry-level competence based on achievements in didactic coursework and fieldwork experiences. Many preventative actions are taken by education programs to help students construct learning skills and prepare for level II fieldwork (Cardell, Koski, Wahl, Rock, & Kirby, 2017; Giles, Carson, Breland, Coker-Bolt, & Bowman, 2017). Fieldwork education, level I followed by level II fieldwork, aids in the development of clinical skills and professional behaviors. In 2017, 9 (0.8%) occupational therapy doctorate (OTD) students and 319 (2.3%) masters of occupational therapy (MOT) students failed level II fieldwork (American Occupational Therapy Association [AOTA], 2018c). These statistics indicate that most occupational therapy students are demonstrating preparedness for entry-level work in the profession. While level I fieldwork is intended to prepare students for level II fieldwork, Johnson, Koenig, Verrier Pierson, Santalucia, and Wachter-Schutz (2006) highlighted that occupational therapy students perceive level I fieldwork (early experiential learning experiences) as not facilitating feelings of confidence and preparedness going into level II fieldwork. This further contributes to the dilemma of better understanding students who are at risk for level II fieldwork failure after completing level I fieldwork curricula in their academic programs. The dilemma further escalates when education programs determine students are failing level II fieldwork at a percentage above the national average, leading stakeholders to question what factors compromised student performance during the fieldwork education process.

Problem Statement

The significance of level I fieldwork student performance has been under researched and little is known about the relationship these early experiential learning experiences have with later

level II fieldwork performance by occupational therapy students. Moreover, little is known about the relationship that level I student demographics, level I fieldwork factors, and competence exam success have with level I fieldwork performance and later level II fieldwork performance.

It is required that occupational therapy students successfully complete and pass both fieldwork education levels (level I and level II) to complete degree requirements and to seek eligibility to take the National Board Certification for Occupational Therapy (NBCOT) examination (Accreditation Council for Occupational Therapy Education [ACOTE], 2012). In preparation for taking the NBCOT board exam, many programs use the Occupational Therapy Knowledge Exam (OTKE) as a preparatory action to gauge a student's success in the academic program (NBCOT, 2018a). The OTKE was designed to assess knowledge and skills acquired in early experiential learning (level I fieldwork) and didactic coursework in advance of setting level II fieldwork goals (NBCOT, 2018a). This standardized competence exam tool has been shown to be effective in preparing the student to be successful on the NBCOT examination (Alexander, Perryman, & Rivers, 2015). These actions contribute to student and program success, but little is known about how performance in early experiential learning activities (level I fieldwork) prepares the students for future experiential learning activities (level II fieldwork) and for being successful in the academic program and on the NBCOT examination.

Purpose Statement

The purpose of this study was to investigate the relationship between occupational therapy student level I fieldwork performance and level II fieldwork performance, academic performance, and competence exam success. This study answered the following research question: Is there an association between level I fieldwork performance and level II fieldwork performance, academic performance, and competence exam success?

Research objectives. To answer this question, the following objectives were addressed.

1. To examine if there is a difference in occupational therapy students' level II fieldwork performance, as measured by performance assessment scores and pass/fail rates, when compared to their level I fieldwork performance (assessment score = 100/score less than 100).
2. To determine if there is a significant difference in occupational therapy student academic performance, as measured with occupational therapy grade point average (OT-GPA) at the time of graduation, compared to student level I fieldwork performance assessment (assessment score = 100/score less than 100).
3. To examine if there is a significant difference in occupational therapy student competence exam success, as measured with OTKE competence exam scores and percentage who scored above or below the national average, when compared to level I fieldwork performance (assessment score = 100/score less than100).
4. To determine if there is a significant difference in student demographics (gender, age, and degree type) and level I fieldwork factors (setting and site characteristics, supervision type, and discipline type of fieldwork educator) when compared to student level I fieldwork performance (assessment score = 100/score less than 100).
5. To determine predictors of level I fieldwork assessment scores based on statistically significant differences and correlations between level I fieldwork assessment scores (assessment score = 100/score less than 100), level II fieldwork assessment scores, academic performance, student demographics, level I fieldwork factors, and competence exam success.

Significance of Study

The significance of this study is that information gained from it can be used by occupational therapy educators and fieldwork coordinators to better understand how level I fieldwork experiences and factors, academic performance, and student demographics relate to level II fieldwork performance. This may allow them to identify students at-risk of not passing level II fieldwork. Educators and coordinators may also use study results to create a learning environment that will help students successfully transition from classroom to clinic, improve student outcomes in level II fieldwork performance, and prepare students for certification.

Literature Review

Occupational therapy literature has examined various components of fieldwork education. However, there is a paucity of literature that specifically investigates evaluation of fieldwork education. Roberts, Hooper, Wood, and King (2015) found 10% of occupational therapy fieldwork education literature focused on assessment and influence of specific fieldwork learning environments. Roberts et al. (2015) found fieldwork education literature mainly focuses on participants' subjective perceptions of the fieldwork experience as outcomes versus examination of assessment data as outcomes. This literature review will explore the constructive process of fieldwork education, student characteristics related to fieldwork performance success, past predictors of fieldwork performance success, and the relationship between fieldwork performance and competence exam success.

Fieldwork education is often described as the bridge from classroom to clinic. It assists occupational therapy students with making the transformation from the student role to the role of practitioner (Brzykcy, Geraci, Ortega, Tamra, & McWilliams, 2016). Most importantly, fieldwork facilitates the opportunity for students to develop performance-measured skills such as clinical

reasoning, reflective practice, and professional knowledge on the normative beliefs of the field through professionalization while gaining clinical competence as a general practitioner (ACOTE, 2012; DeIuliis, 2017). Successful completion of both fieldwork education levels is needed for the student to be eligible to take the NBCOT examination (NBCOT, 2018b). With a goal of developing a generalist or general practitioner, fieldwork is organized by levels to include level I, an introductory-competence level and level II, a progressive-entry level (ACOTE, 2012). Level I fieldwork should reflect the curriculum design of the program and enhance coursework through observation and participation in the occupational therapy service delivery process (ACOTE, 2012). Sequence and duration of level I fieldwork experiences vary at the discretion of the occupational therapy program, but should be consistent with ACOTE standards (DeIuliis, 2017). Level II fieldwork; however, is more standardized across academic programs while at the same time being consistent with ACOTE standards (ACOTE, 2012). At each level of fieldwork, the occupational therapy student is assigned a fieldwork educator and exposed to various practice populations. The fieldwork educator observes and formally evaluates the student's technical performance and professional behaviors. Roles of the fieldwork educator are not exclusively to be an evaluator, but also act as a site supervisor, educator facilitating professionalization, mentor, and clinical reasoning guide (Costa, 2015). Level I fieldwork is the first opportunity for students to participate in supervised clinical education that facilitates methods of constructivism to include transformational learning, experiential learning, situated learning, and reflective practice (DeIuliis, 2017; Giles et al., 2014; Merriam, Caffarella, & Baumgartner, 2007). Level I fieldwork focuses on the student internalizing and applying didactic knowledge, interpersonal characteristics and attributes, and technical (clinical) skills acquired throughout the curriculum in preparation for level II fieldwork (ACOTE, 2012; Giles et al., 2014).

According to constructivism pedagogy, context of learning impacts learning itself while fieldwork facilitates an intentional opportunity to construct knowledge through interactions within a learning environment (Gredler, 1997; Merriam et al., 2007). Fieldwork education applies educational pedagogies, first described by John Dewey, based on experiential learning (DeIuliis, 2017). Experiential education enhances student learning by providing an environment in which they can construct interpersonal characteristics, attributes, and skills that may promote their development of professional competence (Cutchin, 2004; DeIuliis, 2017). Merriam et al. (2007) identified transformational, experiential, situated, and reflective practice learning as methods for implementing constructivism. Level I fieldwork provides the opportunity for the learner to construct a new sense of self where future self as practitioner is envisioned (Costa, 2015). It also creates a situation in which students participate in finding meaning and understanding of what is learned in the classroom, progress through the use of well-designed and appropriate clinical challenges, and think about and reflect on the experience (Dewey, 1938; Giles et al., 2014; Merriam et al., 2007). Roberts et al. (2015) stressed fieldwork research must have conceptual and theoretical underpinnings to link a study to much larger issues related to fieldwork within occupational therapy education. Past occupational therapy literature has emphasized the importance of constructivism as rationale for learning related to preparation for level II fieldwork, but specific aspects such as the constructive process of level I fieldwork have not been targeted in past studies to influence level II fieldwork.

In 2017, 1,097 OTD students were placed for level II fieldwork, 1,088 placements were successfully completed resulting in a successful completion rate of 99% pass rate was reported (AOTA, 2018). For MOT students, 13,678 students placed for level II fieldwork, 13,359 placements were successfully completed, and a 98% pass rate reported (AOTA, 2018). Despite low

failure rates, factors identifying at-risk students for failing level II fieldwork have not been established in the literature (Whisner, Geddie, Sechrist, & Wang, 2019). Preventing and understanding factors associated with level II fieldwork failure is difficult, especially if students succeed in their didactic coursework and pass level I fieldwork.

Past studies examined fail rates within programs and focused on characteristics and attributes associated with successful and unsuccessful fieldwork students. Higher student academic achievement has been demonstrated to have a positive correlation with higher fieldwork performance scores (Howard & Jerosch-Herold, 2000; Tan, Meredith, & McKenna, 2004). Emotional intelligence and professional communication skills have also been correlated with higher fieldwork performance scores (Andonian, 2013; Andonian, 2017; Brown, Williams, & Etherington, 2016; DeIuliis, 2017; Tan et al., 2004; Tickle-Degnen, 1998). Supervision provided by fieldwork educators has been found to have the greatest influence on the development of attitudinal and interpersonal factors within students (Christie, Joyce, & Moeller, 1985; Hanson, 2011). DeIuliis (2017) listed several traits of successful fieldwork students ranging from strong self-awareness to strong organization, problem-solving, and communication skills. Negative attributes of unsuccessful fieldwork students range from lack of clinical competence to the inability to demonstrate appropriate safety and judgment (DeIuliis, 2017). These attributes are measured on level I and level II fieldwork performance evaluations and these outcomes are intended to be predictors of success for professional skill development (Cardell, Koski, Wahl, Rock, & Kirby, 2017; DeIuliis, 2017; Roberts et al., 2015). Brown, Caruso Streeter, Stoffel, and Mcpherson (1989) were the first to study how to measure occupational therapy student level I fieldwork performance. Using a level I fieldwork student performance evaluation tool they created, Brown et al. (1989) collected data from 259 occupational therapy and occupational therapy assistant students, fieldwork

supervisors, and faculty. Their findings provided evidence that research efforts should focus on the value of level I fieldwork experiences and the development for criterion referenced level I fieldwork assessment tools (Brown et al., 1989). Brown et al. (1989) also generated the idea for questioning the ability of level I fieldwork assessment tools to provide critical feedback before level II fieldwork experiences. Koenig, Johnson, Morano, and Ducette (2003) validated and established the reliability of the *Philadelphia Region Fieldwork Consortium Level I Student Evaluation* (2018), a tool used to measure student professional behavior during level I fieldwork experiences. Their efforts suggested the establishment of psychometric properties for criterion such as professionalism in order to observe constructivism in student professional behaviors and identify at risk students early prior to participating in level II fieldwork (Koenig et al., 2003). The study found that students constructed professionalism skills within level I fieldwork experiences as evidenced by statistically significant differences found when comparing the professionalism level I fieldwork assessment scores from the first, second, to third experiences, $p < .001$ (Koenig et al., 2003). These findings suggest that when academic fieldwork coordinators try to psychometrically develop criterion on level I fieldwork assessment tools, the constructivism of skills such as professionalism can be observed during the assessment of the student and then discrimination among students can take place to provide remediation that will better socialize the student to the occupational therapy profession (Koenig et al., 2003). However, psychometric development in all criterion on level I fieldwork assessment tools is not yet a common and routine practice by academic fieldwork coordinators. Research presented in the literature facilitates awareness for qualities of successful and unsuccessful fieldwork students, but does not specifically focus on the value of the constructive process for developing these traits in level I fieldwork and potential relationship with and effects on level II fieldwork and professional competence development.

Predictive factors associated with overall program performance and fieldwork performance have been studied and focused on predictive pre-admission and program completion factors. Pre-program grade point average (GPA), pre-program science GPA, and Graduate Record Examination (GRE) scores have been found to predict overall program performance, but not individual aspects of a program such as fieldwork performance. (Lysaght, Donnelly, & Villeneuve, 2009; Kirchner & Holm, 1997; Kirchner, Stone, & Holm, 2001; Whisner et al., 2019). Bathje, Ozelie, and Deavila (2014) revealed analytical and qualitative GRE scores do not predict fieldwork performance, but the scores from the written sub-scale of the GRE does have predictive qualities. Kirchner et al. (2001), in a previous study, revealed a positive correlation between analytical GRE scores and level II fieldwork performance scores. The literature reveals there are evidence-based non-predictors and predictors of level II fieldwork; however, prediction modeling for level I fieldwork students has not been studied. Investigating the relationship between level I fieldwork performance, level II fieldwork performance, and program success is valuable.

Lastly, current literature has examined the relationship of competence exam success and fieldwork performance. Occupational therapy entry-level education relies on formal and summative tools such as the OTKE. These tools are used to determine if students are able to effectively utilize acquired clinical skills and knowledge gained through completion of didactic coursework and level I and level II fieldwork experiences (Avi-Itzhak & Krauss, 2010). The OTKE was designed to assess the acquired knowledge and skills thus far in didactic education and early experiential learning (level I fieldwork) and the results are used to set specific fieldwork goals in preparation for level II fieldwork (NBCOT, 2018a). The OTKE is 100 multiple-choice questions organized into four domains that align with the blueprint of the exam: (a) evaluation and assessment to acquire factors using a client-centered approach; (b) formulate conclusions based on analysis and

interpretation of findings from assessment; (c) intervention management for client-centered care purposes; and (d) competency and practice management (NBCOT, 2018a). Each domain is then subdivided into task and knowledge statements derived from a large scale, validation practice analysis study that outlines essential competencies for entry-level practice. For example, Domain I, which involves responsibilities and duties relative to evaluation and assessment, is then subdivided into tasks that describe content knowledge and actions that describe acquisition and analysis of evidence when performing an occupational profile (NBCOT, 2018a). Domain II, pertaining to analysis and interpretation, is subdivided into two tasks that tests student knowledge on non-standardized and standardized assessment findings and implementation of evidence-based practice for client-centered treatment (NBCOT, 2018a). Domain III, which includes intervention management, is subdivided into three tasks that examines student knowledge on their ability to manage interventions for the pediatric, young adult and adult, and geriatric populations within consideration for psychosocial, biomechanical, and neurological factors (NBCOT, 2018a). Domain IV, competency and practice management, is subdivided into activities that measure knowledge on life-long learning for competency development and ethical decision-making for safe practice for the consumer of occupational therapy services (NBCOT, 2018a). The blueprint of the NBCOT certification format is similar to the OTKE format as evidenced by the same domains to organize the exam, but with more tasks added in each domain testing knowledge of the student on the NBCOT certification exam (NBCOT, 2018b).

In health professions, preparatory tools, like the OTKE, designed by board certification agencies, have been identified as a learning activity to help students gain familiarity with national certification exams. Preparatory tools like the OTKE also facilitate the opportunity to assess summative student knowledge and skill acquisition from clinical experiences and didactic

coursework (Avi-Itzhak, 2015; Dadian et al., 2002; Edenfield & Hansen, 2000). In one study, researchers revealed standardized competence exam success (OTKE scores above national average) was not a predictor of level II fieldwork performance (Whisner et al., 2019). The literature highlighted that OTKE results have been found to effectively provide students with information on their strengths and weaknesses related to skill and knowledge acquisition, which is beneficial for cultivation of competent future, certified therapists (Alexander et al., 2015).

Outcomes of the OTKE are beneficial both for the occupational therapy student and faculty. Results of the OTKE not only provide the student with performance data, but can also be used by occupational therapy faculty to analyze and enrich curriculum design, which includes didactic coursework and embedded level I fieldwork sequence (Breen-Franklin, 2017). The reviewed literature suggests early exposure to the expectations and format of the licensure examination process can benefit students by providing them with an assessment of their readiness to pass the NBCOT examination. For educators, results of the OTKE can be used to raise awareness for at-risk students (Breen-Franklin, 2017; Whisner et al., 2019). A gap in the literature is the failure to examine the relationship between early experiential learning experiences (level I fieldwork) and student competence exam success. Therefore, studying a potential association between level I fieldwork and student competence exam success (OTKE scores) is valuable to better understand the theoretical underpinnings of constructivism for learning within the occupational therapy education process. Giles et al. (2014) emphasized that an occupational therapy student in preparation for level II fieldwork demonstrates a responsibility for constructing their knowledge through their early experiences by participating in transformational, situated, and experiential learning while simultaneously developing reflective practice skills. Past literature has not gone past perception or descriptive studies to better understand the constructive process for professional behaviors, skills,

and clinical reasoning development related to summative assessment data as outcomes (Roberts et al., 2015).

In summary, this literature reveals much is unknown about the relationship between early level I fieldwork experiences, level II fieldwork, and later competence exam success. Understanding this relationship will provide insights into the use of level I fieldwork assessment data as an outcome measure for preparation for level II fieldwork, program performance, and competence exam success.

Method

Study Design

This was a non-experimental study using a retrospective cohort design to determine if relationships exist between occupational therapy student level I fieldwork performance and level II fieldwork performance, academic performance, and competence exam success. The study took place from May 2019 – January 2020. Prior to data extraction, the study was approved by the University's Human Research Protections Program (HRPP) and the University's Registrar's Office

Participants

Program and institutional data for 73 entry-level MOT (n = 21) and OTD (n = 52) students (two different cohorts) who completed the program between 2014 and 2018 at the University of Indianapolis were extracted from student records. Participants included in the study were enrolled in the accredited occupational therapy program and routinely completed a one, two, and three-week level I fieldwork experiences that are sequenced in the academic program's curricula. The level I fieldwork experiences were full-time, off site, and within medical model settings (inpatient, school-based, home health, and outpatient settings). A fourth 8-week level I, community-based fieldwork

experience was excluded from this study due to use of a different level I fieldwork performance evaluation tool.

An a priori minimum sample size calculation was conducted using a formula specific for reliability studies, developed by Walter, Eliasziw, and Donner (1998). A reliability study sample size calculator was used assuming the study would be examining the correlation between level I and level II performance assessment scores. The following parameters were used for the sample size calculation;(a) significance level of .05; (b) power of .80; (c) acceptable reliability of .70; and (d) expected reliability of .50. Based on that calculation, a minimum sample size of 63 participants was recommended to sufficiently power this study. Therefore, 73 participants adequately powered this study.

Data

De-identified data were provided to the primary researcher (J. Z.) by the fieldwork administrative assistant. Data were extracted from four different sources: 1) CORE, the fieldwork data management system used by the OT program at the University; 2) Occupational Therapy Centralized Application Service (OT-CAS) used by the OT program at the University; 3) department Banner (learning management data system) portal; and 4) NBCOT portal. Data extracted from CORE included fieldwork performance scores (level I and level II) and fieldwork factor data. Fieldwork factor data included duration of fieldwork measured in hours, sequence of placement, setting and site characteristics, supervision type, and discipline. Demographic data included gender, age, race, and degree type extracted from the OT-CAS. Academic performance data included participant OT-GPA at time of graduation and was extracted with permission from the Registrar's Office and in compliance with FERPA standards from department Banner portal access. The OTKE scores and OTKE completion date was extracted from the NBCOT portal.

Operationalization and definitions. Academic performance was defined as cumulative OT-GPA at time of graduation. Supervision type was characterized by direct supervision by qualified personnel (1:1 model) or a collaborative model where level I peer groups were supervised by one qualified personnel (Costa, 2015). Site characteristics included duration of fieldwork measured by hours, sequence of placement documented as first (one week), second (two week), or third (three week), indication of full-time or part-time placement, setting and site characteristics, supervision type, and discipline type for fieldwork educator. For this study, a student will be categorized as passing level II fieldwork if a score of 122 or higher was obtained on the Level II Fieldwork Performance Evaluation or failing if the score was below 122 (AOTA, 2002).

Instruments

Level I fieldwork performance evaluation. At the end of each level I fieldwork experience, students are assessed using the University of Indianapolis Level I Fieldwork Performance Evaluation. This is a 33-item skill observation tool that evaluates an occupational therapy student's task and professional behaviors while on a one, two, and three-week level I fieldwork evaluation. This tool was designed to measure skills and behaviors, planning, intervention, communication, critical reasoning, and professionalism. These items are measured on a 3-point scale with 3 = satisfactory, 2 = needs improvement, and 1 = unsatisfactory. In addition, if needed, the fieldwork educator may choose to select "not applicable" if a construct unable to be met in a fieldwork setting. Total scores range from 0-99 and are calculated and reported as a percentage. The University of Indianapolis tool does not define student ratings and scoring criteria. This assessment tool was designed using ACOTE objectives and program curriculum objectives (ACOTE, 2012). This tool has never been validated and examined for reliability. Fieldwork

educators complete this assessment tool with the guidance of the instructions at top of the electronic form.

Level II fieldwork performance evaluation. The AOTA Fieldwork Performance Evaluation (FWPE) is a 42-item assessment instrument designed to measure an occupational therapy student's performance for applying the occupational therapy process within level II fieldwork (AOTA, 2012; DeIuliis, 2017). Each item is scored using a 4-point Likert-like scale with 1 = unsatisfactory, 2 = needs improvement, 3 = meets standards, to 4 = exceeds standards (AOTA, 2002). Rasch analysis methods revealed adequate range of items for level II fieldwork performance and acceptable standard error for each item, as well as 41 of the 42 items exhibiting acceptable goodness-to-fit and item separation (Atler, 2002; Bathje et al., 2014). Validity and reliability for this instrument is not established in the literature.

Occupational therapy knowledge exam. The OTKE is a standardized online, 100-question examination that includes validated domains and tasks drawing on student clinical and didactic knowledge from accumulated coursework and experiential learning through fieldwork (NBCOT, 2018a). Psychometric establishment studies for this assessment are not released for public review and provided on a limited basis to occupational therapy academic program directors (NBCOT 2018a).

Each year national averages are calculated and released to participating program chairs (NBCOT, 2018a). Students are provided results of their OTKE scores, which display raw scores, and percentages of the number of questions answered correctly in each validated domain and task, as well as their result in comparison to the national average. The OTKE was designed to assess the acquired knowledge and skills thus far in early experiential learning (level I fieldwork) to set specific fieldwork goals in preparation for level II fieldwork (NBCOT, 2018a). If below the

national average, students within this program are required to develop a study plan for the NBCOT board exam in collaboration with their academic advisors at the university for which this study is taking place. At the time the studied cohorts' were enrolled, the OT program at the University had students complete the OTKE after their first level II fieldwork rotation, which indicates dependence on skill and knowledge acquired and constructed during level I fieldwork is expected for success (above national average).

Procedures

Participant identification. Participants were identified from CORE fieldwork data management system by the fieldwork administrative assistant. The fieldwork administrative assistant created a list of potential participants in an Excel spreadsheet and will determine if each student meets study inclusion criteria. If a student was not eligible, the name was deleted from the Excel spreadsheet. Once it was determined all students meet study inclusion criteria, data extraction began.

Data extraction procedures. The following procedures identifies the actions of the fieldwork administrative assistant and program chair completed in regards to the collection of identifiable data and the transfer of de-identified data to the primary researcher.

CORE. The fieldwork administrative assistant extracted the following data and input the data into an Excel spreadsheet: level I fieldwork performance scores, level II fieldwork performance scores, and fieldwork factors.

Occupational therapy centralized application service. The fieldwork administrative assistant and the program chair collected demographic data (gender, age, race, and degree type) from the OT-CAS portal. The OT-CAS portal is accessible through a password-protected account

managed by the program chair. These data were added to the Excel spreadsheet by the fieldwork administrative assistant.

National board for certification in occupational therapy portal. The administrative assistant and occupational therapy program chair accessed and transferred participant OTKE scores and percentages to the Excel spreadsheet to include raw score (number of questions answered correctly) and domain percentages (percentage of questions answered correctly in each domain). The portal is overseen by the program chair and is password protected.

Banner. Banner is the University of Indianapolis registrar archive records data management system. The administrative assistant extracted participants' OT-GPA and input it into the Excel spreadsheet. This concluded data extraction. The Excel spreadsheet with participant identifier (name) was maintained and managed by the fieldwork administrative assistant; the primary researcher did not have access to this file. The fieldwork administrative assistant was responsible for de-identifying the data and creating the Excel spreadsheet with the de-identified data.

Transfer procedures. The following procedures were used to de-identify the data and transfer the newly created spreadsheet to primary researcher.

1. The administrative assistant assigned a unique study identification number to each participant and remove each participant's name. The file was then saved using a new name. The Excel file that links participants' names and student identification number remained with the administrative assistant and will be deleted at conclusion of study.
2. The newly created Excel file with the de-identified data was sent by the administrative assistant to the primary researcher via the University's email.

3. Once the primary researcher received the Excel file, data were categorized for each participant as passing or failing level II fieldwork based on the Level II Fieldwork Performance Evaluation score. The primary researcher determined whether the participant's OTKE score was above or below national average and that data were added to the Excel spreadsheet.
4. The primary researcher then exported data from the Excel spreadsheet into IBM SPSS Statistics for Windows, Version 24.0 (IBM Corp., Armonk, NY) for data analysis.
5. The Excel spreadsheet maintained and managed by the primary researcher was deleted one month following conclusion of study.

Data management. The primary researcher managed and stored the data in the Excel spreadsheet and SPSS file on a password protected department computer located in a locked in office. The administrative assistant stored the identifiable data Excel spreadsheet on a password protected department computer kept in a locked office. One month following conclusion of study, data collected during study for research purposes was deleted.

Data Analysis

All data were analyzed using IBM SPSS Statistics for Windows, Version 24.0 (IBM Corp., Armonk, NY). All tests were two-tailed and a significance level of less than .05 was considered statistically significant. Descriptive statistics were conducted on the entire sample. Normality of data was determined using the Shapiro-Wilk test. To determine a difference in level II fieldwork performance assessment scores between students who had a perfect score on the level I fieldwork performance assessment and those who did not have a perfect score on the assessment (objective 1), Fisher's exact and Mann-Whitney *U* tests were conducted. To determine a difference in level II

fieldwork pass/fail rates between students who had a perfect score on the level I fieldwork performance assessment and those who did not have a perfect score on the assessment, Fisher's exact tests were conducted. To determine a difference in students' OT-GPA and level I fieldwork assessment scores (objective 2), independent *t* tests were conducted.

To determine if there were differences in level I fieldwork performance assessment scores (score < 100, score = 100) and OTKE scores (objective 3), as well as between students who score above or below the national average on the OTKE, independent *t*, Mann Whitney *U*, and Fisher's exact tests were conducted. Fisher's exact tests were also conducted to determine differences in level I fieldwork performance assessment scores by student demographics and by level I fieldwork factors (objective 4). The original proposal included conducting regression analysis to determine significant predictors of level I fieldwork performance assessment scores. However, due to lack of significance between level I and level II fieldwork performance assessment results, regression analysis was not warranted.

Results

Records from 73 students were included in the study. The majority of participants were under 26 years of age (*n* = 68, 93.2%), Caucasian, non-Hispanic (*n* = 67, 91.8%), and female (*n* = 68, 93.2%). Fifty-two (71.2%) participants were working on a doctorate degree while 21 (28.8%) were working on a master's degree in occupational therapy. All participants completed full-time fieldwork placements for all level I and level II fieldwork sequences. Descriptive statistics for grade point average upon graduation (OT-GPA) for participants were a mean (standard deviation) of 3.72 (0.15). Information on setting and site characteristics, supervision type, and fieldwork educator discipline type for each level I fieldwork placement in sequence (L1A, L1B, and L1C) can be found in Table 1. Descriptive statistics for level I and first level II (L2R1), and second level II (L2R2)

Performance assessments can be found in Table 2 while competence exam scores (OTKE) and success rates are found in Table 3.

Objective One: Level II Performance Scores by Level I Assessment Categories

Non-parametric statistical tests were completed to determine differences in level II fieldwork performance assessment scores between level I fieldwork performance assessment score categories (score < 100, score = 100) for all three rotations. No statistically significant differences were found for any of the three level I fieldwork rotations as detailed in Table 2. For the second part of objective one, to determine if there was a significant difference in level II pass/fail rates by level I fieldwork performance assessment score categories, results from two-sided Fisher's exact tests indicate there was not a significant difference in L2R1 and L2R2 pass rates by level I performance assessment score rotation sequence categories (see Table 2).

Objective Two: Occupational Therapy Grade Point Average by Level I Assessment Categories

OT-GPA was not statistically significantly different between participants who received and did not receive a perfect score on the first Level I fieldwork assessment, $t(71) = -0.35$, $p = .726$. There was also not a statistically significant difference in OT-GPA by Level I performance assessment score categories for the second and third assessments, $t(71) = 0.99$, $p = .325$; $t(71) = 0.12$, $p = .904$, respectively.

Objective Three: Competence Exam Success by Level I Sequence Assessment Categories

A statistically significant difference was found between OTKE domain two task one (OTKEd2t1) scores and L1A ($Z = -2.02$, $p = .043$) assessment scores, as well as OTKE domain four task one (OTKEd4t1) scores and L1A ($Z = -2.25$, $p = .024$) assessment scores. No statistically significant differences were found between participants' OTKE scores in any other OTKE domains

or tasks between participants who had perfect and non-perfect level I fieldwork assessments. In addition, results indicated there were no significant differences in OTKE scores above or below the national average between level I performance assessment score categories for any of the three level I assessments. All comparison results are shown in Table 3.

Objective Four: Demographics and Level I Fieldwork Factors by Level I Assessment Categories

Analyses were conducted to determine if there were statistically significant differences in participant demographics (gender, age, race, and degree type) and level I fieldwork factors (setting and site characteristics, supervision type, and fieldwork educator's discipline type) compared to level I fieldwork assessment scores for all rotations. No statistically significant differences were found for any of the comparisons for all three level I fieldwork rotations as detailed in Table 4.

Results of this study did not yield enough statistically significant differences to pursue regression modeling to determine predictors of level II fieldwork performance or competence exam success.

Discussion

Level I fieldwork is an important part of occupational therapy education**.** A common dilemma experienced by academic fieldwork coordinators is when occupational therapy students receive perfect scores on Level I fieldwork evaluations, and then fail future progressive level II fieldwork experiences. This is especially concerning since there are no variables offering insight into this digression within the fieldwork process. Therefore, the purpose of this study was to determine if there were significant differences between level I and level II fieldwork performance, academic performance, level I fieldwork factors, student demographics, and competence exam success in occupational therapy students. The only statistically significant differences identified were between

one-week, level I fieldwork assessment scores, and overall competency development in students within specific knowledge domains and tasks outlined by the NBCOT (2018a) on the OTKE. The majority of results from this study revealed no major statistically significant differences or associations among most of the variables. Therefore, results of this study were not useful to determine any predictors of level II fieldwork performance. The current state of level I fieldwork research on predictors of future fieldwork performance reflects the absence of a valid and reliable assessment tools to measure fieldwork performance and the lack of adequate sample sizes to effectively power studies. Both accurate assessment tools and adequate sample size are needed to reveal if there is a relationship between level I and level II fieldwork performance and whether level 1 fieldwork performance and other factors can predict future fieldwork performance. This study, like other studies reviewed in this paper, did not use a tool that was discriminatory and had a small sample size of resulting in an underpowered study, making it impossible to make conclusions about the relationship between level I and level II fieldwork performance and other factors that may influence fieldwork performance. All patterns, principles, and relationships shown by the findings are detailed below.

Statistically Significant Findings

A statistically significant difference was found in one-week, level I fieldwork assessment scores, and domain two (formulate conclusions based on assessment findings) task one (acquisition of information during occupational profile) scores on the OTKE. Another significant difference was found between one week, level I fieldwork student assessment scores and domain 4, competence development for managing professional activities. Managing professional activities facilitate the acquisition of knowledge translation for evidence-based practice (OTKE domain four task one assessment scores) to promote quality care. The two significant findings from this study have to be

interpreted with caution given the low statistical power of the study, the homogeneity of individual scores on level I and level II assessments scores and the OTKE scores, and the lack of a performance assessment tool in which the validity, reliability, and responsiveness has been established.

Regarding specific domain and task scores related to significant findings, students who scored less than perfect scores on 1-week, level I fieldwork assessments exhibited higher median scores, 0.80 on competence development for domain two (formulate conclusions based on assessment findings) task one (acquisition of information during occupational profile) mean scores in comparison to students who had perfect one-week, level I assessment scores with their median score found to be 0.70. Further analysis revealed students who scored less than perfect scores on 1-week, level I fieldwork assessments exhibited lower median scores, 0.50, on competence development for managing professional activities that facilitate the acquisition of knowledge translation for evidence-based practice (OTKE domain four task one assessment scores) in comparison to students who had perfect one-week, level I assessment scores with their median score found to be 0.67. Median scores related to the statistically significant differences found in these OTKE domains and tasks are important to note because the results provide an index of the average position of the OTKE distribution of scores for each finding (Portney & Watkins, 2009). These results further offer insight into unexpected central tendency identifying abnormal and inconsistent group (perfect or not perfect level I fieldwork assessment scores) patterns within OTKE domain and task scores. The results would not be assumed or expected if constructive, transformational, affective, and active engagement learning are taking place. The typical nature of the data assumed based on the distribution of scores if these pedagogies hold true would be those students who score less than 100 on the level I fieldwork assessment tool within different level I

fieldwork experiences would have lower OTKE total, domain, and task scores related to acquisition of skill and competence for client-centered and evidence-based practice. Again, due to the limited sample size, lack of score variability, and lack of use of a valid and reliable assessment tool, these results cannot be confidently reported as true differences. Therefore, it cannot be stated with certainty that these occupational therapy fieldwork education pedagogies and philosophies are or are not taking place until more research is conducted.

It has been posited the level I fieldwork implementation process closely resembles the level II fieldwork process regardless of program-specific sequence, duration, and setting type, as highlighted by Shalik (1990). The similarities between level I and level II fieldwork are further revealed by analysis of level I fieldwork data to show students are supervised daily as well as engaging in formal and informal evaluation of their performance across the continuum of occupational therapy fieldwork education (Shalik, 1990). Occupational therapy education, including fieldwork education, assumes the philosophy that constructivism is taking place in and beyond the classroom setting while actively engaging in clinical education (AOTA, 2018b). It is also true that students learn assumptions for their discipline in health professions and form knowledge of the profession as it is adopted and acquired in early experiential learning experiences (Hofer, 2006; Long, Mitchell, Chase, & Mineo, 2019). Costa (2015) stated student assumptions and beliefs are acquired, transformed, or not transformed in unidentified situations for topics such as evidence-based and client-centered practice in early experiential learning experiences such as level I fieldwork. Again, these findings need to be interpreted with caution until a larger sample size and valid and reliable performance assessment is established.

Non-Significant Findings

There were no statistically significant results for all other studied objectives in determining differences between level I fieldwork assessment scores (< 100, = 100), level II assessment scores, academic performance, demographics, and level I fieldwork factors. It is important to note two findings did approach the set alpha level of $p < .05$ when attempting to determine differences in two-week level I fieldwork assessment scores and OTKE domain three task three scores (intervention skills), 0.07, as well as determining difference in three-week level I fieldwork assessment scores and again OTKE domain four task one (managing professional activities that facilitate the acquisition of knowledge translation for evidence-based practice), 0.09.

Previous studies found positive and negative relationships between higher academic achievement and level II fieldwork performance scores in students (Howard & Jerosch-Heorld, 2000; Tan et al., 2004). Howard and Jerosch-Herold (2000) found pre-admission qualifications to be poor predictors of student fieldwork and academic performance. Tan et al. (2004) found that academic achievement was a positive predictor of level II fieldwork performance in students. Therefore, all findings, including the findings of this study, are conflicting with no statistical differences found in OT-GPA and fieldwork performance, but have been found to have a relationship in one other study. This study is unique because it included level I fieldwork performance as a variable to determine if differences exist between academic performance.

This study found no relationship between student demographics and fieldwork performance. Past studies did not report interpretation of results related to relationships between student demographics and fieldwork performance but focused more on relationships between pre-admission qualifications, academic performance, competence exam success, patient outcomes, and level II fieldwork performance (Kirchner & Holm, 1997; Kirchner, Stone, & Holm, 2001; Tan et al., 2004;

Whisner et al., 2019). Again, adequate sample size in future studies are needed in order to determine if conflicting or identical results will be found. In regards to fieldwork factors, results of this study support findings reported from the Shalik (1990) level I fieldwork study that site characteristics and expectations vary so drastically that it is difficult to establish statistically significant differences in fieldwork performance (level I and level II) and level I fieldwork factors. Supervision type, fieldwork educator discipline, and hands-on participation during level I fieldwork have all been variables that were studied using qualitative designs and findings suggested relationship between level I fieldwork performance and level I fieldwork factors previously mentioned (Haynes, 2011; Heine & Bennett, 2009; Shalik 1990). However, the studied level I fieldwork assessment tool using a quantitative design was unable to detect differences between level I fieldwork assessment scores and level I fieldwork factors.

Past studies have examined relationships and differences between pre-admission criteria, level II fieldwork performance, academic performance, level II fieldwork factors, student demographics, and competence exam success in occupational therapy students with limited results providing evidence these true differences and relationships exist. (Kirchner & Holm, 1997; Kirchner et al., 2001; Lysaght, Donnelly, & Villeneuve, 2009; Shalik, 1990; Whisner et al., 2019). Therefore, results of this study add to the very limited findings and suggest something is missing from level I fieldwork assessment tools and study design methods that is inhibiting genuine hypothesis testing with inferential statistics practices from occurring when attempting to study and examine the science on fieldwork education measurement of student performance.

Findings of this study were not of a magnitude that would shift paradigms in current fieldwork education philosophies or pedagogies. However, the findings do suggest level I fieldwork assessment tools developed at the program level need to have better validity, reliability, and

responsiveness for assessment criterion such as student skill acquisition and qualities of professionalism. Stakeholders interested in fieldwork education literature should consider the value of all of these non-significant outcomes. In other words, these findings may be pushing for more accountability by occupational therapy education programs to design and implement level I fieldwork assessment tools that are responsive in all clinical education settings through the establishment of psychometric properties. Despite the statistical outcome of this study, there is opportunity in future research to enhance the power of studies that focus on the science of fieldwork performance measurement in students.

Limitations

The limitations of this study are the lack of established fidelity of the level I and level II performance assessment tools, lack of variability in performance assessment scores, and a study that was too underpowered to detect student performance score differences between level I and level II fieldwork. It is conjectured the limitations of homogeneity of scores and lack of statistical power to detect differences was primarily caused by the use an assessment tool that did not have established validity and reliability. It is unknown whether the performance assessment tool actually measures student fieldwork performance, whether the tool is stable and has internal consistency to measure student performance, and importantly, whether the tool is responsive enough to detect small changes in performance scores. Also, the *AOTA Fieldwork Performance Evaluation (2002)* lacks psychometric evidence threatening validity and reliability. Despite the close resemblance of level I and level II fieldwork evaluation requirements and supervision processes of the student cited by Shalik (1990), no statistically significant differences were determined between small changes in student level I fieldwork assessment scores and pass/fail rates in level II fieldwork.

The lack of variability in level I fieldwork assessment scores, subsequent level II fieldwork assessments scores, and OTKE scores may have been a direct result of the inability of assessments to measure and discriminate sensitive change in potential performance issues within specific criterion in any of the fieldwork I or II experiences**.** The majority of both OTD and MOT students had perfect scores on all level I fieldwork experiences. In fact, 92% of level I A, and 79% of level I B and C fieldwork students had perfect level I fieldwork assessments scores. It also important to note that limited variability was found in level II fieldwork assessment scores as evidenced by less than 2.7 % of students scoring less than 122 (failing score on level II fieldwork assessment tool) when compared to all level I fieldwork assessment score categories. If performance assessment tools were designed to more accurately measure student performance criteria and be more responsive to changes in student performance then there may be more variability in performance scores. More variability could not only increase the power for the study to detect differences between level I and level II scores, but also allow the use of more powerful statistical tests.

Another limitation to this study is the participant population lacked diversity in gender, age, and race; however, students who participated in this study were representative of the student population in similarly sized occupational therapy education programs (AOTA, 2018c; Harvison, 2018). The sample population size (52 occupational therapy doctorate students, 21, masters of occupational therapy students) when compared to national maximums related to student-faculty ratios cited by AOTA (2018c), 64 for occupational therapy doctorate students and 60 for masters of occupational therapy students as class size in ratio to one faculty member at programs nationally.

Future Research

Addressing limitations of this study can be a starting point for future study considerations. First, future research efforts should focus on level I fieldwork assessment tool design and

implementation within occupational therapy education program curricula. **S**teps should include examining the role of the academic fieldwork coordinator completing the task of managing fieldwork data in order to support the best student outcomes in fieldwork education at all levels. Examining this role of academic fieldwork coordinator will potentially find the extent to which program flexibility is needed for the development, actions needed to ensure measurement, responsiveness, and validation (fidelity criteria) of level I fieldwork assessments. It is unknown what facilitators and barriers exist for academic fieldwork coordinators to fully implement evidence-based practice in fieldwork education. Future research is recommended to understand the needed resources for academic fieldwork coordinators to establish psychometric proprieties for criterion on level I fieldwork assessments and to understand better how to eliminate barriers preventing such efforts. More studies are needed to understand better the value for designing evaluation mechanisms for level I fieldwork that are responsive and may reveal constructivism, transformative learning, and competency-based learning, which is an assumption and expectation of the current occupational therapy education philosophy in the classroom and in clinical education settings (AOTA, 2018b).

Second, the evidence from this study and past studies have not been strong enough to reject assumptions that signature pedagogies (affective, transformative, and active engagement learning) are or are not taking place in level I fieldwork education **(**Kirchner & Holm, 1997; Kirchner, Stone, & Holm, 2001; Schaber, 2014; Tan et al., 2004; Whisner et al., 2019). This is due to statistical power lacking in these studies to effectively determine differences and relationships of level I fieldwork assessment scores, level II fieldwork assessment scores, academic performance, and competence exam success. Therefore, future studies to determine differences and relationships within fieldwork education measurement, academic performance, and competence exam success

should consider adequate sample sizes, reasonable effect sizes, and strategically setting the alpha level of significance (Kellar & Kelvin, 2013: Portney & Watkins, 2009). These actions will increase the statistical power of future studies to better detect true differences in level I assessment scores, level II assessment scores, academic performance, competence exam success. Future studies should consider placing high value in determining statistical power of a study prior to implementing methods in order to avoid explaining results using theoretical models and theories that may have many interpretations in complex categories of occupational therapy education such as fieldwork education.

Implications

Literature supported implications based on the results of this study are limited. Costa (2015) and DeIuliis (2017) are the most current literature in occupational therapy education to provide examples of level I fieldwork assessment tools with general criterion set for professionalism (time management, interaction, clinical reasoning, verbal and nonverbal communication, participation in supervisory process, evaluation, and intervention skills). The scoring criteria for these sample level I fieldwork assessments are basic and generally range unsatisfactory to exceeds expectations with no subcategories for scoring criteria provided. An endorsed level I fieldwork assessment tool published by AOTA (2017), *Level I fieldwork competency evaluation for OT and OTA students*, possesses similar criterion and scoring criteria. However, there is no literature on the establishment of psychometric properties for level I fieldwork assessment tool criterion or scoring criteria at this time. The implications of this study are meant to empower academic fieldwork coordinators to become aware of this problem and focus on the development of fieldwork assessment tools to have better responsiveness. This will then facilitate the opportunity for the fieldwork educator to provide

meaningful feedback to students in early experiential learning (level I fieldwork) that will facilitate the assumed constructivism and transformational learning pedagogies and philosophies.

The journey continues for occupational therapy fieldwork education researchers to determine if true differences and relationships can be found in level I fieldwork assessment scores, level II fieldwork assessment scores, academic performance, and competence exam success in order to better inform educators of risk factors for student outcomes such as level II fieldwork failure. The primary lesson learned from this study is that the Level I fieldwork performance-based tool that was examined by the researcher lacks the ability to inform decision-making after detecting differences in student outcomes that would reveal performance skills or learner characteristics that are of concern or warrant remediation prior to level II fieldwork. It has also been found that level I fieldwork assessment tools need to be more responsive to detect differences in student fieldwork performance. Therefore, an agenda can be created to better understand if responsiveness in level I fieldwork assessment tools is the missing link to determine if a relationship or differences exist between level I fieldwork performance, level II fieldwork performance, academic performance, and competence exam success.

It is advised if academic fieldwork coordinators feel confident their level I fieldwork assessment tools have established psychometric properties reliability measurement, responsiveness, and validation (fidelity criteria) confirmed, then multivariate analyses should be conducted (Mowbray, Holter, Teague, & Bybee, 2003). This action would hopefully lead to level I fieldwork assessment scores that have more variability due to enhanced detection of differences in student performance criterion such as clinical and professionalism skills. Specifically, exploratory factor analysis and confirmatory factor analysis should be conducted if warranted to ensure construct validity exists within level I fieldwork assessment tools. This would provide a starting point to

better understand student competencies for clinical and professionalism skills to identify correlation between variables. This would then lead to the ability to perform regression modeling led by academic fieldwork coordinators to determine predictive relationship within each occupational therapy program.

Whisner et al. (2019) are the most recent researchers to conduct regression analysis to determine if a predictive relationship existed between level II fieldwork performance, pre-admissions criteria, academic performance, and competence exam success using structural equation modeling as a confirmatory factor analysis method. Their findings revealed relationships between student thinking type, pre-admissions GPA, and level II fieldwork (Whisner et al., 2019). However, due to the use of proxy variables for OTKE competence exam success the researchers highlighted a severe limitation to study results reducing statistical power for the variables studied (Whisner et al., 2019). Reasoning for reduced statistical power in this study is also explained by the limitation that the current standardized level II fieldwork assessment tool lacks psychometric evidence and thus also contributes to the low statistical power of this variable (Whisner, 2019). Yet, the lack of psychometric evidence should not be viewed by academic fieldwork coordinators as a barrier to implications focused on developing and studying fieldwork assessment tools.

This study identifies areas of improvement for level I fieldwork measurement with actions to consider by academic fieldwork coordinators. The implication of academic fieldwork coordinators to utilize inferential statistics when reviewing level I fieldwork data on a more regular basis aligns with the *Occupational Therapy Education Research Agenda* (AOTA, 2018a) by promoting evidence-based practices for the creation of performance-based tools to measure student competency at all levels of fieldwork. Academic fieldwork coordinators should focus on the responsiveness of level I fieldwork assessment tools by examining the structure of these measures

in order to consider adding subcategories for fieldwork educators to score critical variables related to skill acquisition in clinical environments (Kielhofner, 2006; Mowbray et al., 2003; Portney & Watkins, 2009). It is not enough for level I fieldwork assessments to have face validity, but rather time should be taken to ensure content, criterion, and construct validity is established in order to avoid the inability of the instrument to detect differences (Kielhofner, 2006; Portney & Watkins, 2009).

An ideal level I fieldwork assessment would measure student performance constructs as it is intended, have precision of measurement, sensitivity, possess norm and criterion referencing, and have established methods for understanding standard error of measurement (Kielhofner, 2006). This would allow comparisons to be completed between students' level I fieldwork assessment scores and depending less on the assumption that perfect level I fieldwork scores are indicating progression in all areas of skill acquisition as a student progress through an occupational therapy academic program. Then, the academic fieldwork coordinators need to educate fieldwork educators to ensure the competence for scoring student criterion and for the use of scored sub-categories that provide the opportunity for raters to highlight critically different variables of the student's performance (Mowbray et al., 2003). These methods facilitate validation and confirmation of student competence in certain areas of knowledge and skills measured on level I fieldwork assessments (Cook et al., 2015). The most recent literature focused on level I fieldwork assessment tool development and psychometric established is found in the works published by Koenig et al. (2003) and Brown et al. (1989). Both research teams started with a state consortium of academic fieldwork coordinators and fieldwork educators to identify needed criterion on level I fieldwork assessment tools. Koenig et al. (2003) focused on developing criterion for professionalism behaviors to be assessed during level I fieldwork experiences. Brown et al. (1989) focused their

efforts of designing a tool that was comprehensive for a variety of level I fieldwork settings. Koenig et al. (2003) were able to provide evidence of constructivism for professionalism development in level I fieldwork students as evidenced by first rotation students scoring lower on their tool in comparison to scores on second and third level I fieldwork experiences ($p < .001$). However, both research teams provide a road map that can be added to the implication agenda suggested in this study for level I fieldwork assessment tool design. These stages of level I fieldwork assessment tool design recommended by Brown et al. (1989) and Koenig et al. (2003) are:

- stage one to focus on Level I fieldwork tool design with item analysis and factor analysis conducted after pilot implementation of tool in program decided level I fieldwork sequence;
- stage two to educate fieldwork educators and initiate of rater reliability studies to determine if assessment tool revision is needed; and
- stage three is to conduct validity studies to compare known groups such as the groups identified in this study as having perfect and not perfect level I fieldwork assessment scores.

Another consideration when determining how to implicate the information from this study is to understand that level I fieldwork assessments must not be considered one size fits all for generations of students over time as a program evolves. Axioms drive this implementation mindset, and in this situation, the validation of differences for fieldwork performance in students is unidentifiable if level I fieldwork assessment tools are not frequently reassessed for quality improvement. DeIuliis (2017) has highlighted that generational differences are an intrinsic quality of a student's professionalism perspective. Generational differences occur over time in occupational therapy student populations and academic program models for implementing level I fieldwork

assessment tools should frequently practice quality improvement for fidelity criteria of these tools to validate differences in student performance (McGrew et al., 1994; Mowbray et al., 2003). This occurs again by academic fieldwork coordinators implementing multivariate analyses methods to understand better construct validity within criterion measured on level I fieldwork assessments. Academic fieldwork coordinators should then attempt to establish concurrent validity and predictive validity of all criterion on level I fieldwork assessment tools. This implication is necessary to better understand the relationship and determination of true differences between level I fieldwork performance, level II fieldwork performance, academic performance, and competence exam success because psychometric properties are established.

In summary, implications based on information from this study can be used for academic fieldwork coordinators to form an agenda to participate better in establishing science for the measurement of level I fieldwork education. These implications include, but are not limited to:

- design program focused level I fieldwork assessment tool with consortium expertise from academic fieldwork coordinators, faculty, fieldwork educators, and consideration for literature supported student perception on level I fieldwork as cited by Johnson et al. (2006).
- educate fieldwork educators on level I fieldwork tool criterion;
- conduct exploratory and confirmatory factor analysis of clinical skills and professionalism criterion on level I fieldwork assessment tools;
- conduct rater reliability studies on design level I fieldwork assessment tool;
- consider revisions to the tool at this point with guidance from consortium efforts;
- establish concurrent validity and predictive validity for clinical skills (in the occupational therapy process) and professionalism criterion;

- conduct on-going reassessment of tool based on observation of level I fieldwork formed groups based on observed patterns in data; and
- repeat quality improvement actions cited above to ensure the reliability and validity of level I fieldwork measurement in your program in order to ensure constructivism, affective, and active engagement learning are truly taking place and reflected in fieldwork data.

These implications may be interpreted as more ideas for future studies. However, Stutz-Tanenbaum, Hanson, Koski, and Greene (2015) identified academic fieldwork coordinators as participating in the part-time role of data manager and using fieldwork data to better bridge didactic and clinical setting education. These implications are actions needed to ensure that future fieldwork data from existing databases do not have threats to reliability or validity due to level I fieldwork assessments tools having unknown psychometric properties or secondary analysis of the data is almost impossible due to the inability to properly operationalize variables on level I fieldwork assessment tools (Kielhofner, 2006). Therefore, these implications are providing an agenda for academic fieldwork coordinators to enhance their roles as data managers and be able to better promote the science for measurement of student fieldwork performance based on lessons learned from this study of a program developed level I fieldwork assessment tool.

Conclusion

Occupational therapy education in the past has assumed that level I fieldwork resembles level II fieldwork and this relationship allows for transformational and constructive learning to take place (Costa, 2015; Shalik, 1990). The level I fieldwork tool studied was unable to provide evidence of this relationship. However, this relationship is difficult to study due to the challenges associated with the lack of fieldwork assessment tools with established psychometric properties at

both levels of fieldwork education. Health professions clinical education, in general, is being forced to focus on assessment challenges related to student performance due to recognized student deficiencies in critical competency areas such as professionalism, clinical evaluation and intervention skills, communication, and ethics (Mejicano, Klamen, Cate, Powell, & Lucey, 2017; Yoder-Wise, 2015). Bathe et al. (2014), as well as Roberts et al. (2015), recommended focusing on particular fieldwork experiences such as level I fieldwork experiences and indicators for level II fieldwork failures, which is achieved in this study. Level I fieldwork is further challenging to study due to particular problems and local conditions that limit generalizations and theory building due to level I fieldwork curricula not being standardized or existing data for secondary analysis posing threats to reliability and validity. However, there is still a need to address such fieldwork experiences through the implementation of theory building that links research questions to data and facilitates linkage to unfavorable outcomes such as level II fieldwork failure that can be resolved utilizing data-driven decision making (Berliner, 2002).

Using a quantitative approach, this study also supplements scarce fieldwork education literature in specific research agenda categories such as theory building and pedagogy by examining theories of constructivism, transformational learning, and active engagement learning which are all underlying assumptions of occupational therapy fieldwork education (AOTA, 2018a; Zeigler et al., 2019). Moreover, this study aligns with the current *Education Research Agenda* (AOTA, 2018a) by promoting evidence-based practices for the creation of performance-based tools to measure student competency at all levels of fieldwork. The results of this study reveal value in both the minimal significant and non-significant findings by bringing awareness for the need for academic fieldwork coordinators as data managers to focus on the fidelity of measurement for level I fieldwork and consider an agenda for level I fieldwork assessment tool design. In conclusion, this study

demonstrates the need to understand concepts for level I fieldwork assessment of student performance in early experiential learning that will ensure that occupational therapy fieldwork education at all levels is preparing students for board certification appropriately in all competency areas and to provide high-value medical care to society.

References

Accreditation Council for Occupational Therapy Education. (2012). 2011 Accreditation council for occupational therapy education (ACOTE) standards. *American Journal of Occupational Therapy, 66*(Suppl. 1), 1-68.

Alexander, A., Perryman, M., & Rivers, P. A. (2015). Development and effectiveness of a national board certification for occupational therapists (NBCOT) examination preparatory course. *Journal of Healthcare Finance, 42*(2), 1-12.

Atler, K. (2002). *The complete guide: Using the fieldwork performance evaluation forms.* State College, PA: AOTA Press.

American Occupational Therapy Association. (2002). Fieldwork performance evaluation for the occupational therapy student. Bethesda, MA: AOTA Press.

American Occupational Therapy Association. (2017). *Level I fieldwork competency evaluation for OT and* OTA students. Retrieved from https://www.aota.org/~/media/Corporate/Files/EducationCareers/Educators/Fieldwork/Level I/Level-I- Fieldwork-Competency-Evaluation-for-ot-and-ota-students.pdf

American Occupational Therapy Association. (2018a). Occupational therapy education research agenda- revised. *American Journal of Occupational Therapy, 72*(2), 1-5.

American Occupational Therapy Association. (2018b). *Vision 2025*. Information retrieved from https://www.aota.org/publications-news/otp/archive/2018/vision-2025.aspx

American Occupational Therapy Association. (2018c). *Academic programs annual data report: Academic year 2017 – 2018*. Information retrieved from https://www.aota.org/~/media/Corporate/Files/EducationCareers/Educators/2017-2018-Annual-Data-Report.pdf

Andonian, L. (2013). Emotional intelligence, self-efficacy, and occupational therapy students' fieldwork performance. *Occupational Therapy in Health Care, 27*, 1-15. https://doi.org/10.3109/07380577.2012.763199

Andonian, L. (2017). Emotional intelligence: An opportunity for occupational therapy. *Occupational Therapy in Mental Health, 33*(4), 1-9. https://doi.org/10.1080/0164212X.2017.1328649

Avi-Itzhak, T. (2015). Ability of the national board for certification in occupational therapy practice test to estimate the probability of first-time pass status on the national certification exam. *American Journal of Occupational Therapy, 69*, 1-8. doi:10.5014/ajot.2015.015024

Avi-Itzhak, T., & Krauss, A. (2010). An outcome assessment for evaluating occupational therapy students' proficiency and skills required for passing the NBCOT computer-based certification test. *Journal of Allied Health, 39*(2), 1-7.

Bathje, M., Ozeilie, R., & Deavila, E. (2014). The relationship between admission criteria and fieldwork performance in a masters-level OT program: Implications for admissions. *The Open Journal of Occupational Therapy, 2*(3), 1-6. https://doi.org/10.15453/2168-6408.1110

Berliner, D. C. (2002). Comment: Education research. The hardest science of all. *Educational Researcher, 31*(8), 1-2. doi:10.3102/0013189X031008018

Breen-Franklin, A. (2017). Enabling student success for the NBCOT exam: A pilot education program. *Occupational Therapy in Health Care, 31*(4), 1-7. doi:10.1080/07380577.2017.1376766

Brown, S., Caruso Streeter, L. A., Stoffel, V. C., & McPherson, J. J. (1989). Development of a level I fieldwork evaluation. *American Journal of Occupational Therapy, 43*(10), 1-5.

Brown, T., Williams, B., & Etherington, J. (2016). Emotional intelligence and personality traits as predictors of occupational therapy students' practice education performance: A cross-sectional study. *Occupational Therapy International, 23,* 1-13. https://doi.org/10.1002/oti.1443

Brzykcy, D., Geraci, J., Ortega, R., Tamra, T., & McWilliams, K. (2016). Occupational therapy fieldwork education: Value and purpose. *American Journal of Occupational Therapy, 70*(Suppl 2), 1-2. https://doi.org/10.5014/ajot.63.6.821

Cardell, B., Koski, J., Wahl, J., Rock, W., & Kirby, A. (2017). Underperforming students: Factors and decision-making in occupational therapy programs. *Journal of Occupational Therapy Education, 1*(3), 1-13. doi:10.26681/jote.2017. 010301

Christie, B., Joyce, P., & Moeller, P. (1985). Fieldwork experience, part II: The supervisor's dilemma. *American Journal of Occupational Therapy, 39*(10), 1-7.

Cook, D. A., Brydges, R., Ginsburg, S., & Hatala, R. (2015). A contemporary approach to validity arguments: A practical guide to Kane's framework. *Medical Education, 49*, 1-15.

Costa, D. M. (2015). *The essential guide to occupational therapy fieldwork education: Resources for educators and practitioners.* Bethesda, MD: AOTA Press.

Cutchin, M. (2004). Using Deweyan philosophy to rename and reframe adaptation-to-environment. *American Journal of Occupational Therapy, 58*(3), 1-10.

Dadian, T., Guerink, K., Olney, C., & Littlefield, J. (2002). The effectiveness of a mock board experience in coaching students for the dental hygiene national board examination. *Journal of Dental Education, 66*(5), 1-6.

DeIuliis, E. D. (2017). *Professionalism across occupational therapy practice*. Thorofare, NJ: SLACK Incorporated.

Dewey, J. (1938). *Experience and education.* New York, NY: Simon & Schuster

Edenfield, S. M., & Hansen, J. R. (2000). Relationships among dental hygiene course grades, a mock board dental hygiene examination, and the National Board Dental Hygiene Examination. *The Journal of Dental Hygiene, 72*(2), 1-6.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Thousand Oaks, CA: SAGE publications.

Giles, A. K., Carson, N. E., Breland, H. L., Coker-Bolt, P., & Bowman, P. J. (2014). Use of simulated patients and reflective video analysis to assess occupational therapy students' preparedness for fieldwork. *American Journal of Occupational Therapy, 68,* 1-10. http://dx.doi.org/10.5014/ajot.2014.685S03

Gredler, M. E. (1997). *Learning and instruction: Theory into practice* (3rd ed.). Upper Saddle River, NJ: Prentice-Hall.

Hanson, D. (2011). The perspectives of fieldwork educators regarding level II fieldwork students. *Occupational Therapy in Health Care, 25*(2-3), 1-14.

Harvison, N. (2018). *Current trends in accreditation and higher education* [PowerPoint Slide Presentation]. Retrieved from https://www.aota.org/~/media/Corporate/Files/EducationCareers/2018-conference-presentations/2018-Trends-in-Accreditation-Higher-Education.pdf

Haynes, C. J. (2011). Active participation in fieldwork level I: Fieldwork educator and student perceptions. *Occupational Therapy in Health Care, 25*(4), 1-13. https://doi.org/10.3109/07380577.2011.595477

Heine, D., & Bennett, N. (2009). Student perceptions of level I fieldwork supervision. *Occupational Therapy in Health Care, 17*(2), 1-9. https://doi.org/10.1080/J003v17n02_06

Hofer, B. K. (2006). Domain specificity of personal epistemology: Resolved questions, persistent issues, and new models. *International Journal of Educational Research, 45*(1-2), 85-95. https://doi.org/10.1016/j.ijer.2006.08.006

Howard, L., & Jerosch-Herold, C. (2000). Can entry qualifications be used to predict fieldwork and academic outcomes in occupational therapy and physiotherapy students? *British Journal of Occupational Therapy, 63*(7), 1-6. https://doi.org/10.1177%2F030802260006300706

Johnson, C. R., Koenig, K. P., Verrier Piersol, C. Santalucia, S. E., & Wachter-Schutz, W. (2006). Level I fieldwork today: A study of contexts and perceptions. *American Journal of Occupational Therapy, 60,* 1-13.

Kellar, S. P., & Kelvin, E. A. *Munro's statistical methods for health care research* (6th ed.). Philadelphia, PA: Wolters Kluwer Health, Lippincott, Williams, & Wilkins.

Kielhofner, G. (2006). *Research in occupational therapy: Methods of inquiry for enhancing practice.* Philadelphia, PA: F. A. Davis Company.

Kirchner, G. L., & Holm, M. B. (1997). Prediction of academic and clinical performance of occupational therapy students in an entry-level master's program. *American Journal of Occupational Therapy, 51*(9), 1-5. https://doi.org:10.5014/ajot.51.9.775

Kirchner, G. L., Stone, R.G., & Holm, M.B. (2001) Use of admission criteria to predict performance of students in an entry-level master's program on fieldwork placements and in academic courses. *Occupational Therapy in Health Care, 13*(1), 1-10. https://doi.org/10.1080/J003v13n01_01

Koenig, K., Johnson, C., Morano, C. K., & Ducette, J. P. (2003). Development and validation of a professional behavior assessment. *Journal of Allied Health, 32*(2), 1-6.

Long, D. M., Mitchell, A. W., Chase, C., & Mineo, B. (2019). Entry-level occupational therapy students' beliefs about knowledge and knowing: Findings from three masters level programs in the US. *Journal of Occupational Therapy Education, 3*(4), 1-26. https://doi.org/10.26681/jote.2019.030405

Lysaght, R., Donnelly, C., & Villeneuve, M. (2009). Factors predicting applicant outcomes in occupational therapy education. *Canadian Journal of Occupational Therapy, 76*(1), 1-10. https://doi.org/10.1177%2F000841740907600110

McGrew, J. H., Bond, G. R., Dietzen, L., & Salyers, M. (1994). Measuring the fidelity of implementation of mental health program. *Journal of Consulting and Clinical Psychology, 62,* 1-8.

Mejicano, G., Klamen, D., Cate, O. T., Powell, D., & Lucey, C. (2017, June). *Achieving competency-based, time-variable health professions education*. Paper presented at Josiah Macy Junior Foundation: Achieving Competency-Based, Time-Variable Health Professions Education Conference. New York, NY. Retrieved from https://macyfoundation.org/assets/reports/publications/jmf2017_annual_report_webpdf.pdf

Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). *Learning in adulthood: A comprehensive guide.* San Francisco, CA: Wiley.

Mowbray, C. T., Holter, M. C., Teague, G. B., & Bybee, D. (2003). Fidelity criteria: Development, measurement, and validation. *American Journal of Evaluation, 24*(3), 1-25.

National Board for Certification in Occupational Therapy. (2018a). Exam preparation. Retrieved from https://www.nbcot.org/Educators/Exam-Prep

National Board for Certification in Occupational Therapy. (2018b). *NBCOT study guide for the OTR certification examination*. Gaithersburg, MD: National Board for Certification in Occupational Therapy, Inc.

Philadelphia Region Fieldwork Consortium. (2018). *Philadelphia Region Fieldwork Consortium Level I Student Evaluation* (2nd ed.). Retrieved from http://www.philaotfwconsortium.org/resources

Portney, L. G., & Watkins, M. P. (2009). *Foundations of clinical research: Application to practice.* Upper Saddle River, NJ: Pearson Education, Inc.

Roberts, M. E., Hooper, B. R., Wood, W. H., & King, R. M. (2015). An international systematic mapping review of fieldwork education in occupational therapy. *Canadian Journal of Occupational Therapy, 82*(2), 1-13. doi:10.1177/0008417414552187

Schaber, P. (2014). Conference Proceedings - Keynote address: Searching for and identifying signature pedagogies in occupational therapy education. *American Journal of Occupational Therapy, 68,* 1-5. http:dx.doi.org/10.5014/ajot.2014.685S08

Shalik, L. D. (1990). The level I fieldwork process. *American Journal of Occupational Therapy, 44*(8), 1-7.

Stutz-Tanenbaum, P., Hanson, D., Koski, J., & Greene, D. (2015). Exploring the complexity of the academic fieldwork coordinator role. *Occupational Therapy in Health Care, 29*(2), 139-52. doi:10.3109/07380577.2015.1017897

Tan, K., Meredith, P., & McKenna, K. (2004). Predictors of occupational therapy student's clinical performance: An exploratory study. *Australian Occupational Therapy Journal, 51*(1), 1-9. https://doi.org/10.1046/j.1440-1630.2003.00383.x

Tickle-Degnen, L. (1998). Working well with others: The prediction of students' clinical performance. *American Journal of Occupational Therapy, 52*(2), 1-10. https://doi.org/10.5014/ajot.52.2.133

Walter, S., Eliasziw, M., & Donner, A. (1998). Sample size and optimal designs for reliability studies. *Statistics in Medicine, 17*(1), 1-11.

Whisner, S. M., Geddie, M., Sechrist, D., & Wang, E. (2019). Examination of potential factors to predict fieldwork performance: A program evaluation project. *Journal of Occupational Therapy Education, 3*(1), 1-22. https://doi.org/10.26681/jote.2019.030106

Yoder-Wise, P. (2015). The continuously learning healthy system: Recommendations from the Josiah Macy Jr. foundation. *Journal of Continuing Education in Nursing, 48*(9), 1-2. doi:10.3928/00220124-20150821- 10

Zeigler, J., Janes, W., Cook, A., Escher, A., Cohill, B., Galey, S., . . . Olson, D. (2019, October). *A mapping review of occupational therapy fieldwork literature.* Paper presented at the meeting of American Occupational Therapy Association Education Summit 2019 Las Vegas, NV.

Table 1

Descriptive Site Characteristics of Level I Fieldwork (*N* = 73)

L1A, 1-week duration or 40 hours	*N* (%)
Setting and Site Characteristics	
Physical Dysfunction Setting	8 (11.0)
Other	65 (89.0)
Supervision Type	
1:1	72 (98.6)
Other	1 (1.4)
Fieldwork Educator Discipline Type	
OTR	47 (64.4)
COTA or other	26 (35.6)
L1B, 2-week duration or 80 hours	***N* (%)**
Setting and Site Characteristics	
Physical Dysfunction Setting	7 (9.6)
Other	66 (90.4)
Supervision Type	
1:1	70 (95.9)
Other	3 (4.1)
Fieldwork Educator Discipline Type	
OTR	43 (58.9)
COTA or other	30 (41.1)
L1C, 3-week duration or 120 hours	***N* (%)**

Setting and Site Characteristics	
Physical Dysfunction Setting	6 (8.2)
Other	67 (91.8)
Supervision Type	
1:1	71 (97.3)
Other	2 (2.7)
Fieldwork Educator Discipline Type	
OTR	37 (50.7)
COTA or other	36 (49.3)

Note. L1A = Level 1A fieldwork; L1B = Level 1B fieldwork; L1C = Level 1C fieldwork; OTR = Occupational Therapist; COTA = Certified Occupational Therapy Assistant

Table 2

Comparison of Level II Performance Scores by Level I Performance Assessment Score Categories (*N* = 73)

	L1A Score			L1B Score			L1C Score		
	< 100	100		< 100	100		< 100	100	
	N = 6	*N* = 67		*N* = 15	*N* = 58		*N* = 15	*N* = 58	
	***M* (*SD*)**	***M* (*SD*)**	***p***	***M* (*SD*)**	***M* (*SD*)**	***p***	***M* (*SD*)**	***M* (*SD*)**	***p***
L2R1 Score	138.33	133.97	.244	131.07	135.17	.265	134.73	134.22	.859
	(9.99)	(11.76)		(14.90)	(10.61)		(9.11)	(12.26)	
L2R2 Score	136.50	138.13	.445	129.33	140.24	.469	138.60	137.84	.929
	(7.94)	(20.82)		(36.46)	(12.50)		(7.98)	(22.17)	
	***N* (%)**	***N* (%)**	***p***	***N* (%)**	***N* (%)**	***p***	***N* (%)**	***N* (%)**	***p***
L2R1 Score			1.000			.371			1.000
< 122	2 (2.7)	2 (2.7)		2 (2.7)	2 (2.7)		2 (2.7)	2 (2.7)	
≥ 122	71 (97.3)	71 (97.3)		71 (97.3)	71 (97.3)		71 (97.3)	71 (97.3)	
L2R2 Score			1.000			.371			1.000
< 122	2 (2.7)	2 (2.7)		2 (2.7)	2 (2.7)		2 (2.7)	2 (2.7)	
≥ 122	71 (97.3)	71 (97.3)		71 (97.3)	71 (97.3)		71 (97.3)	71 (97.3)	

Note. L1A = Level 1A fieldwork; L1B = Level 1B fieldwork; L1C = Level 1C fieldwork; L2R1 = First Level II fieldwork placement; L2R2 = Second Level II fieldwork placement.

Table 3

Comparison of OTKE Scores by Level I Performance Assessment Score Categories (N = 73)

	L1A Score			L1B Score			L1C Score		
	< 100	100		< 100	100		< 100	100	
	N = 6	*N* = 67		*N* = 15	*N* = 58		*N* = 15	*N* = 58	
	***M* (*SD*)**	***M* (*SD*)**	***p***	***M* (*SD*)**	***M* (*SD*)**	***p***	***M* (*SD*)**	***M* (*SD*)**	***p***
Total OTKE Score	62.83 (6.43)	61.33 (6.09)	.565	61.47 (5.47)	61.45 (6.28)	.992	61.87 (4.85)	61.34 (6.40)	.770
	***Mdn* (IQR)**	***Mdn* (IQR)**	***p***	***Mdn* (IQR)**	***Mdn* (IQR)**	***p***	***Mdn* (IQR)**	***Mdn* (IQR)**	***p***
OTKEd1t1	0.83 (0.13)	0.78 (0.13)	.117	0.78 (0.33)	0.78 (0.22)	.989	0.78 (0.11)	0.78 (0.22)	.719
OTKEd1t2	0.63 (0.25)	0.63 (.25)	.708	0.63 (0.13)	0.63 (0.25)	.615	0.63 (0.25)	0.63 (0.25)	.571
OTKEd2t1	0.80 (0.10)	0.70 (0.20)	.043*	0.70 (0.20)	0.70 (0.20)	.989	0.70 (0)	0.70 (0.20)	.878
OTKEd2t2	0.61 (0.06)	0.61 (0.16)	.934	0.61 (0.11)	0.61 (0.11)	.270	0.61 (0.16)	0.61 (0.08)	.807
OTKEd3t1	0.66 (0.36)	0.56 (0.19)	.604	0.55 (0.14) [a]	0.57 (0.11) [a]	.808	0.56 (0.13) [a]	0.57 (0.11) [a]	.847
OTKEd3t2	0.59 (0.13) [a]	0.55 (0.11) [a]	.497	0.59 (0.09) [a]	0.54 (0.11) [a]	.151	0.59 (0.14)	0.55 (0.14)	.461

OTKEd3t3	0.43 (0.11)	0.43 (0.14)	.303	0.43 (0.28)	0.43 (0.14)	.074	0.43 (0.14)	0.43 (0.14)	.668
OTKEd4t1	0.50 (0.34)	0.67 (0.33)	.024*	0.67 (0.33)	0.67 (0.33)	.723	0.67 (0.34)	0.67 (0.33)	.099
OTKEd4t2	0.71 (0.18)	0.57 (0.14)	.728	0.71 (0.14)	0.57 (0.14)	.279	0.57 (0.28)	0.71 (0.14)	.774

Note. OTKE = Occupational Therapy Knowledge Exam. OTKEd1t1 = OTKE domain 1 task 1 score. OTKEd1t2 = OTKE domain 1 task 2 score. OTKEd2t1 = OTKE domain 2 task 1 score. OTKEd2t2 = OTKE domain 2 task 2 score. OTKEd3t1 = OTKE domain 3 task 1 score. OTKEd3t2 = OTKE domain 3 task 2 score. OTKEd3t3 = OTKE domain 3 task 3 score. OTKEd4t1 = OTKE domain 4 task 1 score. OTKEd4t2 = OTKE domain 4 task 2 score. L1A = Level 1A fieldwork. L1B = Level 1B fieldwork. L1C = Level 1C fieldwork. In order of level I fieldwork sequence for participants' program reported in this study. [a]Mean (standard deviation) reported. *$p < .05$.

Table 4

Comparison between Level I Fieldwork Student Demographics and Site Characteristics by Level I Performance Assessment Categories (*N* = 73)

	L1A Score			L1B Score			L1C Score		
	<100 *N* = 6	100 *N* = 67		< 100 *N* = 15	100 *N* = 58		< 100 *N* = 15	100 *N* = 58	
	N (%)	*N* (%)	*p*	*N* (%)	*N* (%)	*p*	*N* (%)	*N* (%)	*p*
Race			1.000			.097			.335
White, NH	6 (8.2)	61 (83.6)		12 (16.4)	55 (75.3)		15 (20.5)	52 (71.2)	
Other	0 (0)	6 (8.2)		3 (4.1)	3 (4.1)		0(0)	6 (8.2)	
Gender			1.000			.576			.576
Female	6 (8.2)	62 (84.9)		15 (20.5)	53 (72.6)		15 (20.5)	53 (72.6)	6
Male	0 (0.0)	5 (6.8)		0 (0)	5 (6.8)		0 (0)	5 (6.8)	
Age			1.000			1.000			1.000
> 26	0 (0.0)	5 (6.8)		1 (1.4)	4 (5.5)		1 (1.4)	4 (5.5)	
< 26	6 (8.2)	62 (84.9)		14 (19.2)	54 (74.0)		14 (19.2)	54 (74.0)	
Degree Type			1.000			1.000			.204
MOT	2 (2.7)	19 (90.5)		4 (5.5)	17 (23.3)		2 (2.7)	19 (26.0)	
OTD	4 (5.5)	48 (65.8)		11 (15.1)	41 (70.7)		13 (17.8)	39 (53.4)	
Setting/Site Characteristics			1.000			.332			.596
PD Setting	0 (0)	8 (11.0)		0 (0.0)	7 (9.6)		2 (2.7)	4 (5.5)	
Other	6 (8.2)	59 (90.8)		15 (20.5)	51 (77.3)		13 (17.8)	54 (80.6)	

Supervision Type			1.000			1.000			1.000
1:1	6 (8.2)	66 (90.4)		15 (20.5)	55 (75.3)		15 (20.5)	56 (76.7)	
Other	0 (0)	1 (1.4)		0 (0)	3 (4.1)		0 (0)	2 (2.7)	
Disciple of FE			.412			1.000			.247
OTR	5 (6.8)	42 (89.4)		9 (12.3)	34 (46.6)		10 (13.7)	27 (37.0)	
COTA or Other	1 (1.4)	25 (34.2)		6 (8.2)	24 (32.9)		5 (6.8)	31 (42.5)	

Note. L1A = Level 1A fieldwork; L1B = Level 1B fieldwork; L1C = Level 1C fieldwork; NH = Non-Hispanic; OTR = Occupational Therapist Registered; COTA = Certified Occupational Therapy Assistant; FE = Fieldwork Educator; MOT = Masters of Occupational Therapy degree; OTD: Occupational Therapy Doctorate degree; PD = Physical dysfunction setting.

Appendix

University of Indianapolis Level I Fieldwork Performance Assessment Tool

University of Indianapolis

Student:
Fieldwork Educator:
Site:

Date: ()

Level I Fieldwork Student Evaluation Form (FWPE)

General overview

Please respond to items 1-26 by selecting satisfactory (S), needs improvement (NI), or unsatisfactory (U) columns. Designate N/A if the item is not applicable. Please add clarifying statements and /or examples in the current column. Students must achieve a total score 80% to pass with no more than 1 item rated as Unsatisfactory.
Comments are required for needs improvement and unsatisfactory ratings

ASSESSMENT

Identifies deficits in areas of occupation, occupational performance skills and patterns, and client factors across the lifespan.	**NO SCORE SELECTED**
Question Comments :	
Describes the impact of activity demands, environment, and context on occupational performance.	**NO SCORE SELECTED**
Question Comments :	
Completes an occupational profile on a client.	**NO SCORE SELECTED**
Question Comments :	
Consider factors that might bias assessment results.	**NO SCORE SELECTED**
Question Comments :	

Compare and contrast the role of the OTA in the screening and evaluation process at this practice setting.	**NO SCORE SELECTED**

Question Comments :

Describes the impact of activity demands, environment, and context on occupational performance	**NO SCORE SELECTED**

Question Comments :

PLANNING

Interpret the results of the OT assessment with application made to the impact of the results on occupational performance.	**NO SCORE SELECTED**

Question Comments :

Establishes at least two relevant and attainable goals, which are client centered and occupation based.	**NO SCORE SELECTED**

Question Comments :

Describes services occupational therapy can offer patients/clients within this practice setting.	**NO SCORE SELECTED**

Question Comments :

INTERVENTION

Chooses or designs at least one occupation based intervention that is relevant to client needs.	**NO SCORE SELECTED**

Question Comments :

Articulates the rationale for this intervention	**NO SCORE SELECTED**

Question Comments :

Adheres to safety precautions and infection control guidelines during participation in all observed interventions — **NO SCORE SELECTED**

Question Comments :

Articulates the purpose of observed therapist interventions to either staff or client. — **NO SCORE SELECTED**

Question Comments :

Identifies and demonstrates understanding of the role of the OTA at this setting. — **NO SCORE SELECTED**

Question Comments :

COMMUNICATION

Uses effective strategies to interact and collaborate with staff, clients, and significant others, including the OTA. (ie. Relevant conversation, timing of questions, maintaining role of student). — **NO SCORE SELECTED**

Question Comments :

Uses effective non-verbal communication with client and significant others (ie.body language, eye contact) — **NO SCORE SELECTED**

Question Comments :

Completes assigned written documentation with supervision — **NO SCORE SELECTED**

Question Comments :

CRITICAL REASONING

Describes the various aspects of the OT process in this practice setting.	**NO SCORE SELECTED**
Question Comments :	
Applies through written assignments and/or conversations with FW educator and/or client, classroom knowledge about the evaluation process to this setting.	**NO SCORE SELECTED**
Question Comments :	
Articulates how OT theories of occupation are applied within this practice setting	**NO SCORE SELECTED**
Question Comments :	
Articulates ways in which current evidence could impact practice within this setting.	**NO SCORE SELECTED**
Question Comments :	

PROFESSIONALISM

Participates in experiences with enthusiasm	**NO SCORE SELECTED**
Question Comments :	
Takes initiative to maximize learning and uses time effectively.	**NO SCORE SELECTED**
Question Comments :	
Manages emotions professionally.	**NO SCORE SELECTED**
Question Comments :	

Respects client rights and confidentiality.	**NO SCORE SELECTED**
Question Comments :	
Uses effective communication with supervisor and other staff	**NO SCORE SELECTED**
Question Comments :	
Responds appropriately to supervisory feedback.	**NO SCORE SELECTED**
Question Comments :	
Takes initiative to ask questions.	**NO SCORE SELECTED**
Question Comments :	
Utilizes professional ethics	**NO SCORE SELECTED**
Question Comments :	
Wears suitable attire and is neatly groomed.	**NO SCORE SELECTED**
Question Comments :	
Is prompt and prepares for all fieldwork sessions	**NO SCORE SELECTED**
Question Comments :	
Turns in all fieldwork assignments promptly.	**NO SCORE SELECTED**
Question Comments :	
Adheres to facility rules and schedules.	**NO SCORE SELECTED**

Question Comments :

COMMENTS

(When completing this section, you may include diagnoses, age ranges, optional experiences, remediated problems, strengths and weaknesses.)

Comments :

Evaluation Score Summary

Title:	Score	Weight	Adj. Score	
Primary Evaluation	0.00	100.00%		Required