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Art in Occupational Therapy Education: An Exploratory Mixed-Methods Study of an Arts-Based Module

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Abstract

Art-based learning experiences have demonstrated a range of benefits, including improved observation skills and perspective taking. This article describes the effects of an art-based module in an entry-level curriculum for occupational therapy (OT) students. An exploratory pilot study investigated the feasibility of a group-administered visual art-based module for 20 first-year OT graduate students. Outcomes were evaluated using a mixed-methods approach that combined pre-post quantitative results from survey questionnaires and qualitative reflective essays. Pre- and post-surveys revealed significant changes in the students' perception regarding the benefits of art in OT curricula. The students' reflective essays on their learning described art-based sessions as: (a) opportunities to practice perspective shifting, (b) tapping into emotion, (c) exemplars of the therapeutic encounter, (d) integrative and "out of the box," and (e) impacting student roles and the classroom environment. Findings support art-based pedagogies to complement coursework to build an understanding of clients, creative thinking, and valued learning experiences. Learning partnerships between occupational therapy faculty, art museum educators, and artists can offer fruitful interdisciplinary learning experiences.

Keywords

art, arts and crafts, humanities, occupational therapy education

Cover Page Footnote

The Institutional Review Board (IRB) for the University of North Carolina at Chapel Hill approved the study. Students completed the IRB approved informed consent process. There were no external funds to support this study. Preliminary data from this study was presented at the American Occupational Therapy Association 2015 Annual Conference. We thank the students who participated in this study. We also thank artists Gloria Lightsey-Lewis and Alice McCall Smith for the valuable learning experiences given to the occupational therapy students.

Credentials Display

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Literature Review

The term art has many meanings. Most simply, art is “something that is created with imagination and skill and that is beautiful or that expresses important ideas or feelings” (Art, n.d.). Concepts in the category of art include skill, creativity, beauty, and feeling. Art has important meanings in occupational therapy (OT). One is the therapeutic use of art- and craft-making occupations. Another is the art of OT practice. This background will briefly describe these first two meanings and then focus on the use of art in OT education.

An important backdrop for exploring art in OT is the profession’s history. When the profession began a century ago, the act of “doing” arts and crafts was central to practice and education (Levine, 1987; Peloquin, 1996a, Peloquin, 1996b; Quiroga, 1995). The profession took inspiration from leaders such as Mary Reilly, who wrote “man, through the use of his hands as they are energized by mind and will, can influence the state of his own health” (1962, p. 2). Later, OT adopted a medical lens on occupation and intentionally distanced itself from arts and crafts to legitimize the science of practice in the context of reductionist paradigms (Levine, 1987). The interventions of many practitioners shifted the focus to remediating impairments in body structures and functions and skills training for basic activities of daily living (Shannon, 1977). An effort to appear high-tech in this era has contributed further to the demise of arts and crafts in practice (Harris, 2007). As arts and crafts receded as therapeutic occupations, particularly in medical model settings, they disappeared from curriculum

standards (Bathje, 2012). There are few examples of the use of art in any form in entry-level OT education today.

Another factor in this discussion of art is OT’s identity as an art and as a science (Rogers, 1983; Wood, 1995; Yerxa & Sharrott, 1986; Zemke, 2004). Rogers (1983) wrote that the “artistry of clinical reasoning is exhibited in the craftsmanship with which the therapist executes the series of steps that culminates in a clinical reasoning decision” (p. 615). Peloquin (1989) describes the art of OT as also the “capacity to establish rapport, to empathize, and to guide others to know and make use of their potential” (p. 221). Yet, the art of OT has been dropped from the American Occupational Therapy Association’s official definition (Peloquin, 1989). While scholars have used the term artistry in their descriptions of best practice (Rogers, 1983; Wood, 1996, 2004), a stronger influence has been the science-driven culture and reimbursement policy in the United States (Howard, 1991). Given the profession’s devalued historical stereotype of simply teaching basket weaving, there are status and financial risks for identifying essential parts of practice that are not informed by science (Levine, 1987; Shannon, 1977).

In OT education, art may be a useful pedagogy with which to teach important tenets of practice (Peloquin, 1996a, 1996b). As a biopsychosocial profession, OT requires a deep understanding of the values and beliefs of our clients, beyond simply “doing” occupation, to build partnerships with them in practice. Moreover, competence in the profession rests on the ability to consider varying perspectives on situations, and

importantly, to grasp the client's way of seeing things (Mattingly & Fleming, 1994). This capability requires that practitioners reflect on the nature and limitations of their own perspectives (Schön, 1983). Social science knowledge cannot sufficiently prepare a practitioner to enter the life-world of clients who have faced dashed hopes, traumatic losses, fear, and even catastrophe (Cassel, 1976; Mattingly & Fleming, 1994). Visual arts offer nonverbal ways of communicating information about the human condition that may offer insights about values, beliefs, and the lived experiences of clients that constitute the meanings of occupation.

At many universities, health disciplines called “medical humanities” and “health humanities” have emerged. For example, visual arts in professional education is used to develop clinical skills, including observation skills, critical thinking, perspective taking, and rapport building (Casey, 2009; Cassel, 1976; Charon, 2010; Gauferg & Williams, 2011; Ousager & Johannessen, 2010; Schaff, Isken, & Tager, 2011). This interest was spurred by studies indicating a decline in medical students' empathy during medical school (Hojat et al., 2009; Roberts & Noble, 2015). It has been suggested that learning through medical humanities improves patient care, as well as self-understanding and stress relief for physicians in training (Gaufberg & Williams, 2011; Hammer et al., 2011; Ousager & Johannessen, 2010; Perry, Maffulli, Willson, & Morrissey, 2011; Roberts & Noble, 2015). Museum-based experiences involving medical students and people

understanding and rapport (Roberts & Noble, 2015). Arts and humanities have also been used for interprofessional education experiences to build empathy, compassion, ethics, and skills for teamwork (Smith, Molineux, Rowe, & Larkinson, 2006).

Art-based education aligns with pedagogies used in OT that stress active learning, modeling of learning experiences, and integrating affective and cognitive learning (Peloquin, 1996b; Schaber et al., 2012; Schaber, 2014). Pedagogies not only convey information, but also teach how to approach new learning and what is important in the culture of the profession. Educational approaches also communicate the teachers' values and thinking about what is important in human transactions (Hooper, 2008). In accordance with this, the authors acknowledge that we value occupational therapists who navigate dimensions of human occupations and experiences that are not readily understood on the surface or through current social science.

Research in OT education is in its early phases of development, and therefore remains largely theoretical and descriptive (Hooper, King, Wood, Bilics, & Gupta, 2013). The small amount of literature about art in OT focuses on the use of arts, crafts, and creative occupations in practice (Perruzza & Kinsella, 2010).

Over the past 20 years, students in the University of North Carolina at Chapel Hill (UNC) master's of occupational therapy program have read narratives and heard from guest speakers who use art occupations therapeutically while living with a disability. The speakers' interpretations of the

value and meaning of artworks provide rich insights into inner selves, as well as the significance of aesthetics, context, and possibilities. These learning experiences of interaction with speakers are based on Deweyan pedagogy that incorporates active experience, inquiry, and social processes to promote habits of inquiry that integrate cognitive and affective domains (Dewey, 1938).

Two years prior to this study, an experience led by an educator at the Ackland Art Museum on the UNC campus was added to the course. Many students described it as a profound learning experience. Their responses echoed emerging evidence about the benefits of museum-based learning experiences for medical students, nurses, and OT students (Camic, Tischler, & Pearman, 2014; Cohen et al., 2006). These experiences have demonstrated a range of benefits, including increased observation skills and perspective-taking ability (MacDonnell & Macdonald, 2012). OT students' favorable responses to these experiences and the emerging evidence in literature inspired us to more systematically investigate art-based experiences in OT education (Fraser & al Sayah, 2011).

We sought to explore OT students' learning experiences from a 6-hr visual art module. The visual art module was part of a four-credit course for first-year master's level graduate students. Our rationale for using a mixed-methods approach incorporating quantitative surveys and a qualitative essay was to achieve a more comprehensive description of the students' views of the benefits of art in OT curricula. The aim of the quantitative component was to examine the change in the

students' perceptions of art in their learning experience before and after the art-based education intervention. It was hypothesized that the students' perceptions regarding the benefits of art in OT education would improve after the intervention. The qualitative research question was: What can students' reflections from three sessions of art-based learning tell us about art in OT education?

Method

This exploratory pilot study investigated the feasibility of a single-arm, group-administered, three-session visual art teaching module for 20 first-year master's students in OT. Using a before and after survey and a qualitative analysis of end-of-session reflective essays, intervention outcomes were evaluated using a mixed-methods approach.

Visual Art Module

The visual art module was part of an OT entry-level course titled Biomedical and Phenomenological Aspects of Illness and Disability. It occurred in the first unit, Multiple Perspectives on Illness and Disability, and was comprised of three sessions lasting 2 hr each. The first of three activities was a visit to the Ackland Art Museum on the UNC campus. During the 2-hr class session at the museum, the students participated in group discussions about four works of art, facilitated by author CA. The four works of art included: a seventeenth-century Dutch scene of an expansive church interior and people in it; a nineteenth-century French painting of Cleopatra contemplating suicide; a fifteenth-century Italian altarpiece from a Catholic church depicting Mary, Jesus, and four saints; and a fifteenth-century monumental Thai sculpture of Buddha. Taken together, they

presented varied styles, subjects, moods, materials, and time periods.

The students spent approximately the same amount of time discussing each of the four works of art. In each case, the discussion focused on the same series of questions that asked them to (a) note the work of art's visual characteristics, working as a group to produce a careful and thorough inventory; and (b) based on those visual characteristics and again working as a group, articulate an analysis of what they saw and postulate possible meanings. Author Carolyn Allmendinger then provided factual and contextual information about the works of art to answer the students' questions and to support or, if needed, contest their interpretations. Finally, the students were prompted to reflect on their own participation—whether they volunteered information readily, for example, or hesitated to speak up—and what types of visual characteristics they noticed early or later in the process.

The educator, author Carolyn Allmendinger, prompted the students to consider the difference between what they observe and what they infer; the varied perspectives that other students had on the same painting or sculpture; the effect of the artist's intention on the work's meaning; multiple meanings of the same scene, act, or object; and the importance of context to understand the work of art. This experience was designed to examine how experiences in many contexts, including encounters with fine art, can hone students' skills with observing, interpreting, and considering differing perspectives on the same work.

The second and third learning sessions for

this module were with two women with disabilities
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who engage in art-making occupations. Although neither identifies primarily as an artist, they have agreed to the use of this identity for this project. One of the artists, who has multiple sclerosis and depression, works with clay to express her personal aesthetic, explore and overcome fears, and find joy through creative and emergent processes of working with clay. She was trained as an occupational therapist in another country and has not practiced in 20 years. The second artist is educated as a chaplain. She creates mandalas each day as a meaningful occupation to self-assess her well-being as part of her self-health care routine. The process and product of making mandalas enables her to monitor, anticipate, reflect on, and overcome her challenges from bipolar disorder.

The second and third sessions each had three parts. They began with the artist's personal narrative, in particular, her social and occupational history into which chronic health conditions entered and changed that narrative. Then using photos and actual objects, the artists offered insights about how their art enables them to live well with a disability. In the final portion of each session, the artists led the students in working with clay and making mandalas to experience art making as both self-assessment and as a therapeutic occupation. The artists discussed what they experience when their creation does (and does not) express their ideas, how the work emerges in ways that surprise them, and the discoveries they have made about themselves through art occupations. The artists solicited conversation about the personal experiences of the students in the art-making activity as part of an unfolding learning process that

was infused with emotional content. Themes from the museum visit arose naturally, such as discoveries about differing meanings, points of view, intentions, and contexts for art making.

Pre and Postmodule Surveys

A premodule survey was administered to twenty students on the first day of the class. Eleven survey questions using a Likert scale captured the students' perspectives toward the learning model of visual art in OT education. The survey was re-administered at the end of the art-based sessions.

Reflective Essays

At the conclusion of the unit titled *Multiple Perspectives on Illness and Disability*, which included the art-based learning sessions, the students were asked to write a three- to five-page reflective essay that addressed (a) course content on living with chronic conditions and disabilities, (b) use of visual art in learning, and (c) personal growth as learners. In other words, the students were asked to address the content, pedagogical methods, and perceived personal learning outcomes associated with the unit. The reflective essay was a pass/fail assignment for which the students gained full credit by simply completing the assignment. We asked permission to analyze the essays after the students had received credit.

Data Analysis

The results of the premodule and postmodule surveys from the seventeen students who gave permission for their results to be used in the study were analyzed using SAS version 9.3. The quantitative responses were analyzed using paired t-tests to compare mean scores on the two administrations of the survey. Two-sided

significance tests were set at 0.05. To our knowledge, there has been no previous research in this area to indicate whether a small, moderate, or large effect size was likely. Since this was an exploratory pilot study, we applied a large effect size (0.8). Our power analysis yielded a greater than 80% power to detect such an effect for a sample size of seventeen in a pre-post design.

Qualitative data analysis of the students' reflective essays followed an inductive thematic approach adapted from Braun and Clarke (2006) and used coding strategies described by Saldaña (2015). Two coders, one occupational therapist and one museum educator (AM and CA), began building familiarity and understanding by independently re-reading the data and posing questions, such as "What is the student learning?" and "What terms do they use to describe the experience?" Multiple cycles of coding were undertaken to synthesize the data and search for themes, including first cycle descriptive, in vivo, and process coding and second cycle affective coding, including emotions coding and values coding. The coders came to consensus on major themes and collaboratively worked through additional data visualization and condensation processes. The coders examined relationships among the data by comparing participant accounts and narrative arcs, as well as re-contextualizing the data by applying the findings to goals of OT education.

Results

Pre and Postmodule Survey Results

Nineteen first-year OT graduate students completed the premodule surveys (response rate of

95%) and seventeen of them completed the post-art module surveys (response rate of 85%). The mean age of the participating students was 27.5 years of age (ranged from 22 to 39 years of age). The two completed premodule surveys without matching postsurveys were excluded in the analysis.

In response to the questions about their previous experiences of visual arts, seven students (41%) indicated they were “not at all or only slightly involved with visual art,” while 10 students (59%) indicated they were “moderately to very involved with visual art” for the premodule survey. For the postmodule survey, five students (29%) indicated “not at all or only slightly involved with visual art,” while 12 students (71%) indicated “moderately to very involved with visual art.”

Seventeen students provided answers to the seven prompts about their perceptions of whether visual arts should be used in OT curricula for critical thinking for both pre and postmodules. The students were asked to “select the response that best represents how you feel about whether visual arts should be used in OT curricula to teach (a) skills for assessment of clients in OT; (b) skills to communicate about clients and environments; (c) discrimination of observations and inferences about clients; and (d) alternative perspectives on clients and situations, about one’s own personal point of view, differing meanings of occupations for clients, and understanding of illness and disability experiences.”

The seven questions were placed on a 5-point rating scale ranging from *strongly disagree* (1) to *strongly agree* (5). For the premodule, the

about whether visual arts should be used in OT curricula to teach students for critical thinking was 26.8 (standard deviation [*SD*] = 3.9), while the postmodule mean was 28.6 (*SD* = 3.4). Although the difference between the premodule and postmodule responses was small, it is notable that the mean score for Question 5 (about one’s own personal point of view) increased from 3.76 to 4.29 (see Figure 1).

Seventeen students provided answers to the three questions about their perspectives about whether visual arts should be used in OT curricula for experiences for both pre- and post-art sessions. As summarized in Table 1, the premodule mean score of the students’ perceptions about whether OT class sessions should be used to make and discuss making art was 2.94 (*SD* = 0.97), while the postmodule mean was 4.29 (*SD* = 0.85) ($p < 0.05$). The mean score on the question about making art for a deeper understanding of creativity, self, and imagination was also significantly increased after completing art sessions ($p < 0.05$). For the question about whether it makes sense to discuss art in OT coursework, the postmodule mean score of 1.65 was significantly lower than the premodule mean of 2.18 ($p < 0.05$) (see Table 1). This prompt was stated in the negative, and thus the decrease from pre to postmodule scores reflected a significant increase in their support for art in their education. In the premodule survey, the students generally agreed or strongly agreed that because few future clients would be artists, art-based education experiences did not make much sense. However, this opinion of the value of arts-based education significantly changed after the module.

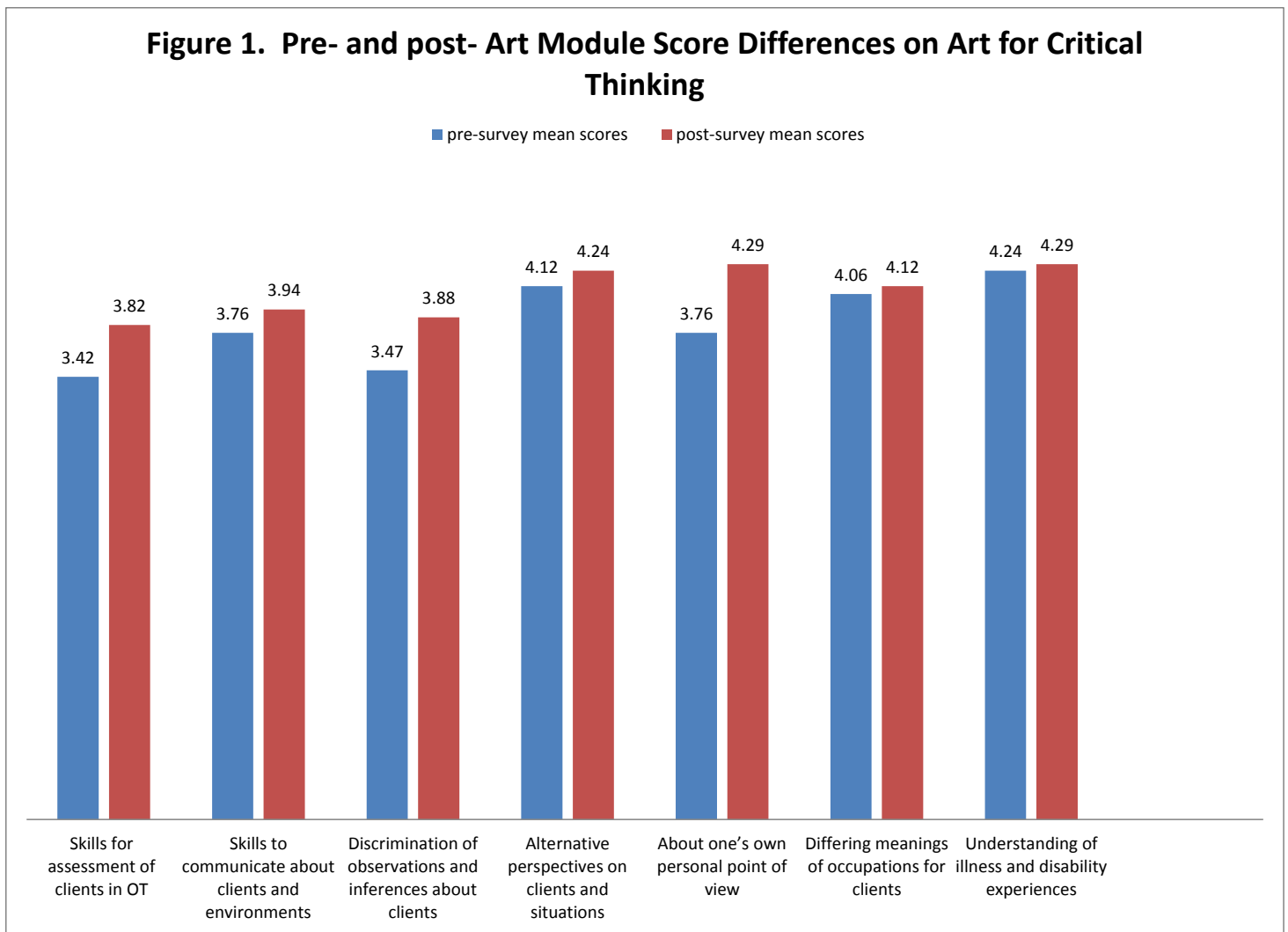


Figure 1. Pre and post-art module score differences on art for critical thinking.

Table 1

Pre- and Post-art Module Score Differences on Art as Experience

Items	Pre-art	Post-art	Differences
	(N = 17)	(N = 17)	(N = 17)
	Mean	Mean	
	(SD)	(SD)	
1. OT class sessions should be used to make and discuss making art.	2.94(0.97)	4.29(0.85)	1.3529 ^a
2. OT students should experience making art for a deeper understanding of creativity, self, and imagination.	3.41(1.06)	4.47(0.51)	1.0588 ^a
3. Because few of my future clients will be artists, it does not make sense to discuss art in OT coursework.	2.18(0.88)	1.65(0.61)	-0.5294 ^a

Note: 5-point rating scale ranging from (1) *strongly disagree* to (5) *strongly agree*

^ap < 0.05

Qualitative Results in Student Reflections

Five central themes arose in the student reflections: (a) art-based sessions are opportunities to practice perspective shifting, (b) art-based sessions tap into emotion, (c) art-based sessions are exemplars of the therapeutic encounter, (d) art-based sessions are integrative and “out of the box,” and (e) art-based sessions impact student roles and the classroom environment.

Art-based sessions are opportunities to practice perspective shifting. Several of the students noted that they initially felt skeptical about the art-based learning sessions. They questioned the relevance of the experiences. One student predicted that the museum visit would merely serve as a reminder to be observant. The students were surprised, however, by how engaging and memorable the sessions were. Viewing works of art prompted many discussions of how context influences interpretation. The students appreciated having the time and space to consider the varying contexts in which the art was produced and viewed by its original audiences, and how changing social, historical, and even spiritual climates might impact how an audience received and understood works of art. The students began to question their first impressions and to think more carefully about perception and interpretation. They described seeing parallels between the way works of art and clients tell stories—with special attention to the importance of looking beyond a client’s body or physical components and of considering the emotional and spiritual aspects of his or her situation. They acknowledged the significance of

might make sense of his or her experiences in the context of personal history or a life story. One of the students who was initially suspicious of the museum visit later wrote about how valuable she thought it was to reevaluate her thinking, and how she envisioned continuing self-reflective processes as essential components of her future therapy career.

This experience drove home the importance of perspective and communication and showed me just how difficult it is to create the shared understanding that is so vital to a successful medical team and therapeutic relationship. I think it also made me realize how much detail you can see if you simply take the time to look. For many of the paintings, I thought I had gotten the ‘gist’ of the painting after a brief minute or two of looking. But being encouraged to look further and spend time with the painting revealed many important details that ended up being central, or at least significant, to the painting’s meaning. I hope I will remember to take time with my future clients, making certain to pay attention to all the details of the evaluation and treatment process in order to capitalize on details I may have otherwise missed.

This student expressed surprise that there was more to be seen by looking longer, more carefully, or from various vantage points. Many of the students expressed that the art-based learning sessions experientially demonstrated that they could improve their observation skills with training and practice. Several wrote about the museum visit as a

social experience that highlighted the importance of multiple perspectives and different but also valid interpretations of the same information. Some of the students described frustration that there was no ultimate authority figure and no single answer, and that the artists were not present to answer questions. As one wrote, it caused the students to pause and consider how a medical team communicates and shares information in the effort to create a shared understanding in a clinical context. The students explained that learning in a social context was valuable and allowed them to reflect on the different life histories and perspectives that their peers brought to the conversation.

The students also reflected on how their own assumptions and knowledge base impacted their interpretive processes. Viewing or making art in a group with their peers allowed the students to see the range of reactions the class had to the same piece. Some of the students were less familiar with representations of famous people or religious iconography and were surprised when other students interpreted those pieces more readily. Other students pointed out things that they had not previously been able to see.

As I move forward from this unit, I feel even more strongly that humility is one of the most important qualities in an effective occupational therapist. Having the self-awareness to understand our own tendencies to want to quickly arrive a 'big picture' and to create our own stories, allows us to know when to humbly step back from our narrative creation and listen to others, allowing their story to unfold.

The students acknowledged that in their future OT careers they would end up facing unknowns; they commented that taking the time to learn more about a client's story and history would enhance their understanding of a clinical situation. One student wrote about the process of stepping back and taking a reflective pause to consider the co-constructive nature of therapeutic relationships. In general, they reflected that therapists should be as skillful in listening as in instructing. A therapist who can listen to alternative narratives is able to collaborate with, rather than attempt to dictate on, a client's trajectory.

Art-based sessions tap into emotion. The students felt that the art-based learning sessions were accessible in different ways than the standard lecture or discussion-based class sessions.

The inclusion of art highlighted a way to understand some things that cannot be put into words. Both creating art and perceiving others' art can be a highly emotional and evocative process, sometimes conjuring feelings that are subconscious or too complex to organize into verbal form. Emotions that are overwhelming or difficult to articulate can be transferred to a picture, colors, or shapes.

This student explained how the process of viewing and making art tapped into a level of emotion and creativity that is often challenging to access consciously. Many students wrote about the arts' ability to communicate through visual rather than verbal means, sometimes allowing entry into difficult or uncomfortable topics.

Art-based sessions are exemplars of the therapeutic encounter. The students related the art-making sessions to the concept of a therapeutic encounter, in which the guest artist facilitated the students' experiences of doing.

It was really important to also grasp the role of the facilitator in the art sessions. Had the facilitator been less passionate or simply bland, the activities would have been equally bland. The words chosen and even things like tone and pace led to a productive and useful session.

The students felt these sessions helped them develop a better understanding of OTs as facilitators of therapy sessions. The students said they learned key components for successful OT interventions by experiencing how the guest artist facilitators presented the art-making activities and the safe space that they created for the students to experience experimentation, trial, and error. As one student commented:

They had a way of leading their sessions that made art accessible to everyone. By emphasizing the process and being comfortable with varied outcomes, [the guest artists] facilitated successful and inspiring sessions.

The students thought that the art facilitation helped model the therapeutic process, and that the art activities themselves were meaningful tools they would keep in mind for possible interventions. They felt they gained a better appreciation for the importance of creating physical and emotional space for clients to express their feelings and

had gained increased confidence about their future roles as OT practitioners to create these spaces.

Art-based sessions promote learning that is “out of the box” and integrative. The art-based learning sessions helped students think about integrating different, sometimes unexpected, types of knowledge and information, taking students “out of the box,” a term they used in their reflections. As one student explained:

I experience the world more intuitively than intellectually. In spite of that, I initially undervalued the strengths in that type of understanding. [This module] has helped me to see the importance of unquantifiable information that doesn't fit neatly in a box.

The art-based learning also helped the students develop comfort with OT as a discipline that, in some views, operates “out of the box” by validating their perspective of OT as holistic, humanistic, and able to bridge medical science and lived experience. The students wrote about developing a better sense of what was distinctive about the OT field, as well as what connects it with other disciplines. The students expressed excitement at more clearly seeing parallels between the arts and humanities and developing a more nuanced appreciation of the complexity of the human experience. Viewing art, they wrote, made them think about topics such as body language and power structures and how they can envision applying this type of information into their approach to working with future clients.

I was also not expecting the way in which the narratives, the art experiences, the more academic and theoretical talks, and the poetry would work together to create a

unified academic experience for me as a student. I am more used to academic experiences that do not embrace subjectivity, and may even claim objectivity. I am used to embracing the phenomenological experience as more worthy of study and contemplation in my personal life. I enjoyed embracing subjectivity and the necessity of understanding different phenomenological experiences in an academic setting, and placing those understandings alongside biological or medical explanations as different and equally valuable ways of knowing and thinking—not just feeling. This more complicated way of knowing and thinking rings true and necessary for me in light of my understanding of what it means to be a competent professional in a human services field.

As this student described, viewing illness and disability as lived experiences helped him or her to contextualize a biomedical understanding. The students felt that the art-based learning reinforced their own ideas of the importance of understanding humans as feeling beings, offsetting the potential of biomedical perspectives to minimize emotional experience in favor of other forms of data. The students articulated the need to seek balance between art and science, between biomedical and phenomenological sources of information, and between client and therapist knowledge.

The themes noted above were surprisingly consistent in the students' reflective essays.

Although a few students acknowledged that not all clients might desire to participate in art-based occupations as therapeutic intervention, none of the students felt that art-based learning sessions had been unhelpful to their education. A few of the students commented that they had begun to incorporate more art-making into their own daily lives. The students felt the sessions were a valuable part of the course and should be continued.

Art-based sessions affect student roles and the classroom environment. The students discussed the art activities' effect on the classroom environment. Some of the students relaxed in new ways and become absorbed in the process of creating art, which in turn allowed them to listen and respond to one another in new ways.

The process of creating space through art was very meaningful to me because of the different perspective it gave me on the artistic process. During the class sessions, I allowed myself to just enjoy the experience of creating. I liked watching the clay walls become smooth and even under my hands, and I enjoyed listening to the discussion take place. It gave me space to think about the classroom in a much different way than I typically do. As I listened to my classmates discuss what it meant [to] them, I viewed them not just as classmates but as people with their own histories. We were collectively in a process of discovery, not just about ourselves but about each other. It was a place set apart and it allowed space to simply enjoy the process of learning.

The students noted appreciatively one effect of having their hands occupied: They were able to engage with one another without being expected to make eye contact or to display full attention through other typical behaviors. A student said he often finds sitting through classes somewhat tedious, but found himself better able to attend to the class discussion as he moved and manipulated materials. Another student mentioned that the hands-on work with materials increased her confidence when handling materials while she went on a Level I fieldwork mid-semester and assisted with bandaging, compression garments, and making splints.

The students also noted the interactive, hands-on nature of the art-based learning sessions. Learning about concepts experientially, they said, felt different and augmented how they tended to think about ideas abstractly. They appreciated the novelty and fun of the sessions and felt that they represented some of the most memorable moments in the course. Overwhelmingly the students wrote about how valuable they found the art-based sessions and how much they contributed to their learning. Again, they favored continuing the art-based learning sessions in future classes as a natural complement to other forms of learning in the curriculum.

Discussion

The integrated quantitative and qualitative findings of this study support the use of art-based pedagogies to complement coursework. The aim of the quantitative component was to examine the change in the students' perceptions of art in OT

art-based educational intervention. It was hypothesized that the students' perceptions regarding the benefits of art in OT education would improve after intervention. Indeed, on the survey, a significant change was found in the students' perceptions of art-based class sessions as positive experiences.

The favorable responses from the students about the value of arts in OT education are supported in theoretical and anecdotal literature about art in OT education (Peloquin, 1996b). This result supported our quantitative hypothesis, and the qualitative analysis of the reflective essays strengthened this finding about the value of arts in OT education. Analysis of the student essays, which comprised the qualitative arm of this study, revealed what they learned from the art-based module. In particular, the qualitative portion of this study explored: What can students' reflections from three sessions of art-based learning tell us about art in OT education?

The students' reflective essays conveyed that the art-based education (a) was an important opportunity to practice perspective shifting, (b) tapped into emotions, (c) exemplified the therapeutic encounter, (d) promoted learning that is “out of the box” and integrative, and (e) impacted student roles and the classroom environment.

Our findings align with literature about these themes of art-based learning in health professions. Art-based learning in health professions has been used to generate an understanding of differing perspectives (Casey, 2009; Cassel, 1976; Fraser & al Sayah, 2011; Gaufberg & Batalden, 2007; MacDonnell &

Macdonald, 2012; Naghshineh et al., 2008; Peloquin, 1996a). The ability to shift perspectives is a fundamental skill that underpins OT principles of client-centered services. In a landmark study of OT clinical reasoning, Mattingly and Fleming (1994) wrote: “The meaning that the patient makes of an illness enters directly into the therapeutic process. The therapists thus find themselves constantly confronted with the interpretive task of translating between their way of seeing and the patient’s” (p. 75). In delivery of care to people with complex occupational needs, there are typically multiple perspectives to be understood and incorporated into intervention, including those of family members and caregivers (Lawlor, 2003; Mattingly, 2010). The student essays revealed they experienced and they valued having practice with perceiving, shifting, and even adopting multiple perspectives.

That students described art as tapping into emotions was expected given the types of discussions during the art-based sessions. It may go without saying that art is a form of expression that can fill a void in our ability to use words to communicate feelings, experiences, and connections to each other. John Dewey, in his book, *Art and Experience*, posited “works of art are the only media of complete and unhindered communication between man and man that can occur in a world full of gulfs and walls that limit community of experience” (Dewey, 1934/2005). Art-based methods have been described as safe ways to access and discuss complex emotions for medical students by putting the focus on “the third thing,” the art object, rather than oneself (Gaufberg & Batalden, 2007). Quite possibly the use of art gave

permission to pay attention to and consider aspects of human experience that are not language based. Peloquin (1996b) argued for “art to enhance confluent learning,” integrating affective and cognitive experience because students who “ready themselves for any humanistic practice must learn to understand—that is, to think about *and* feel themselves into—the experiences of others” (p. 148). The students’ access to their own emotions during the art experiences in our study may relate to the literature supporting the use of art to build empathy in health care provider education (Casey, 2009; Cassel, 1976; Charon, 2010; Fraser & al Sayah, 2011; Gaufberg & Williams, 2011; George, Yang, Stuckey, & Whitehead, 2012; Peloquin, 1996a; Perry et al., 2011; Roberts & Noble, 2015; Schaff et al., 2011).

The students reflected on their art-based experiences as instructive as exemplars for therapy sessions they will conduct in the future. Likely, the students enjoyed and felt well facilitated in the art-based experience, and therefore they wished to be able to replicate key features that they themselves found particularly therapeutic. We acknowledge that the favorable comments by the students may have been based also on the teaching skills of the museum educator, former occupational therapist, and chaplain who had honed their skills over past sessions of teaching. While the students appreciated the facilitation, they conveyed that there is something inherent in the art-based learning beyond how well the activities were facilitated. Although the study did not focus on teaching students to use art therapeutically with clients, some

students expressed increased interest in the use of art as a therapeutic occupation in practice.

The arts-based learning experience that they described as “out of the box” appeared to affirm the students’ desires to relate their beliefs about themselves as whole people into their views of their clients. The students may have already been acculturated to delegitimize subjective and affective aspects of human experience, or be discreet about divulging their significance, a behavior coined as the “underground practice” (Mattingly & Fleming, 1994). Art-based learning seemed to give them permission to think about both the heart and the mind of practice, and to realize therapists can actually integrate biomedical and phenomenological ways of knowing (Turpin, 2007). Moreover, for some, the art-based unit kindled passions about becoming occupational therapists who can engage with clients through profound experiences and extreme challenges. It endorsed the use of creative thinking to assist clients to overcome occupational challenges.

Art-based learning created a classroom environment in which the students were able to engage in ways that facilitated their learning. The students favorably viewed the pedagogy of active learning that incorporated physical engagement with materials, walks through museum spaces, engaged inquiry, peer learning, affective and intellectual integration, and reflection on learning. In progressive education pedagogy, these are conditions that optimize learning (Dewey, 1938). Active and relational approaches to learning also align with pedagogies described as germane to OT

The students reported that art-based learning experiences offered accessible and valued opportunities to develop their abilities to understand others’ perspectives, access emotions, think creatively, and bridge ways of knowing. This perspective contrasts with the decline in the profession’s identity as an art and as a science and its use of art in practice and education. At the end of the module, the students expressed a view of art-making as a useful therapeutic tool that has a place in OT education and practice. Their comments aligned with OT scholars who have endorsed art-based learning but have not yet influenced current definitions of practice and education standards. The qualitative findings support use of active learning, inquiry, and social processes that are central principles of Deweyan pedagogy that has been applied in OT education (Coppola, 2013; Dewey, 1938).

Taken together, the qualitative and quantitative findings collectively affirm the notion that art-viewing and art-making activities served as a useful and valuable pedagogical method for building the clinical reasoning skills of first-year OT students. The statistical analysis serves as additional triangulation of the qualitative findings, and the qualitative findings helped to deepen our understanding of the survey results. The benefit of a mixed-methods approach in this context was that the students completed brief pre and posttests that enabled them to quickly self-assess changes in their learning, as well as provide useful feedback to the course instructors. The reflective essay assignment was already built into the syllabus. Securing permission to analyze the written reflections

allowed the researchers to further develop their understanding of how and why the unit was meaningful.

OT education programs may consider the benefits of learning partnerships with art museums. These partnerships align with trends in which universities are seeking to build interdisciplinary experiences for engaging arts, humanities, and health professions. At the same time, museums are developing creative programming to serve communities and students. This confluence of interests poses opportunities to investigate the nature and effects of these educational experiences. Our students' responses and our interdisciplinary collaborative learning through this research project reveal potential for such partnerships to grow to benefit students, faculty, clients, and communities.

It was the intent of this study to contribute to education research about using art in OT education, rather than to teach students to use art as therapeutic occupations. It is beyond the scope of this study to explore whether students' experiences of art influence their use of art in interventions for future clients. The main implication of this pilot study was to inform future research about art-based educational methods. To our knowledge, a study of this kind has not been previously undertaken. The favorable responses of the students who responded to the surveys and submitted their essay for analysis indicate that art-based OT education may be worthy of future larger studies of art in OT education.

Limitations

This study used a small sample size of 20 OT students in an educational program in the southeastern United States. Seventeen students

completed the anonymous pre and postexperience surveys, and 15 of those completed the narrative questions at the end of the postexperience survey. The reasons for not completing surveys are unknown and may have biased results toward favorable views of the art-based experience. The students may have felt the need to write favorably about the experience as part of a course assignment, despite the fact that the essay was ungraded. The design did not allow us to distinguish the key aspects of the intervention that most impacted student learning. Although conclusions are limited by the small sample size and some environmental and specific personal factors, such as cultural background, this pilot study contributes to our understanding of art as a useful therapeutic tool in OT education.

Future Study

Further studies are needed to confirm and expand the present findings for other contexts, on a larger scale, and potentially with multiple sites and various forms of art. Those studies could identify key ingredients of the experience, the optimal amount of time in the module, and which students appear to benefit most from these experiences. In other studies of this nature, there will be variations in the learning experience provided by local artists and art educators. Our central finding is that art-based experiences are feasible and important aspects of pedagogy for preparing occupational therapists. For OT to fully embrace its ethos as an art and as a science, the profession needs to continue to investigate and advance pedagogies that help students learn the art of practice.

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