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A Podcast's Effect on Empathy and Client-Centeredness in Occupational Therapy Students

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Abstract

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Keywords

Empathy, client-centered, podcast, OT education

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A Podcast's Effect on Empathy and Client-centeredness in Occupational Therapy Students

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ABSTRACT

There is mixed evidence on the effectiveness of educational approaches that address empathy and client-centeredness in occupational therapy (OT) education. The purpose of this study was to investigate the effect of listening to a personal narrative-account podcast on empathy and client-centeredness in OT students. An experimental, posttest-only control group design was used. Master's degree level OT students were stratified by year of study and were randomly assigned to either an intervention group or control group. Following a 5-week educational intervention, levels of empathy and client-centeredness were measured and compared using the Kiersma-Chen Empathy Scale and the Patient-Practitioner Orientation Scale via post-test, respectively. Analyses were conducted using a multivariate analysis of variance (MANOVA). Results of the MANOVA demonstrated no statistically significant difference between the students who participated in the intervention versus the control on the combined (or linear combination of) dependent variables, Wilks' $\Lambda = .96$, $F(2.34) = .71$, $p = .499$ *partial* $\eta^2 = .04$. There was no statistically significant difference in using a combination of written diagnostic information and a first-person narrative account podcast as compared to written diagnostic information only on OT students' overall level of empathy and client-centeredness. As the results of the MANOVA were not significant, post hoc analyses were not conducted. Implications and recommendations are shared to guide OT educators in facilitating in their students the development of these two attributes of professionalism that are vital for effective client care.

Introduction

Occupational therapy (OT) practitioners who demonstrate a prioritization of the wants, needs, and uniqueness of an individual receiving OT services are said to possess an attitude of client-centeredness (Boyt Shell et al., 2014). Central to client-centered care in the healthcare arena is the issue of empathy. A client-centered mindset is critical in the field of OT because one of the guiding beliefs in the profession is that the most instrumental tool available to a practitioner is the empathetic use of self within a therapeutic relationship (Abreu, 2011). Further, as communicated in Vision 2025 of the American Occupational Therapy Association (AOTA), the professional organization's most current vision statement, a top priority of the profession is to provide customized services that meet the individual needs of each consumer in a way that is accessible to and effective for all (AOTA, n.d.). There is mixed evidence in the literature, however, on successful educational approaches used to address empathy and client-centeredness in OT education (Abreu, 2011; Brown et al., 2020; Davis et al., 2005; Dearing & Steadman, 2009; Gurley et al., 2022; Logan, 2022; Mann et al., 2009; Milliken et al., 2022; Ozelie et al., 2018; Serrada-Tejeda et al., 2022; Yedidia et al., 2003). Additionally, OT students' competency in both areas is a concern (Brown et al., 2010; Sljivic et al., 2022).

Literature Review

When preparing students to provide effective client care in the field, OT programs are tasked with expanding students' empathy and client-centeredness as an aspect of professionalism (Ozcan et al., 2012). Defined as the ability to recognize, understand, and share another person's perspective and feelings, empathy is said to be malleable and is identified as one of the major elements responsible for the change that occurs during the OT treatment process (Abreu, 2011; Mennenga et al., 2016). Furthermore, research shows that increased levels of empathy are significantly associated with increased client-centeredness (Haley et al., 2017). Client-centeredness, identified as an integral component of the OT process (AOTA, 2020), is defined as an attribute allowing a provider to prioritize the wants, needs, and uniqueness of the client (Boyt Schell et al., 2014; O'Brien & Hussey, 2018). Client-centered care has been found to improve social interaction, quality of life for clients, and occupational performance (Kwon & Kim, 2022; Torpil & Kaya, 2022;). Therefore, OT educators aim to facilitate the development of both empathy and client-centeredness in students (Abreu, 2011; Gurley et al., 2022).

Client-Centered Care and Empathy in the Field of Occupational Therapy

Empathy is recognized as a pathway to improvement in communication between OT practitioners and their clients as well as to better clinical outcomes (Abreu, 2011; AOTA, 2018; Boyt Shell et al., 2014; del Canale et al., 2012; Hojat et al., 2011; Hojat et al., 2017; Michael et al., 2019; Moudatsou et al., 2020). Based on decades of research to that effect, empathy is a pivotal aspect of healthcare and is necessary for the development of a therapeutic relationship between the client and healthcare provider (Busch et al., 2019; Davis et al., 2005; Larsen et al., 2018; Moudatsou et al., 2020). Importantly, the push towards evidence-based practice in the field of OT has led to practices in OT education that have been proven to positively impact the effectiveness of OT services, including the use of strategies to advance empathy levels in OT

students (Bal & Veltkamp, 2013; Gribble et al., 2018; Karam & Elfiel, 2020; Kelly, 2022). As such, OT educators recognize that an increase in empathy has been shown to result in improved client compliance and satisfaction and an improved therapeutic relationship between the practitioner and client (Petrucci et al., 2016; Raja et al., 2015; Thomas et al., 2018; Torpil & Kaya, 2022) as well as a minimization in client litigation (Greve, 2017; Hojat, 2009) and better long-term results (Davis et al., 2005; Hojat et al., 2013). In empathizing with a client, the OT practitioner validates the individual's sense of self-worth and control, thus setting the stage for them to write the next chapter of their own life (Burke et al., 2016). Thus, the greater the degree to which an OT practitioner subscribes to client-centeredness, the higher quality of client care they are able to provide, the more successful the therapeutic relationship, and the more positive the client's outcome (Davis et al., 2005; Kwon & Kim, 2022; Taylor & Lamoreaux, 2008; Torpil & Kaya, 2022).

Studies examining client-therapist relationships in OT clinical practice have had mixed findings. In 1999, a qualitative study that implemented focus groups with mental health clients revealed that the clients did not perceive the occupational therapy service providers as empathetic, nor did the clients believe that they were valued as human beings (Corring & Cook, 1999). Another study reported that OT practitioners did not always involve their clients in goal setting and treatment planning (Maitra & Erway, 2006). In the same study, the occupational therapists reported a variety of barriers to implementing client-centered practice (Maitra & Erway, 2006). Other studies have found that clients have positive perceptions of the relationships that they develop with their treating occupational therapists (Darragh et al., 2001; Palmadottir, 2006).

Client-Centered Care and Empathy in Occupational Therapy Students

The development of empathy and client-centeredness in OT students has long been of concern to OT educators (Alma & Smaling, 2006; Brown et al., 2010; Gurley et al., 2022). Over the past 50 years, OT educators have expressed concerns about both the need for more developed interpersonal sensitivity among OT students and a more strategic and evidence-based initiative through which to address this deficit area as students are being prepared to enter the field as clinicians (Christiansen, 1977; Posthuma, 1972; Thomas et al., 2018).

The content included in OT education programs is in large part dictated by the standards provided by the programs' accrediting body, the Accreditation Council for Occupational Therapy Education (ACOTE). The concept of client-centeredness and its cornerstone empathy are integrated throughout the standards and are accepted within OT education to be an important component of professionalism, which is an overarching concept generally defined as the skills, knowledge, and attitudes necessary for competency within a particular field (Fields et al., 2011; Robinson et al., 2012).

Educational Approaches to Teaching Client-Centered Care and Empathy

Students enrolled in OT education programs must become healthcare practitioners with client-centered mindsets who seek to understand the situation, concerns, and needs of the individual requiring aid on both a cognitive and emotional plane (Gurley et al., 2022;

Weiner et al., 2013). Although the majority of students entering OT programs express a drive to help those in need, this desire is largely unfocused, and the concept of client-centered care is unfamiliar to these individuals (Ross & Haidet, 2011). As such, client-centeredness is a critical element of comprehensive healthcare education (Brown et al., 2020; Lauver et al., 2002), including OT education.

Studies that have examined educational interventions designed to improve empathy and client-centeredness reveal mixed findings. For example, didactic teaching methods, such as lectures, case presentations, classroom discussions, and training in communication and interpersonal skills, have been found to positively influence healthcare education students' empathy and client-centeredness (Gladstein, 1987; Yedidia et al., 2003). Further, exposure to films and videos have facilitated students' empathy and client-centeredness (Simmons et al., 1992). In contrast, other studies have shown that empathy and client-centeredness do not improve through traditional teaching methods such as listening to lectures, reading diagnostic information, and writing reports (Dearing & Steadman, 2009; Mann et al., 2009).

A national survey of 568 OT practitioners - most of whom (77%) had graduated from OT school within the last 5 years - indicated that despite a high value being placed by participants on the clinician's empathy and client-centeredness necessary for the establishment of a quality therapeutic relationship with each client, the majority of these OT practitioners indicated they felt inadequately prepared to do so. Although almost three-fourths of respondents indicated these topics were covered in various classes in their academic programs, approximately half felt the training they received in how to integrate the individual needs of each client into the treatment plan was insufficient (Taylor et al., 2009).

More recent studies specific to OT education have examined empathy and client-centeredness (Brown et al., 2020; Gurley et al., 2022; Logan et al., 2022; Milliken et al., 2022; Ozelie et al., 2018; Serrada-Tejeda et al., 2022). For example, in a 2022 survey study, results indicated that OT faculty believed that having strong communication and interpersonal skills, being responsible and empathetic, adaptable, ethical, and clinically competent were all important attributes in OT students (Gurley et al., 2022). Qualitative results from a study by Milliken et al. (2022) indicated that students who participated in an interprofessional simulation felt that their capacity for empathy was improved after participation in the simulation. In another investigation, students who listened to a Hearing Voices auditory simulation believe that they were better prepared to treat persons with mental health-related diagnoses (Ozelie et al., 2018). Finally, a study examining the impact of a 12-week consumer-led tutorial to improve empathy in OT students revealed no statistically significant difference between the treatment and control groups (Logan et al., 2022).

The Use of Podcasts in Teaching Client-Centered Care and Empathy

One pedagogical approach that has emerged as a way to address empathy and client-centeredness in OT and other health professions educational programs is the use of digital technology (Car et al., 2019). Digital technology has become part of the daily

lives of people in the United States and across the globe in recent years, and the use of technology in teaching and learning has been a natural outgrowth of that movement (Srivastava & Dey, 2018). Accordingly, audio podcasts are being used in the context of healthcare education at an increasing rate (Cho et al., 2017; Kelly et al., 2022). A podcast is generally described as a series of digital audio files that can be accessed online and then downloaded and listened to on an electronic device (Jiménez-Castillo et al., 2017). The range, flexibility, ease of use, accessibility, and affordability of podcasts make this medium a viable platform for learning for students enrolled in health professions educational programs, including OT students. Additionally, podcasts have been found to be effective in improving a variety of learning outcomes (Khechine et al., 2013; Teckchandani & Obstfeld, 2017), but their effectiveness in promoting empathy and client-centeredness has not been examined in this context. As such, this type of technology creates an option for learning about a wide variety of topics related to the practice of OT, including empathy and client-centeredness.

After conducting a recent systematic review of research on empathy training in health science programs, Bas-Sarmiento et al. (2020) concluded that educational interventions designed to promote empathy in students should be based on a theoretical framework. The Model of Narrative Reasoning Development and Adult Learning Theory (ALT) were used to frame and guide the current study. The Model of Narrative Reasoning Development is an essential component of reasoning in clinical practice and facilitates the "understanding [of] patients' experiences with illness within the biosocial context of their lives including beliefs, values, and culture" (Nesbit et al., 2016, p. 2) and allows for the enhancement of competency in professional reasoning through engagement in the stories of others (Márquez-Álvarez et al., 2019). A narrative approach moves beyond diagnostic, evaluative, and treatment-specific information to involve more personal aspects of an individual's life. As such, the use of narrative technique in teaching and learning centers on the human aspects of the client's story (Greenfield et al., 2015). Further, client stories, often referred to as *illness narratives*, serve as a powerful tool in the learning process as the medium challenges students' assumptions and fills in gaps in their experience and knowledge when it comes to living with illness and disability (Charon, 2001; DasGupta & Charon, 2004; Kumagai et al., 2009; Petrucci et al., 2016). The use of storytelling in teaching allows learners to recognize and understand the human experience of others, which in turn facilitates a shift in focus from that of pathology to that of the person or persons living with disease or illness (Mattingly, 1991). According to Mattingly (1991), the "... nature of the patient's dysfunctions are still important, but they are only one part of the picture that the therapist has to put together with the unique features of one patient's situation" (p. 1000). In this way, first-person accounts can allow students to view things through the perspective of a person with challenges - and background and lifestyle - different from students' own, thus supporting growth in empathy.

Adult learning is a complex phenomenon that involves an evolving set of theories and research. Adults enter the learning environment with more life experience and knowledge than children, allowing the adult learner to draw on past experiences while pulling new information into the context of what is known (Knowles et al., 1998).

According to Adult Learning Theory (ALT), adults construct meaning as it relates to what is already known and to what the learner seeks to know. Additionally, adults are capable of being more self-directed in the learning process and are often more motivated to do the work involved in learning (Knowles, 1984). Given that OT students, like adult learners in general, have a specific and unique set of needs (Kiely et al., 2004), characteristics identified in ALT were considered in the design of this study, including a desire for exposure to information that clearly connects to their lives and their preference of having an opportunity to draw and reflect upon past experiences as part of the learning process (Merriam et al., 2007). According to ALT, adults prefer to learn and learn best when provided with the opportunity to take in information and construct meaning in a self-directed manner. As such, ALT was considered in the development of the study intervention (Boyatzis et al., 1995).

While research on the importance of facilitating the growth of OT students' empathy and client-centeredness supports the targeting of these two components of professionalism in OT education, evidence on the effectiveness of instructional approaches to increase empathy and client-centeredness is mixed. Considering the Model of Narrative Reasoning Development, the use of a personal narrative-based podcast was proposed as an instructional approach to address the need for increasing empathy and client-centeredness in OT students. In response, this study was designed to investigate the effect of listening to a first-person narrative-account podcast on the empathy and client-centeredness of OT students enrolled in an entry-level OT education program.

The research question for this study was: What is the effect of written diagnostic information along with a first-person narrative podcast when compared to written diagnostic information only on the linear combination of OT students' empathy and client-centeredness?

Methods

Study Design

A quasi-experimental posttest-only control group design was employed in this study. The design was chosen as it is rigorous and controls for most threats to internal validity (Creswell, 2015). The value of the posttest-only control group design over the pretest-posttest design is that it reduces threats of testing, instrumentation, and regression (Creswell, 2015).

Participants and Setting

Participants were recruited from two cohorts of students in a Master's of OT program on a health science center campus at a metropolitan university. The sample was selected using a single-stage non-random convenience sampling technique. Students in Term II (i.e., first-year students) and Term IV (i.e., second-year students) of the program were recruited as participants to form two stratified groups. From each of the strata, OT students were randomly assigned to intervention and control groups. The control group was provided with traditional instruction consisting of written information about Amyotrophic Lateral Sclerosis (ALS), including the prevalence, incidence, symptoms,

diagnostic process, and challenges associated with the condition over a five week-period, and the intervention group received the same information and also consumed multiple episodes of a podcast over a five-week period of time.

While all participants were enrolled as full-time students in the program, the study was conducted outside of the students' coursework. Inclusion criteria included current enrollment in an accredited entry-level OT program at University of Tennessee Science Center and physically and cognitively able to access and consume podcast episodes. Exclusion criteria included previous consumption of the specific podcast and an inability to physically or cognitively access or consume podcast episodes. This information was ascertained via self-report as part of the demographic questionnaire administered prior to the intervention.

Students in the current program learn about the OT profession's foundational pillars, which include client-centeredness and the holistic model that supports empathy as a therapeutic tool through reading, lectures, case studies, role play with peers, clinical simulation encounters, and in-class discussions. In addition, each student is required to earn at least 20 professional development hours per term outside of the course and fieldwork requirements. Program professional development requirements are aimed to spur students' growth in the areas of empathy and client-centeredness. These two competencies are also addressed through experiential learning during clinical rotations.

Procedure

Institutional Review Board (IRB) approval was obtained, and all participants provided informed consent to take part in the study and completed a demographic survey. Participants were randomly assigned into the control or intervention group according to their ranking as a first- or second-year student. In this way, half of the participants in the first-year cohort were sorted into the intervention group and the other half into the control group, with the same occurring for the second-year cohort. This created an even distribution among the two groups and controlled for the year of study in the program. Participants were informed that they would be allowed to count participation in the study for six hours towards the professional development requirement for the term.

Participants in the intervention group consumed the podcast at a rate of approximately 80 minutes per week, listening to the narrative account for a total of about six hours and 50 minutes over a period of five weeks. Along with the link, a handout with diagnostic information was provided to participants in the intervention group each week, and participants in the control group were provided with the same written information at the same rate and via the same method of distribution. Thus, the independent variable in the study was consumption or absence of consumption of a multi-episodic narrative-account podcast over a five-week period.

At the end of the five weeks, both groups completed a post-test via email to assess levels of empathy and client-centeredness using validated instruments. The posttest also asked participants to report on their use of resources provided (e.g., reading behaviors, listening behaviors), which was examined to ensure the fidelity of the

intervention. This research design allowed for comparison of scores between the intervention and control groups as well as between the first- and second-year students in the program.

Intervention

The intervention in the current study involved the OT students listening to a narrative account podcast entitled *Living While Dying* (Wurzer, 2016), a multi-episodic first-person narrative account of a person with a catastrophic illness. Supported by the Model of Narrative Reasoning Development, methods of learning involving narrative, especially first-person accounts, should have a lasting impact on OT students. As asserted by Mattingly (1991), "a narrative model of reasoning ... is fundamental to the thinking of [those in training to become] occupational therapists" (p. 998). Listening to the stories of clients and other illness narratives enables students to see things through a different lens and can enhance empathetic understanding in the context of patient care (Hojat, 2007). The podcast was 31 episodes, and all were previously recorded. The length of each episode varied between six minutes, 58 seconds, to 24 minutes, one second, with an average episode length of 12 minutes, 56 seconds. The exact total playing time for all episodes combined was six hours, 50 minutes, and 55 seconds.

Instruments and Data Collection

A descriptive questionnaire was administered to collect demographic and experience data prior to the intervention. Levels of empathy were measured via a composite score on the Kiersma-Chen Empathy Scale (KCES; Kiersma et al., 2013). Client-centeredness was measured using the composite score on the Patient-Practitioner Orientation Scale (PPOS; Krupat et al., 2000). A post-intervention survey was also administered. All surveys were administered via email.

The KCES has acceptable criterion validity (Haley et al., 2017) and reliability was supported with Cronbach's alpha greater than .80 in nursing students (Kiersma et al., 2013). The scale is formatted to detect changes over short periods of time (Everson et al., 2015). Cronbach's alpha was calculated for the sample, which demonstrated that it was a reliable instrument for use with study participants.

The PPOS, an 18-item scale, is a measure often used in healthcare research to assess patient centered care beliefs, primarily referred to in the field of OT as client-centeredness (Haley et al., 2017). Cronbach's alpha has been reported at .73 (Krupat et al., 2000), indicating acceptable reliability. In this study, Cronbach's alpha was calculated for the sample, which demonstrated that it was a reliable instrument for use with the study participants. Criterion validity is also supported from Rater Interaction Analysis, showing scores of healthcare professionals predicted patient-practitioner variations in communication ($p = .03$; Shaw et al., 2012). With the developer's permission, the term doctor was changed to healthcare professional and the term patient was changed to client for the administration of the scale in this study, making the instrument more applicable to the population for this investigation.

A post-intervention survey was included as part of the post-test data collection to determine fidelity. Participants were asked the following to ascertain their consistent participation in the study as planned:

- Did you listen to each episode of the podcast in its entirety?
- Did you comply with the listening schedule as directed in the instructions sent via email each week during the five-week long period?
- Did you read the information on the handout sent to you via email each week?

If through this survey it had been determined that a participant had failed to comply with the instructions provided, including the listening schedule for the intervention group, that individual would have been excluded from the study; however, that did not occur based on the data collected via the survey.

Data Analysis

Data were analyzed using IBM Statistical Package for the Social Sciences (SPSS) version 24 software. Participant demographics were analyzed using descriptive statistics. To test the effect of the independent variable (e.g., listening to a narrative-based podcast) on the dependent variables (e.g., empathy and client-centeredness), a multivariate analysis of variance (MANOVA) test was utilized.

Prior to conducting the MANOVA, assumption testing was completed to determine if conclusions from the results of the analysis could correctly be drawn based on the data collected. A series of chi-square of independence tests and a *t*-test demonstrated that the intervention and control groups were not significantly different in their proportions of males and females or ethnic groups. The average ages of participants between groups did not differ, thus the demographic variables were added as a covariate to the final analysis. Significance level was set at an alpha level of .05. The assumption of no extreme outlier was examined using a visual inspection of box plots based on KCES scores and PPOS scores. While there was one outlier in the KCES scores and three in the PPOS scores within the intervention group, these were not extreme. Therefore, the assumption of no extreme outliers was not violated. Further assumption testing was conducted to examine univariate normality using the Shapiro-Wilk normality test, with non-significant results (a significance level greater than .05) indicating tenability of the assumption (Tabacknick & Fidell, 2013). Because a change in level of empathy has been shown to result in a similar change in client-centeredness (Haley et al., 2017), a linear relationship was assumed and found to be present between these two dependent variables, and thus, analysis via a MANOVA test was appropriate (Tabacknick & Fidell, 2013). Mahalanobis' distance value was used to test for an assumption of multivariate normality. This value was compared with the critical value of 13.82 on a chi-squared distribution table (Tabacknick & Fidell, 2013). This assumption was tenable as the data's highest value did not exceed the critical value. A correlation analysis was used to test for multicollinearity and singularity with the understanding that a MANOVA is most robust when the dependent variables are moderately correlated. Assumption testing for linearity, equal variances, and homogeneity of variance-covariance were also conducted.

Results

Of the 77 OT students, 40 (51.9%) began the study as participants and 37 (48%) completed the study, with 19 participants in the control group and 18 in the intervention group. Both groups had 12 participants who were second-year students. The control group included seven first-year students, and the intervention group was comprised of six students in the first year of the program. The control group had all female participants, with the intervention group being similar in composition with one male and the rest females. Ages of participants in the control group ranged from 22 to 33 years with a mean age of 24.32, and participants in the intervention group ranged in age from 23 to 28 years with an average age of 24.61.

All participants in both groups indicated they had read the materials as provided in the study; however, nine in the control group and 14 in the intervention group reported having read the written materials during weeks other than the one in which the materials were provided. In comparison, half of the intervention group participants ($n=9$) noted they listened during weeks other than the week in which podcasts were scheduled to be listened. The primary reason participants provided for varying from the prescribed listening schedule was being too busy. The variation from the prescribed schedule both for reading the materials provided and listening to specific episodes of the podcast during a set time period is not considered to be vital to the fidelity of the intervention because all participants - even those who did so on a different time schedule within the five-week long intervention period - still consumed all of the materials as directed. On the other hand, while the majority of intervention group participants ($n=15$) reported having listened to all 31 episodes of the podcast, the remainder ($n=3$; cases 9, 11, and 17) reported having listened to most ("about 25") of the 31 episodes. Data from all participants in the intervention group were included in the analyses. Because the scores of those participants who did not fully comply with the prescribed listening schedule were closely related in that they were within one standard deviation from the mean of the scores overall, fidelity of the intervention is considered to have been upheld.

Scores on the KCES and PPOS for the control and intervention groups can be found in Table 1. With an 18-item six-point Likert scale ranging from 18 to 108, with a higher score indicating a higher level of client-centeredness, scores of participants in both groups in this study fall in the bottom-third range of the scale, with the intervention group score slightly lower than the control group. Pearson correlation coefficients demonstrated that the pair of the dependent variables were negatively, significantly associated ($r = -.335$). As empathy scores increased, client-centeredness scores decreased. Since the variables were associated, the decision to conduct an MANOVA was made.

Table 1*KCES and PPOS Scores for Control and Intervention Groups*

Test	Control Group (n = 19)			Intervention Group (n = 18)		
KCES	Mean (SD)	Minimum Score	Maximum Score	Mean (SD)	Minimum Score	Maximum Score
	85.79 (5.67)	78 (n=1)	98 (n=1)	88.1 (6.89)	68 (n=1)	101 (n=1)
PPOS	Mean (SD)	Minimum Score	Maximum Score	Mean (SD)	Minimum Score	Maximum Score
	42.22 (9.22)	27 (n=1)	61 (n=1)	40.17 (8.19)	25 (n=1)	56 (n=2)

Results of the MANOVA demonstrated no statistically significant difference between the students who participated in the intervention versus the control on the combined (or linear combination of) dependent variables, Wilks' $\Lambda = .96$, $F(2.34) = .71$, $p = .499$ *partial* $\eta^2 = .04$. As the results were not significant, no follow up ANOVAs were conducted. These results indicated that consumption of the narrative-account podcast did not influence levels of empathy or client-centeredness. In essence, the combination of written diagnostic information and a podcast of a first-person narrative account when compared to written diagnostic information had no statistically significant effect on OT students' overall level of empathy and client-centeredness. As the results of the MANOVA were not significant, post hoc analyses were not conducted.

Discussion

According to the results of the analysis, there was no significant difference between the two groups following a five-week long intervention. However, the lack of significant results provides empirical and practical information that can be used to inform both future research and educational practice. There are a variety of ways the results can be explained, including failing to include a reflective component, failure to frame this intervention as part of a larger strategy to target empathy and client-centeredness in multiple courses and lessons throughout the program, and an issue with the wording in one of the measurement tools, the PPOS, which may have resulted in misinterpretation by participants.

The Model of Narrative Reasoning Development identifies narrative reasoning as a cognitive strategy used to gain a better level of understanding of how clients experience illness within the context of their individual lives (Nesbit et al., 2016). Further, narrative reasoning is said to depend on a practitioner's ability to relate to the emotions of a client and to recognize that a client's experience with an illness is only part of that individual's story (Mattingly, 1991). It was hypothesized that the OT students in the current study would come to understand the circumstances, emotions, and thoughts of another person by looking through the lens of a story via a podcast. However, the results

demonstrated that solely listening to a first-person narrative account of an individual over the course of five weeks was not sufficient to influence OT students' empathy and client-centeredness. In other words, because the intervention only lasted 5 weeks, there was not enough time to evoke the changes desired.

In alignment with beliefs of Forrest et al. (1999), a long-term, comprehensive, and strategic strategy targeting empathy and client-centeredness with more breadth and depth is likely needed within OT programs. Students' gaps in competency and professional development in training to become healthcare professionals have sometimes been viewed as a problem that rests with the individual student (Forrest et al., 2008), while others have begun to see these problems of professional competence as issues that need to be addressed at the program level using a systems perspective (Forrest et al., 2008). According to Forrest et al. (1999), changing the general way of thinking about this phenomenon allows for a better understanding of how to address the issue effectively and more systemically.

Development of professional competencies such as empathy and client-centeredness, it seems, may need to take place over a period of time (Forrest et al., 2008). Further, as highlighted in the Model of Narrative Reasoning (Nesbit et al., 2016), the evolution of narrative reasoning parallels a developmental sequence, and thus it is advised going forward that a comprehensive, developmental approach to the facilitation of empathy and client-centeredness in OT students be used by OT education programs. For example, providing exposure to a variety of different stories of individuals with various health conditions and concerns throughout specific courses in the OT program may increase the likelihood of professional growth in the targeted areas. In this same vein, development of, adherence to, and careful monitoring of a more comprehensive program aimed at facilitating growth in empathy and client-centeredness - and, further, making this part of an OT program's mission - is likely to be more effective than a singular intervention as explored in this study. Finally, adding a written reflective writing component to the intervention would likely have prompted the students to take the perspective of the individual with the illness, increasing the potential for promoting empathy and client-centered practice in the OT students (Charon, 2001; DasGupta & Charon, 2004). The written reflective component could be added as a homework assignment. Additionally, professor or student led discussions could be used to foster reflection.

In addition to the Model of Narrative Reasoning Development, the principle of adult learning theory was considered in the design of this study. Adult learning theory emphasizes that learning in adulthood is not just a cognitive process. Rather, it is a holistic process that involves the body, the emotions, and the spirit in addition to the mind. In this way, the adult learner is allowed to construct meaning as it relates to what is already known and what the learner seeks to know (Taylor & Lamoreaux, 2008). The need for opportunities to be self-directed in the learning process, for example, and the tendency to be motivated by learning that relates directly to real life are essential to effective learning for adults (Knowles, 1984). In essence, Knowles claimed that since adults are self-directed, the formatting of instruction should allow them to discover

things and knowledge for themselves without depending on other people. Finally, Knowles stressed the value of the learning process in adult learning and emphasized the comparable efforts on the part of the learner and the instructor involved in adult learning (Knowles et al., 1998). These principles were factored into the design of the current study, and it was assumed that the learners in the intervention group who consumed the podcast would "make meaning" that was directly aligned with the outcome goals of the investigation. The self-directed nature of the intervention, in fact, was initially considered to be a strength of the study design. Not only did the intervention promote efficiency on the end of the instructor since it did not require additional time to be spent on preparation or delivery of the narrative account, but it also showed consideration for learners' time by allowing them to consume the story in the location and at the time of choice of the learners. Instead, though, there may have been too much self-directedness required of the participants. As previously stated, there was no reflective writing requirement or opportunity for discussion among participants, either with or without the involvement of an instructor. As such, perhaps the lack of prompted reflection following the consumption of the narrative-account podcast episodes resulted in a failure of the students to relate the experience to the aspects of real-life, and to professionalism, that was expected.

To this point, reflection is frequently identified in the literature as an essential part of competency development in healthcare education (Chen & Forbes, 2014; Fragkos, 2016; Mann et al., 2009). Further, the Theory of Narrative Reasoning Development includes reflection as one component of the learning process for students preparing to enter the healthcare field (Nesbit et al., 2016). Nesbit and colleagues (2016) noted the work of Wainwright (2010) that underscores how experienced therapists actively reflect on their experiences and interactions with clients more than novice therapists. According to Wainwright, more experienced clinicians consider the lived experiences of their client as opposed to students and less experienced therapists more often focus on the biomedical aspects of a client. For the current study, it was anticipated that the students would be self-directed in the reflection process. However, based on the scores on the KCES and PPOS it appears that the students did not reflect to the degree that was necessary to effect significant change in students' empathy and client-centeredness.

An interesting finding in this study was the negative correlation between empathy and client-centeredness, especially as previous researchers have found a positive association between these variables (Haley et al., 2017). It was expected that the results would demonstrate that as participants' empathy levels increased, their levels of client-centeredness would increase. However, the opposite was revealed in the analysis; that is, participants with higher levels of empathy had lower levels of client-centeredness and vice versa. This discrepancy might be explained by the construction of the PPOS scale and the wording of the items on the PPOS. Although reliability of the PPOS has been supported in physicians (Krupat et al., 2000) and in physical therapy students (Ross & Haidet, 2011) and the measurement tool has been used widely with practitioners and with students in other healthcare professions (Krupat et al., 2000; Shaw et al., 2012), the scale has not previously been used in the field of OT.

Because the PPOS was developed for the purpose of measuring an attitude of patient-centeredness in the patient-physician relationship (Schweller et al., 2014) rather than in a relationship between a client and an OT, there might have been a different interpretation involved in the items or the responses on the survey. Even though the developer of the PPOS allowed for the terminology used on the scale to be changed for the purposes of this study to better align with the ideals and practices of OT with the use of a *healthcare professional* instead of *doctor* and *client* in lieu of *patient*, the wording might have been regarded from conflicting vantage points by participants. For example, one item on the scale reads "Most clients want to get in and out of the healthcare professional's office as quickly as possible." If viewed from the vantage point of a patient in a physician's office, a more patient- or client-centered response is strongly agree. However, if considered from the perspective of a person receiving OT services involving a strong therapeutic relationship or connection between the practitioner and the client, a more patient- or client-centered response would be strongly disagree. In this example, in the interpretation offered by the developer of the PPOS, strongly agree (i.e., or "6," which is the highest ranking on the scale) indicates a high level of client-centeredness, and yet it is feasible that an OT student might see a lower ranking for these items as one that more closely aligns with the construct of client-centeredness. This might explain why analysis of the data collected in this study indicated that as empathy levels increased, client-centeredness decreased.

Limitations

Although the use of an experimental design controls for many threats to internal validity, some limitations still exist and should be noted as they had the potential to impact the results. The sample size was small and, despite randomization, preexisting differences between the two groups cannot be ruled out given the absence of a pretest. In addition, the study was conducted in one OT program which limits generalizability.

The threat of diffusion of intervention was a limitation as the participants, in both the control and intervention groups, were part of the same OT program. As part of the post-intervention survey, participants were asked if they discussed the study with other OT students and all respondents indicated that they had not; however, this could not be guaranteed. Another limitation of the study may be that the data collection instruments were solely self-report measures, which might have been adversely impacted by the aspiration to provide socially desirable or professionally expected responses. Also, the PPOS was not designed to be used with therapists and may not have fully captured client-centeredness. In terms of participant bias, the faculty-student relationship could have also influenced participants' responses on the post-intervention survey.

Because the ACOTE standards drive the development of the OT curriculum, this limits the choices that students are able to make related to the learning process, which may limit the application of Adult Learning Theory. Also, the majority of OT students have gone straight through undergraduate to graduate work, which limits the life experience to which they might apply their learning. While the study was intentionally designed to be conducted outside of a course so as to respect the self-directedness aspect of the intervention, it is possible that this aspect might also have impacted the students'

participation, in that students in either group might not have been as committed to paying attention to, processing, or applying the information in either the written form or the content of the podcast as they would have if the intervention had been conducted as part of a course.

Recommendations for Future Research

Further study of this topic is needed with a larger, more diversified sample from multiple OT programs across the nation. Future studies should consider triangulating data by using standardized assessment tools along with student and client perceptions of empathy. Additional research is warranted to investigate the impact of a narrative-account podcast with the incorporation of a required reflective component that is part of an OT course. Careful consideration should be given when selecting the tool to measure client-centeredness.

Implications for Occupational Therapy Education and Practice

Although the results of this study indicate that the two targeted professional attributes of empathy and client-centeredness did not change in a significant way - and in fact client-centeredness was slightly decreased in the intervention group over those in the control group - the fact remains that these attributes need to be developed in OT students through targeted educational experiences designed to enhance the capacity for these skill sets so that the most effective client care will be provided by the students upon graduation and entry into the field (Hojat, 2007). As such, limitations in this study and reasons for the lack of a significant difference between the control and intervention groups' empathy and client-centeredness levels provide implications for those designing instruction for OT students. Expanding the application of narrative-account podcasts by including them as part of the instructional materials as part of a comprehensive, strategic program is recommended. Adding a reflective or discussion component to the podcast intervention is likely to be necessary if the intervention is to be effective in influencing empathy and client centeredness (Chen & Forbes, 2014; Fragkos, 2016; Mann et al., 2009). Finally, ensuring the validity and internal consistency of the assessment tool should be considered in the evaluation of instructional strategies to effectively assess the growth of empathy and client-centeredness in future OT practitioners. Instruments need to be normed and validated with OT students.

Conclusion

This study investigated the effectiveness of a narrative-account podcast on empathy and client-centeredness in OT students. Despite the evidence that these two attributes of professionalism need to be specifically and strategically taught as part of an OT education program, identifying instructional strategies to teach empathy and client-centeredness is challenging. This study provides insight on the process of implementing strategies to address these critical areas as part of what is necessary to become a competent OT practitioner. Although the intervention in this study did not have a significant effect on empathy or client-centeredness, the results provide direction for future study and the design of interventions. The non-significant results of the study demonstrate that more research and improved interventions need to continue to be developed and investigated. Additionally, the results indicate that an isolated

intervention may not be sufficient to effect positive change in these important aspects of professional development, thus spotlighting the need for a more thorough approach to be used to improve empathy and client-centeredness in students enrolled in OT education programs.

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