2020

Determining the Effect of Target Education on Students' Cultural Responsiveness and Performance During Standard Patient Interactions

Rebecca Mojica
Eastern Kentucky University, bkmojica@me.com

Determining the Effect of Target Education on Students' Cultural Responsiveness and Performance During Standard Patient Interactions

Presented in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Occupational Therapy

Eastern Kentucky University
College of Health Sciences
Department of Occupational Science and Occupational Therapy

Rebecca Mojica, MS OTR/L
2020

EASTERN KENTUCKY UNIVERSITY
COLLEGE OF HEALTH SCIENCES
DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY

This project, written by Rebecca Mojica under direction of Dr. Geela Spira, and approved by members of the project committee, has been presented and accepted in partial fulfillment of requirements for the degree of

DOCTOR OF OCCUPATIONAL THERAPY

CAPSTONE COMMITTEE

G Spira — 7/7/2020

Faculty Mentor — Date

Susan Glass Hames — 7/6/2020

Committee Member — Date

EASTERN KENTUCKY UNIVERSITY
COLLEGE OF HEALTH SCIENCES
DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY

Certification

We hereby certify that this Capstone project, submitted by Rebecca Mojica, conforms to acceptable standards and is fully adequate in scope and quality to fulfill the project requirement for the Doctor of Occupational Therapy degree.

Approved:

Shirley O'Brien 12/14/2020

Shirley O'Brien, PhD, OTR/L FAOTA — Date
Program Coordinator, Doctor of Occupational Therapy

Dana Howell 12/14/2020

Dana Howell, PhD, OTD, OTR/L, FAOTA — Date
Chair, Department of Occupational Science and Occupational Therapy

Executive Summary

Background: The American Occupational Therapy Association (AOTA) has adopted the term cultural responsiveness as part of their Vision 2025. However, there is limited available data about the level of cultural responsiveness skills in occupational therapy students.

Purpose: The purpose of this capstone project was to ascertain the impact of target specific training in cultural diversity on students' perception of cultural responsiveness, and on their performance during simulated patient interactions. The research aimed to answer the following research questions: a) Does targeted specific training in cultural diversity impact students' perception of culturally responsive skills? b) Does students' perception of culturally responsive skills match faculty rating of performance in simulated patient interactions with standard patients?

Theoretical Framework: The overreaching framework for this capstone project was the conceptual model for culturally responsive care. This model is supported by the conceptual framework for cultural competence and the model of cultural effectiveness.

Methods: This capstone project followed a one group pretest and post-test quasi-experimental design. Participants were recruited from the second-year students enrolled in the occupational therapy program. Two assessment measures were utilized. The first measure participants completed a pre-test and post self-assessment before and after completing an online training in culture and diversity. Participants were also evaluated by faculty as part of a regularly scheduled learning activity with standard patients. The pre and post-test self-assessment consisted of a survey modeled after the Cultural Competence Assessment Instrument (CCAI).

Results: A total of seven (n=7) out of ten students participated in the capstone project. Results from the *t* test paired two sample for the means, of the fourteen questions in the pre and post-test self-assessment, revealed an overall score of $p = 0.002$ indicating that completion of the self-learning modules positively impacted the students self-perception of culturally responsive skills. Findings revealed that students' perceptions and faculty assessment were compatible in the areas of communication. In contrast, students' perceptions and faculty assessment of students' skills disagreed in the area of culturally responsive skills.

Conclusions: The results of this research study support the use of targeted specific education in culture and diversity in order to improve students perception of their culturally responsive skills. It also revealed that students' perception of culturally responsive skills differ from faculty rating of their performance in simulated patient interactions. Stressing the value of culturally responsive skills in addition to communication skills throughout foundational and clinical courses in occupational therapy programs, could lead to increased awareness and proficiency that will transfer into therapeutic interventions with clients.

Acknowledgements

I would like to express my deepest gratitude to my faculty mentor Dr. Geela Spira for her support, guidance, and valuable feedback during this capstone project. Also, my sincere thanks to Dr. Susan Skees-Hermes for her time, feedback, and encouragement. You both helped me stay motivated, focused and organized. My deepest appreciation to Dr. Shirley O'Brien, OTD program coordinator for her continued support throughout the program.

Special thanks to Dr. Hector M. Huerta, for serving as the second faculty assessor of the standard patient simulations and helping with proofreading my paper. Also, to Dr. Ingris Tremino for helping with participant recruitment and consent signing. And to Dr. Elsayed Abdel-Moty for always being available to help with the statistics portion of the research.

This project would not have been possible without the students that gave their time and effort to participate in this research, for which I am extremely grateful. Thanks also to my colleagues in the OT program at Florida International University for the resources, support and encouragement for the last two years.

And to my friends that are my family for making this journey meaningful and keeping me motivated along the way, I could not have done it without you.

EASTERN KENTUCKY UNIVERSITY

COLLEGE OF HEALTH SCIENCES
DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY

CERTIFICATION OF AUTHORSHIP

Submitted to: Dr. Geela Spira

Student's Name: Rebecca Mojica

Title of Submission: Determining the Effect of Target Education on Students' Cultural Responsiveness and Performance During Standard Patient Interactions

Certification of Authorship: I hereby certify that I am the author of this document and that any assistance I received in its preparation is fully acknowledged and disclosed in the document. I have also cited all sources from which I obtained data, ideas, or words that are copied directly or paraphrased in the document. Sources are properly credited according to accepted standards for professional publications. I also certify that this paper was prepared by me for this purpose.

Student's Signature: 

Date of Submission: July 5th , 2020

Table of Contents

List of Tables

Section One: Nature of Project and Problem Identification

Individuals may assume that occupational therapy students at a large urban university in a culturally diverse city are culturally responsive and able to meet the needs of the society they represent. However, there is a lack of evidence to support this assumption. There is limited knowledge available regarding the level of cultural responsiveness of entry-level master's occupational therapy students at large urban public universities, and how the students' level of cultural responsiveness impacts simulated patient interactions.

Problem Statement

The problem this project addressed is that occupational therapy students often enter the workforce without the necessary skills including self-awareness of biases, respect and tolerance of others' views and ways, and the ability to modify their responses in order to better serve a diverse population. In addition, academic programs are required to comply with the 2018 Accreditation Council of Occupational Therapy Education (ACOTE) Standard B.1.2 expected student outcomes for master's degree Occupational Therapy programs. This standard delineates that graduates will be able to " apply and analyze the role of sociocultural, socioeconomic, and diversity factors, as well as lifestyle choices in contemporary society to meet the needs of persons, groups, and populations" (ACOTE, 2018). Addressing this problem supports the American Occupational Therapy Association (AOTA) Vision 2025, which highlights the need for occupational therapists to embrace diversity and provide client centered culturally responsive services (AOTA, 2019).

Results from a needs assessment administered on third year occupational therapy students, completing their first Level II fieldwork experience, revealed that there is a disconnect between the students' responses to statements about cultural factors presented in the needs

assessment survey, and their opinion on how the curricular content influenced their responses (Mojica, 2019). The majority of the students (72%) believed that the educational program prepared them to demonstrate respect and understanding for diversity. However, 57% of the students either disagreed or were undecided whether they were exposed to culturally diverse content in the didactic portion of the program. Students expressed a high level of confidence in their verbal and nonverbal communication skills while interacting with clients. However, it was difficult to ascertain if this high level of confidence was a result of the educational content in the occupational therapy program, or if it transfers into culturally responsive interactions with clients. The majority of the students (57%) expressed that specific content in culture and diversity would be beneficial to improve the skills required to interact with individuals of diverse populations (Mojica, 2019).

The results of the needs assessment were congruent with available research (Kale & Hong, 2007; Talero et al., 2015) where students perceived inadequate exposure or training to culture and diversity content in their academic course work. Available research (Ching et al., 2019; Grady et al., 2018) supports the use of culture specific content and learning activities to facilitate the development of cultural competence in occupational therapy students. The needs assessment results supports opportunities for further research, that are in alignment with the findings of the literature review which recommends expanding research to a wider demographic (Grady et al., 2018), and explore the effectiveness of training on culturally diverse curriculums (Ching et al., 2019; Suarez-Balcazar et al., 2009).

Purpose

The purpose of this capstone project is to ascertain the impact of target specific training in cultural diversity on students' perception of cultural responsiveness, and on their performance during simulated patient interactions with standard patients.

Research Question

The research aimed to answer the following research questions:

1) Does targeted specific training in cultural diversity impact students' perception of culturally responsive skills?

2) Does students' perception of culturally responsive skills match faculty rating of performance in simulated patient interactions with standard patients?

Definitions and Variables

The operational definition of cultural responsiveness for the purpose of this research is the intentional respect for individuals from other cultures, and the willingness to incorporate acquired cultural knowledge and experiences to adapt procedures and interventions considering client's cultural needs and performance capacity (adapted from Balcazar et al., 2009; Gay, 2018; Muñoz, 2007).

Independent Variable.

The independent variable in the study is defined as the cultural diversity training that was provided during the fifth semester of the program.

Dependent Variable.

The dependent variable is defined as the level of cultural responsiveness of the occupational therapy students at the end of their fifth semester.

Hypothesis

The following nondirectional hypothesis was explored: students participating in cultural diversity training will exhibit higher levels of cultural responsiveness during simulated standard patient interactions.

Theoretical Framework

The overreaching framework for this capstone project is the conceptual model for culturally responsive care by Muñoz (2007), comprised of the combined effect of five components which include generating cultural knowledge, building cultural awareness, applying

cultural skills, engaging culturally diverse individuals, and exploring multiculturalism. This model was furthered by the conceptual framework for cultural competence proposed by Balcazar et al. (2009), and the model of cultural effectiveness by Wells et al. (2016). The conceptual framework for cultural competence looks at cultural competence as an intentional process where the individual develops awareness, knowledge and skills but requires a supportive environment in order to be successful applying said skills (Balcazar et al., 2009). The model of cultural effectiveness is a process that focuses on self-exploration, self-reflection, knowledge, and individuals' skills and their effect on perceptions, attitudes and behaviors (Wells et al., 2016).

These frameworks guided the educational modules utilized in the capstone project and supported the principal investigator's (PI) expectation that additional training in cultural diversity influences the level of cultural responsiveness in students. The educational modules presented diversity not only from the context of race and ethnicity, but also focused on social determinants of health, health disparities, disability culture, and LGBTQ issues in order to increase students' self-awareness of cultural biases, cultural knowledge and its effect on interactions with other individuals. Improved cultural knowledge helps occupational therapy practitioners adapt the way interventions are provided, which in turns enables occupational engagement (Black & Wells, 2007). Supporting clients' occupational engagement facilitates attaining a just society where individuals are able to participate in the meaningful activities of their choice (Aldrich et al., 2017). Whiteford and Townsend argued that training occupational therapy practitioners in the inequalities and prejudices that client's encounter may facilitate their understanding and their journey into achieving occupational justice for their client's (2011). The basis of occupational justice emphasizes that occupation is an essential part of the human experience and it will be an injustice to deprive individuals of equal opportunities to engage in

the occupations of their choice (Whiteford & Townsend, 2011). A just society ensures that all individuals and populations have access to necessary services in order to prevent restricted participation and social exclusion.

Significance of the Study

Occupational therapy programs strive to ensure that students will develop skills to meet the cultural needs of the clients they serve upon becoming entry-level professionals. This effort results in occupational therapy practitioners that are prepared to acknowledge the diversity of the individuals and populations they serve in order to provide services that meet their cultural needs. The immediate significance of this research is that occupational therapy students were provided with the opportunity to explore their own biases, increase awareness of said biases, and gained understanding of the need for culturally appropriate interventions. By completing the training, participants in the study gained additional knowledge in cultural diversity and increased self-awareness that will enable them to provide culturally responsive care while empowering and meeting their client's occupational needs.

This research benefits occupational therapy practice by yielding new knowledge on the impact of structured education in cultural diversity in occupational therapy programs, and by stimulating the development of educational tools that improve the educational curriculum. This capstone project provides a brief review of available literature that supports the need for further research in cultural responsiveness in occupational therapy students. In addition, it encourages the opportunity for similar research at other educational institutions, which in turn will add more evidence-based practices in the topic of cultural responsiveness of occupational therapy students.

Section Two: Literature Review

A historical review of literature indicated that topics related to culture and diversity in occupational therapy were approached and studied throughout the 1990s impacting emerging conceptual models, and educational standards in occupational therapy programs (Black, 2002). A literature review of the available occupational therapy research into the topic of culture revealed inconsistent use of terminology, where some authors looked at cultural competence, others at cultural awareness, or at cultural responsiveness. There is also evidence of different conceptual cultural models emerging in the literature which is congruent with AOTA's vision and the need to better serve diverse populations. Overall four main topical threads were identified in the reviewed articles including: (a) different definitions of cultural competence and cultural responsiveness, (b) different conceptual models to address culture within the context of occupational therapy, (c) students' self-perceptions of training in culture and diversity, and (d) different self-assessments utilized to evaluate cultural competence or perceptions. These topical threads are further explained within the content of this paper.

Definitions

Examining the thread of differing descriptions of cultural definitions, one variety is the differing explanations of culture and cultural competence found in healthcare literature. In a context specific to occupational therapy, Kielhofner (2002) provided a definition directly related to occupation, defining culture as the means through which individuals validate and interpret their doing. A more comprehensive definition was provided by Black and Wells (2007) stating that culture is a combination of the learned influences which impact how a group of people live which are transmitted throughout generations; including values, beliefs, interactions, norms for communication, and self-expression. Culture has also been described as observable behaviors, values, and objects that are part of an individuals' identity (Bonder & Martin, 2013). These

definitions focus on the individuals' identity and how it influences occupational engagement. However even with these broad definitions of culture, a synthesis of occupational therapy literature which looked at approaches to culture and diversity within the profession revealed that culture and diversity were narrowly studied mainly from the context of race and ethnicity (Beagan, 2015). This limited focus failed to recognize the pervasive influence of socio-economic factors and gender identity upon individuals' overall engagement in occupations.

The concept of culture is always developing, and it is difficult to subscribe to a single definition of culture. Bonder and Martin (2013) emphasized the difficulty of providing a formal definition of culture, and that available definitions are often influenced by the interests and concerns of those involved in providing the definition. Instead, it is recommended that practitioners acknowledge that culture is always present in their interactions with others, and that they improve their cultural knowledge in order to meet the needs of the current global environment in which they practice (Balcazar et al., 2009). This knowledge requires learning different cultural characteristics and how they relate to client's health, and their view of illness and disability as within different contexts some aspects of diversity maybe more important than others in order to achieve good outcomes and provide good quality care (Beagan, 2015; Taff & Blash, 2017).

The concept of cultural competence in occupational therapy practice is an ongoing process in which a practitioner seeks to develop a sense of how individuals experience their uniqueness within different contexts and respond accordingly (Black & Wells, 2007; Wells et al., 2016). In addition, practitioners must have the willingness to accept and respect individuals from other cultures, to adapt procedures and interventions in order to meet client's cultural needs, and to challenge discriminatory and oppressive practices (Balcazar et al., 2009). Darawsheh et al.

argued that cultural competence is simply a level of maturity that is achieved when the individuals cultural needs are "considered and met within the context of their occupational needs" (2015, p.1). The common denominator in these views is the intention to discover the client's cultural needs and the willingness to respond to those unique needs within the appropriate context. However, if cultural competence is a dynamic process where practitioners need to adapt to meet the cultural needs of the client, then one can argue that the level of maturity suggested by Darawsheh et al. (2015) is not a single occurrence but one that is achieved every time a practitioner successfully considers and meets the cultural needs of their client.

Even though the term cultural competence is found throughout the occupational therapy literature, the AOTA recently shifted its language from utilizing the term cultural competence to introducing the term cultural responsiveness in the Vision 2025 (AOTA, 2019). Cultural responsiveness is a term most often associated within the context of education, and with globalization the concept has expanded into business, healthcare, and social sciences (Gay, 2018). In occupational therapy literature, culturally responsive care was initially defined in 2007 as the development of a collaborative relationship based on intentional mutual respect for an individual's culture (Muñoz). However, another definition has since emerged within occupational therapy which describes culturally responsive care as fair, empathetic, and contextualized care that is in tune with the common experiences of diverse individuals with the purpose of enabling participation and inclusion in occupations (Talero et al., 2015). The common thread in both definitions is the development of a collaborative relationship based on common experiences between the client and the practitioner. Providing culturally responsive care rather than culturally competent care implies that there is an intentional effort from the

practitioner to explore, reflect, adapt and collaborate in all aspects of their client's care (Muñoz, 2007).

Cultural Models in OT

Model of cultural effectiveness. Cultural models in occupational therapy are still emerging (Muñoz, 2007). One of the earliest models referenced is the cultural competency model introduced by Black and Wells (2007) which seeks to promote acceptance, tolerance, knowledge and positive relationships between individuals of different cultures. This model has now evolved into the model of cultural effectiveness which focuses on self-exploration, self-reflection, improving knowledge and skills, and encourages individuals to explore the effect of their cultural views on their interactions with others (Wells et al., 2016).

Conceptual framework for cultural competence. Congruent with the proposed definition of culturally responsive care, the conceptual framework for cultural competence by Balcazar et al. (2009) looked at achieving cultural competence as an intentional process where occupational therapy practitioners gain awareness, knowledge, and develop skills but also require a supportive environment to successfully implement said skills.

Process for cultural competence framework. While exploring the views of occupational therapy practitioners regarding perceptions of culturally competent practice and their experiences developing culturally competent skills, Darawsheh et al. (2015) identified two main cultural themes: culture shock and the process of cultural competence. Culture shock surfaces when the practitioner's expectations are not met due to inaccurate preconceived notions which can lead to uncomfortable feelings that may interfere with service provision (Darawsheh et al., 2015). In order to reduce the risk of culture shock, this research project asserts that it is important to provide occupational students with the educational and learning opportunities to develop the necessary skills to provide culturally responsive care. The authors included cultural

responsiveness as the fourth stage in a six-stage process for achieving cultural competence that includes cultural awareness, cultural preparedness, cultural picture of the person, cultural responsiveness, cultural readiness, and cultural competence.

Model for culturally responsive care. A specific model for cultural responsiveness in occupational therapy was developed by Muñoz (2007). The conceptual model for culturally responsive care is comprised of the combined effect of five components which include generating cultural knowledge, building cultural awareness, applying cultural skills, engaging culturally diverse individuals, and exploring multiculturalism (Muñoz, 2007).

KAWA model. Another cultural model that is often referenced in occupational therapy literature about culture and diversity is the KAWA model. KAWA is a client centered model initially created to meet the needs of East Asian practitioners and their clients. This model recognizes the different contexts in which clients interact, and compels practitioners to be aware of not only of their client's culture, but also of their own cultural preconceptions, the client's previous experiences in occupational therapy, and the culture of the practice setting and how they interrelate to guide the therapeutic process with the goal to improve wellbeing (Iwama et al., 2009; Teoh & Iwama, 2015). Although this model is mostly utilized by practitioners as a treatment intervention, its focus on the culture of the practice setting and how it influences the therapeutic process are important concepts to emphasize when educating occupational therapy students.

Having examined the literature regarding definitions of culture, cultural competence, and cultural responsiveness, the model for culturally responsive care with its emphasis on improving cultural knowledge, building cultural awareness, and applying cultural skills was selected as the theoretical model for this capstone project. The conceptual framework for cultural competence

with its focus on achieving cultural competence as an intentional process, and the model for cultural effectiveness with it focus on self-reflection, improving knowledge and skills were chosen as the complementary models that guided this project.

Students' Perception of Cultural Training and Education

A literature search revealed that studies regarding cultural competence have been conducted with a variety of healthcare students, including medical, dental, social work, and physical therapy students. However, the amount of specific research related to occupational therapy students is limited. One such study about the self-perceptions of cultural awareness in entry level occupational therapy students revealed that participants reported limited cultural awareness and training (Talero et al., 2015). A research study with both occupational and physical therapy students indicated that 77% of the participants had limited knowledge of different cultures (Kale & Hong, 2007). Occupational therapy students, as well as practitioners reported that they often felt that they received limited culturally diverse content in their academic programs (Cheung et al., (2002); Suarez-Balcazar et al., 2009).

A study about the self-perceptions of cultural competence from the occupational therapy practitioner's perspective revealed that practitioners often report feeling inadequately prepared to adapt to the cultural needs of their clients (Suarez-Balcazar et al., 2009). Occupational therapy programs incorporate international service-learning programs and fieldwork experiences in an effort to provide students with the opportunity to interact and immerse themselves in diverse cultures. A recent study that examined the cultural competence of master level occupational therapy students concluded that there is opportunity for occupational therapy programs to improve their curriculum by providing education that increases students' cultural competence (Grady et al., 2018). This is supported by additional evidence related to occupational therapy which concludes that students' perceptions of cultural competence improve with specific training

and educational experiences (Cheung et al., 2002; Ching et al., 2009). The available literature regarding students' self-perception of cultural training and education supported this capstone project.

Assessment of Cultural Responsiveness

A review of available literature revealed there is not a specific tool that addresses cultural responsiveness of occupational therapists or occupational therapy students. Suarez-Balcazar et al. (2009) examined some of the available tools for assessing cultural competence and concluded that most of the available scales have been validated in other fields of health and social sciences, and none of these scales has been used with occupational therapists. This gap in the availability of specific assessment tools for occupational therapy and occupational therapy students led Balcazar and colleagues to develop the Cultural Competence Assessment Instrument (CCAI), which combines some of the most pertinent questions of other available assessments, as well as demographics and background information, and it asks about previous exposure to the topic (2009). The CCAI was validated with a random sample of over four hundred occupational therapy practitioners. Being the only available assessment instrument specifically designed and validated for occupational therapists made the CCAI the most adequate tool for this research project (see Appendix C). Therefore, a modified version of the CCAI was developed to assess students' perceptions of cultural responsiveness during this project.

The examination of available research revealed a gap in the literature regarding occupational therapy students' perception of cultural responsiveness. The available literature supported the provision of specific training in cultural diversity, as well as the need to provide said training as part of the foundational education in occupational therapy programs.

Section Three: Methods

Project Design

This capstone project followed a quantitative research method of a one group pretest and post-test quasi-experimental design. A single group quasi-experimental design measures the group before and after intervention (Creswell & Creswell, 2018).

Setting

The study took place at an occupational therapy program of a large urban public university in the state of Florida, in the United States where the capstone author is a faculty member.

Participants

A sample of convenience was utilized in this capstone project. The population in the study consisted of second-year master level occupational therapy students enrolled in the program where the PI is a faculty member. A minimum of 6 students was required to complete the study, to have a representative sample size of the class of at least 15% and to account for attrition. There was no maximum number of participants, however the second-year cohort consisted of 44 students.

Inclusion criteria. All second-year students in the program during their fourth semester were eligible for voluntary participation in the study.

Exclusion criteria. Students "off-track" due to academic performance or those that entered academic probation were excluded from the study.

A total of seven (n=7) out of ten students that signed the consent to participate completed the pre and post-test self-assessment surveys for this research project. Eight of ten students that consented completed the pre-test and all the learning modules, of which seven completed the post-test. It is important to note that the research project started prior to students going on a two-

week level 1 fieldwork experience, and the last four weeks of the research implementation were impacted by a statewide mandate to initiate remote learning practices due to the COVID-19 pandemic. This may have contributed to the attrition in participation in the research project.

Assessment Tools

Properties of the Assessment Tools.

Two assessment measures were utilized in this capstone project. The first measure consisted of a self-assessment of participants' knowledge, opinions, and attitudes towards culture and diversity topics. The Cultural Competence Assessment Instrument (CCAI) was modified by removing questions related to employment and work settings in order to better assess the students. The CCAI was validated with a random sample of over four hundred occupational therapy practitioners and was found to have strong psychometric properties. During the validation process internal consistency was measured utilizing Cronbach alpha factor analysis set at > .75 , and results yielded scores greater than .75 all areas assessed (Suarez-Balcazar et al., 2011). The modified version of the CCAI consisted of fifteen statements survey rated in a five-point Likert scale that assesses students' knowledge, opinion and attitudes towards the statements and information presented (see Appendices D and E). The five-point Likert scale utilized in the survey ranged from strongly agree, agree, neutral, disagree, and strongly disagree.

The second assessment measure consisted of a faculty observation checklist developed by the PI in order to assess students during standard patient (SP) interactions. The SP interactions took place as part of a skills and competency assessment as the end of a required psychosocial course. The faculty used the checklist to assess students' overall performance, their verbal and non-verbal communication, and their ability to adapt intervention in response to the cultural needs of the clients. The validity and reliability of this checklist tool has not been evaluated.

Procedures

Upon receiving approval from the PI Institutional Review Board (IRB), and establishing a reliance agreement with Eastern Kentucky University IRB, the capstone project was implemented. Participants were recruited from the second-year cohort of occupational therapy students via flyers, email, and face to face communication. In order to maintain the privacy and confidentiality of the participants during the research process, the printed informed consent was obtained and stored by another faculty member in the program until completion of the academic semester. Pre and post self-assessment was administered via a Qualtrics® survey. Participants were given the option to not disclose demographical information in the survey. In addition, none of the data gathered during pre-post test was directly associated to the participants identity.

Participants completed a self-assessment of their knowledge, opinions, and attitudes towards culture and diversity topics before and after completing a training module in culture and diversity developed for this capstone project. The training consisted of 3 one-hour online modules completed as an independent learning activity which student accessed via the CANVAS® learning platform. The training modules developed for this capstone project included areas not typically taught within the content of the courses in the academic program, including: (a) social and health disparities of specific populations, (b) bias and discrimination in healthcare, and (c) cultural models within occupational therapy.

Upon completion of the training modules participants, completed a simulated standard patient interaction of diverse cultural background as part of a regularly scheduled learning activity in a psychosocial course. This learning activity was initially scheduled as a face to face interaction, in a simulation lab where interactions are recorded for feedback and review purposes. Modification of the interaction was required in response to requirements to transition to a fully remote learning format due to the COVID-19 pandemic. The modification consisted of

simulating a telehealth intervention with the SP via Zoom®, which were recorded for feedback and review purposes. The standard patients that participated in the interventions were culturally diverse, as one SP was Asian and the other represented a transgender male.

All students enrolled in the course were evaluated with the faculty assessment checklist by the class instructor, which is also the PI for this capstone project, during the simulated interaction. All faculty assessment checklists were identified by the day and assigned order of the students' scheduled intervention. All students enrolled in the course had the opportunity to receive feedback on their performance during a debriefing session. The PI was blinded as to the study participants until after the final grades were submitted for the course. Once the semester was completed and grades for the course posted, the participants were identified and their assessment checklist selected based on the master scheduled for the simulated interventions. The videos of the participants in the capstone projects were also reviewed and the students assessed with the faculty checklist by a second faculty member in the occupational therapy program. The videos were identified by the day and order in which the participants administered their intervention. The faculty member was instructed to identify the participants in the same manner when completing the checklist. The data gathered from the faculty assessment checklists completed by both faculty members was aggregated and analyzed.

Ethical Considerations

AOTA Code of Ethics (2015) specifies the following six "Principles and Standards of Conduct" expected from occupational therapy professionals; beneficence, nonmaleficence, autonomy, justice, veracity and fidelity (p.2). In order to ensure that all ethical aspects were taken into consideration, approval from the university institutional review board (IRB) was obtained. Most of the principles and standards described by the AOTA Code of Ethics are relevant to this research, and they will be preserved. The principle of nonmaleficence requires

occupational therapy researchers to avoid conflict of interest and exploiting relationships. To avoid the students' perception that there is an undue influence to participate in their professor's research study and to avoid any conflict of interest, participant recruitment was performed via email, flyers, and face to face communication. A different faculty member assisted with the recruitment and with obtaining informed consent. The principle of autonomy is of the utmost importance as students' rights to "self-determination, privacy, confidentiality and consent" (p.4) must be honored. Students were expected to volunteer for the project as an act of free will. They were required to sign a consent form that clearly described the purpose and research process. In addition, they had the right to withdraw from the study without fear of negative consequences. There were no secondary gains or adverse consequences whether a student volunteered for the research or not. Another important aspect of the principle of autonomy is that of privacy and confidentiality. The researcher ensured that the requirements of the Family Educational Rights and Privacy Act (FERPA) [Pub. L. 93-380] were met. The occupational therapy program has procedures in place to maintain students' privacy and confidentiality, including mandatory FERPA training.

The principles of veracity and fidelity were also preserved during this research. The students had access to accurate information and the researcher ensured that the information was understood. The researcher maintained the principle of fidelity by avoiding conflict between the work responsibilities as an instructor and those required for the research. In addition, in order to avoid conflict with the students' academic responsibilities, the training was provided online via web-based modules outside of their class requirements.

Data Analysis

According to Taylor (2017), researchers use descriptive, inferential statistics, or a combination of both in quantitative studies. Descriptive statistics are used to describe the sample population in terms of demographics and social characteristics. Inferential statistics help researchers test the hypothesis and ascertain if the outcomes of the studies are by chance or due to a true impact of the intervention (Taylor, 2017). The data gathered in the study was analyzed using a combination of descriptive and inferential statistics. The demographic and behavioral data gathered was analyzed using descriptive statistics such as mean, standard deviation, frequency and percentages. The behavioral data included knowledge, opinion and attitudes towards the topics presented in the survey. Inferential statistics were used to analyze the students overall scores in pre and post-test self-assessments. In order to ascertain if there was a statistical significance between the students pre and post self-assessment test scores, a *t* test paired two sample for means at a .05 α was performed the using data analysis feature using IBM SPSS Statistics software 64-bit version for Mac OS. A Chi Square test using Microsoft® Excel for Mac was performed to analyze the correlation between the results of the faculty assessments performed on participants during standard patient interactions.

Section Four: Results

The following section presents the results of the data analysis of this capstone project. A total of seven students volunteered for this research, the sample size (n=7) represents, 16% of the second-year occupational therapy cohort. The majority of the participants identified themselves as female (n=6) and the remainder as male (n=1). The participants ages ranged from 24-30 (n=5) and (n=2) participants in the 32-42 years range. A total of 57% of the participants (n=4) identified themselves as Hispanic, all reporting fluency in Spanish as a second language, with one participant also reporting fluency in Portuguese. The remaining 43% of the participants (n=3) identified themselves as white, with one of them reporting some knowledge of conversational Spanish. Overall the sample is representative of the student body of the occupational therapy program, where currently 59 % of the students are Hispanics and 25% White non-Hispanic. Demographic data is presented in Table 1.

Table 1

Participants Demographics

Demographics	**Participants N=7**
Age	**N**
24-26	2
27-30	3
32-42	2
Sex/Gender	
Female	6
Male	1
Race/Ethnicity	
African American/Black	0
Hispanic/Latinx	4
White	3

Prior educational experiences. When asked about previous educational experiences with regards to training in culture and diversity, most participants reported having some previous formal or informal introduction to the topic. These included taking a required class or elective

(n=3) or independently learning about the topic (n=2). All participants reported that the topic of culture and diversity is covered in various courses taught in their academic program.

Pre-Test and Post-Test Comparison

Results from the *t* test paired two sample for the means, of the fourteen questions in the Modified CCAI pre and post-test self-assessment, revealed an overall score of $p = 0.002$ indicating that completion of the self-learning modules on cultural responsiveness positively impacted the students self-perception of culturally responsive skills. Subsequent *t* test analysis of specific questions directed at ascertaining students perceptions of culturally responsive skills including; verbal and non-verbal communication, examining personal biases, and adjusting therapeutic strategies revealed a $p = .029$ indicating a positive statistically significant change between pre-test and post-test scores. The pre-test and post-test mean results for selected questions on cultural responsiveness are reflected in Table 2.

Table 2

Self-Perceptions of Cultural Responsiveness

Self - Perceptions of Cultural Responsiveness	***Pre-Test Mean***	***Post-Test Mean***
It is hard to adjust my therapeutic strategies with my ethnic minority clients.	3.2	3.4
I am effective in my verbal communication with clients whose culture is different than mine.	4.8	5.6
I feel confident that I can learn about my client's cultural background.	5.4	6.4
I am sensitive to valuing and respecting differences between my cultural background and my client's cultural heritage.	5.6	6.2
I am effective in my nonverbal communication with clients whose culture is different from mine.	4.8	5.4
I do not feel that I have the skills to provide services to ethnic minority clients.	-2.8	-2.4
I examine my own biases related to race and culture that may influence my behavior as a service provider.	5.8	6.2
I would find it easy to work competently with minority clients.	4	5.2
It is difficult for me to accept that cultural beliefs may influence how ethnic minorities respond to illness and disability.	-2.2	-2
Overall pre-post t test paired two samples for means score (α=.05)	*p=.029*	

In addition, 100% of the participants agreed or strongly agreed that they could learn culturally responsive behaviors from peers, and that they have the cultural skills to provide services to ethnic minority clients. All participants (100%) also agreed or strongly agreed that they could be more intentional at taking into consideration their client's cultural background in their treatment interactions. Subsequent *t* test analysis of specific questions directed at ascertaining students' self-perception of attitudes regarding cultural responsiveness including; being open to learn about different cultures and openly discussing any issues they may have developing multicultural awareness, revealed a $p = .036$ indicating that there is a statistically significant change between students pre-test and post-test scores in those areas. The pre-test and post-test mean results for selected questions about attitudes and perceptions are reflected in Table 3.

Table 3

Self - Perceptions of Attitudes Regarding Cultural Responsiveness

Self - Perceptions of Attitudes Regarding Cultural Responsiveness	***Pre-Test Mean***	***Post-Test Mean***
I feel that I can learn from my ethnic minority clients.	6	7
I have opportunities to learn culturally responsive behaviors from peers.	5.2	6.6
I am open to learn about different cultures through educational methods and /or life experiences.	6.6	6.8
I openly discuss with others issues I may have in developing multicultural awareness.	4.6	5.8
Overall pre-post t test paired two samples for means score ($\alpha = .05$)	*p=.036*	

Faculty Assessment of Students Cultural Responsiveness

A faculty generated checklist was used to assess four areas directly related to questions 2, 3, 4, and 6 on the modified CCAI. Due to the small sample size, comparison of faculty assessment and students' post-test responses was performed with descriptive statistics using frequency and percentages. In the area of verbal communication and non-verbal communication,

combined faculty scores revealed congruency between the faculty scores and the students' perceptions of the verbal and non-verbal communication skills. Both students and faculty agreed or strongly agreed that 86% of the students were effective in their verbal communication, and 71% of students were effective in their non-verbal communication. During the simulated intervention with standard patients, faculty also assessed students ability to ascertain cultural factors that may hinder client's ability to engage in meaningful occupations. Comparison of faculty rating and students' self-perceptions revealed significant differences in these areas. Faculty agreed or strongly agreed that 67% of the students were able to ascertain pertinent factors compared to 100% of the students self-rating of agreed or strongly agreed. Students ability to adjust therapeutic strategies when working with minority clients was also assessed. Only 14% of the students agreed or strongly agreed that it is hard for them to adapt their therapeutic strategies, compared to 36% of the faculty scores. Overall comparison results between faculty objective assessment and student self-reflection and reflected in Table 4.

Table 4

Difference Between Objective Faculty Assessment and Subjective Student Self-reflection

Difference Between Objective Faculty Assessment and Subjective Student Self-reflection	***Faculty Assessment %***	***Students Post Test %***
It is hard to adjust my therapeutic strategies with my ethnic minority clients.	36%	14% *
I feel confident that I can learn about my client's cultural background.	67%	100% *
I am effective in my verbal communication with clients whose culture is different than mine.	86%	86%
I am effective in my nonverbal communication with clients whose culture is different from mine.	71%	71%

*Denotes significant difference between faculty and student perceptions

Comparison between the two faculty assessments was performed with a chi square test.

Results revealed that there was a statistically significant difference between the faculty scores for the questions addressing nonverbal communication (*p=.0002*) and students' ability to adapt therapeutic strategies to meet client's cultural needs (*p=.0006*).

Discussion

This capstone project was supported by available literature which recommends the exploration of the effectiveness of training and culturally diverse curriculums (Ching et al., 2019; Suarez-Balcazar et al., 2009). This research aimed to ascertain if the implementation of targeted specific training in cultural diversity impacts the perception of culturally responsive skills in occupational therapy students, and if the students' perception match faculty rating of students' performance in simulated patient interactions.

Impact of Target Specific Training

Upon completion of the learning modules provided, participants exhibited change in the mean scores of all the questions in the pre-and-post-test self-assessment. The self-assessment measured students' knowledge, opinions, and attitudes towards topics about culture and diversity. The observed change in the mean scores comparison suggests that the participants perceived a greater level of knowledge and culturally responsive skills. The change in mean scores could be attributed to the completion of the assigned online learning modules on culture and diversity. These findings are supported by additional evidence in occupational therapy literature which concluded that students' perceptions of cultural competence improve with specific training and educational experiences (Cheung et al., 2002); Ching et al., 2009; Grady et al., 2018).

This research provided participants with the opportunity to explore their own biases, and to gain an understanding of the need for culturally appropriate interventions. In the area of

culturally responsive skills students exhibited improvement in their awareness of the need to value and respect the differences between their client's and their own cultural background. Participants also exhibited understanding of the need to be more intentional in taking their clients cultural background into consideration during treatment interactions. These results are consistent with the operational definition of cultural responsiveness developed for this capstone, which emphasizes the intentional respect for individuals from other cultures, and the willingness to incorporate acquired cultural knowledge and experiences in therapeutic interactions. In addition, results also indicated that participants appeared receptive to learn about culture and culturally responsive behaviors from their peers as well as their clients. This willingness and intent to be culturally responsive may transfer from the academic setting to their fieldwork experience, and possibly to the students' future employment setting.

Students' and Faculty Perceptions

This capstone project is unique from available research in culture and diversity, as it is the first time that participants' culturally responsive skills were also assessed by faculty members during simulated standard patient interactions. A second aim of this capstone project was to ascertain if the students' perceptions and the faculty assessment of student skills matched. Findings revealed that students' perceptions and faculty assessment of students' skills were compatible in the area of communication. In contrast, students' perceptions and faculty assessment disagreed in the area of culturally responsive skills. Culturally responsive skills included students' ability to gather information about their client's cultural background and adapt interventions accordingly.

Verbal and non-verbal communication. Students' perceptions and the combined assessments of both faculty members were consistent in the areas of verbal and non-verbal communication. These are previously learned skills that students have the opportunity to

practice in formative learning activities and are consistently assessed in all clinical courses during clinical competencies. It is possible that the similarity in scores could be attributed to the recurrent effort placed on the importance of communication and the therapeutic use of self throughout all foundational and clinical courses in the academic program.

Culturally responsive skills. When comparing students' self-rating with the faculty assessment of their skills, there was significant difference between faculty rating and students' perceptions in the area of culturally responsive skills. Different from the faculty observations, students reported high levels of confidence in their ability to ascertain relevant information about the client's cultural background and adapt interventions to meet their client's cultural needs. However, this level of confidence did not necessarily translate to formulating an effective series of questions to ascertain the client's cultural background or to effectively adapt interventions during simulated standard patient interactions.

A logical interpretation for these results could be that students construe adapting interventions in terms of performance skills, overlooking the need to take into consideration the client's personal factors, values and beliefs. Personal factors , values and beliefs are inherent to each individual, however they may change overtime and impact the way individuals engage in occupation (AOTA, in press). The discrepancy between faculty assessment and students' perceptions could also be attributed to the students focusing on details specific to administering their assigned intervention and the time constraint during the competency assessment. One could argue that if academic programs place similar effort on culturally responsive care as in communication and therapeutic use of self, students' level of confidence and knowledge of culturally responsive skills will also develop over time.

Overall faculty assessment. When comparing the individual ratings of students' performance from both faculty members, results revealed consistent scores in the areas of verbal communication and students' ability to ascertain their client's cultural background. However, there was a difference between each faculty assessor's perceptions in the areas of non-verbal communication and students' ability to adapt interventions. This discrepancy in scores between the two faculty members could be attributed to influences resulting from the abrupt transition to a remote teaching platform in response to the COVID-19 pandemic. When assessing all students in the course, the PI, also in the role of course instructor, took into consideration the effect of the unanticipated change from a scheduled face to face interaction to a simulated telehealth session upon students' performance. It is possible that the second faculty member, who reviewed only the videos of the participants in the research, assessed the students' performance without accounting for the additional stressors inherent to the unanticipated change in context.

Strengths and Limitations

One of the limitations of the project was the use of a small sample set of second year occupational therapy students at a large urban public university. In addition, students that volunteered to participate in the study may have been inherently vested in learning more about culture and cultural diversity which can lead to improved outcomes. This limitation may hinder the ability to easily generalize the research at different academic institutions. Another limitation of the study was that the assessment tool utilized for the pre and post-test has not been validated on occupational therapy students. A strength of the project, compared to similar available research that looks at single group pre-post-test comparisons on the topic of culture and diversity, was that this study also looked at students' simulated interactions with culturally diverse standard patients, including an Asian SP and an SP portraying a transgender individual. The gathering of objective data during simulated interventions by comparing the faculty

assessment with the students' self-perceptions provides an additional way to assess the impact of the culture and diversity training on student's culturally responsive skills.

Implications for Occupational Therapy Practice

This study provides additional knowledge on the impact of structured education in cultural diversity in occupational therapy programs, and it helps to reduce the gap in available research on cultural responsiveness specific to occupational therapy students. The operating definition of cultural responsiveness generated for this research could be generalized for wider use and application with occupational therapy practice. The educational modules developed for the capstone project were not limited to general knowledge about cultural responsiveness, but also examined health disparities affecting underserved populations including the LGBTQ community. Results of a research about transphobia in healthcare students showed that occupational therapy students reported significantly higher levels of transphobia than other healthcare professions (Acker, 2017). Gender identity training in educational programs can serve to increase knowledge in occupational therapy practitioners on how to better serve the LGBTQ community. In addition, this capstone project supports the use of high-fidelity simulations that provides first-hand practical experiences with standard patients of diverse backgrounds in order to help students improve their knowledge and skills. Leighton (2017) described the use of SP as the highest-level fidelity in simulation-based learning. Furthermore, this capstone project reveals the need for intentional emphasis in academic programs on educating students on adapting interventions according to the client's cultural need and background which could be achieved by creating a curricular theme or curricular thread.

The assessment tool designed for this research study could serve as a model for occupational therapy programs to gather data to comply with the Accreditation Council of Occupational Therapy Education (ACOTE) 2018 Standard B.1.2 which assesses student

outcomes in socio-economic and diversity factors (ACOTE, 2018). The aim of this research was in alignment with the American Occupational Therapy Association (AOTA) Vision 2025 statement which highlights that occupational therapists must embrace diversity and provide client centered culturally responsive services (AOTA, 2019).

Recommendations for Future Research

As evidenced by the gap in the literature of specific research on cultural responsiveness of occupational therapy students, there are still continued opportunities for further research in this area. Available research in occupational therapy has focused on cultural competence, and not on cultural responsiveness which includes content regarding the practitioner intent to explore, reflect, adapt and collaborate in all aspects of their client's care (Muñoz, 2007). Therefore, continued research in cultural responsiveness is recommended in order to reduce the literature gap in this topic. Further research on the development and effectiveness of training material on culture and diversity is recommended. In addition, there is opportunity to compare the faculty assessment of students' skills during simulated interactions with standard patients and the students' assessment by fieldwork educators (FWE) during Level 1 and Level 2 fieldwork experiences. This will add data on how targeted education on culture and diversity impacts students' clinical experiences.

To further validate the results, it is recommended that this research be replicated at the same institution with a larger sample size, as well as providing a face to face component to the training. Collaboration with other occupational therapy programs will allow for validation of the modified version on the CCAI on occupational therapy students. In order to strengthen the validity of the data, it is recommended that the pre-assessment is completed upon admission to the occupational therapy program. This can provide a more accurate and targeted picture of students' change in perception of culturally responsive skills over time.

Summary

The results of this research study support the use of specific training in culture and diversity in order to improve students' perception of their culturally responsive skills. Furthermore, this research study introduced the use of culturally diverse standard patients in competency assessments, which provided the opportunity to assess students' cultural responsiveness in a safe environment. The findings indicated that completion of the self-learning modules on cultural responsiveness positively impacted the students' self-perception of culturally responsive skills. It also revealed that students' perception of culturally responsive skills differed from the faculty rating of their performance in simulated patient interactions.

Stressing the value of culturally responsive skills in addition to communication skills throughout foundational and clinical courses in occupational therapy programs could lead to increased awareness and proficiency that will transfer into skills to promote effective therapeutic interventions with clients. The development of culturally responsive skills in future occupational therapy practitioners will help to reduce current health disparities in minority and underserved populations and promote overall well-being in the individuals and communities served. It is this author's intent to serve as a change agent that drives culturally diverse content into the curriculum of occupational therapy programs.

References

Acker, G. M. (2017). Transphobia among students majoring in the helping professions. *Journal of Homosexuality,64*(14), 2011-2029. https://doi.org/10.1080/00918369.1293404

ACOTE. (2018). *2018 Accreditation Council for Occupational Therapy Education (ACOTE) Standards and interpretive guide.* Retrieved from https://www.aota.org/~/media/Corporate/Files/EducationCareers/Accredit/StandardsReview/2018-ACOTE-Standards-Interpretive-Guide.pdf

Aldrich, R. M., Boston, T. L., & Daaleman, C. E. (2017). Centennial Topics—Justice and U.S. occupational therapy practice: A relationship 100 years in the making. *American Journal of Occupational Therapy*, *71*(1), 7101100040. https://doi.org/10.5014/ajot.2017.023085

AOTA. (2019). Board expands *Vision 2025*. *American Journal of Occupational Therapy, 73*(3):7303420010. https://doi.org/10.5014/ajot.2019.733002

AOTA. (in press). *Occupational therapy practice framework: Domain and process*. (4th ed.). *American Journal of Occupational Therapy*, *74* (Supplement 2). Advanced online publication. Retrieved from https://www.aota.org/~/media/Corporate/Files/Secure/Practice/Officialdoms'/Guidelines/OTPF4_FINAL_for_web.pdf

AOTA. (2015). Occupational Therapy Code of Ethics 2015. *American Journal of Occupational Therapy, 69* (S3), 1-8. https://doi.org/10.5014/ajot.2015.696S03

Balcazar, F., Suarez-Balcazar, Y., & Taylor-Ritzler, T. (2009). Cultural competence: Development of a conceptual framework. *Journal of Disability and Rehabilitation, 31*(14), 1153-1160. https://doi.org/10.1080/09638280902773752

Beagan, B. L. (2015). Approaches to culture and diversity: A critical synthesis of occupational

therapy literature. *Canadian Journal of Occupational Therapy*, *82*(5), 272-282. https://doi.org/10.1177/0008417414567530

Black, R.M. (2002). Occupational therapy's dance with diversity. *American Journal of Occupational Therapy,56*(2), 140-148. https://doi.org/10.5014/ajot.56.2.140

Black, R.M. & Wells, S.A. (2007). *Culture & occupation: a model of empowerment in occupational therapy*. Bethesda, MD: AOTA Press

Bonder, B., & Martin, L. (2013). *Culture in clinical care: Strategies for competence.* (2nd ed). Thorofare, NJ: Slack Inc.

Cheung, Y., Shah, S., & Muncer, S. (2002). An exploratory investigation of undergraduate students' perceptions of cultural awareness. *British Journal of Occupational Therapy, 65*(12), 543-550. https://doi.org/10.1177/030802260206501203

Ching, E., Contreras, E., Dimalanta, P., Duran, L., Freeman, R., Hawe, U., Hong, S., & Ramos, W. (2019). Social and Cultural Concepts Module: Curricula to Foster Cultural Responsiveness. *Journal of Occupational Therapy Education, 3*(3). Retrieved from https://encompass.eku.edu/jote/vol3/iss3/4

Creswell, J. W. & Creswell, J. D. (2018). The selection of a research approach. In J. Creswell, *Research design: Qualitative, quantitative, and mixed methods approaches.* (5th ed., pp. 3-22). Thousand Oaks: Sage.

Darawsheh, W., Chard, G. & Eklund, M. (2015). The challenge of cultural competency in the multicultural 21st century: A conceptual model to guide occupational therapy practice. *Open Journal of Occupational Therapy, 3*(2). https://doi.org/10.15453/2168-6408.1147

Gay, G. (2018). *Culturally responsive teaching : Theory, research, and practice* (3rd ed.). New York, NY: Teachers College Press

Grady, S., Brungardt, K., & Doll, J. (2018). The impact of classroom instruction on cultural awareness and sensitivity in occupational therapy students. *Journal of Occupational Therapy Education (JOTE), 2*(2) https://doi.org/10.26681/jote.2018.020201

Iwama, M. K ., Thomson, N. A., & Macdonald, R. M. (2009). The KawaModel: The power of culturally responsive occupational therapy. *Disability & Rehabilitation*, *31*(14), 1125-1135. https://doi.org/10.1080/09638280902773711

Kale, S., & Hong, C. S. (2007). An investigation of therapy student's perceptions of cultural awareness. *International Journal of Therapy & Rehabilitation, 14*(5), 210-214. https://doi.org/10.12968/ijtr.2007.14.5.23538

Kielhofner, G. (2002). *A model of human occupation: theory and application* (3rd ed.). Baltimore, MD: Lippincott Williams & Wilkins

Leighton, K. (2017). Innovations in facilitating learning using patient simulation. In M.J. Bradshaw & B.L. Hultquist (Eds.), *Innovative teaching strategies in nursing and health professions* (7th ed., pp. 269-295). Burlington, MA: Jones & Barlett Learning.

Mojica, R. (2019). *Needs assessment*. [Unpublished manuscript]. Eastern Kentucky University

Muñoz, J.P. (2007). Culturally responsive caring in occupational therapy. *Occupational Therapy International, 14* (4), 256-280. https://doi.org/10.1002/oti.238

Suarez-Balcazar, Y., Rodawoski, J., Balcazar, F., Taylor-Ritzler, T., Portillo, N., Barwacz, D., & Willis, C. (2009). Perceived levels of cultural competence among occupational therapists. *American Journal of Occupational Therapy*, *63*(4), 498-505. https://doi.org/10.5014/ajot.63.4.498

Suarez-Balcazar, Y., Balcazar, F., Taylor-Ritzler, T., Portillo, N., Rodawoski, J., Garcia-Ramirez, M., & Willis, C. (2011). Development and validation of the cultural competence assessment instrument: A factorial analysis. *Journal of Rehabilitation*, *77*(1), 4-13.

Taff, S.D., & Blash, D. (2017). Diversity and inclusion in occupational therapy: Where we are, where we must go. *Occupational Therapy in Health Care*, *31*(1), 72-83. https://doi.org/10.1080/07380577.2016.1270479

Talero, P., Kern, S.B., & Tupe, D.A. (2015). Culturally responsive care in occupational therapy: an entry-level educational model embedded in service-learning. *Scandinavian Journal of Occupational Therapy*, *22*(2), 95-102. https://doi.org/10.3109/11038128.2014.997287

Taylor, R. R. (2017). Writing the research proposal. In R.R. Taylor (Ed.), *Research in occupational therapy: Methods of inquiry for enhancing practice* (2nd ed., pp. 135-143). Philadelphia: F. A. Davis.

Teoh, J.Y. & Iwama, M.K. (2015). The Kawa Model Made Easy: a guide to applying the Kawa Model in occupational therapy practice (2nd edition). Retrieved from:www.kawamodel.com

Wells, S.A., Black, R.M., & Gupta J. (2016). Model for Culture Effectiveness. In S.A.Wells, R.M. Black & J. Gupta (Eds.), *Culture and Occupation: Effectiveness for Occupational Therapy Practice, Education, and Research* (3rd ed., pp 65-79). Bethesda, MD: AOTA Press

Whiteford, G., & Townsend, E. (2011). Participatory occupational justice framework (POJF 2010): Enabling occupational participation and inclusion. In F. Kronenberg, N. Pollard & D. Sakellariou (Eds.), *Occupational therapies without borders: Towards an ecology of occupation-based practices* (Vol. 2, pp. 65-84). Edinburgh: Elsevier.

Appendix A: IRB Approval

FIU | FLORIDA INTERNATIONAL UNIVERSITY

Office of Research Integrity
Research Compliance, MARC 414

MEMORANDUM

To:	Rebecca Mojica
CC:	File
From:	Elizabeth Juhasz, Ph.D., IRB Coordinator
Date:	January 23, 2020
Protocol Title:	"Determining the effect of target education on students' perception and performance of cultural responsiveness during simulated patient interaction"

The Social and Behavioral Institutional Review Board of Florida International University has approved your study for the use of human subjects via the **Expedited Review** process. Your study was found to be in compliance with this institution's Federal Wide Assurance (00000060).

IRB Protocol Approval #:	IRB-20-0031	**IRB Approval Date:**	01/22/20
TOPAZ Reference #:	108582	**IRB Expiration Date:**	01/22/23

As a requirement of IRB Approval you are required to:

1) Submit an IRB Amendment Form for all proposed additions or changes in the procedures involving human subjects. All additions and changes must be reviewed and approved by the IRB prior to implementation.
2) Promptly submit an IRB Event Report Form for every serious or unusual or unanticipated adverse event, problems with the rights or welfare of the human subjects, and/or deviations from the approved protocol.
3) Utilize copies of the date stamped consent document(s) for obtaining consent from subjects (unless waived by the IRB). Signed consent documents must be retained for at least three years after the completion of the study.
4) **Receive annual review and re-approval of your study prior to your IRB expiration date**. Submit the IRB Renewal Form at least 30 days in advance of the study's expiration date.
5) Submit an IRB Project Completion Report Form when the study is finished or discontinued.

HIPAA Privacy Rule: **N/A**

Special Conditions: **N/A**

For further information, you may visit the IRB website at http://research.fiu.edu/irb.

Appendix B: Relying Institution Agreement

Institutional Review Board (IRB) Authorization Agreement

Name of Institution or Organization Providing IRB Review:
Florida International University (FIU), (hereinafter "Designated IRB")
IRB Registration #: IRB00008168 / IRB00008169
Federalwide Assurance (FWA) #: FWA00000060

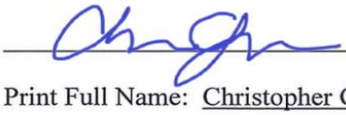
Name of Institution Relying on the Designated IRB:
Eastern Kentucky University, (hereinafter "Relying Institution")
FWA #: FWA00003332

The Officials signing below agree that the Relying Institution may rely on the Designated IRB for review and continuing oversight of its human subject research for the following specific protocol(s):

> **Project Title:** Determining the effect of target education on students' perception and performance of cultural responsiveness during simulated patient interactions.
> **Principal Investigator (Designated IRB):** Rebecca Mojica (as an FIU staff member)
> **Principal Investigator (Relying Institution):** Rebecca Mojica (as an EKU graduate student)
> **Sponsor or Funding Agency:** N/A

The review performed by the Designated IRB will serve to meet the human subject protection requirements of the Relying Institution's OHRP-approved FWA. The Designated IRB will follow its written procedures for reporting its findings and actions to appropriate officials at the Relying Institution. Relevant minutes of the Designated IRB meetings will be made available to the Relying Institution upon request. The Relying Institution remains responsible for ensuring compliance with the Designated IRB's determinations and with the Terms of the Relying Institution's OHRP-approved FWA. This document must be kept on file by both parties and provided to OHRP upon request.

Signature of Signatory Official: Florida International University



Date: 01/29/20

Print Full Name: Christopher Grayson Institutional Title: Director of Research Integrity

Signature of Signatory Official: Eastern Kentucky University

Date: 1/28/2020

Print Full Name: *Dr. Gerald J. Pogatshnik* Institutional Title: *Executive Vice President for Academic Affairs & Provost*

Page 1 of 1

Appendix C: Cultural Competency Assessment Instrument

Cultural Competence Assessment Instrument (CCAI)

Fabricio Balcazar, Ph.D., Yolanda Suarez-Balcazar, Ph.D., Tina Taylor-Ritzler, Ph.D.,
Juleen Rodakowski, OTD, Celestine Willis, M.Ed., and Nelson Portillo, Ph.D.
University of Illinois at Chicago

This work was funded by the National Institute on Disability and Rehabilitation Research (NIDRR), U.S. Department of Education, through a grant to the Center for Capacity Building on Minorities with Disabilities Research at the University of Illinois at Chicago (Grant # H133A040007). The opinions expressed herein are those of the authors and not necessarily those of NIDRR.

Cultural Competence Assessment Instrument (CCAI)

PART 1: ABOUT YOU.

Please circle the numbers or complete the correct response(s) to the following questions.

1. **Are you:** (1) Female (2) Male

2. **How old are you?** _____ **Years**

3. **What is your race/ethnicity? (S*elect ALL applicable*):**

   (1) African American/Black
   (2) Asian
   (3) Hawaiian/Pacific Islander
   (4) American Indian/Alaskan Native
   (5) Hispanic/Latino(a)
   (6) White
   (7) Other. *Please specify* _____

4. **Do you speak any language(s) other than English when providing services?** (1) Yes (2) No

5. **If Yes, what are these languages?** _____

6. **What is the highest level of education you have obtained?**

   (1) Less than high school
   (2) High school graduate/ GED
   (3) Some college, no degree
   (4) Associate degree
   (5) Bachelor's degree
   (6) Master's degree (MA, MS)
   (7) Professional Degree (MD, JD, PTD,OTD, PsyD)
   (8) Doctorate Degree (Ph.D./ Ed.D)

7. **What is your current position?**

   (1) Executive Director (e.g., CEO)
   (2) Volunteer
   (3) Administrative (e.g., receptionist)
   (4) Service worker (e.g., job training specialist)
   (5) Professional (e.g., MD, LCSW, Physical Therapists, Rehab & Mental Health counselors, Ph.D.)
   (6) Managerial (e.g., project director, supervisor)
   (7) Other. *Please specify*._____

8. **How many years have you been working in your current position?** _____ **Years**

9. **Which of the following types of training did you receive on cultural competency, if any?**
   Circle ALL the responses that apply.

   (1) I took a required class that focused SPECIFICALLY on this topic in school
   (1) I took an elective class that focused SPECIFICALLY on this topic in school
   (2) This topic was covered in various classes in school
   (3) I learned about this during my fieldwork experience in school
   (4) I took continuing education (CE) workshops or CE courses on this topic
   (5) I gained knowledge from reading about this topic on my own
   (6) I learned about it through supervision on the job
   (7) I learned about it through interaction with professionals from other disciplines at my workplace
   (8) I have had no formal training on cultural competency

PART 2: ABOUT YOUR WORK during the PAST YEAR ONLY.

Please circle the number(s) or complete the correct response(s) to the following questions:

10. Indicate the top 3 populations that you see most often in your work:

(1) African American/Black
(2) Asian
(3) Hawaiian/Pacific Islander
(4) American Indian/Alaskan Native
(5) Hispanic/Latino(a)
(6) White
(7) Other. *Please specify* _____

11. Rate your level of success in outreaching the following ethnic populations:

	Very Successful					**Very Unsuccessful**	**N/A**
African American/Black	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Asian	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Hawaiian/Pacific Islander	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Native American/Alaskan Native	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Hispanic/Latino(a)	***6***	***5***	***4***	***3***	***2***	***1***	***0***
White	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Other (*Please specify*)	***6***	***5***	***4***	***3***	***2***	***1***	***0***

12. Rate your level of success in retaining the following ethnic populations:

	Very Successful					**Very Unsuccessful**	**N/A**
African American/Black	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Asian	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Hawaiian/Pacific Islander	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Native American/Alaskan Native	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Hispanic/Latino(a)	***6***	***5***	***4***	***3***	***2***	***1***	***0***
White	***6***	***5***	***4***	***3***	***2***	***1***	***0***
Other (*Please specify*)	***6***	***5***	***4***	***3***	***2***	***1***	***0***

CONSIDERING YOUR WORK OVER THE <u>PAST YEAR</u>		**Strongly Agree**					**Strongly Disagree**
13.	I feel that I can learn from my ethnic minority clients.	***6***	***5***	***4***	***3***	***2***	***1***
14.	It is hard adjusting my therapeutic strategies with ethnic minority clients.	***6***	***5***	***4***	***3***	***2***	***1***
15.	I am effective in my verbal communication with clients whose culture is different from mine.	***6***	***5***	***4***	***3***	***2***	***1***
16.	My organization does not provide ongoing training on cultural competence.	***6***	***5***	***4***	***3***	***2***	***1***
17.	I do not consider the cultural backgrounds of my clients when food is involved.	***6***	***5***	***4***	***3***	***2***	***1***
18.	I receive feedback from supervisors on how to improve my practice skills with clients from different ethnic minority backgrounds.	***6***	***5***	***4***	***3***	***2***	***1***
19.	At work, pictures, posters, printed materials and toys reflect the culture and ethnic backgrounds of ethnic minority clients.	***6***	***5***	***4***	***3***	***2***	***1***
20.	I feel confident that I can learn about my clients' cultural background.	***6***	***5***	***4***	***3***	***2***	***1***
21.	Cultural competence is included in my work place's mission statement, policies, and procedures.	***6***	***5***	***4***	***3***	***2***	***1***
22.	I am effective in my nonverbal communication with clients whose culture is different from mine.	***6***	***5***	***4***	***3***	***2***	***1***
23.	The way services are structured in my setting makes it difficult to identify the cultural values of my clients.	***6***	***5***	***4***	***3***	***2***	***1***
24.	I feel that I have limited experience working with ethnic minority clients.	***6***	***5***	***4***	***3***	***2***	***1***
25.	It is difficult to practice skills related to cultural competence.	***6***	***5***	***4***	***3***	***2***	***1***
26.	I am sensitive to valuing and respecting differences between my cultural background and my clients' cultural heritage.	***6***	***5***	***4***	***3***	***2***	***1***
27.	My workplace does not support using resources to promote cultural competence.	***6***	***5***	***4***	***3***	***2***	***1***
28.	I have opportunities to learn culturally responsive behaviors from peers.	***6***	***5***	***4***	***3***	***2***	***1***
29.	I do not feel that I have the skills to provide services to ethnic minority clients.	***6***	***5***	***4***	***3***	***2***	***1***
30.	I examine my own biases related to race and culture that may influence my behavior as a service provider.	***6***	***5***	***4***	***3***	***2***	***1***
31.	I actively strive for an atmosphere that promotes risk-taking and self-exploration.	***6***	***5***	***4***	***3***	***2***	***1***
32.	My work place does not support my participation in cultural celebrations of my clients.	***6***	***5***	***4***	***3***	***2***	***1***
33.	I would find it easy to work competently with ethnic minority clients.	***6***	***5***	***4***	***3***	***2***	***1***
34.	I openly discuss with others issues I may have in developing multicultural awareness.	***6***	***5***	***4***	***3***	***2***	***1***
35.	I learn about different ethnic cultures through educational methods and/or life experiences.	***6***	***5***	***4***	***3***	***2***	***1***
36.	It is difficult for me to accept that religious beliefs may influence how ethnic minorities respond to illness and disability.	***6***	***5***	***4***	***3***	***2***	***1***

Appendix D: Modified CCAI Pre-Test

Part 1: About You
Please select or provide the answer that best describes you.

Q1 Are you
- Male
- Female
- Other
- Prefer not to self-identify

Q2 How old are you? _____ years

Q3 What is your race/ethnicity? Select ALL applicable

- African American /Black
- Asian
- Hawaiian Pacific Islander
- American Indian/ Alaskan Native
- Hispanic / Latinx
- White
- Other. Please specify _____

Q4 When providing services, do you speak any languages other than English?
- Yes
- No
- If yes, please specify. _____

Q5 Thinking about your educational experiences, which of the following types of training on cultural responsiveness have you received? Select all that apply.
- I took a required class in school that focused specifically on this topic.
- I took an elective class in school that focused specifically on this topic.
- This topic was covered in various classes in the program.
- I learned about this on my fieldwork experience in OT school.
- I learned from reading about this topic on my own.
- I learned about it through interactions with others.
- I have no training on cultural responsiveness.

Part 2: About your experiences
This section contains 15 statements. Please select the response based upon the degree to which you agree or disagree with those statements.

Considering your experiences over the last year (including your Level 1 FW), please select the response based upon the degree to which you agree or disagree with the following statements:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I feel that I can learn from my ethnic minority clients.	○	○	○	○	○
It is hard to adjust my therapeutic strategies with my ethnic minority clients.	○	○	○	○	○
I am effective in my verbal communication with clients whose culture is different than mine.	○	○	○	○	○
I feel confident that I can learn about my client's cultural background.	○	○	○	○	○
I feel that I have limited experiences working with ethnic minority clients.	○	○	○	○	○
I am sensitive to valuing and respecting differences between my cultural background and my client's cultural heritage.	○	○	○	○	○
I am effective in my nonverbal communication with clients whose culture is different from mine.	○	○	○	○	○
I have opportunities to receive feedback from fieldwork educators	○	○	○	○	○

and/or faculty on how to improve my practice skills with clients from diverse backgrounds.					
I have opportunities to learn culturally responsive behaviors from peers.	○	○	○	○	○
I do not feel that I have the skills to provide services to ethnic minority clients.	○	○	○	○	○
I examine my own biases related to race and culture that may influence my behavior as a service provider.	○	○	○	○	○
I would find it easy to work competently with minority clients.	○	○	○	○	○
I am open to learn about different cultures through educational methods and /or life experiences.	○	○	○	○	○
I openly discuss with others issues I may have in developing multicultural awareness.	○	○	○	○	○
It is difficult for me to accept that cultural beliefs may influence how ethnic minorities respond to illness and disability.	○	○	○	○	○

This survey was adapted by Rebecca Mojica from:
Balcazar, F., Suarez-Balcazar, Y., Taylor-Ritzer, T., Rodakowski, J., Willis, C., & Portillo, N. (2009). Cultural Competence Assessment Instrument

This conclude the survey. Thank You!

Appendix D: Modified CCAI Post-Test

Thank You for completing the learning modules
This section contains 16 statements, please select the response based upon the degree to which you agree or disagree with those statements.

Considering what you have learned in the modules, your experiences over the last year (including your most recent Level 1 FW) and looking forward into future interactions, please select the response based upon the degree to which you agree or disagree with the following statements:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I feel that I can learn from my ethnic minority clients.	○	○	○	○	○
It is hard to adjust my therapeutic strategies with my ethnic minority clients.	○	○	○	○	○
I am effective in my verbal communication with clients whose culture is different than mine.	○	○	○	○	○
I feel confident that I can learn about my client's cultural background.	○	○	○	○	○
I am sensitive to valuing and respecting differences between my cultural background and my client's cultural heritage.	○	○	○	○	○
I am effective in my nonverbal communication with clients whose culture is different from mine.	○	○	○	○	○
I have opportunities to receive feedback from fieldwork educators and/or faculty on how to improve my practice skills with clients from diverse backgrounds.	○	○	○	○	○

I have opportunities to learn culturally responsive behaviors from peers.	○	○	○	○	○
I do not feel that I have the skills to provide services to ethnic minority clients.	○	○	○	○	○
I can be more intentional at taking into consideration client's cultural background in my interventions.	○	○	○	○	○
I examine my own biases related to race and culture that may influence my behavior as a service provider.	○	○	○	○	○
I would find it easy to work competently with minority clients.	○	○	○	○	○
I am open to learn about different cultures through educational methods and /or life experiences.	○	○	○	○	○
I openly discuss with others issues I may have in developing multicultural awareness.	○	○	○	○	○
It is difficult for me to accept that cultural beliefs may influence how ethnic minorities respond to illness and disability.	○	○	○	○	○
I have a better understanding of the needs of ethnic minorities and underserved populations.	○	○	○	○	○

This survey was adapted by Rebecca Mojica from:
Balcazar, F., Suarez-Balcazar, Y., Taylor-Ritzer, T., Rodakowski, J., Willis, C., & Portillo, N. (2009). Cultural Competence Assessment Instrument This conclude the survey. Thank you for your participation!