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Abstract

This study explored the impact of teaching empathy to occupational therapy students through the close reading of literary narratives. The study defined empathy as a dynamic process involving Theory of Mind (ToM), emotional resonance, and empathy as a willful act. Empathy is an espoused value of occupational therapy challenged by the modern demands of the market-driven health care system, and research suggests reading literary narratives, or stories with qualities of literature, facilitates greater empathy. Prior studies have also indicated that practicing with greater empathy improves health outcomes and makes occupational therapy sessions more client centered. In this study, a quasi-experimental design was used on occupational therapy students (n = 31) in a graduate level rehabilitation course that involved the close reading, or critical reflection, of literary narratives to teach empathy. Close reading is a teaching process through which students critically read and reflect on literary narratives through instructor-guided reflection. Study findings on the pre and post-test surveys of students found a statistically significant improvement in scores ($p < .05$) on the *Jefferson Scale of Empathy (JSE)*. No differences were found between pre and post-test surveys of the *Reading the Mind in the Eyes Test (RMET)*. The JSE measures empathic awareness, while the RMET measures aspects of empathic performance. Study limitations included mid-course changes due to the COVID-19 pandemic and the potential impact of social desirability on perceptions of empathy. Study findings suggest the close reading of literary narratives may be an effective learning tool to teach empathic-centered care to occupational therapy students.

Keywords

Empathy, close reading, Theory of Mind, literary narratives

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ABSTRACT

This study explored the impact of teaching empathy to occupational therapy students through the close reading of literary narratives. The study defined empathy as a dynamic process involving Theory of Mind (ToM), emotional resonance, and empathy as a willful act. Empathy is an espoused value of occupational therapy challenged by the modern demands of the market-driven health care system, and research suggests reading literary narratives, or stories with qualities of literature, facilitates greater empathy. Prior studies have also indicated that practicing with greater empathy improves health outcomes and makes occupational therapy sessions more client centered. In this study, a quasi-experimental design was used on occupational therapy students ($n = 31$) in a graduate level rehabilitation course that involved the close reading, or critical reflection, of literary narratives to teach empathy. Close reading is a teaching process through which students critically read and reflect on literary narratives through instructor-guided reflection. Study findings on the pre and post-test surveys of students found a statistically significant improvement in scores ($p < .05$) on the *Jefferson Scale of Empathy (JSE)*. No differences were found between pre and post-test surveys of the *Reading the Mind in the Eyes Test (RMET)*. The JSE measures empathic awareness, while the RMET measures aspects of empathic performance. Study limitations included mid-course changes due to the COVID-19 pandemic and the potential impact of social desirability on perceptions of empathy. Study findings suggest the close reading of literary narratives may be an effective learning tool to teach empathic-centered care to occupational therapy students.

Introduction

A cornerstone belief of occupational therapy is the view of human beings as complex occupational beings (Myer, 1922). This belief involves occupational therapy's need to perceive a client's subjective internal, external, emotional, social, and cultural influences on occupation (American Occupational Therapy Association [AOTA], 2017; AOTA, 2020; Yerxa, 2009). Occupational therapy scholars have historically and recently articulated a professional ethos that emphasizes the need to gain such a full understanding through empathic-centered care (Abreu, 2011; AOTA, 2020; Peloquin, 2005; Yerxa, 1980). Abreu (2011) called empathy a guiding belief in occupational therapy, stating it involves a "willingness to enter the other person's emotional state," and the ability to "feel, detect, imitate, and express emotions and to communicate verbal and nonverbal signals to understand each other" (p. 624).

In this study, empathy is defined as a complex, dynamic process involving Theory of Mind (ToM), emotional resonance, and empathy as a willful act (Gerdes & Segal, 2009). Consequently, at a clinical level, empathy is considered a volitional dynamic that involves inter-subjectivity and imagining the perspective and emotions of another (AOTA, 2020; Rogers, 1951). Teaching empathy to students in an occupational therapy course was the subject of this study. In particular, the study assessed whether the close reading of literary narratives would improve levels of empathy. In the course, in addition to traditional content on physical rehabilitation, students read stories with qualities of literature, answered and discussed reflective questions on story themes and characters, and designed occupational therapy treatment plans for story characters. The course was based on the narrative medicine program at Columbia University (Charon et al., 2017), and similar medical humanities courses (Batt-Rawden et al., 2013).

Literature Review

Empathy as a Challenged Value in Occupational Therapy

ToM has been described as the cognitive systems and mental states involved in inferring another's mental state (Heyes & Frith, 2014). ToM therefore has two aspects: 1) the ability to infer, or mentalize, other states through observation and social interaction, and 2) the cognitive systems involved in the process of mentalizing (Heyes, & Frith, 2014). This is significant clinically when attempting to read a client's reactions when performing occupations, interpreting a client's understanding of instruction, and perceiving a client's expressed and non-expressed goals for therapy.

In addition, clinicians who view a client's health and emotional needs empathically have demonstrated improved health outcomes with clients (Del Canale et al., 2012; Hojat et al., 2011). A systematic Cochrane review of over 1,500 articles by Trzeciak and Mazzarelli (2019) found a clinician's emotional response to a patient, or compassion, can reduce patient stress, lower blood pressure, promote healing, improve quality of life, reduce pain, improve diabetic management, build trust, improve function, heal wounds faster, improve lung function, reduce depression, and reduce clinician burnout.

A similar study of 38 occupational therapists found the more understanding occupational therapists were, the more clients chose client-centered interventions, and the more understanding the occupational therapists were, the harder clients worked and participated in goal setting (Fan & Taylor, 2020).

Occupational therapy's belief in impactful empathic-centered practice, however, has conflicted with occupational therapy's need to remain viable in the current, market-driven health care system (Starr, 2017). In particular, studies from the perspective of patients have shown that occupational therapists have emphasized the demands of productivity, norm-based assessment, evidence-based protocols, and the institution, over the needs of the individual (Cruz et al., 2015; Gupta & Taff, 2015; Hammell, 2007; Kennedy & Fortune, 2013; McCorquodale & Kinsella, 2015; Oladottir & Palmadottir, 2017). For example, Gupta and Taff (2015) critically analyzed the literature and occupational therapy billing trends in the United States (U.S.), concluding occupational therapy is currently "incongruent with the professions' espoused philosophy and values of client-centered practice" (p. 244). In specific, Gupta and Taff (2015) discovered occupational therapists predominantly used upper extremity exercises and activities of daily living (ADL) as interventions, with the goal of rapid discharge. This emphasis, they said, is done with disregard of individual dignity, choice, and strengths, in a system that is more focused on immediate "sickness" and financial reimbursement than occupational health (Gupta & Taff, 2015, p. 246).

Literary Narratives and Empathy

A demonstrated method to address modern challenges to practicing with greater empathy is the reading of client-based narratives (Golden et al., 2016; May-Benson & Friel, 2017; Pizzi, 2015; Wasmuth, 2021). The study of narratives from the perspective of individuals receiving occupational therapy has been linked to occupational therapy's core beliefs (Clark, 1996; Denshire & Lee, 2013; Kielhofner & Forsyth, 1997). Reading literary narratives has also been theorized as a means for occupational therapists to challenge assumptions about disability and improve occupational therapy's understanding "of the human condition" (Peloquin, 1988, p. 221).

Literary narratives, as defined, have the following characteristics: sensory evoking language, unsettling reader's expectations through multiple perspectives, psychologically complex characters, and challenging social conventions (Kidd & Castano, 2013; Kidd & Castano, 2016). Peloquin (1995) theorized the reading of literary narratives, as defined, facilitates empathy through its use of metaphor and sensory experiences, as well as its ability to place the reader into a virtual world, stating that reading "can be a rehearsal for empathy" (Peloquin, 1995, p. 660). More recently, it has been theorized that the reading of literary fiction fosters a reader's ability to imagine life through another, broadening a reader's "consciousness to encompass fellow beings" (Koopman & Hakemulder, 2015, p. 97). Narrative theorists have described the reading of literary narratives as a unique cognitive process that involves internal "world making" and "world creation", allowing the reader to take up "imaginary residency" within the author's world (Hermon, 2012, p. 18).

Extensive quantitative research has linked the reading of literary narratives to improved levels of theory of ToM (Bal & Veltkamp, 2013; Dijkie et al., 2013; Guarisco et al., 2017; Heyes & Frith, 2014; Mar et al., 2006; Mar et al., 2009; Mumper & Gerrig, 2017). In addition, the close reading of literary narratives by health care students in medical humanities courses has fostered greater levels of empathy (Batt-Rawden et al., 2013; Graham et al., 2016). Close reading is defined as purposeful, attentive reading and discussion of text that focuses on the particular over the general (Charon et al., 2017; Karam & Elfiel, 2020). Unlike casual reading, which emphasizes reading for entertainment and facts, close reading is guided by text-based questions and structured discussion, in an attempt to attain deeper understanding of the influences of context, culture, and socio-economic factors on an individual's world view (Charon et al., 2017; Karam & Elfiel, 2020).

Narrative Reasoning

Mattingly and Fleming (1994, 1998), in their landmark participant-observation study, found a connection between patient narratives and skilled occupational therapists, termed narrative reasoning. Their work was based on Bruner's (1987, 1991) description of individual life narratives. Specifically, Mattingly and Fleming (1998) observed "expert" occupational therapists' use of narratives to collaboratively reason with clients, imagine client's lives, and give shape to emotions. The expert occupational therapists appeared to be more effective if they saw their patients as a dynamic story involving past, present, and future narratives, versus a list of medical problems (Mattingly & Fleming, 1998). The future story of health is defined as a collaborative, dynamic process between therapist and patient that involves determining therapeutic goals, such as regaining the ability to perform prior meaningful occupations (Mattingly & Fleming 1994; Mattingly & Fleming, 1998).

More recently, Mattingly's (2010) ethnographic study of minority families with children with complex medical conditions again articulated the need to perceive a client's "rich and particular" point of view, in order to truly understand a patient. Bishop (2019) used narrative reasoning to center her practice more on client needs, stating such a client-centered approach through narrative reasoning, moved her practice beyond the restraints of evidenced-based protocols to attain more positive health outcomes. Nesbit et al. (2016) determined value in a physical therapy program which focused on student use of reflective stories and patient interviews to establish patient-therapist relationships and drive decision making, concluding that the "empathic perspective" and established "therapeutic alliance" through narrative reasoning, can play a pivotal role in impactful clinical reasoning. Zafran (2019) has also recently called for occupational therapy education to embrace Matting's narrative-based approach to address the challenges of modern practice, citing a need for an increased "critical reflection" that challenges existing frames of references and leads to an embracing of alternative worldviews.

Given that empathy is an expressed occupational therapy value (AOTA, 2020), the demonstrated role of empathy in improving healthcare outcomes (Hojat, 2011), modern challenges to practicing occupational therapy with empathy (Gupta & Taff, 2015), and the demonstrated ability of reading literary narratives and narrative reasoning to foster empathy (Kidd & Castano, 2013), an investigation into a systematic way to teach empathic-centered care to occupational therapy students through literary narratives is warranted (Abreu, 2011; Zafran, 2019).

Methodology

A Narrative Based Curriculum to Teach Empathy

A specific curriculum that uses literary narratives and close reading to foster empathic-centered care with medical professionals is the narrative medicine program at Columbia University (Charon et al., 2017). The narrative medicine program at Columbia emphasizes the teaching of empathy through close reading, or critical reflection of literary narratives through guided discussion, journaling, and clinical application, in an attempt to teach students to empathically view patients as a complex, unfolding story (Charon et al., 2017). In a qualitative study, students at Columbia demonstrated improved empathic awareness after a course involving close reading (Miller, 2014).

Based on the stated significance of empathy in practice (AOTA, 2020) and the demonstrated influence of close reading (Karem & Elfiel, 2020; Charon et al., 2017) and narrative reasoning (Mattingly & Fleming, 1998) on fostering empathy and client-centered care, the experimental class's curriculum was modeled on the narrative medicine program at Columbia University.

In specific, through the close reading of literary narratives, curriculum interventions in the experimental class attempted to teach students to view patients as complex occupational beings and to practice with empathy and narrative reasoning. Assignments emphasized seeing patients as an unfolding story with diverse needs, versus a defective body in need of fixing as determined exclusively through objective measures and a medical diagnosis (Yerxa, 2009). For example, students had to break down a story character's life into Mattingly and Fleming's (1994) three stories, past, present, and future, and discuss the influence of past relationships, culture, social determinants of health, occupational roles, and life experiences on a character's story, in an effort to determine a client's deeper occupational needs beyond traditional exercise, norm-based assessment, and activity of daily living (ADL) retraining.

All of the assigned literary narratives met the criteria of literature that facilitates empathy as defined by Kidd and Castano (2013). In particular, the assigned readings depicted worlds that challenged stigma, embraced difference, described positive representations of disabled bodies, and attempted to create "accessible" and "valued spaces" for disability (Fletcher & Primack, 2017). Memoirs by individuals with conditions traditionally referred to as "chronic" in a medical model were selected for their ability to "redefine" and "reconstruct" common characterizations (Cardillo, 2010). These fit what Muller (2006) referred to as acceptance of "different styles of being."

In total, students were assigned the same eleven literary narrative readings with related close reading assignments. All of the literary narratives assigned were real-world examples of topics covered in class, with an emphasis on individuals experiencing health issues. Through weekly assignments and guided discussion, students read short literary narratives and reflected on a character's major life events, dominant occupations, primary relationships, perceptions of emotional and physical health, and envisioned a future story of health for story characters. Students also designed treatment plans, through lab-based simulations and written assignments, based on story characters.

See Table 1 for examples of class sessions related to literary narratives.

In addition, students had to choose, read, and reflect on a single book-length literary narrative from a selection of choices. Choices were provided to students based on the tenet that reading levels and choice can influence readers' ability to engage with the narrative and stimulate empathic processes (Bal & Veltkamp, 2013; Johnson, 2012; Tamir et al., 2016).

See Table 2 for a list of the book-length literary narratives that students read.

Table 1*Outline of Class Sessions*

Sessions	Class Activities	Narratives
Session 1	<p>Class Discussion/ Close Reading: - Role of client-centered care, empathy, narrative reasoning in practice</p> <p>In Class Assignment: - Based on patient narrative from <i>Clinical Reasoning</i>, determine a future story of health/narrative reasoning as defined by Mattingly & Fleming (1994, 1998)</p>	<p>O'Reilly, M. (1994). Sharing the health experience (narrative). In Mattingly, C., & Fleming, M. (Eds.), <i>Clinical Reasoning: Forms of inquiry in a therapeutic practice</i>, (pp. 288-231). F.A. Davis.</p>
Session 2	<p>Class Discussion: - Medical & Social Models of Disability</p> <p>In Class Assignment: - Determining independent living skills of physically disabled</p>	<p>Johnson, M.J. (2003). Unspeakable conversations (memoir), <i>New York Times Magazine</i>, February 16, 50-55. https://www.nytimes.com/2003/02/16/magazine/unspeakable-conversations.html</p>
Session 3	<p>Class Discussion: - Role of occupation on health, isolation, ageism</p> <p>Homework Assignment: - Determining an occupational therapy treatment plan for story character - Determining a future story of health for story character - Assignment also discussed in class</p>	<p>Angell, R. (2014). This old man: Life in the nineties (memoir). <i>The New Yorker</i>, 17, 60-65. https://www.newyorker.com/magazine/2014/02/17/old-man-3</p> <p>Backman, F. (2012). <i>A man called Ove</i> (novel excerpt). Washington Square Press.</p> <p>Kelly, C. (2011). Old men waiting (short story). <i>The MacGuffin</i>, 27(3), 116-127.</p>

Session 4	<p>Class Discussion:</p> <ul style="list-style-type: none"> - Role of occupation on health, post-traumatic stress disorder, cultural influences, occupational roles <p>Homework Assignment:</p> <ul style="list-style-type: none"> - Determining a treatment plan for story character - Determining a future story of health - Assignment also discussed in class 	Kelly, C. (2011). Serving the wounded (short story). <i>Slice</i> , 9, 95-102.
Session 5	<p>Student Led Discussion:</p> <ul style="list-style-type: none"> - Assimilation, sexual identity, substance abuse, culture, family influences <p>Homework Assignment:</p> <ul style="list-style-type: none"> - Determining a treatment plan for story character - Determining a future story of health - Assignment also discussed in class 	Kelly, C. (2011). Beautiful eye (short story). <i>Red Wheelbarrow</i> , 2, 72-83.
Session 6	<p>Online Discussion Forum:</p> <ul style="list-style-type: none"> - Managing chronic health conditions, role of family, occupational roles, social determinants of health <p>Homework Assignment:</p> <ul style="list-style-type: none"> - Determining a treatment plan for story character - Determining a future story of health - Assignment also discussed in class 	<p>Aronson, L. (2013). Days of awe (short story). In <i>A history of the present illness</i>, (pp. 179-204). Bloomsbury.</p> <p>Genova, L. (2011). <i>Left neglected</i> (novel excerpt). Simon & Schuster.</p>
Session 7	<p>Online Discussion Forum:</p> <ul style="list-style-type: none"> - Institutionalism, lost/found occupation within an institution <p>In Class Assignment:</p> <ul style="list-style-type: none"> - Role of meaningful objects, impact of life events on health 	Penney, D., & Stastny, P. (2008). <i>Lives left behind</i> (book excerpt). Bellevue Literary Press.
Session 8	<p>Online Discussion Forum:</p> <ul style="list-style-type: none"> - Assimilation, identity, social norms 	Grealy, L. (1994). <i>Autobiography of a face</i> (memoir excerpt). HarperCollins.
Session 9	<p>Online Discussion Forum:</p> <ul style="list-style-type: none"> - Dementia care, caregiver support, lost occupations 	Miller, S. (2003). <i>The story of my father</i> (memoir excerpt). Random House.

Table 2*Literary Narratives Read by Students*

TITLE/AUTHOR (students chose one of the following)
<i>Of Such Small Differences</i> : Joanne Greenberg
<i>White Oleander</i> : Janet Fitch
<i>A Man Called Ove</i> : Fredrik Backman
<i>The Great Believers</i> : Rebecca Makkai
<i>Me Before You</i> : Jojo Moyes
<i>Doubletake</i> : Kevin Michael Connolly
<i>Ginny Moon</i> : Benjamin Ludwig
<i>Educated</i> : Tara Westover
<i>When Breath Becomes Air</i> : Paul Kalanithi
<i>Here if You Need Me</i> : Kate Braestrup
<i>The Curious Incident of the Dog in the Nighttime</i> : Mark Haddon
<i>The Nickel Boys</i> : Colson Whitehead
<i>Left Neglected</i> : Lisa Genova
<i>This Much I Know is True</i> : Wally Lamb

Research Question

Given the need to refine and justify research on a narrative medicine-based occupational therapy curriculum, a quasi-experimental design was chosen to address the following research question: 1) How do levels of empathy change in occupational therapy students who engage in a course that involves the close reading of literary narratives? The researcher's working hypothesis was that empathy levels of occupational therapy students would increase following participation in a course that involves the close reading of literary narratives.

Population

At the university studied students entered the occupational program, in what is called the "professional phase", through one of two ways: as an undergraduate entering their third year at the university, or as a transfer student with a pre-existing bachelor's degree or higher. When all students enter the professional phase they are considered graduate students. The professional phase consists of three years. The students involved in the study were in the spring semester of their second year in the professional phase. The course studied occurred in the spring semester of 2020.

Thirty-one of the 37 students in the class participated in the study. All participation was voluntary with student consent received from all participants. This study received approval from the Institutional Review Board (IRB) on 9/23/19. All subjects involved were provided written consent to participate in the study. The only risks to participants were time and inconvenience. There were no direct benefits to participants.

Instrumentation

Students were given a demographic survey that asked questions on age, gender, grade point average (GPA), level of education prior to entering the professional phase, and the number of novels read in the year prior to the course studied. For descriptive data on participants, see Table 3.

Table 3

Participant's Descriptive Data

Category:	Males	Females	Total
Participants:	4	27	31
GPA: mean	3.5	3.6	3.6
Age Category 1: (19-21)	2	19	21
Age Category 2: (22-29)	2	7	9
Age Category 3: (23-30)	1	1	1
Education Category 1: (Undergraduate prior to entering professional phase)	3	20	23
Education Category 2: (Bachelor's degree prior to entering professional phase)		6	6
Education Category 3: (Master's degree prior to entering the professional phase)	1	1	2
Novels Read Pre-test: mean	.75	2.07	1.9
Novels Read Post-test: mean	2.25	3.44	3.29

Note: GPA=Grade Point Average

In addition to the demographic survey, students were given pre and post class surveys in the spring semester of 2020 on the *Reading the Mind in the Eyes Test* (RMET) and the *Jefferson Scale of Empathy* (JSE). The first pair of surveys were given electronically with the professor present before the class began. The second pair of surveys were given to the students electronically after the class was completed.

The RMET (URL:<http://socialintelligence.labinthewild.org/mite/>) measures an individual's ability to recognize the subtle emotions of another in photographs (Barron-Cohen et al., 2001). On the RMET survey participants choose the appropriate emotion that matches the expressed emotion in a photograph of an individual's eyes. The RMET has been described as an "advanced" ToM test, and it has been used in over 250 different studies involving measures of empathy, social sensitivity, and theory of mind (Fernández-Abascal et al., 2013; Vellante et al., 2012). The RMET has demonstrated sensitivity to ToM differences through a demonstrated inverse correlation

($r = -.53$) to the Autism Spectrum Quotient, a measure of “autistic traits” (Baron-Cohen et al., 2001). With neurotypical populations, Nott et al. (2019) found a large positive correlation between individuals accurately labeling the facial emotions of photographs and scores on the RMET.

The JSE is an adapted version of the original *Jefferson Scale of Empathy Physician/Health Professional version* (Hojat, 2016). The JSE is broadly used in the health field as a self-reported measurement of empathy and has been translated into over 38 different languages (Hojat, 2016). The JSE student version was adapted from the health profession version for more general use with health care students. The JSE student version involves 20 Likert-scaled questions, based on a health-care provider’s perceptions of the role of empathy in practice (Hojat et al., 2018). Exploratory and confirmatory factor analysis by Hojat et al. (2018) suggested the JSE assesses three factors of empathy: perspective taking (or ToM), compassionate care (emotional resonance), and walking in the patient’s shoes (ToM/emotional resonance). Hojat et al.’s study (2018) found internal consistency with the factors of perspective taking (Cronbach’s alpha = .80), compassionate care (Cronbach’s alpha = .71), and walking in the patient’s shoes (Cronbach’s alpha = .71).

Results

The JSE group mean on the pre-test was 99.09 (SD = 2.39). The group mean on the post-test JSE in the study was 116.84 (SD = 1.67), with an actual range of 100 minimum to 130 maximum. The JSE group mean, or score average, consequently improved from 99.09 on the pre-test to 116.84 on the post-test, meaning student scores improved the second time they took the survey. A paired samples t-test, comparing pre and post JSE group score means, demonstrated a statistically significant change ($p = .000$) between the pre-test and the post-test mean scores on the JSE. See Table 4 for paired sample statistics on the JSE and RMET. See Table 5 for paired samples t tests on the JSE and RMET.

Table 4

Paired Samples Statistics: Empathy Group Comparison

		Mean	N	STD. Deviation	Std. Error Mean
Pair 1 JSE	JSE Pre	99.0968	31	13.33505	2.39505
	JSE Post	116.8481	31	9.31939	1.67381
Pair 2 RMET	RMET Pre	25.4516	31	2.97589	.53449
	RMET Post	25.4194	31	4.11318	.73875

Table 5*Paired Samples t-test: Empathy Paired Differences*

	Mean	Std. Deviation	Std. Error Mean	95% CI Lower	95% CI Upper	t	df	Sig. (2-tailed)
Pair 1 JSEPre- JSEPost	-17.75129	10.71704	1.92484	-21.68233	-13.82025	-9.22	30	.000
Pair 2 RMETpre- RMETPost	.03226	3.83392	.68859	-1.37403	1.43855	.047	30	.963

The RMET scores on the pre-test ranged from 17 minimum to 32 maximum with a mean of 25.45. The score range on the RMET post-test ranged from 16 minimum to 33 maximum with a mean of 25.41. The RMET group mean decreased from 25.45 on the pre-test to 25.41 on the post-test, indicating student scores decreased slightly the second time they took the survey. A paired samples t-test, comparing pre and post RMET group score means, demonstrated an insignificant change ($p = .963$) between the pre-test and the post-test mean scores on the RMET.

Discussion

The improvement in JSE group mean scores supported in part the research hypothesis that after an occupational therapy course involving close-reading, empathy levels would improve. The improvement in scores may not be attributable to the course itself, but they are a strong indicator of change following participation. The improved JSE scores also correspond with existing literature, which suggested humanities content in a healthcare-based course improved student levels of empathy (Batt-Rawden et al., 2013). In particular, the JSE findings are similar to the qualitative study of the program at Columbia University (Miller, 2014), in which students reported higher levels of empathy after completing a Narrative medicine-based course.

Furthermore, as stated, the JSE has demonstrated a connection between high JSE scorers and improved patient outcomes compared to low JSE scorers (Del Canale et al., 2012; Hojat et al., 2011). This met the theorized connection between the reading of literary narratives, empathy, and health outcomes. Simply, after a course involving close reading, the occupational therapy students in this particular course demonstrated higher scores in an empathy survey that correlates with better health outcomes.

When viewing the JSE scores as an evaluation of a particular course, however, the stated limitations and complex nature of empathy need to be considered (Gerdes & Segal, 2009). Since the JSE survey is self-reported, it does not support improved empathic performance through ToM and emotional resonance (Hojat, 2016), or

empathy as a willful act. Consequently, results from the JSE should be viewed in terms of potential increased awareness, understanding, and sensitivity to the need for empathic practice, not improved empathic performance.

Empathic performance was measured through the RMET (Baron-Cohen et al., 2001). In this study, no change was found between pre and post-test mean scores of the RMET. This finding contradicted extensive findings in the literature which linked the reading of literary narratives to improved scores on ToM measures such as the RMET (Kidd & Castano, 2013; Dijkie et al., 2013; Bal & Veltkamp, 2013; Guarisco et al., 2017; Mar et al., 2006; Mar et al., 2009; Mumper & Gerrig, 2017).

Speculated potential reasons for the lack of significant change in the RMET are numerous. Foremost amongst the reasons may be the format of the survey itself. Unlike the JSE, the RMET involves over 36 different questions and a degree concentration to study each image and make a selection. The images themselves can also be distorted depending on lighting. Considering the limitations (see Limitations) on the second survey, some students may have been unwilling to give the survey the necessary required attention the second time.

It is also significant that unlike prior studies, the RMET was not given to study participants directly after a literary narrative reading (Bal & Veltkamp 2013; Dijkie et al., 2013; Guarisco et al., 2017; Mar et al., 2006; Mar et al., 2009; Mumper & Gerrig, 2017). The delay between when the students read their last literary narrative and took the RMET survey may have played a role in the RMET scores. In other words, close reading of literary narratives may not influence ToM and emotional resonance over a length of time (Koopman & Hakemulder, 2015). If so, this finding would have significant implications on the feasibility of carryover of this curricular innovation into the practice of occupational therapy.

Limitations

Limitations of the instrumentation include the potential impact of the pandemic on course curriculum and survey responses, and the possible influence of social desirability on the JSE. Halfway through the semester the COVID-19 pandemic changed the course from completely in person, to strictly online with recorded audio lectures, videos, and written assignments. The student led discussion assignment shifted to an online forum, where students posted comments on the readings. During the recorded lectures, students and the teachers also could not interact spontaneously, nor were students able to make impromptu visits with their professor to discuss assigned readings.

The pandemic also changed the context of how each survey was given. The first survey, before the shift to an online format, was done in class with the professor present. The second was done online after the course was completed without the professor present. Consequently, it is unknown where students took the survey, what distractions were present, and what potential influence being in the classroom with the professor may have had.

In addition, social desirability has been shown to influence the results of self-report surveys of healthcare workers on socially sensitive subjects, such as empathy (King & Bruner, 2000; Van de Morel, 2008). In this study, even though grades were not connected to the survey and results were anonymous, students may have wanted to meet the perceived ideals of the occupational therapy profession as advocated by their occupational therapy instructor.

In addition, was the instructor's choice of short stories and novels influenced by unconscious bias? Would the choices of more diverse instructors, based on the definition of literary narratives, be more impactful on student empathy levels? Would students benefit from a greater selection of choices by instructors with differing backgrounds in culture and disability?

Implications for Occupational Therapy Education

Overall, this research was significant because it adds to an understanding of a potential occupational therapy curriculum to improve student levels of empathy. The study proposed a specific curriculum that can be refined and used as the basis for further study, and as a vehicle for assessing the curriculum's impact on clinical experiences. Because of the study's mixed results and limitations, it is the beginning of an important and ongoing dialogue on how to teach students to practice occupational therapy more empathically. The study added to the growing literature on both narrative medicine and medical humanities as a whole. The study expanded the pedagogy of medical humanities through a curriculum that attempted to operationalize the theoretical findings on literary narratives into the field of occupational therapy education.

Educators may benefit from the study's findings when it comes to teaching empathy and client-centered care in the classroom. In particular, educators may want to look to literary narratives in addition to, or in place of, traditional academic textbooks when it comes to a depiction of clients. For example, instead of relying on a medicalized case study for a class assignment, have students read a short story or novel excerpt with the qualities of a literary narrative. This may broaden and enhance student understanding of clients as a full, complex human being, versus a list of problems in need of fixing.

In addition, the findings and literature suggest replacing the traditional use of medical cases with literary narratives and narrative reasoning in simulation may prove beneficial to fostering client-centered care. For example, students could interview a client as a person, determining his or her life narrative, in conjunction with traditional evaluation. Specifically, students could be taught to ask a client about his or her past, present, and future stories of occupational health, as the client demonstrates range of motion, or performs ADL. This may train students to assess both the physical capabilities and narrative story of a client together, learning to evaluate a patient through the lens of his or her story. Consequently, a client's diverse, holistic needs would not be seen as an academic exercise or separate from the actual practice of occupational therapy. Understanding a client's complexity, through his or her past, present, and future stories, during a simulated evaluation, would make a client's narrative the focal point of a student's emerging clinical reasoning.

Future Research

When considering future studies, the question of how to assess the impact of the course through the RMET can be revisited. More specifically, to what extent does the reading of emotions in facial photographs foster the kind of empathic practice that will lead to better health outcomes? The RMET may not be appropriate instrumentation in itself considering the end goal of teaching students to foster greater understanding or perspective taking on client points of view, beyond a basic ToM skill linked to autism spectrum disorder (Baron-Cohen et al., 2001). The Interpersonal Reactivity Index (IRI), for example, a validated survey that measures student sensitivity to altering points of view (Bonfils et al., 2018) could be added to the testing protocol.

In addition, rich qualitative description of student perceptions of the assigned readings and the role of empathy in practice may enhance understanding of the curriculum's impact. Greater knowledge of the course, from the students' perspective, may in turn help refine curriculum design to improve empathy levels.

Stated limitations in the JSE may be addressed in part through the use of social desirability scales, such as the Marlow-Crowne Social Desirability Scale (Reynolds, 1982). More qualitative examination may also develop theory of student perceptions of empathy and the role of empathy in modern practice. In addition, future study of journal reflections on fieldwork clinical rotation, through both quantitative and qualitative analysis, may address questions such as: To what extent do students practice empathically during fieldwork after a course involving narrative medicine? To what degree do student levels of empathy change after fieldwork? This line of inquiry in turn may help more closely align coursework with the modern demands of occupational therapy practice.

Conclusion

In summary, for participating students, the improved JSE scores are an indicator that there is a potential connection between course content and increased student awareness of the role of empathy in occupational therapy. Future inquiry needs to address the following questions: To what extent did the curriculum, as designed, result in improved empathic awareness? If so, which aspects of the curriculum influenced empathic awareness: the reading of literary narratives, student reflection, lecture content, or other? To what extent is close reading more effective than the existing occupational therapy curriculum in teaching and facilitating empathic centered care?

The RMET findings call for revisions to the existing pedagogy, involving potentially more close observation and reflection on artistic images as practiced at Columbia (Charon et al., 2017). This addition in turn may help improve student ability to both view empathy as a willful act and practice more empathically. Unanswered questions to address regarding the RMET include the following: To what extent would greater use of artistic images improve RMET-measured empathic performance? What role did the timing of the reading of literary narratives have on the RMET findings? What role did the more challenging format of the RMET have on student levels of participation? If so, are their other instruments that would be more appropriate?

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