JOTE Journal of Occupational Therapy Education

Volume 7 | Issue 3 Article 12

2023

Level I Fieldwork: Could Simulation be the Answer? A Descriptive Study

Darla Coss
St. Catherine University

Stephanie de Sam Lazaro
St. Catherine University

Katelyn Brady
St. Catherine University

Recommended Citation

Coss, D., de Sam Lazaro, S., & Brady, K. (2023). Level I Fieldwork: Could Simulation be the Answer? A Descriptive Study. *Journal of Occupational Therapy Education, 7* (3). https://doi.org/10.26681/jote.2023.070312

Level I Fieldwork: Could Simulation be the Answer? A Descriptive Study

Abstract

This article describes the creation and outcomes of simulation as Level I Fieldwork for entry level graduate occupational therapy students. The simulations were created by a team of interprofessional educators following the International Nursing Association for Clinical Simulation and Learning best practices. Additionally, the simulations were designed to meet the student learning outcomes of Level I Fieldwork. Students participated in eight high-fidelity simulations and were evaluated with self-ratings, peer ratings, and faculty ratings. Each student completed a student evaluation of the fieldwork experience, with rating scales and open-ended questions to understand student perceptions of the experience. The vast majority of students met or exceeded expectations on all rating scales. Faculty ratings on student performance were consistently higher than peer ratings and self-ratings. Student perceptions of their experiences were mostly positive, and the majority of students reported meeting the student learning outcomes. The results of this study indicate that Level I Fieldwork with well-designed simulation can result in positive student perceptions, achievement of student learning outcomes, and a consistent student experience.

Keywords

Simulation, level I fieldwork, experiential learning, occupational therapy education

JOTE
Journal of Occupational Therapy Education

Volume 7, Issue 3

Level I Fieldwork: Could Simulation be the Answer? A Descriptive Study

Darla Coss, OTD, OTR, CHT

Stephanie de Sam Lazaro, OTD, MA, OTR/L

Katelyn Brady, OTD, OTR/L

St. Catherine University

United States

ABSTRACT

This article describes the creation and outcomes of simulation as Level I Fieldwork for entry level graduate occupational therapy students. The simulations were created by a team of interprofessional educators following the International Nursing Association for Clinical Simulation and Learning best practices. Additionally, the simulations were designed to meet the student learning outcomes of Level I Fieldwork. Students participated in eight high-fidelity simulations and were evaluated with self-ratings, peer ratings, and faculty ratings. Each student completed a student evaluation of the fieldwork experience, with rating scales and open-ended questions to understand student perceptions of the experience. The vast majority of students met or exceeded expectations on all rating scales. Faculty ratings on student performance were consistently higher than peer ratings and self-ratings. Student perceptions of their experiences were mostly positive, and the majority of students reported meeting the student learning outcomes. The results of this study indicate that Level I Fieldwork with well-designed simulation can result in positive student perceptions, achievement of student learning outcomes, and a consistent student experience.

Preparing students for successful entry into the occupational therapy field requires a variety of educational methods and experiential learning opportunities. Level I fieldwork is an integral part of experiential learning (Accreditation Council for Occupational Therapy Education [ACOTE], 2018). The goal of Level I fieldwork is to “introduce students to fieldwork, apply knowledge to practice, and develop understanding of the needs of clients” (ACOTE, 2018, p. 39). Currently, there are no clear guidelines on best practice for the design, delivery and evaluation of a Level I experience to meet the

desired outcomes for occupational therapy students (Nielsen et al., 2020). Although this allows for customization of sites, schedules, and timing that best match the occupational therapy program goals, it also creates high levels of variability in the design and delivery of Level I experiences (Brown & Mohler, 2020; Nielsen et al., 2020). This descriptive study aimed to contribute to the current research on how a simulation-based Level I fieldwork experience can lead to successful outcomes for occupational therapy students and demonstrate ways to provide more uniform design, delivery, and evaluation of students.

Simulation Defined

Simulations are used frequently in higher education to address critical thinking, problem solving, and decision making (Chernikova et al., 2020). The Agency for Healthcare Research and Quality (2020) defined simulation-based learning experiences as "an array of structured activities that represent actual or potential situations in education and practice" (p. 43). In order for simulation to be an effective educational tool, it is imperative that simulation experiences follow key standards of practice and have specific learning outcomes (Bennett et al., 2017; Grant et al., 2021). The International Nursing Association for Clinical Simulation and Learning (INACSL) updated healthcare simulation standards of best practice in 2021 to include: "professional development, prebriefing, simulation design, facilitation, debriefing process, operations, outcomes and objectives, professional integrity, simulation-enhanced IPE, and evaluation of learning and performance" (Watts et al., 2021, p. 2). These standards serve as a guide to best practice when creating and implementing healthcare simulations within a curriculum and ensure similar experiences and learning outcomes for students.

Simulation includes a variety of modes of delivery with the use of case studies, videos, role play, standardized patients or other modalities to meet learning outcomes (Bennett et al., 2017). Simulation can be high fidelity, meaning it is designed to be realistic with a high level of interactivity and control of the learning, or it can be low fidelity, in which case the mode of delivery (case study, role play) does not need to be controlled for learning (Agency for Healthcare Research and Quality, 2020). It requires the new learner to be an active participant with an opportunity to be immersed in experiences common in the profession (Chernikova et al., 2020).

The increased complexity of clients' needs requires future health care professionals to understand not only procedural skills for their specific practice, but also demonstrate strong communication and interprofessional skills to provide the best care (Paxino et al., 2022). Healthcare educators can use simulation to help students connect coursework to clinical practice in preparation for fieldwork and their entry level career (Bennet et al., 2017; Giles et al., 2014). Simulation is an effective way to teach complex skills such as clinical procedural skills, communication, and teamwork (Chernikova et al., 2020; Watts et al., 2021). This technique facilitates learning through feedback, repetition, immediate practice following curriculum instruction, and scaffolding to meet the needs of the learner (Chernikova et al., 2020). These experiences can create safe opportunities to apply professional skills in a low-risk environment (Cunningham et al., 2018; van Vuuren, 2016). Simulation is an effective way to educate students whether they are beginners or advanced learners (Chernikova et al., 2020).

DOI: 10.26681/jote.2023.070312

Simulation as Level I Fieldwork

The occupational therapy accrediting body in the United States identified simulation as part of the array of methods to meet Level I fieldwork experience requirements (ACOTE, 2018). While there is evidence to indicate that simulated learning experiences can provide occupational therapy students an appropriately scaffolded challenge to prepare for clinical practice (Bethea et al., 2014; Giles et al., 2014; Grant et al., 2021; Layne et al., 2021), there is limited but growing evidence in the use of simulation as Level I fieldwork. For instance, in a randomized controlled trial, occupational therapy students who participated in 40 hours of structured simulated practice achieved similar professional skills in comparison to students who participated in 40 hours of traditional clinic-based experiences (Imms et al., 2018). Additionally, students in the simulated environment had more opportunities to practice hands-on skills and the education was more consistent compared to the clinic-based experiences (Imms et al., 2018). Students participating in virtual case-based simulations in lieu of traditional Level I fieldwork placements perceived improvements in their skills in areas of confidence and readiness for clinical practice in Level II fieldwork (Mattila et al., 2020). Lastly, simulation as a replacement for Level I fieldwork, again in a virtual environment, was effective in developing professional behaviors and skills (Harris et al., 2022) and comparable to in person, traditional fieldwork (Ozelie et al., 2022). Simulation as a method to complete Level I fieldwork is an emerging area of occupational therapy education. This study aims to contribute to the evidence and answer the question: Can high fidelity simulation support students in successfully meeting Level I fieldwork outcomes?

Methods

Design

This descriptive study utilized a pilot simulation program for Level I fieldwork for all second-year master's and doctoral entry level occupational therapy students for their second of two Level I experiences during the fall semester of 2020. Descriptive quantitative data were analyzed to understand self, peer, and faculty ratings for performance in the simulations according to a standardized rubric. Additionally, quantitative and qualitative data related to the student's experience and perceptions of the level I experience were analyzed. The study occurred at a graduate occupational therapy program located at a Doctoral Professional University in the Midwest. The Institutional Review Board at the university reviewed and approved the study as exempt.

Participants

All second-year entry level graduate occupational therapy students (master's and doctoral) (*n*=43) were enrolled in this pilot program and participated in eight distinct simulations based on four cases in fulfillment of their second level I fieldwork experience. This cohort of students completed their first Level I experience in spring semester of 2020 through phone interviews with individuals at high risk for COVID-19 using the occupational profile template tool and through watching and analyzing three

International Clinical Educators (ICE) videos in online class with debrief sessions using ICE materials. Students from additional programs, specifically occupational therapy assistant and nursing programs, participated in some of the simulations, however, data collection was done by those respective programs and is not included in this analysis.

Procedures

Graduate nursing, graduate occupational therapy, occupational therapy assistant faculty and the school of health's director of simulation collaborated to develop cases and train all faculty involved on best practices in simulation. Simulations were developed based on four existing instruction-based electronic health record (EHR) cases from EHR Go (EHR Go, 2022). The cases were edited to meet the student learning outcomes for Level I fieldwork and to align with the program's curriculum design. Each case included two simulation experiences with the client played by a trained faculty or staff member, in two different practice settings in order to demonstrate the occupational therapy process and follow the client through a continuum of care. Cases included: 1) a child with a sub-acute burn in the foster care system (telehealth with the foster caregiver and telehealth with the county social worker), 2) an adult with chronic back pain in the emergency room followed by treatment in the outpatient pain clinic, 3) an older adult with chronic obstructive pulmonary disease admitted to acute care and then a transitional care unit, and 4) an adult with an acquired brain injury in sub-acute rehabilitation with subsequent home care.

Case information in EHR Go included pre-case materials relevant to the client's medical diagnosis, along with chart information such as referral and therapy orders, history and physical, labs, nursing notes, and evaluation or discharge notes from previous settings (if applicable). Cases one and three also included audio recordings pertinent to the case scenario, with an additional video for case one. Cases two and three had an interprofessional focus with entry-level nursing students. All simulations occurred in person on campus in occupational therapy and interprofessional lab spaces with case one including a telehealth component in which students were in the lab setting and the client was on the other end of a Zoom call.

Trained faculty and staff led all simulations with a total of six groups which included occupational therapy, occupational therapy assistant, and nursing students with six to eight occupational therapy and occupational therapy assistant students in each group and two nursing students in each group for cases two and three. For each case, one faculty member played the standardized patient for all groups of students. The Healthcare Simulation Standards of Best Practice (Watts et al., 2021) were followed in the design of the simulation-based learning experiences. All faculty were trained in the Healthcare Simulation Standards of Best Practice by the university's director of healthcare simulation who is a certified healthcare simulation educator-advanced® (CHSE-A®). Faculty members received Minnesota Board of Nursing Contact Hours for completion of the trainings on the topics of 1) Standards of Best Practice & Prebriefing, 2) Debriefing & Assessment Tools, and 3) Debriefing Workshop.

DOI: 10.26681/jote.2023.070312

The simulation experiences allowed all participating occupational therapy and occupational therapy assistant students to play the role of the occupational therapy practitioner (OTP) once, the role of the occupational therapy/occupational therapy assistant student (OTS) once, and the role of the observer six times (each student participated in eight simulations; two distinct settings for each of the four cases). Due to varying group sizes and remedial sessions for two students, four occupational therapy students played the role of OTP or OTS a total of three times. The inclusion of the roles of the OTP and OTS was twofold; It allowed increased active participation for larger numbers of students, and served to mitigate student anxiety, as OTP and OTS were using a team approach in providing care. Students were assigned to roles at the start of the semester for all simulations with care taken to ensure all were assigned role of OTP or OTS at least twice and rotated through the experiences over the course of the semester. Students were provided information at the beginning of the semester related to expectations and role delineation while in each of the various roles. One week prior to each simulation students received a document outlining pre-simulation expectations (reading and resource review), within simulation expectations (type of session, e.g., evaluation, care conference, intervention, discharge), and post-simulation expectations (e.g., evaluation note, treatment note, home program).

Each case included individual student preparation using EHR Go for pre-simulation learning, a 15-minute prebrief, a 20-minute scenario with instructors as standardized patients, and a facilitated 60 minute debrief. Prior to each of the simulations, instructors set up the simulation space and equipment and completed a dry run of the simulation to ensure consistency and standardization for each group of students. Through careful design and planning, high quality simulations with robust practice fidelity were created.

Data Analysis

After each simulation and prior to the debrief, all student observers, students in the role of OTP or OTS, and faculty participating in the simulation completed a rubric via Google forms on the students who were in the OTP and OTS roles during the simulation. The rubric was based on the existing Level I Fieldwork Performance Evaluation (FWPE) for the occupational therapy program. Modifications included the addition of cues and examples (created by faculty who used the rubric for classroom-based simulation activities) to help students and faculty rate each section on the evaluation. The same rubric was used for all simulations, and training on the use of the rubric was provided to all students and faculty prior to the first simulation. All raters identified whether it was a “self-rating” (rating themselves in the role of OTP or OTS), “peer rating” (students in the observer role rating the students in the OTP and OTS roles), or “faculty rating” and rated each student in the OTP and OTS roles on four metrics: 1) Professional Behavior, 2) Clinical Reasoning, 3) Communication and Client-Centeredness, and 4) Reflection on Performance. Examples were provided for the categories to assist in consistency. The rating scale for each of the four items was “Exceeds”, “Meets”, “Needs Improvement”, and “Unsatisfactory”. Each student was rated by one to two faculty and their peers (six to eight students) for each of the two experiences in which they were an OTP or OTS through an electronic form. Only faculty ratings were used to evaluate the students for passing the Level I experience. Students needed to achieve at least a “Meets” rating in

all four categories from their faculty raters in order to pass the experience. Peer ratings and self-ratings were used as a formative feedback mechanism and a time for reflection to prepare students for the debrief portion of the simulation. Only the faculty of record for the course had access to the identified data and provided each student with their faculty, self, and peer feedback through the university's course management system. That faculty member exported all deidentified data to an excel spreadsheet in a password protected folder available to the authors of this study. Descriptive statistics formulas in Excel were used to analyze the data for the complete data set and by each rater group (self, peer, and faculty) by the research team.

After all simulation experiences were completed, students submitted a modified version of the Student Evaluation of the Fieldwork Experience (SEFWE) through an electronic form. Utilization of a SEFWE is standard practice for all Level I experiences in this occupational therapy program. Modifications to the tool were made by occupational therapy faculty and included removal of items that did not pertain to this experience or were controlled/known to decrease the length of the form (setting, ages of clients, etc.). The modified SEFWE gathered student feedback and perceptions on the attainment of student learning outcomes (scale of rarely, occasionally, frequently, and consistently) and curricular preparation for the Level I experience. Additionally, data on student perceptions were gathered through four scaled items: 1) The expectations of the fieldwork experience were clearly defined, 2) The expectations were challenging but not overwhelming, 3) The experiences supported my professional development, and 4) The experiences matched my expectations. Descriptive statistics were used to analyze the results. Finally, students were invited to provide additional feedback through three open ended items. These items included "What changes would you recommend to this Level I fieldwork?", "What changes would you recommend to the curriculum as a whole?", and "Additional comments." Open ended comments were analyzed independently by two researchers for themes and then corroborated to conclude results.

Results

Across all simulation experiences and students, a total of 155 faculty ratings, 542 peer ratings, and 90 self-ratings were completed (each of the 43 students rated themselves twice and four of those students rated themselves three times due to smaller group size or remedial session). Only the ratings for the graduate occupational therapy students involved in the simulation are included in this report. The nursing and occupational therapy assistant students who participated in the simulations were evaluated using a different set of metrics based on their identified student learning outcomes and therefore their data is not included.

Faculty rated students on the metrics of 1) Professional Behaviors, 2) Clinical Reasoning, 3) Communication and Client-Centeredness, and 4) Reflection on Performance. Reflection on performance had the largest percentage (31.6%, *n*=49) of "Exceeds" ratings from faculty followed by professional behaviors (21.3%, *n*=33) and communication and client centeredness (21.3%, *n*=33). Less than 1% of students received an "Unsatisfactory" rating from faculty and less than 5% of students received a "Needs Improvement" rating from faculty in any area. The areas in which

DOI: 10.26681/jote.2023.070312

"Unsatisfactory" ratings were given by faculty were in clinical reasoning and communication and client centeredness. These students completed a remedial simulation experience and subsequently received "Exceeds" or "Meets" ratings from faculty; they did not receive self or peer ratings on their remedial activities.

Peer to peer ratings included the same metrics and categories. The largest percentage of peer ratings in the "Exceeds" category was in the area of professional behavior (19.3%, *n*=104) followed closely by communication and client centeredness (18.8%, *n*=102) and reflection on performance (18.1%, *n*=98). Peers gave "Needs Improvement" ratings across all four areas ranging between 2% (*n*=11) and 8% (*n*=44) of the total ratings in each area. No peer to peer ratings were provided at the "Unsatisfactory" level.

Students' self-ratings using the same metrics were the highest ("Exceeds") in the area of reflection on performance (12.2%, *n*=11) and professional behavior (12.2%, *n*=11) and communication and client centeredness (11.1%, *n*=10). Similar to the peer ratings, ratings in the "Needs Improvement" range were noted in all four areas within the self-rating data set, but at a higher rate (7%, *n*=7 to 21%, *n*=19). Self-rating data did not include any "Unsatisfactory" scores. See Table 1 for ratings across areas for all groups.

Table 1

Faculty, Peer, and Self-Rating of Performance on Simulations

	Professional Behavior	**Clinical Reasoning**	**Communication & Client Centeredness**	**Reflection on Performance**
Exceeds				
Faculty	21.3% (*n*=33)	11% (*n*=17)	21.3% (*n*=33)	31.6% (*n*=49)
Peer	19.2% (*n*=104)	11.8% (*n*=64)	18.8% (*n*=102)	18.1% (*n*=98)
Self	12.2% (*n*=11)	3.3% (*n*=3)	11.1% (*n*=10)	12.2% (*n*=11)
Meets				
Faculty	78.1% (*n*=121)	85.2% (*n*=132)	74.2% (*n*=115)	65.8% (*n*=102)
Peer	74.7% (*n*=405)	80.1% (*n*=434)	74.4% (*n*=403)	78.4% (*n*=425)
Self	81.1% (*n*=73)	75.6% (*n*=68)	77.8% (*n*=70)	78.9% (*n*=71)
Needs Improvement				
Faculty	0% (*n*= 0)	2.6% (*n*= 4)	3.9% (*n*= 6)	2.6% (*n*= 4)
Peer	5.7% (*n*=31)	8.1% (*n*=44)	6.6% (*n*=36)	2% (*n*=11)
Self	7.8% (*n*=7)	21.1% (*n*=19)	10% (*n*=9)	8.9% (*n*=8)
Unsatisfactory				
Faculty	0% (*n*= 0)	0.6% (*n*= 1)	0.6% (*n*= 1)	0% (*n*= 1)
Peer	0% (*n*= 0)	0% (*n*= 0)	0% (*n*= 0)	0% (*n*= 0)
Self	0% (*n*= 0)	0% (*n*= 0)	0% (*n*= 0)	0% (*n*= 0)

Note. For all faculty ratings *n*= 155. For all peer ratings *n*=542. For all self-ratings *n*= 90.

Some notable commonalities and differences were found when data was reviewed across all three groups of raters. First, clinical reasoning had the lowest percentage of ratings in the “Exceeds” category across all groups; subsequently that area had the highest percentage of “meets” ratings from faculty and peers. Second, for faculty and self-ratings professional behavior had the lowest percentage of “Needs Improvement” and “Unsatisfactory” ratings. For peers, reflection on performance had the lowest percentage of ratings of “Needs Improvement” and “Unsatisfactory” ratings. While peers and self-ratings included “Needs Improvement” ratings across all four areas, faculty ratings of “Needs Improvement” were noted in all areas except professional behaviors. The largest percentage of “needs improvement” self- and peer-ratings were in the area of clinical reasoning. Faculty indicated “Needs Improvement” the most frequently in the area of communication and client centeredness. Finally, it should be noted that in general, faculty gave the highest percentage of ratings in the “Exceeds” and “Meets” categories across the board, followed by peers, with self-ratings showing the highest percentage of “Needs Improvement” ratings across all four areas.

Student perceptions were gathered through a modified SEFWE to rate their performance on the identified simulation learning outcomes, simulation expectations, and overall experience using a rating scale. Across the six learning outcomes a majority of students rated their performance “frequently” or “consistently” during the simulation experiences. Three of the six items had more than 70% of students noting “consistently”: 1) Analyze client and contextual factors that influence engagement in occupation for the simulated clients, 2) Document occupational therapy services provided to clients, and 3) Give and receive feedback on critical thinking and clinical reasoning skills. The two items with the most variability were: 1) Critique and select screening and assessment methods utilized by OTPs and the interprofessional team (16% “rarely” or “occasionally”, *n*=7) and 2) Critique evidence for an occupational or interprofessional program used to address factors that limit engagement in occupation (“rarely” or “occasionally” 11%, *n*=5). See Table 2 for all student self-ratings of performance on simulation learning outcomes.

Within the student ratings of their perceptions of the expectations for the simulations and of the experiences themselves, there was a high level of variability across three of the four items. All students rated “The experiences supported my professional development” in a positive or neutral way. The largest percentage of “Disagree” was found in “The expectations of the fieldwork experience were clearly defined” (44%, *n*=19), followed by “The expectations were challenging but not overwhelming (disagree 23%, *n*= 10, strongly disagree 7%, *n*=3). See Table 3 for further details.

DOI: 10.26681/jote.2023.070312

Table 2

Students' Self-Ratings of Performance on Simulation Learning Outcomes

Level I Student Learning Outcomes	Consistently	Frequently	Occasionally	Rarely
Analyze client and contextual factors that influence engagement in occupation for the simulated clients.	72.1% (*n*=31)	27.9% (*n*=12)	0% (*n*=0)	0% (*n*=0)
Examine how OTPs and members of the interprofessional team address psychological, social, and behavioral factors for clients.	60.5% (*n*=26)	37.2% (*n*=16)	2.3% (*n*=1)	0% (*n*=0)
Critique and select screening and assessment methods utilized by OTPs and the interprofessional team.	20.9% (*n*=9)	62.8% (*n*=27)	14% (*n*=6)	2.3% (*n*=1)
Critique evidence for an occupational or interprofessional program used to address factors that limit engagement in occupation.	39.5% (*n*=17)	48.8% (*n*=21)	11.6% (*n*=5)	0% (*n*=0)
Document occupational therapy services provided to clients.	79.1% (*n*=34)	20.9% (*n*=9)	0% (*n*=0)	0% (*n*=0)
Give and receive feedback on critical thinking and clinical reasoning skills.	76.7% (*n*=33)	23.3% (*n*=10)	0% (*n*=0)	0% (*n*=0)

Note. For all items, *n* = 43.

Table 3

Student Perceptions of the Simulation Expectations and Experience

Expectation and Experience Items	SA	A	NO	D	SD
The expectations of the fieldwork experience were clearly defined.	4.7% (*n*=2)	41.9% (*n*=18)	9.3% (*n*=4)	44.1% (*n*=19)	0% (*n*=0)
The expectations were challenging but not overwhelming.	0% (*n*=0)	60.5% (*n*=26)	9.3% (*n*=4)	23.3% (*n*=10)	6.9% (*n*=3)
The experiences supported my professional development.	32.6% (*n*=14)	60.5% (*n*=26)	6.9% (*n*=3)	0% (*n*=0)	0% (*n*=0)
The experiences matched my expectations.	9.3% (*n*=4)	41.9% (*n*=18)	27.9% (*n*=12)	18.6% (*n*=8)	2.3% (*n*=1)

Note. For all items *n*=43. Rating scale consisted of SA=Strongly Agree, A=Agree, NO=No Opinion, D=Disagree, SD=Strongly Disagree.

Students were also given the opportunity to provide open-ended feedback on non-required survey items. Student perceptions were overall favorable across items. There was a total of 29 free-response comments out of a possible 43 total survey respondents. Fifty-two percent of the comments were positive. For example, one student stated “Sim really blew my expectations. I did not think it would go this in depth, and I think this is more valuable than just shadowing”. Several students used positive adjectives to describe their experience: “meaningful,” “impactful,” “valuable,” “relevant,” and “worthwhile.” Twenty-eight percent of the comments included positive and constructive feedback for improvement or expressions of negative aspects of the experience (e.g., “expectations were unclear,” “anxiety provoking”), however these were balanced with comments indicating learning through those negative feelings. For example, one student noted “Simulations themselves were meaningful, some of the prep work was less relevant” while another stated “It provoked a lot of anxiety, but it was a good learning experience.” Finally, 7% of comments indicated no additional feedback and 13% included only constructive feedback for the program’s future use of simulation.

For example, one student noted:

> Please tell future students early on about how much time is expected to be committed to pre-work and post-work, in addition … many thought this was a practicum and that we had to be experts and know the pre-work material verbatim … [though it’s clear now] this is not a practicum.

There were no comments that were negative only in nature.

Discussion

All students in the occupational therapy program at this institution completed eight simulation experiences based on four cases over the course of a semester to fulfill Level I fieldwork requirements. Across all assessment measures utilized, all students met or exceeded expectations on the learning outcomes, although two students required remediation to do so. In addition, student perceptions related to their performance on outcomes were overall positive. Faculty, peer, and student self-ratings all indicated that simulation successfully met the Level I fieldwork learning outcomes for the program.

Faculty ratings were consistently higher than student self and peer ratings. Faculty ratings were primarily “Exceeds” and “Meets,” while students provided self and peer ratings most reflective of “Meets” and “Needs Improvement.” These findings are in alignment with similar studies, in which students participating in simulation for Level I fieldwork rated themselves lower than faculty in some areas (Harris et al., 2022; Mattila et al., 2020) and warrants further investigation. It is possible that with training and educational experience, faculty members better understand the developmental progression based on the curriculum, and likely rated students based on where they should be in relation to the curriculum. Students, meanwhile, seemed to expect their performance be at the level of practice ready. Students may not fully recognize the learning that has yet to occur as they complete their second year in a graduate occupational therapy program.

DOI: 10.26681/jote.2023.070312

The need for intentional preparation and pre-briefing became apparent in the open-ended comments and perception rating scales. Clear and concise preparatory materials and pre-briefing that provides the 'just right' amount of information is necessary to create a supportive learning environment and one in which students feel safe to take risks in their learning. Student comments reflected fear of making a mistake or doing something wrong. While educators understand that mistakes will be made in simulation, particularly with students in a Level I fieldwork situation, students seemed to hold themselves to a higher standard at this point in their education. Clear definitions of terms such as "Professional Behavior" and "Clinical Reasoning" along with more concrete examples may help students understand the rating scale and expectations. In addition, there was a high level of variability in students' perceptions of the expectations matching the actual experience, with a large portion of students feeling the expectations were not clearly defined. Students could have been provided with additional information on the experience, including explicit instructions on how long to prepare and what the outcome would be in the event of a rating that does not meet the standard for passing.

Students reported the extensive time for a faculty led debrief benefited their learning experience overall. One student said "The debrief aspect of simulations was my favorite part. Having the opportunity to speak with the faculty leaders and other students about each case and how OT could best handle it was extremely valuable." It is clear that dedicating time and training faculty on pre-brief and debrief processes, according to best practices, is a necessary component of learning. Giving and receiving feedback was one of the highest rated learning outcomes from students.

Although no formal comparison was made to the students' first Level I fieldwork experience, the students participating in the simulated Level I fieldwork experience had no previous in-person comparisons due to the need for virtual Level I experiences during the COVID-19 pandemic. It is likely that faculty overestimated the students' knowledge of what to expect in simulation, leading to expectations and learning outcomes that were not clear to the students. In hindsight, this may have contributed to the lower self-ratings and variability of clearly defined expectations.

Limitations

The data set for this study only represents one cohort of students (n=43) from one graduate occupational therapy program. The Level I fieldwork simulations were conducted over one semester without a comparison to other forms of fieldwork experiences for the same cohort of students. The assessment measures included the program's Level I FWPE tool and the program's Student Evaluation of the Level I Fieldwork Experience. These tools were modified from the AOTA Level II FWPE and SEFWE to align with the program's Level I fieldwork outcomes and program evaluation plan while maintaining as much consistency with the metrics and areas assessed on the AOTA FWPE and SEFWE used for Level II fieldwork as possible. No validity or reliability testing was performed on the evaluation tools.

Although steps were taken to minimize bias in evaluating students, the potential exists, particularly for confirmation bias as assessing blindly is not an option during simulation. Only faculty ratings were used to determine pass/fail to minimize the potential for peer bias. Faculty agreed and were trained in advance as to the types of issues that would result in failure, and how remediation would occur. Although the intent was to have two faculty rate each student, in some instances only one faculty submitted a rating. Additionally, only OT faculty participated in formal ratings of OT students despite the interprofessional component of cases two and three, although nursing faculty were instrumental in the debriefing process and provided verbal feedback. Similarly, only OT graduate students rated each other although again, during debrief, there were inter and intraprofessional opportunities for verbal feedback. Peer feedback was used for constructive and reflective purposes only, and students were told in advance that only faculty ratings would be included in pass/fail decisions.

Implications for Occupational Therapy Education

Level I fieldwork is an important aspect of the experiential learning and application to practice for OT students. Student learning outcomes from Level I fieldwork vary among all OT programs (Brown & Mohler, 2020; Nielsen et al., 2020). The simulated cases allowed for all students to meet Level I learning outcomes as outlined in this program's curriculum, using the same method of participation and evaluation. All students were exposed to four practice scenarios and were evaluated by consistent faculty members trained on the evaluation tool and rating scale. This aligns with current literature to support that simulation can provide a more consistent education method among all students (Imms et al., 2018). The simulation experiences can also be designed to match student development based on the program's curriculum design (Bennett et al., 2017; Layne et al., 2021). Level I fieldwork conducted as simulation could lead to a more systematic approach to the purpose, outcome, and evaluation for Level I fieldwork. This approach could increase the rigor to standardize Level I fieldwork across occupational therapy programs.

Implementing Level I simulation experiences requires intensive planning and education in order to lead to successful outcomes (Layne et al., 2021). The preparation includes faculty training on best practices, intentional development of case scenarios to meet the current level of student learning, and the development of an evaluation tool that best represents the assessment of the learning outcomes. This can be difficult with time restraints and additional commitments of faculty members. As this was the first time this program utilized simulation as a Level I experience, setting up the appropriate dosing was challenging for faculty. The use of student feedback, faculty reflection, and best practices in simulation will allow the program to improve future Level I simulation experiences. Although the creation of well-designed simulations as Level I fieldwork requires extensive time and planning, students overwhelmingly had positive experiences and identified significant learning.

DOI: 10.26681/jote.2023.070312

The results of this small descriptive study provide evidence that Level I simulation experiences with uniform design, delivery, and evaluation can lead to the successful completion of student learning outcomes. Results indicated that students consistently met or exceeded expectations. Future research could include a comparison of program level outcomes for students that completed simulation versus those that completed a different method of Level I fieldwork, understanding the impact of Level I outcomes on Level II performance, and understanding faculty and fieldwork educators' perceptions of simulation as a preparatory method for practice readiness. Further examination of the purpose of Level I fieldwork within occupational therapy education and the creation of standardized metrics to assess the outcomes would be beneficial to the profession as a whole, to better compare outcomes of Level I experiences and performance. Future research should also include analysis of interprofessional learning outcomes from experiences such as these through use of standardized metrics such as the Interprofessional Collaborator Assessment Rubric (ICAR) (Curran et al., 2011).

Conclusion

This descriptive study supported the use of high-fidelity simulation as a means to facilitate successful student outcomes during Level I fieldwork. When simulation experiences are conducted with best practice guidelines, including clear objectives and structured pre-brief and debrief, students can both meet the curriculum expectation of Level I fieldwork and perceive a positive learning experience. This experience allowed all students to gain similar clinical and professional skills in a safe and meaningful learning environment with a more consistent application and evaluation process. Future research is needed to continue to expand on the effectiveness of simulation-based Level I fieldwork in the overall preparedness for future experiential learning, interprofessional collaboration and transition into clinical practice.

References

Accreditation Council for Occupational Therapy Education. (2018). 2018 Standards and interpretive guide. *American Journal of Occupational Therapy, 72*(Supplement_2). 7212410005p1–7212410005p83 https://doi.org/10.5014/ajot.2018.72S217

Agency for Healthcare Research and Quality. (2020). *Healthcare simulation dictionary,* (2nd ed.). https://www.ahrq.gov/sites/default/files/wysiwyg/patient-safety/resources/simulation/sim-dictionary-2nd.pdf

Bethea, D. P., Castillo, D. C., & Harvison, N. (2014). Use of simulation in occupational therapy education: Way of the future? *American Journal of Occupational Therapy, 68*, S32–S39. https://doi.org/10.5014/ajot.2014.012716

Bennett, S., Rodger, S., Fitzgerald, C., & Gibson, L. (2017). Simulation in occupational therapy curricula: A literature review. *Australian Occupational Therapy Journal*, *64*(4), 314–327. https://doi.org/10.1111/1440-1630.12372

Brown, A. B., & Mohler, A. J. (2020). SELTEC: Service and experiential learning through engagement in the community: A Level I fieldwork model: Part 1. *Journal of Occupational Therapy Education,4*(3). https://doi.org/10.26681/jote.2020.040317

Chernikova, O., Heitzmann, N., Stadler, M., Holzberger, D., Seidel, T., & Fisher, F. (2020). Simulation- based learning in higher education: A meta- analysis. *Review of Educational Research, 90*(4). https://doi.org/10.3102/0034654320933544

Cunningham, S., Foote, L., Sowder, M., & Cunningham, C. (2018). Interprofessional education and collaboration: A simulation-based learning experience focused on common and complementary skills in an acute care environment. *Journal of Interprofessional Care, 32*(3), 395-398. https://doi.org/10.1080/13561820.2017.1411340

Curran, V., Casimiro, L., Banfield, V., Hall, P., Gierman, T., Lackie, K., Oandasan, I., Simmons, B., & Wagner, S. (2011). *Interprofessional collaborator assessment rubric*. https://nexusipe-resource-exchange.s3-us-west-2.amazonaws.com/Curran%2C%20ICAR%2C%20instrument.pdf?cALJ8Oo9bqog_B1E0EZAT0Vchabwukbg

EHR Go. (2022). *Teach human centered health care*. https://ehrgo.com/

Giles, A. K., Carson, N. E., Breland, H. L., Coker-Bolt, P., & Bowman, P. J. (2014). Conference proceedings—Use of simulated patients and reflective video analysis to assess occupational therapy students' preparedness for fieldwork. *American Journal of Occupational Therapy, 68*, S57–S66. https://doi.org/10.5014/ajot.2014.685S03

Grant, T., Thomas, Y., Gossman, P., & Berragan, L. (2021). The use of simulation in occupational therapy education: A scoping review. *Australian Occupational Therapy Journal*, *68*, 345–356. https://doi.org/10.1111/1440-1630.12726

Harris, N. C., Nielsen, S., & Klug, M. G. (2022). Level I Fieldwork using simulation: Student performance outcomes and perceptions. *Journal of Occupational Therapy Education, 6*(2). https://doi.org/10.26681/jote.2022.060216

Imms, C., Froude, E., Chu, E. M. Y., Sheppard, L., Darzins, S., Guinea, S., Gospodarevskaya, E., Carter, R., Symmons, M. A., Penman, M., Nicola-Richmond, K., Gilbert Hunt, S., Gribble, N., Ashby, S., & Mathieu, E. (2018). Simulated versus traditional occupational therapy placements: A randomized controlled trial. *Australian Occupational Therapy Journal, 65*, 556–564. https://doi.org/10.1111/1440-1630.12513

Layne, K., McGee, E., Frank, E., & Petrocelli, T. (2021). Simulation scaffolding in occupational therapy curriculum: Development & implementation. *Journal of Higher Education Theory and Practice*, *21*(2). https://doi.org/10.33423/jhetp.v21i2.4120

Mattila, A., Martin, R. M., & DeLuliis, E. D. (2020). Simulated fieldwork: A virtual approach to clinical education. *Education Sciences*, 10(10) 272. https://doi.org/10.3390/educsci10100272

Nielsen, S., Klug, M., & Fox, L. (2020). Brief report—Impact of nontraditional Level I fieldwork on critical thinking. *American Journal of Occupational Therapy*, 74, 7403345010. https://doi.org/10.5014/ajot.2020.036350

Ozelie, R., Domenighetti, S., Sugar, A., & Conrad, S. (2022). Evolution of Level I Fieldwork during an international pandemic: Students' perceptions of the effectiveness of virtual simulation-based Level I Fieldwork. *Journal of Occupational Therapy Education, 6*(3). https://doi.org/10.26681/jote.2022.060310

Paxino, J., Denniston, C., Woodward-Kron, R., & Molloy, E. (2022). Communication in interprofessional rehabilitation teams: A scoping review. *Disability and Rehabilitation, 44*(13), 3253-3269. https://doi.org/10.1080/09638288.2020.1836271

van Vuuren, S. (2016). Reflections on simulated learning experiences of occupational therapy students in a clinical skills unit at an institution of higher learning. *South African Journal of Occupational Therapy, 46*(3). https://doi.org/10.17129/2310-3833/2016/v46n3/a13

Watts, P. I., Rossler, K., Bowler, F., Miller, C., Charnetski, M., Decker, S., Molloy, M. A., Persico, L., McMahon, E., McDermott, D., & Hallmark, B. (2021). Onward and upward: Introducing the Healthcare Simulation Standards of Best Practice. *Clinical Simulation in Nursing*, *58*, 1–4.https://doi.org/10.1016/j.ecns.2021.08.006