

2023

## Using an Ungraded Interprofessional Clinical Examination to Decrease Student Stress and Anxiety for a Skill-based Exam

McKenzie R. Behrendt  
*University of Nebraska Medical Center*

Stacy Smallfield  
*University of Nebraska Medical Center*

Jessica Semin  
*UNMC*

Kevin A. Kupzyk  
*University of Nebraska Medical Center*

Follow this and additional works at: <https://encompass.eku.edu/jote>



Part of the [Educational Methods Commons](#), and the [Occupational Therapy Commons](#)

### Recommended Citation

Behrendt, M. R., Smallfield, S., Semin, J., & Kupzyk, K. A. (2023). Using an Ungraded Interprofessional Clinical Examination to Decrease Student Stress and Anxiety for a Skill-based Exam. *Journal of Occupational Therapy Education*, 7 (3). <https://doi.org/10.26681/jote.2023.070310>

This Educational Innovations is brought to you for free and open access by the Journals at Encompass. It has been accepted for inclusion in Journal of Occupational Therapy Education by an authorized editor of Encompass. For more information, please contact [laura.edwards@eku.edu](mailto:laura.edwards@eku.edu).

---

# Using an Ungraded Interprofessional Clinical Examination to Decrease Student Stress and Anxiety for a Skill-based Exam

## Abstract

Healthcare educators are encouraged to provide both skill-based practical exams and interprofessional experiences to prepare students for clinical practice. With skill-based exams come increased student stress and anxiety. This article reports on the development, exploratory outcomes, and lessons learned from an ungraded objective structured clinical examinations (OSCEs) event involving doctoral-level occupational therapy and bachelor-level nursing students. The primary objective was to allow occupational therapy students to practice for an upcoming graded, comprehensive, skill-based exam. The secondary objective was to examine if the event changed students' perceived interprofessional skills. The OSCE event included a large group pre-brief, three simulations with mini debriefs following each simulation, and a large group debrief. Students completed pre- and post- tests providing quantitative data to assess perceived attainment of interprofessional competencies. Qualitative data suggested significant value and worthiness of this learning event. Students reported the event improved their interprofessional skills, decreased exam stress and anxiety, and provided them adequate practice for the exam. Overall, the preliminary findings suggested the design of this interprofessional ungraded OSCE event prepared occupational therapy students for comprehensive skill-based exams, thereby decreasing test anxiety and stress levels while facilitating a beneficial interprofessional experience. Details of the OSCE design are shared to assist faculty in preparing future healthcare professionals for positive interprofessional collaborations and comprehensive skill-based curricular assessments.

## Keywords

Interprofessional, stress and anxiety, ungraded simulation, practice simulation, OSCE

## Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

# JOTE

Journal of Occupational  
Therapy Education

Volume 7, Issue 3

---

## Using an Ungraded Interprofessional Clinical Examination to Decrease Student Stress and Anxiety for a Skill-based Exam

---

McKenzie Behrendt, OTD, OTR/L

Stacy Smallfield, DrOT, OTR/L, BCG, FAOTA

Jessica Semin, DNP, MPH, RN

Kevin A. Kupzyk, PhD

University of Nebraska Medical Center

United States

---

### ABSTRACT

Healthcare educators are encouraged to provide both skill-based practical exams and interprofessional experiences to prepare students for clinical practice. With skill-based exams come increased student stress and anxiety. This article reports on the development, exploratory outcomes, and lessons learned from an ungraded objective structured clinical examinations (OSCEs) event involving doctoral-level occupational therapy and bachelor-level nursing students. The primary objective was to allow occupational therapy students to practice for an upcoming graded, comprehensive, skill-based exam. The secondary objective was to examine if the event changed students' perceived interprofessional skills. The OSCE event included a large group pre-brief, three simulations with mini debriefs following each simulation, and a large group debrief. Students completed pre- and post- tests providing quantitative data to assess perceived attainment of interprofessional competencies. Qualitative data suggested significant value and worthiness of this learning event. Students reported the event improved their interprofessional skills, decreased exam stress and anxiety, and provided them adequate practice for the exam. Overall, the preliminary findings suggested the design of this interprofessional ungraded OSCE event prepared occupational therapy students for comprehensive skill-based exams, thereby decreasing test anxiety and stress levels while facilitating a beneficial interprofessional experience. Details of the OSCE design are shared to assist faculty in preparing future healthcare professionals for positive interprofessional collaborations and comprehensive skill-based curricular assessments.

---

## **Introduction**

Simulation experiences, such as objective structured clinical examinations (OSCEs), are best practice for summative assessment of practice skills (Krusen & Martino, 2020). OSCEs prepare occupational therapy (OT) students for fieldwork and practice but also are known to increase student stress and anxiety (Kolanczyk et al., 2019; Krusen & Martino, 2020). The American Occupational Therapy Association (AOTA, 2015) proposed integration of classroom activities, such as skill-based simulation experiences, with interprofessional experiences to promote sharing knowledge and skills with each other. The 2018 Accreditation Council for Occupational Therapy Education (ACOTE®) standards require educators to instruct students in principles of interprofessional teamwork (ACOTE®, 2020). These standards emphasize that interprofessional care is needed in curricula rather than an extracurricular activity. This ensures that every future OT practitioner is equipped with interprofessional skills.

## **The Importance of Comprehensive Skill-based Experiences in Curricula**

Comprehensive skill-based experiences and OSCEs are integral in OT program curricula as they provide opportunity for hands-on application of skills learned in the classroom, help students review course materials, summarize key takeaways of learning, and capture student progress with content mastery for progression through a program of study. Within recent years, educators have been challenged to provide more than paper and pencil competency assessments and to pose scenarios that require higher level cognitive skills and clinical reasoning (Boulet, 2008; Krusen & Martino, 2020; Waghmare & Waghmare, 2021). Competency assessments using simulation are often able to address both technical and soft skills (Chin & Lagasse, 2017; Waghmare & Waghmare, 2021). Specifically, Krusen and Martino (2020) found simulations with standardized patients allowed OT educators to see students' ability to apply therapeutic rapport and professional skills while adapting in-the-moment to a patient's needs. Interestingly, most students preferred this type of practical assessment rather than a written exam (Dalwood et al., 2020; Krusen & Martino, 2020). Krusen and Martino (2020) stated that 70% of students reported an OSCE confirmed their competence, and 80% identified areas for growth from an OSCE. Themed results of one simulation experience involved students' dimensions of learning of real-world application, temporal learning, being open to the process, and experiencing emotions of fear, anxiety, and distress (Krusen & Martino, 2020). Overall, comprehensive skill-based simulation experiences prepare students for practice while also providing an effective assessment of student competency.

## **Skill-based Experiences' Effects on Student Stress and Anxiety**

Occupational therapy student stress is above average with academic pressure and perceived stress being some of the barriers to achieving personal well-being (Laposhka & Smallfield, 2022). Educators are aware that OSCEs are paramount to assessing competency but are also known to increase student stress and anxiety (Krusen & Martino, 2020). It is important that educators take actions to reduce student stress (Grab et al., 2021). Skill-based practice experiences (i.e., an ungraded OSCE) allow

students to become more familiar with the structure and expectations of a OSCE while receiving educator feedback on performance, which may reduce stress and anxiety (Kolanczyk et al., 2019).

Many factors influence stress and anxiety levels for simulation experiences, such as OSCEs. Kolanczyk et al. (2019) noted students can feel intimidated or anxious before the simulation activity. A standardized patient may be intimidating especially if a student has not had life experiences being in patient care or service roles. Burbach et al. (2016) linked performance on simulation to the influence of anxiety, uncertainty, technological limitations, experience with the patient condition, and number of prior simulation-based learning experiences. When posed as a more formative experience rather than summative experience, students saw this as an opportunity to practice resilience and a safe place to fail (Krusen & Martino, 2020; Kolanczyk et al., 2019). This stresses the importance of using an ungraded OSCE to prepare students for the graded OSCE, especially earlier in the curriculum with scaffolding throughout the program (Kolanczyk et al., 2019).

An interprofessional ungraded OSCE is one way to prepare students for comprehensive skill-based simulation exams and reduce stress and anxiety while at the same time maintaining the integrity of the exam and being mindful of costs associated with simulation. Hiring standardized patients for ungraded OSCEs can be expensive and cumbersome to arrange with limited space and time. Using OT student peers as standardized patients would reveal case details to the students portraying the role of patients prior to their turn as therapist, whereas involving other health profession students as standardized patients allows OT students a realistic experience to practice skills. Practicing in a mock clinical environment with the health profession student acting as a standardized patient mimics the level of stress and anxiety an OT student may feel prior to a graded OSCE.

### **The Benefits of Involving Interprofessional Students in OSCE Experiences**

Ample research suggests that engaging in interprofessional experiences within health profession education is a key to a collaborative workforce and high-functioning healthcare teams (Lewis et al., 2018; Poore & Cooper, 2020; Washington et al., 2022). The Interprofessional Education Collaborative (IPEC) has identified core competencies of teamwork, roles and responsibilities, communication, and shared values and ethics are a means to achieve safe, high-quality, accessible, and patient centered care. To actively learn the IPEC competencies and optimally collaborate in practice, interprofessional education is imperative (Edwards Collins et al., 2020; Favolise, 2019; Morrell et al., 2019; Nichols et al., 2019).

Skill-based simulation using an OSCE framework can provide interprofessional health education students with an opportunity to practice IPEC competencies. Nieuwoudt et al. (2021) reported that a curriculum-based interprofessional simulation involving OT and Bachelor of Science in Nursing (BSN) students increased students' self-perceived communication and teamwork skills. Simulation can vary widely with structure and delivery formats and any interprofessional experience leads to immediate and long-term

benefits (Alrasheed et al., 2021; McKinlay et al, 2021). However, literature supports the use of in-person simulation such as role-play and standardized patient encounters that increase hands-on practice and observation. In a study by Cortés-Rodríguez et al. (2021), there was a significant improvement with knowledge, skills, self-efficacy, and interprofessional communication skills with using both methods of role play and standardized patients. We combined the aforementioned best practices to develop and implement an interprofessional ungraded OSCE with the goal of improving interprofessional skills while reducing OT student stress and anxiety for a comprehensive graded OSCE.

### **Description of the Ungraded OSCE Event**

#### **Participants**

Participants (N=42) included doctoral level OT and bachelor level registered nurse (RN) students. OT students (n=20) were enrolled in a middle and older adult assessment and intervention course during the second semester of the program. RN students (n=22) were enrolled in the first of a three-semester accelerated program or second of a four-semester traditional program. Nine OT and RN faculty and staff were involved in planning, implementing, and evaluating the event.

#### **Procedure**

Occupational therapy students were assessed on comprehensive learning through an OSCE during their second semester of the program. To prepare OT students for their first graded OSCE experience, an ungraded interprofessional OCSE event was created involving OT and RN (RN students do not complete the graded OSCE). The ungraded OSCE was completed one week prior to the graded OSCE. The event occurred over a 4-hour timespan and included an introduction, three mock OSCEs, and a large group debrief in a clinical simulation building. The environment was realistic for each of the OSCE care settings. The event was embedded into the curricula of each program and required for participating OT and RN students. Each of the disciplines had defined roles. RN students were standardized patients and observers. OT students were clinical OTs during one of the OSCEs. When not playing the role of the therapist, OT students were observers. The OT and RN learning objectives varied greatly due to several factors including event time constraints along with differences in students' skill sets and roles in this interprofessional event.

The interprofessional faculty and staff team collaborated to create learning objectives (refer to Table 1) for the interprofessional experience.

**Table 1***Ungraded OSCE Learning Objectives*

By the end of the ungraded OSCE experience...

OT learners will:	RN learners will:
1. Communicate the distinct value of occupational therapy to the interprofessional team.	1. Understand occupational therapy's role as a member of the healthcare team through case study learning.
2. Apply theoretical knowledge and evidenced-based intervention strategies to select cases.	2. Identify and communicate when a referral to occupational therapy may be warranted.
3. Discuss interprofessional team dynamics.	3. Discuss interprofessional team dynamics.

***Case Development and Event Details***

Faculty discussed content knowledge within both curricula and identified diagnoses previously introduced to both OT and RN students. The ungraded OSCE had six possibilities, three cases with two possible settings each. One of the authors (MB) modified one case from DiZazzo-Miller (2021) and another case from Nilsen and Gillen (2021). She also designed a third case. All three cases were modified to be relevant to two health delivery settings, home health and inpatient, to prepare students to consider the continuum of care. Diagnoses consisted of COPD (Chronic Obstructive Pulmonary Disease) with history of diabetes; dementia with caregiver education; and depression with history of CVA (Cerebrovascular Accident). The OT faculty member consulted with a public health researcher to develop generalized role-play scenarios for the cases. This enhanced each case by removing jargon, providing multiple viewpoints, and being descriptive without being prescriptive. A few weeks before the ungraded OSCE event, the OT students were assigned a case and a setting and provided the schedule and logistics of the event. RN students were not assigned any preparation materials beyond the schedule and logistics of the day.

***Pre-brief***

At the start of the ungraded OSCE event, OT faculty and students briefly introduced the values and visions of occupational therapy. An OT faculty member outlined the learning goals and logistics of the event and students were split into assigned groups of about 6 students (3 OT, 3 RN) and one facilitator. Students completed a pre-test survey focusing on self-perceived interprofessional skills.

***Ungraded OSCE and Reflection***

Each of the three ungraded OSCEs within this event consisted of three phases -- preparation, encounter, and debrief. During the 10-minute preparation, the RN students read the generalized role-play scenario for a case while the assigned OT student prepared the environment and read over their notes. Observation students (OT & RN) familiarized themselves with their respective observation form. Prior to and after the encounter, observation students answered a question about their perception of OT's

role for this diagnosis within the setting. Then students engaged in a 25-minute encounter where the OT student completed contextually and culturally relevant occupation-based interventions with the patient. After the encounter, the facilitator led a 10-minute small group debrief with a therapist self-reflection, patient reflection, and observer reflections. All students reflected and discussed the pre- and post-encounter questions about OT's role with this patient population within this health delivery setting. RN students then educated the small group on the primary nursing treatment diagnosis and priority items they would address with this patient.

### **Debrief**

At the conclusion of the ungraded OSCE event, a 30-minute large group debrief focused on lessons learned, the role of OT, and how this experience may influence future interprofessional collaboration. To reinforce the goal of understanding the role and responsibilities of OT, students paired up with a student of the opposite profession and explained OT to each other and how OTs and RNs collaborate. Then students completed a post-test survey on their self-perceived interprofessional skills.

### **Documentation**

OT students documented the ungraded OSCE intervention session with a contact note and application of theory and evidenced-based practice for their assigned case. As a large group they reviewed and critiqued one treatment, theory, and evidence note. This allowed for formative feedback from OT facilitators and peers.

### **Assessment**

Data were collected using a pre- and post-test student survey, ungraded OSCE event debrief, a qualitative faculty and staff survey, and a one-month post-OSCE OT student survey. The university's institutional review board office reviewed the protocol and granted exemption.

### **Instruments**

Students completed the Interprofessional Collaborative Competency Attainment Scale (ICCAS; Schmitz, et al., 2017) before and after the event via an anonymous survey. The ICCAS is a self-report 20-item tool that measures six interprofessional skill dimensions, including communication, collaboration, roles and responsibilities, collaborative patient-family centered approach, conflict management/resolution, and team functioning (Schmitz et al., 2017). Items are rated on a five-point scale ranging from 1 indicating "poor" to 5 indicating "excellent" (Schmitz et al., 2017). All items are positively worded with a desired score of 5. A global score ranging from 20-100 was computed for each participant with 20 indicating "poor" and 100 indicating "excellent". Violato and King (2019) found the ICCAS has good reliability and concurrent validity. Six additional questions from Delaney et al. (2021) were added to the post-test to assess the effectiveness of involving another healthcare professional as a standardized patient. Also, one demographic question asking the student's program of study was included.



During the ungraded OSCE event debrief, a recorder captured students' qualitative descriptions of the event based on reflection questions of lessons learned, how the experience influenced their understanding of interprofessional team dynamics, and referral to interprofessional team members. After the event, the facilitators involved (n=5) completed a qualitative survey asking what went well, what improvements were needed, and ideas for future collaborative events between the academic programs.

One month after the actual OSCE, the OT students completed an 8-question post-OSCE survey (refer to Table 3). The intent was to gather their perceptions of the ungraded OSCE and the effectiveness in preparing them for the graded OSCE.

### **Data Analysis**

Quantitative data were analyzed using IBM SPSS Statistics for Windows, version 28 (IBM Corp., Armonk, N.Y, USA). We used a paired *t* test to compare the pre-and post-test 20 ICCAS questions. Significance was set at  $p < .05$ . Descriptive statistics were used to analyze the six additional post-test questions and quantitative portions of the post-OSCE OT student survey. Qualitative data from the ungraded OSCE event debrief and the open-ended items on faculty and student surveys were coded and analyzed for themes.

## **Results**

### **Pre- and Posttest Survey**

Thirty-eight students (n=19 OT and n=19 RN) completed both the pre- and post-test survey. OT and RN students combined had significant improvements in interprofessional core competency skills as seen by a 17-point improvement in ICCAS global scores from the pretest (69.82) to post-test (86.97). Paired *t*-tests revealed improvement in 17/20 ICCAS items. There was a statistically significant improvement on the global ICCAS score from pre- to post-test  $t(37) = 9.91, p < .001$ . There were no significant differences in pre, post, or change scores on ICCAS or on the eval items between OT and RN students.

The following data highlight the spectrum of results on the ICCAS survey with the median gain on a 5-point scale. The top three greatest gains were students' ability to provide constructive feedback to interprofessional team members (1.35), seek out interprofessional team members to address issues (1.12), and negotiate responsibilities within overlapping scopes of practice (1.15). The three least gains were students' ability to actively listen to interprofessional members' ideas and concerns (0.49), express my ideas and concerns without being judgmental (0.53), and be accountable for my contributions to the interprofessional team (0.70).

Six questions (see Table 2) added to the assessment assessed how the students met the overall learning objectives (Delaney et al., 2021).

**Table 2***Post-test Assessment of Learning Outcomes*

Post-test Questions	Strongly agree n(%)	Somewhat agree n(%)	Somewhat disagree n(%)	Strongly disagree n(%)
Being a patient in the OT/RN interprofessional activity contributed to increasing my knowledge and attitudes related to...				
The need for effective communication in developing a care plan.	35(92.1)	3(7.9)	0(0.0)	0(0.0)
Including the patient in decision-making processes.	34(89.5)	4(10.5)	0(0.0)	0(0.0)
Understanding the abilities and contributions of an occupational therapist on the healthcare team.	32(84.2)	5(13.2)	0(0.0)	1(2.6)
Recognizing how other healthcare professional's skills and knowledge complement my own.	30(78.9)	8(21.1)	0(0.0)	0(0.0)
Developing an effective holistic plan for patients.	29(76.3)	9(23.7)	0(0.0)	0(0.0)
Understanding the abilities and contributions of a nurse on the healthcare team.	26(68.4)	10(26.3)	1(2.6)	1(2.6)

This event successfully met 3/3 OT and 3/3 RN learning outcomes. This event broadened nursing students' perspectives of OTs resulting in 97% of all students strongly agreeing on their ability to understand the abilities and contribution of an OT on the healthcare team. Interprofessional team dynamics improved as:

- 92% of students strongly agree effective communication is needed to develop a care plan;
- 100% of students agree including the patient in decision-making process is essential; and
- 100% of students agree to developing an effective holistic plan and how other professionals' skills and knowledge complement their own professions.

### One-Month Post-OSCE Survey

Results of the one-month post-OSCE OT survey confirmed the themes the students were reporting the day of the event, describing increased preparation and decreased stress for the OSCE. Most students strongly agreed (78%) or agreed (18%) that the ungraded OSCE event prepared them for the graded OSCE. Students (91%) also agreed or strongly agreed the ungraded OSCE event decreased their anxiety and stress for the graded OSCE. Most OT students had positive feedback of the ungraded OSCE event on all questions asked in the post-graded OSCE survey. This survey had a 58% response rate which may be due to the voluntary nature of the survey and not having scheduled class time for the survey. Table 3 reports the full results of this OT student survey.

**Table 3**

#### *OT Student One-month Post-Graded OSCE Survey Results*

One-month post-graded OSCE survey item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	n(%)	n(%)	n(%)	n(%)	n(%)
The simulation event prepared me for the actual simulation.	8(72.7)	2(18.2)	1(9.1)	0(0.0)	0(0.0)
There is benefit to having patients in the simulation event portrayed by other healthcare professional students rather than an OT classmate (e.g., mimicking the stress and anxiety of the actual simulation).	7(63.6)	3(27.3)	0(0.0)	1(9.1)	0(0.0)
Working with other healthcare professional students as patients in the simulation event improved my preparation for the actual simulation.	6(54.5)	3(27.3)	1(9.1)	1(9.1)	0(0.0)
The simulation event format consisting of three simulations (10-min prep, 20-25-min SIM, 10-min debrief) along with a large group debrief was beneficial for learning.	6(54.5)	5(45.5)	0(0.0)	0(0.0)	0(0.0)

One-month post-graded OSCE survey item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	n(%)	n(%)	n(%)	n(%)	n(%)
The simulation event decreased my anxiety for the actual simulation.	5(45.5)	5(45.5)	0(0.0)	1(9.1)	0(0.0)
The simulation event decreased my stress for the actual simulation.	5(45.5)	5(45.5)	0(0.0)	1(9.1)	0(0.0)
I value the use of role-play in helping me prepare for fieldwork and practice.	4(36.4)	6(54.5)	1(9.1)	0(0.0)	0(0.0)

### Open-Ended Questions

Open-ended questions from the large group debrief, faculty survey, and one-month survey sought to determine the effectiveness of achieving the learning objectives and influencing student wellness. Four themes were identified: decreasing stress and anxiety, understanding the breadth of OT, recognizing one's own competencies, and benefiting from collaboration. Results from each theme are presented below with exemplars.

#### ***Decreasing Stress and Anxiety***

OT students described decreased stress for the comprehensive skills competency exam because they felt more prepared. An OT student reported, "The mock OSCE was incredibly helpful for me, not only did it help prepare me for the exam, but it gave me twice the practice." Another OT student stated, "The mock was a great exercise to increase my confidence for the actual OSCE and an additional opportunity to work on all of the skills required to be an OT."

#### ***Understanding the Breadth of OT***

Nursing students' comments from the large group debrief revealed an increased understanding of the breadth of what OT can do for multiple patients in a variety of settings. For example, a nursing student stated, "I had no idea OTs did so much with so many different people." Another student was surprised at the "many environmental changes for people with different conditions." A nursing instructor commented that asking students to explain the role of OT to a near-peer at the end of the ungraded OSCE event was a great way to show their understanding of this interprofessional team member.

### ***Recognizing Own Competencies***

Another theme that emerged from this event was recognizing one's own competency in their roles and responsibilities. From a nursing student's perspective, "It was great to see how we can work together to accomplish the same patient goals but how we take a different perspective and approach for the same problem." An OT student elaborated that "This experience has helped me realize how as OTs we really do have expertise in activity analysis and grading the activity to meet people's needs." Other OT students felt they gained knowledge about nursing. One OT student stated, "Learning about nursing [...] and how it aligned with OT helped us during the simulation, but also in the future for interprofessional teams!"

### ***Benefiting from Collaborating***

The largest benefit of this event was involving nursing students rather than peers as standardized patients and receiving immediate feedback from multiple perspectives including the "patient," OT peers, other nursing students, and experienced clinicians. Faculty commended the interprofessional learning and reflection. An OT instructor's feedback stated, "Students were very engaged, nursing students role played very very well; students participated in feedback, and it was valuable." One student stated, "The nurses did a wonderful job portraying the patients which made it a truly valuable and useful experience. That helped me see that really getting into character is what is going to help my classmates and I learn the most from each interaction." Additionally, an OT instructor also recognized the positive interprofessional competency gained from this event, "The in the moment learning and reflections of the students were great for building rapport and understanding of the interdisciplinary team."

## **Discussion**

An ungraded OSCE is an opportunity for interprofessional experience while decreasing OT students' anxiety and stress in preparing for a comprehensive skill-based competency exam. This data suggests that involving other health science professional students as standardized patients in ungraded simulation experiences, such as an OSCE, improves essential elements of teamwork and understanding the roles of interprofessional team members. Our findings are consistent with Boulet (2008) and Holmboe and colleagues (2011) who found that simulation experiences make meaningful and positive differences in preparing students for professional practice.

The one-month post-graded OSCE OT survey results indicate the ungraded OSCE event was effective at decreasing student stress and anxiety related to the graded OSCE. This model may be a strategy to improve student wellness and decrease academic pressure. The active learning methods of being the therapist, being an observer, and involving nursing students as patients and observers encouraged peer-learning, receiving multiple viewpoints on the case, and reflectively forming their own approach to the same case.

In addition to OT students reporting increased preparation and a decrease in stress and anxiety, OT students benefitted from incorporating nursing students as the standardized patient as it led to a more authentic experience. Although it is difficult to determine if the IPE component of this event led to the increased preparedness of the OT students for the OSCE, we found value in involving interprofessional students to expose students to various professions while preparing for examinations. When OT students role play amongst themselves, they may intentionally or unintentionally lead the student therapist in the right direction. Interprofessional students bring their knowledge and experience of the condition to the role-play to increase authenticity and thus lead us to believe this is a valuable component to the actual OSCE preparation.

Our findings are consistent with Nieuwoudt et al. (2021), who found that even a single interprofessional learning event can positively impact student IPE skills. This event encouraged thoughts about interprofessional collaboration for a variety of patients across different settings. As this event's learning objectives were to emphasize the role of OT with less emphasis on RN's role, the ICCAS results and the post-test Delaney et al. (2021) items are consistent with the purpose of this event. Overall, findings indicate this event was a worthy learning experience and positively reinforced the logistics of the interprofessional, ungraded OSCE event. The methods of an in-person event with both a hands-on portion and observation opportunities has been supported by previous studies (Alrasheed et al., 2021; Cortés-Rodríguez et al., 2021; Reime et al., 2017; Washington et al., 2022).

#### **Limitations**

Although student feedback regarding the connection between the ungraded OSCE event and the graded OSCE was positive, our limitations of no comparison group limited us in making a definitive conclusion whether this activity or another activity within the curriculum prepared students for the OSCE. In the one-month post-OSCE survey, OT students noted the usefulness of having other healthcare professional students as the patients, however, it is difficult to determine what role the inclusion of other healthcare professionals played in preparing the students for the graded OSCE rather than someone who is not a healthcare student. We inadvertently used the term "patient" within the post-test survey for the occupational therapy student group; however, it is likely the OT students took the whole event into context when responding to the survey items rather than focusing on the question stem.

#### **Implications for Occupational Therapy Education**

OT educators can create a worthwhile interprofessional event within the curriculum by involving another health profession student as a simulated patient within an ungraded OSCE. This provides an opportunity for students to manage stress and anxiety by practicing skills in a safe environment, reflecting on peer and personal performance, and improving their preparation for skill-based examinations. With the increased desire to incorporate simulation experiences into curricula, an ungraded OSCE provides one feasible method to meet the call to 1) intentionally improve student well-being by decreasing stress and anxiety for graded OSCEs; 2) provide opportunities for simulated clinical experiences; and 3) develop a collaborative workforce. Future directions for subsequent events would be to further integrate into the curricula and advocate for

additional events to be offered. Future research could examine the effectiveness of promoting occupational therapy through this educational modality. These results have implications for OT education but also healthcare education at large as interprofessional ungraded OSCEs can help prepare students for simulation-based examinations, build a cohesive workforce, and improve patient care.

### Conclusion

Healthcare educators implement both skill-based practical exams and interprofessional experiences to prepare students for clinical practice. Skill-based exams increase student stress and anxiety. We developed an ungraded OSCE event involving doctoral-level occupational therapy and bachelor-level nursing students to provide OT students practice for an upcoming graded OSCE and to provide an interprofessional learning experience. We found significant value of this learning event as students reported improved interprofessional skills, decreased exam stress and anxiety, and practice for the exam. In summary, interprofessional ungraded OSCEs are one way to prepare health professional students for practical exams as well as future collaborative patient care.

---

### References

- Accreditation Council for Occupational Therapy Education. (2018). *2018 ACOTE standards and interpretive guide (effective July 31, 2020): January 2022 interpretive guide*. <https://acoteonline.org/accreditation-explained/standards/interpretive-guide>.
- Alrasheed, A., Altulahi, N., Temsah, M. H., Almasri, Z., Alghadeer, S., Mubarak, A. M., Alzamil, H., Bashatah, A. S., Asiri, Y., & AlRuthia, Y. (2021). Interprofessional education competition during the COVID-19 pandemic at King Saud University: Benefits and challenges. *Journal of Multidisciplinary Healthcare, 14*, 673-679. <https://doi.org/10.2147/JMDH.S301346>
- American Occupational Therapy Association [AOTA]. (2015). Importance of interprofessional education in occupational therapy curricula. *American Journal of Occupational Therapy, 69*(3), 6913410020p1–6913410020p14. <https://doi.org/10.5014/ajot.2015.696S02>
- Boulet, J. R. (2008). Summative assessment in medicine: The promise of simulation for high-stakes evaluation. *Academic Emergency Medicine, 15*(11), 1017-1024. <https://doi.org/10.1111/j.1553-2712.2008.00228.x>
- Burbach, B. E., Thompson, S. A., Barnason, S. A., Wilhelm, S. L., Kotcherlakota, S., Miller, C. L., & Paulman, P. M. (2016). Student-perceived influences on performance during simulation. *Journal of Nursing Education, 55*(7), 396-398. <https://doi.org/10.3928/01484834-20160615-07>
- Chin, M., & Lagasse, R. S. (2017). Assessment of competence: Developing trends and ethical considerations. *Current Opinion in Anaesthesiology, 30*(2), 236-241. <https://doi.org/10.1097/ACO.0000000000000431>
- Cortés-Rodríguez, A. E., Roman, P., López-Rodríguez, M. M., Fernández-Medina, I. M., Fernández-Sola, C., & Hernández-Padilla, J. M. (2021). Role-play versus standardised patient simulation for teaching interprofessional communication in care of the elderly for nursing students. *Healthcare, 10*(1), 46. <https://doi.org/3390/healthcare10010046>

- Dalwood, N., Bowles, K.A., Williams, C., Morgan, P., Pritchard, S., & Blackstock, F. (2020). Students as patients: A systematic review of peer simulation in health care professional education. *Medical Education*, 54(5), 387–399. <https://doi.org/10.1111/medu.14058>
- Delaney, L, Wiley, K., & Ronnebaum, J. (2021, July 29). Interprofessional OSCE experience in health science education: A pilot study [Poster Presentation]. 3<sup>rd</sup> Annual Heartland Interprofessional Education (HIPE) Conference, Des Moines, IA, United States. <https://cme.dmu.edu/HIPE2021-Poster1-4>
- DiZazzo-Miller, R. (2021). Alzheimer disease and other dementias. In D. P. Dirette & S. A. Gutman. (Eds.), *Occupational therapy for physical dysfunction* (pp. 756-758). Wolters Kluwer.
- Edwards Collins, M. E., Bell, C. S., Migliarese, S. J., Smith, N., Allison, L. K., Bethea, D. P., Darby, R., & Conner, T. A. (2020). Student perceptions of a live standardized patient interprofessional education scenario: A multi-year study. *Journal of Allied Health*, 49(1), 8-13.
- Favolise, M. (2019). Perceptions of inter-professional education of nursing, occupational therapy and physical therapy students. *Archives of Physical Medicine and Rehabilitation*, 100(12), e192. <https://doi.org/10.1016/j.apmr.2019.10.091>
- Grab, J., Green, M., Norris, J., Pilchik, K., & Fisher, G. S. (2021). Exploring occupational therapy student stress: Professor and student perspectives. *Journal of Occupational Therapy Education*, 5(1). <https://doi.org/10.26681/jote.2021.050103>
- Holmboe, E., Rizzolo, M. A., Sachdeva, A. K., Rosenberg, M., & Ziv, A. (2011). Simulation-based assessment and the regulation of healthcare professionals. *Simulation in Healthcare*, 6 Suppl, S58-62. <https://doi.org/10.1097/SIH.0b013e3182283bd7>
- Kolanczyk, D. M., Borchert, J. S., & Lempicki, K. A. (2019). Focus group describing simulation-based learning for cardiovascular topics in US colleges and schools of pharmacy. *Currents in Pharmacy Teaching & Learning*, 11(11), 1144-1151. <https://doi.org/10.1016/j.cptl.2019.07.005>
- Krusen, N. E., & Martino, M. N. (2020). Occupational therapy students' perceptions of OSCE: A qualitative descriptive analysis. *Journal of Occupational Therapy Education*, 4(1). <https://doi.org/10.26681/jote.2020.040107>
- Laposhka, I., & Smallfield, S. (2022). Self-care: An occupational therapy student perspective. *Journal of Occupational Therapy Education*, 6(1). <https://doi.org/10.26681/jote.2022.060105>
- Lewis, A., Rudd, C. J., & Mills, B. (2018). Working with children with autism: An interprofessional simulation-based tutorial for speech pathology and occupational therapy students. *Journal of Interprofessional Care*, 32(2), 242-244. <https://doi.org/10.1080/13561820.2017.1388221>
- McKinlay, E., Banks, D., Coleman, K., Darlow, B., Dungey, G., Farr, T., Fyte, R., Gray, B., Kemp, L., Mitchell, M., Morris, C., Myers, J., Nesar, H., Perry, M., Price, R., Thompson, W., Westenra, B., & Pullon, S. (2021). Keeping it going: The importance of delivering interprofessional education during the COVID-19 pandemic. *Journal of Primary Health Care*, 13(4), 359-369. <https://doi.org/10.1071/HC21070>



- Morrell, B. L. M., Carmack, J. N., Kemery, S., Moore, E. S., Voll Jr, C. A., Nichols, A. M., Hetzler, K. E., Toon, J., & Moore, S. M. (2019). Emergency on campus! Quantitative analysis of the effects of an interprofessional simulation on health care students. *Athletic Training Education Journal*, 14(2), 93-98. <https://doi.org/10.4085/140292>
- Nichols A., Wiley S., Morrell, B. L., Jochum, J. E., Moore, E. S., Carmack, J. N., Hetzler, K. E., Toon, J., Hess, J. L., Meer, M., & Moore S.M. (2019). Interprofessional healthcare students' perceptions of a simulation-based learning experience. *Journal of Allied Health*, 48(3),159-166.
- Nieuwoudt, L., Hutchinson, A., & Nicholson, P. (2021). Pre-registration nursing and occupational therapy students' experience of interprofessional simulation training designed to develop communication and team-work skills: A mixed methods study. *Nurse Education in Practice*, 53, 103073. <https://doi.org/10.1016/j.nepr.2021.103073>
- Nilsen, D. M., & Gillen, G. (2021). Cerebrovascular accident. In D. P. Durette & S. A. Gutman (Eds.), *Occupational therapy for physical dysfunction* (pp. 756-758). Wolters Kluwer.
- Poore, J. A. & Cooper, D. D. (2020). Interprofessional simulation: From the classroom to clinical practice. *Annual Review of Nursing Research*, 39(1), 105-125. <https://doi.org/10.1891/0739-6686.39.105>
- Reime, M. H., Johnsgaard, T., Kvam, F. I., Aarflot, M., Engeberg, J. M., Breivik, M., & Brattebø, G. (2017). Learning by viewing versus learning by doing: A comparative study of observer and participant experiences during an interprofessional simulation training. *Journal of Interprofessional Care*, 31(1), 51-58. <https://doi.org/10.1080/13561820.2016.1233390>
- Schmitz, C. C., Radosevich, D. M., Jardine, P. J., MacDonald, C. J., Trumpower, D., & Archibald, D. (2017). The interprofessional collaborative competency attainment survey (ICCAS): A replication validation study. *Journal of Interprofessional Care*, 31(1), 28-34. <https://doi.org/10.1080/13561820.2016.1233096>
- Violato, E. M., & King, S. (2019). A validity study of the interprofessional collaborative competency attainment survey: An interprofessional collaborative competency measure. *Journal of Nursing Education*, 58(8), 454–462. <https://doi.org/10.3928/01484834-20190719-04>
- Waghmare, T. K., & Waghmare,L. S., (2021). Evolution of Objective Structured Clinical Examination- actual to virtual. *Journal of Clinical and Diagnostic Research*, 15(3), JI01-JI04. <https://doi.org/10.7860/JCDR/2021/46288/14593>
- Washington, V. L., Zakrajsek, A., Myler, L., Seurnyck, K., Holt, S., & Scazzero, J. (2022). Blending interprofessional education and simulation learning: A mixed-methods study of an interprofessional learning experience with nursing and occupational therapy students. *Journal of Interprofessional Care*, 36(2), 276-281. <https://doi.org/10.1080/13561820.2021.1897552>