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Kelly Little
Creighton University

Yongyue Qi
Creighton University

Vanessa D. Jewell
University of North Carolina

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Promoting Student Understanding of Occupation-Centered Practice and Updated Inter-Rater Reliability of the Occupation-Centered Intervention Assessment

Abstract

The Occupation-Centered Intervention Assessment (OCIA) was developed as a reflective tool for students to improve their comprehension of occupation-centered practice. Finding new and innovative ways to incorporate occupation-centered assignments can serve as a strategy to develop student integration of occupation-centered practice and allow educators to appraise student comprehension. The purpose of this study was to evaluate student understanding of occupation-centered practice by utilizing various statistical analyses, including updated inter-rater reliability, of the OCIA using student assignments. Utilizing a methodological approach, 121 first-year students analyzed 10 physical rehabilitation videos utilizing the OCIA to rate the interventions for their level of occupation-centeredness. Overall, the students demonstrated good agreement ($\alpha = .864$), indicating the OCIA has good inter-rater reliability with first year students. Individual and aggregate student OCIA scores and standard deviations provided valuable information to the course instructors for threshold concepts to reinforce throughout the course and program. The use of the OCIA facilitates student comprehension and application of occupation-centered reasoning and can be woven into didactic curricula as a learning tool.

Keywords

Occupation-centered practice, assignment development, professional reasoning, clinical reasoning, occupation-based

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Promoting Student Understanding of Occupation-Centered Practice and Updated Inter-Rater Reliability of the Occupation-Centered Intervention Assessment

Kelly Little, OTD, OTR/L, CHT, CLT¹

Yongyue Qi, PhD, MS¹

Vanessa Jewell, PhD, OTR/L²

Creighton University¹

University of North Carolina²

United States

ABSTRACT

The Occupation-Centered Intervention Assessment (OCIA) was developed as a reflective tool for students to improve their comprehension of occupation-centered practice. Finding new and innovative ways to incorporate occupation-centered assignments can serve as a strategy to develop student integration of occupation-centered practice and allow educators to appraise student comprehension. The purpose of this study was to evaluate student understanding of occupation-centered practice by utilizing various statistical analyses, including updated inter-rater reliability, of the OCIA using student assignments. Utilizing a methodological approach, 121 first-year students analyzed 10 physical rehabilitation videos utilizing the OCIA to rate the interventions for their level of occupation-centeredness. Overall, the students demonstrated good agreement ($\alpha = .864$), indicating the OCIA has good inter-rater reliability with first year students. Individual and aggregate student OCIA scores and standard deviations provided valuable information to the course instructors for threshold concepts to reinforce throughout the course and program. The use of the OCIA facilitates student comprehension and application of occupation-centered reasoning and can be woven into didactic curricula as a learning tool.

Introduction

Humans are complex occupational beings and the use of occupation to remediate and restore health, prevent injury, compensate, and adapt to life situations forms occupational therapy's professional identity (American Occupational Therapy Association [AOTA], 2017). Occupational therapy practitioners utilize occupations therapeutically to enable participation in life for people, groups, and populations (AOTA, 2020). The successful transition from student to novice practitioner requires students to integrate both core concepts and threshold concepts of the profession during their professional education (Hooper et al., 2015; Price et al., 2021). Core concepts of occupational therapy are the building blocks that create students' base knowledge while threshold concepts take that learning to a transformative level of understanding (Meyer & Land, 2003; Rodger et al., 2015). Threshold concepts within a discipline should have an irreversible nature, be transformative, contain troublesome elements that are conceptually challenging, develop a bond with the profession, and unlock other concepts (Meyer & Land, 2003; Rodger et al., 2015). Student understanding of occupation-centered practice should be integrated across the curricula to elevate student understanding of these concepts (Hooper et al., 2015; Price et al., 2021). The purpose of this study was to evaluate the use of the Occupation Centered Intervention Assessment (OCIA) as an educational tool to increase student understanding of occupation-centered practice as a threshold concept and to report the inter-rater reliability (IRR) for the newest version of the OCIA (Jewell et al., 2022).

The Subject-Centered Integrative Learning Model (SCILM) provides one framework available for educators to increase the explicit use of occupation in the curriculum (Hooper et al., 2020). Instructors can utilize principles from the SCILM to connect course topics to the occupational threshold concepts, ultimately facilitating students' internalization of these concepts (Hooper et al., 2015). Students who have internalized the threshold concepts of occupation, client-centered practice, and occupation-centered theories are better able to integrate these concepts during their experiential coursework (Kaelin & Dancza, 2019; Price et al., 2017). Students and novice practitioners who have not achieved this level of integration tend to use a more fragmented approach when working with clients (Jones et al., 2022; Price et al., 2017). Unfortunately, students frequently experience a practice gap between the occupation-centered theories taught in educational programs and clinical practice when they transition to their experiential coursework making the integration of threshold concepts even more difficult (Jones et al., 2022; Main et al., 2021; Vermaak & Nel, 2016).

This practice gap has developed over time due to implementation barriers of occupation-centered practice. These external barriers include institutional restrictions, financial limitations, limited resources, environment, and time constraints (Murray et al., 2015; Tommaso et al., 2019). Additional internal barriers to occupation-centered practice use by novice practitioners and students include occupation as a source of professional tension and the cognitive load of using occupation-centered practice (Jones et al., 2022). During their experiential coursework, students are frequently overly focused on the specific deficit, disease, or disability and miss what is important to the client (Jones et al., 2022; Tommaso et al., 2019; Turpin et al., 2020). Students often

have difficulty incorporating the client's values, beliefs, lifestyle, and previous roles into interventions due to a lack of confidence and not having previous scripts to draw from (Jones et al., 2022). Lack of experience and previous scripts leads students to only use their working memory which becomes overloaded and makes it difficult to process multiple pieces of information during interventions (Jones et al., 2022). In addition, fieldwork educators may not know how to articulate the language of the occupation-centered theories or professional reasoning to students increasing this gap (Towns & Ashby, 2014; Vermaak & Nel, 2016). Students report it is crucial to be self-directed in their learning and with the application of theoretical constructs of occupation in practice when completing their experiential coursework (Towns & Ashby, 2014). Teaching the use of the OCIA in the first semester of the curriculum provides a reflective tool for students to utilize throughout their didactic and experiential coursework to improve their development and implementation of occupation-centered interventions (Frigo et al., 2019; Jewell, Griswold, et al., 2021; Main et al., 2021; Wienkes & Jewell, 2021).

Using the OCIA as a Tool for Student Development of Occupation-Centered Practice

Educational programs that conceptualize occupation as a “way of seeing” in their pedagogical approach utilize subject-centered learning, threshold concepts, and transformative learning (Price et al., 2017). Engaging students in subject-centered learning teaches them complex ways of knowing and demonstrates to them that there is no one right approach; alternatively, there are several approaches to solving a problem (Hooper et al., 2015). Working to find ways to intersect occupation with topic areas within coursework helps students to begin to view the world from an occupational perspective (Hooper et al., 2015). Educators strive to develop their students' ability to practice professional reasoning and develop a sense of knowing related to the use of occupation-centered practice with clients, in practice settings, and in communities (AOTA, 2018; Hooper et al., 2018). Identifying ways to incorporate self-reflection into occupational therapy education and intersect occupation with course topics helps to generate professional reasoning and the application of occupation-centered practice (Knightbridge, 2019; Turpin et al., 2020). Occupational therapy educators can employ the use of the OCIA in student assignments to improve student professional reasoning, self-reflection, and occupation-centered practice (Frigo et al., 2019; Jewell, Griswold, et al., 2021). Furthermore, the importance of using robust assessments in educational programs to evaluate students' knowledge of occupation in practice as part of the curriculum remains paramount to solid pedagogical methods (Grajo & Gutman, 2020). Educators can utilize assignments involving the OCIA as part of this evaluation process.

Occupation-Centered Intervention Assessment

The OCIA was created as a self-reflection tool and assessment for students, practitioners, and educators to evaluate the level of occupation-centeredness of an intervention and help bridge the gap between threshold concepts learned and practice (Jewell et al., 2022). Students can evaluate therapeutic interventions for ecological validity, client-centeredness, and the use of occupation through self-reflection with the OCIA (Jewell et al., 2022). These constructs are scored on a four-point scale under three continua: personal relevance, contextual relevance, and occupational relevance

(Jewell et al., 2022). Each continuum has an individual score, and those scores are added together for a total score. An overall score of 3-5 indicates the intervention is mostly focused on body functions, a total score of 6-9 indicates the intervention is mostly focused on performance skills, and a total score of 10-12 indicates a focus on occupation (Jewell et al., 2022). Generally, higher OCIA scores reflect interventions that are more occupation-centered and utilize higher levels of occupation-centered reasoning. A primary use of the OCIA is the integration of the tool into occupational therapy education programs to promote self-reflection, professional reasoning, and occupation-centered practice (Jewell et al., 2022). Psychometric properties for the OCIA have been established for use with students and practitioners in a variety of clinical settings, with sound psychometric properties for validity, utility, and reliability (Jewell et al., 2016; Jewell, Burkley et al., 2021; Jewell, Griswold et al., 2021; Jewell & Pickens, 2017; Hinkley et al., 2021; Main et al., 2021; Wienkes et al., 2021).

OCIA IRR was initially established with second-year graduate occupational therapy students through standardized intervention observations of physical rehabilitation interventions, with adequate inter-rater reliability ($\alpha=0.756$; Jewell & Pickens, 2017). Revisions were made to the OCIA schematic, rating scale, and manual improving the clarity and ease of scoring, contextual descriptions, counting of adaptations made to the environment, and requiring personal relevance. A subsequent study demonstrated improved OCIA IRR to $\alpha=0.856$ (Jewell, Burkley, et al., 2021). The current study examined the use of the OCIA in student assignments while simultaneously establishing the IRR of the OCIA using the newly revised four-point scale, updated schematic, and the assessment manual. Specifically, the research questions were:

1. How can data analysis, from an assignment using the OCIA to score standardized physical rehabilitation intervention videos, be used to assess the understanding of occupation-centered practice core concepts?
2. What is the inter-rater reliability of the OCIA (2022 Version) with first-year occupational therapy students observing standardized video-recorded physical rehabilitation treatment interventions?

Methods

Design

This study utilized a broad methodological approach to analyze student ratings of observed occupational therapy interventions to determine the agreement among student raters. The study received Institutional Review Board approval and was exempted due to use of deidentified educational materials.

Sample

The sample included 121 deidentified course assignments from an introductory occupational therapy course at a midwestern university in the United States. The course presented the history and philosophical base of the profession of occupational therapy, introduced occupation as a threshold concept, and provided in-depth teaching of the Occupational Therapy Practice Framework (AOTA, 2020). During the course, the

students studied various theories of occupation, domains of practice, and current trends in the profession. Students participated in training on the OCIA and completed an assignment using the OCIA to assess their knowledge of topics covered during the first semester course.

OCIA Assignment

The students watched 10 standardized adult physical rehabilitation intervention videos from the International Clinical Educators (ICE) library with accompanying written case scenarios (see Figure 1 for an excerpt from the assignment; ICE Inc., 2021). The students individually rated each video intervention and case study using the OCIA schematic for personal, contextual, and occupational relevance resulting in three continua scores and an overall score. Students were graded for participation and not accuracy on the assignment. The purpose of the OCIA is for self-reflection to increase student understanding of the complexity of occupations and increase the students' ability to rate interventions for their level of occupation-centeredness and not to create a right or wrong scenario for clinical practice (Jewell et al., 2022).

Procedures

The class instructors included the assessment developer and three additional, licensed occupational therapists with significant training in the use of the OCIA. The class included a 3-hour online interactive lecture on the development, purpose, utilization, scoring, psychometric properties, and research and clinical uses of the OCIA. Students had access to the OCIA manual and watched the 3-hour lecture either synchronously or asynchronously. As part of the learning process, the students practiced scoring the OCIA after watching four adult physical rehabilitation videos from the ICE library (ICE Inc., 2021). Each video included an accompanying written case study. Students who watched the lecture synchronously attended virtual small group breakout sessions and were provided an opportunity to ask questions and discuss the intervention and scoring process. Students watching asynchronously were provided with opportunities to contact the instructors with questions regarding the OCIA use and scoring or watch the recorded lecture with their peers. Following the OCIA interactive lecture, the students independently completed the course assignment.

The first author de-identified and entered all data into an Excel document. A biostatistician (third author) entered the de-identified data from the Excel document into the Statistical Package for Social Sciences (SPSS) program to analyze the data for the students' mean scores, standard deviations, and IRR of the OCIA.

Figure 1

Excerpt from the OCIA Assignment with Answers Included

Occupation-Centered Intervention Assessment (OCIA) Assignment

Please read the case description, watch the video from the ICE Learning Center, and then write in your scores for each continuum of the OCIA and the total score. You may use the OCIA and your notes to help with scoring. This assignment must be done independently, and you may **not** discuss your scores with anyone. When you finish, please upload your assignment to the Blueline.

<http://www.icelearningcenter.com/ice-video-library/>

Click "Log In"

Select: XXXXXX University

Password / Access Code = XXXXXX

Select the videos under Video Title or use the link

Video #	Section	Video Title	Start/Stop Time	Description	OCIA Scores	
9	Nervous System: Stroke (CVA)	IADLs Sweeping the Sidewalk <u>IADLs: Sweeping the Sidewalk - XXX University (icelearningcenter.com)</u>	Entire Video 2:10	Clint is a 59-year-old male stroke survivor who is receiving therapy at an outpatient therapy clinic for ongoing difficulty utilizing his hand. He told his OT that he feels like he is not helping around the house enough and would like to get back to doing more. His OT asked what sort of tasks he took care of prior to his stroke. He told her he swept out the garage and raked the leaves. His OT asked him if he would like to work on sweeping to be able to continue to strengthen his hand and contribute to the care of his home and he told her he would. They decided together to take a broom out to the front of the therapy clinic and work on sweeping the walk and work on increasing the functional use of his hand for his therapy intervention.	Personal	4
					Contextual	3
					Occupational	4
					Total	11
10	Musculoskeletal: Hip	Hip Fracture Part 2: Ambulating to the Commode <u>Hip Fracture Part 2: Ambulating to Commode – XXX University</u>	Partial video Beginning to 1:25	Jamie is a 75-year-old woman who is at a skilled nursing facility for rehabilitation following a hip fracture with an ORIF. She recently had her weight-bearing status increased. The OT and her discussed her	Personal	4
					Contextual	3
					Occupational	3
					Total	10

Data Analysis

Student Learning

The student mean scores and standard deviations were calculated for each of the continua and compared with the instructors' scores (first and second authors; see Table 1). The additional data obtained provided information for the instructors to evaluate which constructs and case scenarios the students had more difficulty comprehending. When reviewing the video interventions, case scenarios, and scores from Table 1, the instructors identified which case scenarios required further development and which threshold concepts needed further instruction.

Inter-Rater Reliability (IRR)

The OCIA IRR was calculated for first year entry level occupational therapy student raters' assessment of video physical rehabilitation interventions utilizing the revised 4-point scale, updated schematic, and assessment manual. A commonly used measure of agreement is Kendall's W. Kendall's W gives the degree of agreement among the ranks assigned by different judges/raters in assessing certain objects (Field, 2005). However, the authors did not use this statistical method because it requires the outcome measures must be rated as ranks. Instead, Krippendorff's alpha was adopted as the measure of concordance as it is considered the standard reliability measure that could apply to datasets with any number of judges/raters, presence, or absence of missing data, regardless of level of measurement (nominal, ordinal, interval, or ratio) and sample sizes (Hayes & Krippendorff, 2007). Furthermore, Krippendorff's alpha was chosen as the statistic for this study, because it works well with observational data and allowed for flexibility in the number of raters and categories (Hayes & Krippendorff, 2007). The Statistical Package for Social Sciences (SPSS) software was utilized to compute Krippendorff's alpha to determine the IRR of each continuum and the total.

Findings

A convenience sample of 113 females and 10 males in their first semester of an entry-level occupational therapy doctorate program at a midwestern university completed an educational assignment to improve understanding of occupation-centered practice. The students' average age was 24 years, and participants included those who were Asian (9%), Black (3%), Hispanic (15%), and non-Hispanic White (72%). The student cohort included an on-campus pathway (n = 62) and three hybrid distance pathways (n = 61). Two assignments were not included in the final analysis due to students withdrawing from the program.

IRR for the OCIA overall score indicated good agreement ($\alpha = .864$). Individual continua scores were: personal relevance ($\alpha = .844$), contextual relevance ($\alpha = .705$), and occupational relevance ($\alpha = .643$) among raters (see Table 2). To explore the data further the authors calculated the mean and standard deviation for each intervention video and identified which videos had the greatest variability with standard deviations. Table 1 shows the instructors' scores for each video, the students' mean scores, and the students' standard deviations from the mean for each of the ten videos for each continuum and the total OCIA scores.

Table 1

Instructors' Score, Student Means, and Student Standard Deviation from the Means for Each Case Scenario

Video	Personal Relevance		Contextual Relevance		Occupational Relevance		Total OCIA Score	
	IS	M (SD)	IS	M (SD)	IS	M (SD)	IS	M (SD)
1	2.00	2.13 (0.63)	2.00	1.63 (0.65)	4.00	3.34 (0.83)	8.00	7.10(1.39)
2	4.00	3.98 (0.13)	3.00	3.02 (0.20)	4.00	3.96 (0.24)	11.00	10.97 (0.29)
3	3.00	3.00 (0.45)	2.00	2.41 (0.67)	4.00	3.67 (0.55)	9.00	9.08 (1.06)
4	1.00	1.94 (0.50)	1.00	1.17 (0.51)	1.00	1.10 (0.44)	3.00	4.21 (1.13)
5	2.00	2.07 (0.52)	1.00	1.15 (0.42)	2.00	1.99 (0.09)	5.00	5.21 (0.72)
6	4.00	3.99 (0.09)	4.00	3.99 (0.09)	4.00	3.89 (0.42)	12.00	11.88 (0.46)
7	2.00	2.02 (0.30)	2.00	2.47 (0.59)	4.00	3.52 (0.76)	8.00	8.02 (1.09)
8	4.00	3.99 (0.09)	2.00	2.58 (0.60)	4.00	3.94 (0.23)	10.00	10.51 (0.65)
9	4.00	3.98 (0.16)	3.00	2.91 (0.45)	4.00	3.78 (0.47)	11.00	10.66 (0.76)
10	4.00	3.31 (0.62)	3.00	2.55 (0.68)	3.00	3.31 (0.62)	10.00	9.17 (1.15)

Note: IS = Instructors' Score; M = Mean; SD = Standard Deviation

Table 2

Inter-rater Reliability of the OCIA for Student Raters

	Krippendorff's Alpha	95% Confidence Interval	
		Lower Bound	Upper Bound
Video1 (PR, CR, OR)	0.4895	0.4789	0.5000
Video2 (PR, CR, OR)	0.8706	0.8633	0.8780
Video3 (PR, CR, OR)	0.4770	0.4665	0.4877
Video4 (PR, CR, OR)	0.5329	0.5200	0.5457
Video5 (PR, CR, OR)	0.6102	0.5975	0.6227
Video6 (PR, CR, OR)	0.0227	-0.0325	0.0778
Video7 (PR, CR, OR)	0.5128	0.5021	0.5241
Video8 (PR, CR, OR)	0.8903	0.8860	0.8947
Video9 (PR, CR, OR)	0.6815	0.6717	0.6914
Video10 (PR, CR, OR)	0.2318	0.2189	0.2447
PR	0.8442	0.8414	0.8470
CR	0.705	0.7008	0.7091
OR	0.6434	0.6383	0.6483
Total	0.8642	0.8621	0.8663

Note. CV= contextual relevance; OR= occupational relevance; PR= personal relevance.

Discussion

This study had a two-fold purpose, to a) use the OCIA to evaluate student learning of core occupation-centered practice principles and b) evaluate the IRR of the OCIA with first year occupational therapy students utilizing the newest 4-point scale. The instructors were able to gauge the students' understanding of the key concept of occupation-centered practice presented during the course by analyzing data from the study. The IRR for the OCIA has previously been established with student raters, but not with the updated scoring descriptors and scale.

In previous studies, total OCIA scores demonstrated good agreement ($\alpha = 0.756$ and $\alpha = 0.856$) among student raters (Jewell & Pickens, 2017; Jewell, Burkley, et al., 2021). After revision of the OCIA to a four-point scale, the overall IRR with first year students slightly increased to ($\alpha = .864$). IRR among the individual continua were as follows. The previous OCIA version had good agreement for contextual relevance ($\alpha = .835$) while the current study demonstrated moderate agreement ($\alpha = .705$) among raters (Jewell, Burkley, et al., 2021). The lower score of contextual relevance in the current study may demonstrate the difficult nature of understanding ecological validity of interventions in the early stages of occupational therapy education, or it may indicate the need to further develop the written case scenarios to provide more in-depth information regarding the intervention context. Occupational relevance in the most recent OCIA version demonstrated good agreement ($\alpha = .809$) but displayed low agreement ($\alpha = .643$) in the current study, which was surprising (Jewell, Burkley, et al., 2021). This shift may be due to students having difficulty conceptualizing how occupation can be used as a therapeutic modality, the need for increased clarity in the instructors' teaching materials, increased time and processing needed on the Occupational Therapy Practice Framework, or due to the increased virtual nature of learning due to the global pandemic (opposed to face-to-face learning). Although most of the students completed the OCIA training synchronously, all students completed the training virtually via Zoom due to the global pandemic. It was reasonable to conclude that first semester students may not yet have mastered the concept of occupational relevance at this point in their education. Therefore, further instruction on the concept of occupation is recommended throughout occupational therapy curricula, from didactic coursework through experiential learning. Finally, the previous OCIA version had moderate agreement for personal relevance ($\alpha = .705$) while the current study demonstrated good agreement ($\alpha = .844$) among raters (Jewell, Burkley, et al., 2021). This was also surprising as rating the client-centeredness of an observed intervention is difficult, as meaning and purpose are not tangible or visible constructs. It is possible that students were able to depict the personal relevance of the intervention more clearly due to the updated four-point scale and corresponding descriptors.

Educators' understanding of their students' ability to integrate threshold concepts as a way of thinking is important to evaluate throughout the curriculum to successfully advance students from information acquisition to a transformational level of understanding (Hooper et al., 2015; Price et al., 2021). Hooper et al. (2020) discussed the issue of "black box" learning in education identifying that in this type of learning, it is difficult to distinguish if you are accomplishing what was intended in the instruction.

Contrasting that with “glass box” learning, the educator can assess if established course learning objectives are met by students (Hooper et al., 2020). In “black box” learning, students can complete the tasks or procedures but do not yet have a deeper understanding of the underlying concepts (Hooper et al. 2020). Taking that information a step further, educators can create assignments that explore students’ level of understanding which can help to refine and focus instruction on concepts that may need additional cultivation (Hooper et al., 2015). Employing the use of the OCIA for an assignment on occupation-centered practice, the instructors were able to measure the students’ understanding of occupation-centered interventions as part of the theoretical foundations of the profession presented during the course. This information could then guide instructional approaches by targeting areas that are less understood by the students.

Implications for Occupational Therapy Education

Educators can use the OCIA as a tool to facilitate and progress student learning of threshold concepts throughout the occupational therapy curriculum (Wienkes & Jewell, 2021). The OCIA can help students to develop their professional identity, self-reflection skills, and eventually exercise occupation-centered reasoning during their experiential learning (Jewell, Griswold, et al., 2021). Reflection and intentionality are essential for teaching the threshold construct of occupation and the OCIA can be an assignment tool to help accomplish this objective. Students can identify and manipulate therapeutic elements of treatment interventions and break them into concrete categorizations using the OCIA to better understand occupation-centered practice (Jewell et al., 2022). Students are expected to exhibit skills in the first two levels of Bloom’s taxonomy when they transition from their undergraduate studies into their professional OT programs due to being presented with a significant amount of new information (Burwash et al., 2016). During these early foundational courses, the OCIA can serve as a scaffolding on which to begin to build the concept of occupation-centered practice (Jewell et al., 2022). As the students advance through the curriculum, they should move up Bloom’s taxonomy and begin to initiate the application, analysis, and evaluation of more complex threshold concepts (Burwash et al., 2016).

Using the OCIA in an assignment, students watched video recorded treatment interventions and were allowed the opportunity to critically evaluate treatment interventions for client-centeredness, ecological validity, and the use of occupation. The OCIA gave the students a frame of reference to critically appraise a treatment intervention for its level of occupation-centeredness. It further provided a self-reflection tool for students to deconstruct the interventions into concrete categories that helped them to identify patterns that affect occupation. The OCIA schematic is a visual for the OCIA that is easy to use and helps the students break down an intervention into parts and develop a deeper understanding of occupation-centered practice (Jewell et al., 2022). With practice, the use of the OCIA becomes a way of thinking about interventions and is internalized, no longer requiring the use of the schematic. Experienced therapists can view interventions through an occupational lens due to already having scripts stored in their long-term memory allowing them to use short-term memory to make judgments during occupation-based treatment more quickly (Jones et

al., 2022). Students who have not yet acquired occupation as a “way of seeing,” and who do not yet have established scripts in their long-term memory, struggle to identify these areas and apply concepts in practice (Jones et al., 2022; Price et al., 2017). The students in this study were in their first semester of professional school, so they were not expected to have mastery of the threshold concept of occupation-centered practice. The authors were able to discern, through data analysis, which areas may need more focus and increased attention during future coursework. By looking deeper into the specific videos at the mean scores and standard deviations, the authors analyzed the specific case scenarios where students had more difficulty identifying key concepts of occupation-centered practice. The use of the OCIA in assignments allowed the students to further understand the complexity of occupation while informing the educators where to increase focus for future instruction.

Limitations and Future Research

Although the students were able to identify aspects of occupation-centered practice during actual treatment interventions using the OCIA in an assignment, improvements to the process could be made with future assignments. The students were provided a 3-hour lecture covering the development, psychometric properties, use, and scoring of the OCIA, however, there could have been increased practice time to ensure accurate use of the assessment. The students watched treatment interventions in videos which makes it more difficult to discern the meaning and purpose of an intervention than if they were to provide interventions to actual clients (Bennett et al., 2017; Hung et al., 2021; Jewell et al., 2022). This study cannot be generalized to all students because it involved only first-semester students at one university. Understanding of the concept of occupation-centered practice across the didactic and experiential curriculum could further be explored within structured assignments at different levels of Bloom’s taxonomy. Future research should look at longitudinal use of the OCIA during assignments throughout the curriculum and its effect on student experience during experiential coursework. This assignment could be used for future studies as a gold standard to compare student scores to scores from experienced therapists, advanced students, and therapists from various settings.

Krishnagiri et al. (2017) stressed the importance of making occupation more explicit in the occupational therapy curriculum and during assignments. Using the OCIA as a self-reflection tool for students is an explicit way for students to connect occupation with treatment interventions and increase occupation-centered reasoning (Jewell, Griswold, et al., 2021). In the study by Jewell, Griswold, et al., (2021) students utilized the OCIA to assess an intervention they had completed during their experiential coursework and were able to analyze the use of an occupation-centered approach and identify specific areas of improvement. Experiential coursework offers a rich opportunity for the use of the OCIA to help students to integrate an occupational lens into their interventions and apply threshold concepts to clinical applications. In addition, students could utilize the OCIA to analyze their own occupations to better understand the components of occupation prior to assessing others. Utilizing the OCIA during student research projects presents another opportunity for growth in professional reasoning.

The students in this study mostly executed the first two levels of Bloom's taxonomy by being able to access knowledge and comprehension previously learned and applying it when rating the interventions during the assignment (Jensen & Mostrom, 2013). They did, however, begin to apply the fourth level of analysis when deconstructing the intervention into the separate continua (Jensen & Mostrom, 2013). The OCIA could be integrated throughout the curriculum to promote higher-order learning through analysis, synthesis, and evaluation eventually promoting increased levels of professional reasoning (Jensen & Mostrom, 2013). Assignments throughout the curriculum could be written based on the expected stage of learning and advanced through Bloom's cognitive domain as the students move forward in their programs and their understanding of the concept of occupation.

Conclusion

Understanding occupation as a threshold concept is essential for occupational therapy students to acquire during their professional education to enter practice valuing occupational therapy's unique identity (Hooper et al., 2015; Price et al., 2021). Finding ways to make occupation central and explicit during assignments will help students to be able to integrate this threshold concept into practice (Hooper et al., 2015). The OCIA can be utilized in many ways in education as a tool for both educators and students to increase occupation-centered practice through reflection. The OCIA has been researched in multiple treatment settings and with students and has been shown to be a valid and reliable self-reflection tool to improve occupation-centered reasoning (Frigo et al., 2019; Main et al., 2021). Future research involving the OCIA in assignments within various stages of the curriculum is warranted to increase the value of this tool in education.

References

- American Occupational Therapy Association. (2017). Philosophical base of occupational therapy. *American Journal of Occupational Therapy*, 71(2). <https://doi.org/10.5014/ajot.2017.716S06>
- American Occupational Therapy Association. (2018). Philosophy of occupational therapy education. *American Journal of Occupational Therapy*, 72(Sup. 2), 72(1). <https://doi.org/10.5014/ajot.2018.72S201>
- American Occupational Therapy Association. (2020). Occupational therapy practice framework: Domain and process (4th ed.). *American Journal of Occupational Therapy*, 74(Sup. 2), 1-87. <https://doi.org/10.5014/ajot.2020.74S2001>
- Bennett, S., Rodger, S., Fitzgerald, C., & Gibson, L. (2017). Simulation in occupational therapy curricula: A literature review. *Australian Occupational Therapy Journal*, 64, 314-327. <https://doi.org/10.1111/1440-1630.12372>
- Burwash, S., Snover, R., & Krueger, R. (2016). Up Bloom's pyramid with slices of Fink's pie: Mapping an occupational therapy curriculum. *Open Journal of Occupational Therapy*, 4(4), 1-8. <https://doi.org/10.15453/2168-6408.1235>
- Field, A.P. (2005). Kendall's Coefficient of Concordance. In B.S. Everitt & D.C. Howell, (Eds.), *Encyclopedia of statistics in behavioral science – Volume 2* (pp. 1010-1011). John Wiley & Sons, Ltd.

- Frigo, N., Hanneman, E., Kashale, A., Sutton, M., Wright, E., & Jewell, V.D. (2019). Utility of the Occupation-Centered Intervention Assessment for occupational therapy level I fieldwork. *International Journal of Practice-Based Learning in Health and Social Care*, 7(1), 64-74. <https://doi.org/10.18552/ijpblhsc.v7i1.510>
- Grajo, L., & Gutman, S. (2020). Outcomes of higher education and occupational therapy. In S.D. Taff, L.C. Grajo, & B.R. Hooper (Eds.). *Perspectives on occupational therapy education: Past, present, and future* (pp. 75-93). SLACK.
- Hinkley, E., Leach, C., Jewell, V., & Wienkes, T. (2021). Utility of the Occupation-Centered Intervention Assessment in pediatric occupational therapy practice. *Journal of Occupational Therapy, Schools, and Early Intervention*, 15(3), 302-313. <https://doi.org/10.1080/19411243.2021.1975603>
- Hayes A. F. & Krippendorff, K. (2007). Answering the call for a standard reliability measure for coding data. *Communication Methods and Measures*, 1(1), 77-89. <https://doi.org/10.1080/19312450709336664>
- Hooper, H., Krishnagiri, S., Price, P., Taff, S., & Bilics, A. (2018). Curriculum-level strategies that U. S. occupational therapy programs use to address occupation: A qualitative study. *American Journal of Occupational Therapy*, 72(1), 7201205040p1–7201205040p10. <https://doi.org/10.5014/ajot.2018.024190>
- Hooper, B., Mitcham, M., Taff, S., Price, P., Krishnagiri, S., & Bilics, A. (2015). Energizing occupation as the center of teaching and learning. *American Journal of Occupational Therapy*, 69(Supple. 2), 6912360010. <https://doi.org/10.5014/ajot.2015.018242>
- Hooper, B., Molineux, M., & Wood, W. (2020). The Subject-Centered Integrative Learning Model: A new model for teaching occupational therapy's distinct value. *Journal of Occupational Therapy Education*, 4(2). <https://doi.org/10.26681/jote.2020.040201>
- Hung, C., Ho, T., & Lin, C. (2021). Investigating the effectiveness of using a situated simulation-based program to improve occupational therapy students' interactions and observation skills with children. *Occupational Therapy International*, 2021, 1698683. <https://doi.org/10.1155/2021/1698683>
- International Clinical Educators Inc. (2021). *ICE video library*. <https://www.icelearningcenter.com/ice-video-library>
- Jensen, G. & Mostrom, E. (2013). *Handbook of teaching and learning for physical therapists* (3rd ed.). Butterworth-Heinemann, Elsevier Inc.
- Jewell, V.D., Burkley, J., Wienkes, T. & Kaufman, T. (2021). Establishing inter-rater reliability of the Occupation-Centered Intervention Assessment for student observation of rehabilitation interventions. *Journal of Occupational Therapy Education*, 5(4). <https://doi.org/10.26681/jote.2021.050411>
- Jewell, V.D., Griswold, L.A., & Phillips, S. (2021). Supporting the professional reasoning of students from fieldwork to practice. *Journal of Occupational Therapy Education*, 5(4), 1-19. <https://doi.org/10.26681/jote.2021.050412>
- Jewell, V. & Pickens, N. (2017). Psychometric evaluation of the Occupation-Centered Intervention Assessment. *OTJR: Occupation, Participation and Health*. 37(2), 82-88. <https://doi.org/10.1177/1539449216688619>

- Jewell, V. D., Pickens, N. D., Hersch, G., & Jensen, G. (2016). An Exploration into occupation-centered practice in skilled nursing facilities. *Physical & Occupational Therapy in Geriatrics*, 34(1), 43-56.
<https://doi.org/10.3109/02703181.2015.1114062>
- Jewell, V.D., Wienkes, T., & Pickens, N. (2022). *The Occupation-Centered Intervention Assessment: A reflection tool for occupation-centered practice*. AOTA Press.
- Jones, K., Schell, B.B., Neville, M., & Pickens, N.D. (2022). Novice occupational therapy practitioners; use of occupation in practice: A scoping review. *Occupational Therapy in Health Care*, 1-20. <https://doi.org/10.1080/07380577.2022.2025513>
- Kaelin, V., & Dancza, K. (2019). Perceptions of occupational therapy threshold concepts by students in role-emerging placements in schools: A qualitative investigation. *Australian Occupational Therapy Journal*, 66, 711-719.
<https://doi.org/10.1111/1440-1630.12610>
- Knightbridge, L. (2019). Reflection-in-practice: A survey of Australian occupational therapists. *Australian Occupational Therapy Journal*, 66(3), 337-346.
<https://doi.org/10.1111/1440-1630.12559>
- Krishnagiri, S., Hooper, B., Price, P., Taff, S., & Bilics, A. (2017) Explicit or hidden? Exploring how occupation is taught in occupational therapy curricula in the United States. *American Journal of Occupational Therapy*, 71, 7102230020.
<https://doi.org/10.5014/ajot.2017.024174>
- Main, E., Michaud, C., Kellar, A., Wondra, K., Jewell, V.D., Wienkes, T., & Coppard, B.M. (2021). The Occupation-Centered Intervention Assessment: Bridging theory and practice in fieldwork education. *Journal of Occupational Therapy Education*, 5(1). <https://doi.org/10.26681/jote.2021.050110>
- Meyer, J., & Land, R. (2003). *Threshold concepts and troublesome knowledge: Linkages to ways of thinking and practising within the disciplines* (pp. 412-424). University of Edinburgh.
- Murray, C., Turpin, M., Edwards, I., & Jones, M. (2015). A qualitative meta-analysis about challenges experienced in occupational therapy practice. *British Journal of Occupational Therapy*, 78(9), 534-546.
<https://doi.org/10.1177/0308022615586786>
- Price, P., Hooper, B., Krishnagiri, S., Taff, A., & Bilics, A. (2017). A way of seeing: How occupation is portrayed to students when taught as a concept beyond its use in therapy. *American Journal of Occupational Therapy*, 71, 7104230010.
<https://doi.org/10.5014/ajot.2017.024182>
- Price, P. Hooper, B., Krishnagiri, S., Wood, W., Taff, S., & Bilics, A. (2021). Toward robust assessments of student knowledge of occupation. *American Journal of Occupational Therapy*, 75(2), 7502205120.
<https://doi.org/10.5014/ajot.2021.038224>
- Rodger, S., Turpin, M., & O'Brien, M. (2015). Experiences of academic staff in using threshold concepts within a reformed curriculum. *Studies in Higher Education*, 40(4), 545-560. <https://doi.org/10.1080/03075079.2013.830832>
- Tommaso, A., Wicks, A., Scarvell, J., & Isbel, S. (2019) Experiences of occupation-based practice: An Australian phenomenological study of recently graduated occupational therapists. *British Journal of Occupational Therapy*, 82(7), 412-421.
<https://doi.org/10.1177/0308022618823656>

- Towns, E., & Ashby, S. (2014). The influence of practice educators on occupational therapy students' understanding of the practical applications of theoretical knowledge: A phenomenological study into student experiences of practice education. *Australian Occupational Therapy Journal*, 61, 344-352. <https://doi.org/10.1111/1440-1630.12134>
- Turpin, M., Fitzgerald, C., Copley, J., Laracy, S., & Lewis, B. (2020). Experiences of and support for the transition to practice of newly graduated occupational therapists undertaking a hospital graduate program. *Australian Occupational Therapy Journal*, 68, 12-20. <https://doi.org/10.1111/1440-1630.12693>
- Vermaak, M., & Nel, M. (2016). From paper to practice-academics and practitioners working together in enhancing the use of occupational therapy conceptual models. *South African Journal of Occupational Therapy*, 46(3), 35-40. <https://doi.org/10.17159/2310-3833/2016/v46n3a7>
- Wienkes, T.L., & Jewell, V.D. (2021). The way, why, and how of occupation-centered practice in the classroom. *Special Interest Section Quarterly Practice Connections*, 6(2), 11-13.
- Wienkes, T., Jewell, V.D., Chang, I., Quaid, S., & Watson, C. (2021). Clinical utility of the Occupation-Centered Intervention Assessment for occupational therapy mental health practice. *Annals of International Occupational Therapy*, 4(4), e210-e219. <https://doi.org/10.3928/2476122-20210601-04>