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A Quantitative Assessment of Empathy After an Art Prime with Counseling Students

Annette Lisa Coletta
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Walden University

College of Social and Behavioral Sciences

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Annette Lisa Coletta

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Walden University
2019

Abstract

A Quantitative Assessment of Empathy
After an Art Prime with Counseling Students

by

Annette Lisa Coletta

MA, Monmouth University, 2004

BS, Nyack College, 1994

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

May 2019

Abstract

Empathy skills are necessary to form therapeutic relationships. Previous research showed that participating in the arts engaged similar neuropathways as those needed to produce empathy. The theoretical framework for this study was art therapy relational neuroscience. The purpose of this pretest, posttest quantitative research study, using the Toronto Empathy Questionnaire, was to examine if a single art session could effectively prime for empathy. Using nonprobability, convenience sampling method, 74 graduate counseling students completed online surveys. Four findings are of note: (a) a *t*-test showed a significant difference between mean values of pre-post test scores, (b) an independent groups *t*-test indicated no difference in empathy gain scores as related to gender, (c) a Pearson's correlation indicated that age and art experience were positively correlated to empathy gain scores, (d) a multiple regression indicated that none of the variables examined moderated each other or empathy. Age, and art experience, independently, were found to be positively correlated with empathy scores. The results suggest that the self-conducted art session could enhance empathy. This research is an important contribution to the existing literature and enhances social change by studying a previously underrepresented population and investigating the possible effectiveness of a single art session prime for empathy. Using art to enhance empathy in graduate counseling students may aid with securing graduation, licensure, and therapeutic alliances with future clients.

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Dedication

It is with great love and gratitude that I dedicate this work to my Beloved, Who brought me here and paved the way for every arrival I have ever had, and to my Godsend: Dr. Denise Horton and Dr. Lyn Walden.

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With deep appreciation and gratitude, I wish to acknowledge the village that was instrumental in this accomplishment and offer, therefore, that it is “our” accomplishment.

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Table of Contents

List of Tables.....	v
List of Figures	vi
Chapter 1: Introduction to the Study	1
Background	1
Art Used Therapeutically	2
Art Used for Training.....	4
Problem Statement.....	5
Gender and Age Differences	6
Defining Empathy.....	6
Purpose of the Study.....	8
Research Questions and Hypotheses	8
Theoretical Framework.....	10
Nature of the Study.....	11
Definitions.....	12
Assumptions	12
Scope and Delimitations	13
Limitations	13
Significance	14
Summary	15
Chapter 2: Literature Review	16

Literature Search Strategy.....	16
Theoretical Framework.....	17
History of Art Therapy Relational Neuroscience	17
Components of Art Therapy Relational Neuroscience	18
Use of Art Therapy Relational Neuroscience in Other Research	20
Appropriateness of Art Therapy Relational Neuroscience for this Study.....	22
Literature Review Related to Key Variables and Concepts.....	23
History of the Use of Art Therapy by Counselors	23
Current Use of Art Therapy by Counselors.....	32
Empathy.....	35
Empathy and Counselor Training	37
Art Therapy as a Prime for Empathy in Research	40
History of the Use of the Toronto Empathy Questionnaire.....	44
Summary and Conclusions.....	46
Chapter 3: Research Method.....	48
Research Design and Rationale	48
Methodology	50
Population and Participant Characteristics	50
Sampling Method.....	51
Sample Size	51
Procedures for Recruitment, Participation, and Data Collection.....	52

Instrumentation and Operationalization of Constructs	53
Data Analysis Plan	55
Threats to Validity	57
External Validity	57
Internal Validity	57
Ethical Procedures	58
Summary	59
Chapter 4: Results.....	61
Data Collection	62
Description of Sample.....	62
Results.....	65
Research Question 1.....	65
Research Question 2.....	67
Research Question 3.....	69
Additional Analysis.....	74
Summary	78
Chapter 5: Discussion, Conclusions, and Recommendations	80
Interpretation of the Findings	81
Art Therapy Relational Neuroscience Theory.....	81
Age and Gender	82
Art Experience	84

Age and Art Experience	85
Limitations of the Study.....	86
Question Phrasing	87
Testing Effect	88
Participant Characteristics and Sample Size	88
Recommendations.....	88
Implications	90
Conclusions	91
References.....	93
Appendix A: Survey Monkey Permission	128
Appendix B. Informed Consent	129
Appendix C: Demographic Survey	132
Appendix D: Toronto Empathy Questionnaire	133
Appendix E: Art Session Prime Questions	135

List of Tables

Table 1. Demographic Information: Gender.....	63
Table 2. Descriptive Statistics for Age.....	65
Table 3. Paired Sample Statistics.....	66
Table 4. Paired Sample Test.....	67
Table 5. Correlations: Empathy Gained Score and Age.....	68
Table 6. Gender and Empathy.....	68
Table 7. Independent Samples Test.....	69
Table 8. Model Summary.....	70
Table 9. Results of ANOVA.....	71
Table 10. Coefficients.....	72
Table 11. Correlations: Empathy Gained and Art Experience and Age.....	75
Table 12. Model Summary.....	76
Table 13. ANOVA.....	76
Table 14. Coefficients.....	77

List of Figures

Figure 1. Frequency distribution of age.....	64
Figure 2. Cluster for variables Age and Empathy Gained.....	73
Figure 3. Cluster for variables Age_Gender and Empathy Gained.....	73
Figure 4. Cluster representing Empathy Gained and Art Experience	78

Chapter 1: Introduction to the Study

Empathy is a necessary and vital component to positive treatment outcomes in the mental health profession (Bayne & Hays, 2017; Bell, 2018; Ohrt, Foster, Hutchinson, & Ieva, 2009). Although empathy is a phenomenon that is difficult to conceptualize and define, it is important that student counselors develop the attribute to prepare them for success as professional counselors (Bell, 2018). Counseling is considered a creative process, and professionals have used the arts as therapy, and, less often, to help train counseling students (Bell, 2018). Researchers in the field of neuroscience have helped to explain how the arts can tap into imagination, memories, feelings, and thoughts, which are some of the necessary components of empathy (Hass-Cohen & Findlay, 2009; Hass-Cohen, Clyde-Findlay, Carr, & Vanderlan, 2014). In this study, I researched how the arts could promote the development of empathy in student counselors.

In this chapter, I will present the background of this study, the problem addressed by this study, and the purpose for conducting this research. After presenting the research questions and hypotheses, I will discuss the theoretical framework and nature of the study and provide key definitions. Other topics include the assumptions, scope and delimitations, limitations, and significance of the study. A summary of key points and a transition to Chapter 2 conclude the chapter.

Background

Historically, the field of psychology has embraced the arts and creativity as tools to assist patients in expressing their emotions, gain insight, and develop cognitive

abilities and empathy for self and others. One example of how professionals use the arts in psychology is the use of visual assessments. Created in 1921 by Hermann Rorschach, the Rorschach method, better known as the ink blot test, is still in use today (Homann, 2018; Hubbard & Hegarty, 1921/2016). Copyrighted in 1943 by Henry A. Murray and the Harvard Psychological Staff (1943), the Thematic Apperception Test consists of 20 cards that display benign scenes of people (Piotrowski, 1957). These visual assessments are still in use today to assist therapeutically with anger, defensiveness, and schizophrenia (Cramer, 2015; Lele & Flores-Mendoza, 2014; Russo, Chiorri, & Denevi, 2015). Beyond these two assessments, the psychology profession has expanded upon the use of art therapeutically.

Art Used Therapeutically

An electronic database search on the subjects of arts and therapy rendered more than 12,000 results. Some recent examples of how professionals have used the arts are in therapy include the use of play therapy with adolescents, the use of poetry with preteen children, as well as art therapy to treat eating disorders, patients with Alzheimer's disease, and those diagnosed with cancer (Ehresman, 2014; Kloser, 2013; Perryman, Moss, & Cochran, 2015). Clinicians have used the arts to help psychiatric patients, adolescents, and the incarcerated to imagine themselves as healed, to express internalized emotions, and to share dreams in group settings (Bazargan & Pakdaman, 2016; De Vecchi, Kenny, & Kidd, 2015; Hongo, Katz, & Valenti, 2015). Darewych, Carlton, and Farrugie (2015) used digital technology with adults with developmental disabilities to

find new ways for this population to express themselves creatively, develop imagination, and enhance communication and social skills. In addition, clinicians have used art therapy with various mediums, which include poetry, painting, sculpting, and music, for patients with chronic physical pain, depression, and posttraumatic stress (Crawford, Lee, & Bingham, 2014; Lobban, 2014; Parsa & Harati, 2013). As these examples illustrate, art, manifested in several expressive forms, is part of the treatment regimen for diverse types of patients.

Some researchers and clinicians have endorsed Art therapy involving role play and reversal. Yaniv (2012) found role reversal to be a creative, imaginative, and helpful therapeutic tool. Similarly, Anthony Papania, a licensed psychologist for the Creedmoor Psychiatric Center in Queens, New York, uses art therapy with chronically psychotic, nonverbal, and catatonic patients (A. Papania, personal communication, November 15, 2017). Dr. Papania explained that role play was more effective than talk therapy; moreover, Dr. Papania explained that patients were often able to express themselves and their feelings through art better than they could through words.

The Columbia University Department of Psychiatry holds a 15-week art therapy program to assist children in coping with stress (Canino et al., 2009). This program, Caring at Columbia, encourages participants to think about helping self and others and to recognize differences and similarities between self and others; the program also teaches participants how to be a part of a community while expressing feelings about these relationships through art (Canino et al., 2009). Clinicians in the program also use art

therapy with patients to help them negotiate stressors (e.g., disappointments, violence, and loss; Canino et al., 2009). They also use art activities with patients, which require problem-solving, imagination, creativity, and sharing with others in the group (Canino et al., 2009).

Hass-Cohen and Findlay (2009) proposed an art-based relational neurobiological model to assist participants with chronic pain. These authors suggested that neuropathways were shared for emotions and pain and that the use of the nonverbal expression, such as art, could help ameliorate pain (Hass-Cohen & Findlay, 2009). Hass-Cohen and Findlay developed a protocol, art therapy relational neurobiology (ATRN). Components of ATRN include the value of having a witness to the creation of art, having emotional support, as well as the creating art itself (Hass-Cohen & Findlay, 2009).

Art Used for Training

The arts have not only been used therapeutically but also in counselor development. Historically, clinicians have used artistic and creative therapies to develop empathy in students entering the helping professions. Walter and Thanasiu (2011) found the use of role play and digital recording of these activities to be helpful feedback tools for the education of counselors. Black (2008) used imagery, multimedia presentations, and role play to teach psychological counseling graduate students the skills needed for trauma counseling. Buser, Buser, Gladding, and Wilkerson (2011) employed a creative brainstorming tool with counseling students to develop new ways to encourage creativity in children thereby developing creativity in counseling students. This brainstorming tool

requires cognitive flexibility, imagination, problem-solving, and drawing, for example, to train counselors to be creative (Buser et al., 2011). K. L. Henderson and Malone (2012) used the imagery of fairy tales to train counseling students in ethics. In another research study, counseling students in an ethics class were asked to use artistic creativity to create unique bookmarks to highlight what they were learning in their ethics class (Warren, Zavaschi, Covello, & Zakaria, 2012). It seems that psychology and the arts are inextricably linked.

At the time of data collection, I found no research in which researchers had used a single art session to investigate the possible influence on empathy in participants. In reviewing the literature, I also found no research on empathy development in counseling students involving the use of a single prime. Thus, in this study, I focused on the influence of a single art creation session on empathic responding in counseling students.

Problem Statement

The problem addressed in this study was the challenge of increasing counselor empathy, which research has shown can increase counseling effectiveness (Bayne & Hays, 2017; Voutilainen et al., 2018). Counselor and counseling student success, in terms of the formation of a therapeutic alliance with clients and therapeutic outcome, is largely contingent upon counselor empathy; therefore, gaining empathy skills is essential for therapeutic success (Bayne & Hays, 2017; Bayne & Jangha, 2016; Fulton, 2016; Kapur, 2017; Lam, Tracz, & Lucey, 2013; Moyers & Miller, 2013; Soheilian & Inman, 2015). For some clients, a lack of perceived counselor empathy suggests that a counselor does

not care for them and may lead clients to drop out of therapy and relapse (Moyers & Miller, 2013; Ng, 2013).

Gender and Age Differences

Estimates show more women than men are enrolled in graduate counseling programs with one estimate of 70% of marriage and family counselor students as women (Lam et al., 2013). Research shows that women are generally more empathic than are men when relating, and middle-aged counselors may also have an edge on empathy over other age groups (Clarke, Marks, & Lykins, 2016; Khanjani et al., 2015; Sun, Luo, Zhang, Li, & Li, 2018; Willer, Wimer, & Owens, 2015). Some research suggests that cognitive empathy diminishes in older individuals past middle age and into their sixties (Khanjani et al., 2015; Lamm, Riva, & Silani, 2018). Other research suggests the empathy gender gap closes when men perceive practicing empathy as socially acceptable or when problems and empathy are framed in ways that are meaningful to them (Burriss, Schrage, & Rempel, 2016; Clarke et al., 2016). Furthermore, Lam et al. (2013) found no gender differences in empathy with their population of counselors.

Defining Empathy

In the search for productive ways to enhance empathy in counseling students, experts have formulated various definitions of and approaches to the phenomenon. Definitions of empathy often include imagination, perspective taking, understanding of feelings, insight, and drawing upon experience as necessary components for generating empathy (Neukrug, Bayne, Dean-Nganga, & Pusateri, 2013; Van Boven, Loewenstein,

Dunning, & Nordgren, 2013). Neuroscience has contributed to the understanding of the internal resources necessary for a person to experience empathy, which include being open, feeling affect through mirror neurons, being able to differentiate one's own feelings from the other, being flexible, being able to think abstractly, and being able to regulate own feelings as well as the aforementioned components (Carre, Stefaniak, Ambrosio, Bensalah, & Besche-Richard, 2013).

Many, if not all, of the components necessary for empathic response, are similar to components necessary for creating, engaging in, or responding to the arts; thus, the arts are appropriate for use in therapy (Duffy & Haverstroh, 2013; D. R. Johnson, Cushman, Borden, & McCune, 2013; Van Boven et al., 2013). Furthermore, art therapy relational neuroscience (ATR-N), a therapeutic protocol, was developed with the understanding that neuropathways are shared and can be stimulated by various stimuli (Hass-Cohen & Clyde Findlay, 2009; Hass-Cohen et al., 2014). Educators have used the arts in many ways to aid with the development of empathy in counseling students (K. L. Henderson & Malone, 2012; Warren et al., 2012).

However, research conducted using the arts to increase empathy in counseling students is minimal. Researchers who have explored the arts as an influence on constructs important to empathy skills, such as creativity, problem-solving, and imagination, in counseling students (see Black, 2008; Buser et al., 2011; K. L. Henderson & Malone, 2012; Walter & Thanasiu, 2011; Warren et al., 2012) have not measured empathy achieved. At the time of data collection, I found no research on the influence of a single

art-making session on counseling student empathy. Also, I found no research on how age and gender might influence empathy in counseling students after a single art session. To address this gap in the literature, I investigated the influence of a single art session on an empathic response in counseling students and investigated whether age and gender influenced the outcome.

Purpose of the Study

The purpose of this pretest, posttest, quantitative research study was to inquire if the use of creating art could be an effective prime to enhance empathy in graduate-level counseling students. As a result of this pretest-posttest, single session art prime, the research study will contribute to a scant body of research. Similar research that uses some form of the arts to develop empathy in participants showed some significance (Duffey & Haberstroh, 2013; Frei, Alvarez, & Alexander, 2010; Munt, 2009; Potash, Chen, Lam, & Chau, 2014). Quantitative data for this study were obtained from pretest, posttest results and a brief survey, revealing participant age and gender.

Research Questions and Hypotheses

The research questions (RQs) and hypotheses were, as follows:

RQ1: To what extent will graduate counseling students' empathy scores change from pretest to posttest after participating in a single art session?

*H*₀1: No significant change from pretest to posttest scores in empathy based on participation in a single art session will occur.

*H*₁₁: Significant change from pretest to posttest scores in empathy based on participation in a single art session will occur.

RQ2: To what extent will graduate counseling students' empathy gain score (posttest minus pretest) be related to age (measured continuously in years) or differ by gender?

*H*_{02a}: The empathy gain score will not be related to age.

*H*_{12a}: The empathy gain score will be related to age.

*H*_{02b}: The empathy gain score will not differ by gender.

*H*_{12b}: The empathy gain score will differ by gender.

RQ3: To what extent will graduate counseling students' empathy gain score (posttest minus pretest) be related to the linear combination of age, gender, and the interaction of age and gender?

*H*₀₃: The empathy gain score will not be related to the linear combination of age, gender, and the interaction of age and gender.

*H*₁₃: The empathy gain score will be related to the linear combination of age, gender, and the interaction of age and gender.

For RQ1, I conducted a paired *t*-test to determine changes from pretest to posttest score for empathy, the dependent variable. For RQ2, I conducted a Pearson's correlation to determine if any changes in empathy gain scores were related to age and independent groups *t*-test to determine any differences in empathy gain scores by gender. For RQ3, I created a multiple regression model. The empathy gain score (posttest minus pretest) was

the dependent/criterion variable, and the participant's age, gender, and the interaction of age and gender were the independent /predictor variables.

Theoretical Framework

Neuroscience research—specifically, researchers' findings that neuropathways for emotion, affect, and cognition are shared pathways (Hass-Cohen & Clyde-Findlay, 2009; Hass-Cohen et al., 2014)—was the basis for the study's theoretical framework. Because of the shared pathways, there is a neurobiological overlap (Hass-Cohen & Clyde-Findlay, 2009; Hass-Cohen et al., 2014). For example, imagining an activity activates the same areas of the brain as when a participant is engaged in the activity, and imagining events makes those events more likely to happen (Gaesser, Mar, & Barber, 2013; Villiger et al., 2013).

Based on this understanding, Hass-Cohen and Clyde-Findlay (2009) developed art therapy relational neurobiology (ATRN), later to be renamed art therapy relational neuroscience (ATR-N; Hass-Cohen et al., 2014). Using ATR-N, an art therapy protocol, neuropathways, which have been used to store, share, and generate emotional and sensory experiences, are activated, revisited, and reframed. New insights, positive thoughts, and experiences are brought about through ATR-N to alleviate pain (Hass-Cohen & Clyde-Findlay, 2009; Hass-Cohen et al., 2014).

In this study, I used ATR-N theory and tenets to stimulate the neuropathways involved in generating empathy. These include imagination, insight, problem solving, creativity, and experience (Gaesser et al., 2013; Hass-Cohen & Clyde-Findlay, 2009;

Hass-Cohen et al., 2014; Neukrug et al., 2013; Van Boven et al., 2013). The ATR-N protocol was appropriate for this study because ATR-N principles are tailored to enhance neuropathway stimulation and are adaptable for different settings and short-term use (Hass-Cohen & Findlay, 2009)

Nature of the Study

The nature of the study was a pretest, posttest, quantitative research design. Participants were graduate psychological counseling students from the Walden University participation pool and the SurveyMonkey database. The research was conducted online through SurveyMonkey, an online survey platform. Participants were asked to complete the Toronto Empathy Questionnaire (TEQ; Spreng, McKinnon, & Levine, 2009) before an art session. Directly after the art session, participants were posttested with the TEQ.

Research suggests that arousal of mood, having the pressure of time constraints for the completion of a goal, and sharing ideas contribute to creativity (Baas, Koch, Nijstad, & De Dreu, 2015; Cadle, 2015). Drawing, coloring, narrating, and explaining one's art, activates emotional awareness, decision making, insight, and creativity (Hass-Cohen et al., 2014). For this study, I integrated these elements into the art session. After completing the TEQ (pretest), participants were asked to draw a house and decorate it in ways that were meaningful to them. Afterward, participants answered questions explaining what was meaningful to them about their drawing and their choices for location and neighbors (Baas et al., 2015; Cadle, 2015; Hass-Cohen et al., 2014).

Participants adhered to the Walden University participant pool guidelines for submission of their completed surveys.

I used a *t*-test to determine if participant pretest and posttest scores showed gains in empathy. A Pearson's correlation and an independent groups *t*-test were conducted to determine if participant gains in empathy were related to their age or gender. Finally, a multiple regression test was used to determine if any gain in scores was because of some combination of interaction between age and gender. I listed detailed steps to complete the study in Chapter 3

Definitions

Art session: A single meeting where participants can draw, color, problem solve, mentalize, imagine, and explain their perspective (Hass-Cohen & Clyde-Findlay, 2015).

Empathy: An “affective state that stems from the apprehension of another’s emotional state or condition, and that is congruent with it” (Eisenberg & Miller, 1987, p. 91).

Assumptions

All participants in this study were English speaking, graduate psychological counseling students, and they participated of their own volition. I, therefore, assumed that the participants in this study earnestly participated and, with genuine intent, answered assessment questions honestly and did complete the art session prime. Because participation had no impact on class grades of the Walden University participants, and I made no evaluations concerning the appraisal of the artwork produced in this study, I

assumed that these participants did not feel judged, but rather appreciated that their work had furthered research in this area. Furthermore, I assumed the assessment chosen for this study was reliable and provided accurate results.

Scope and Delimitations

Participants volunteered from the graduate level counseling program from the Walden University participant pool. For me to widen the participant pool of candidates, students from any year in their program were able to volunteer to participate. Additional participants volunteered from the online SurveyMonkey database. Choosing a larger and random sample was beyond the scope of this research study.

Testing effect (i.e., when a pretest influences a posttest score) can occur when testing occurs too close together in a pretest and posttest research design (Song & Ward, 2015). Although testing within the same day could contribute to the testing effect, because of the inquiry of this research study, providing a longer amount of time between administering the assessments would fail to capture the time-sensitive results of the art session prime. Therefore, the TEQ was administered twice in the same day to participants.

Limitations

Because preference was given to construct validity, I used the same empathy assessment for the pretest and the posttest; therefore, practice, or test effect, could have occurred (Song & Ward, 2015; Stansfield et al., 2016). In other assessments where practice effect occurred, this did not affect standardization (Safaz, Kurt, Cakir, Yasar, &

Alaca, 2015; Shi et al., 2015). Furthermore, participants consisted of graduate level psychological counseling students from the Walden University participant pool and the SurveyMonkey online database. Thus, it is unlikely that the results can be generalizable beyond this population. As this was a single data collection, it is undetermined if results can be replicated with other populations. Another limitation to this study was the online survey platform research design because there was no way to know if participants completed the art session prime.

Significance

This study helps fill the gap in the literature by exploring variables that are lacking in current research. At the time of data collection, the influence of a single art session on empathy, measured quantitatively with a pretest-posttest design, was lacking in research studies. Although art has been used vastly as a therapeutic tool, most research found neglects using psychological counselors as participants. Increased empathy in relating promotes positive social change by increasing the possibility of safe, healing, and healthy interactions between counselors and clients, as well as helps to sustain a counselor's career (Moyers & Miller, 2013). Counselors who use increased empathy with clients form better therapeutic alliances with their clients and garner better success rates than do those who are more confrontational than empathic. Furthermore, counselors who approach their clients with empathy, regardless of what counseling theoretical framework they use in therapy, maintain their clientele better than do counselors who are not as empathic (Moyers & Miller, 2013).

Summary

Art has been used in numerous ways for therapy and, although less so in training prospective counselors. At the time of data collection, using a single art session to enhance empathy in future psychological counselors using the ATR-N theory and framework had not been researched. Graduate counseling students' success in demonstrating empathic relating for program requirements requires empathy (Lam et al., 2013). As future professional counselors, effectiveness and successful therapeutic outcome are largely contingent upon empathic capacity and skills: enhancing these contribute to positive social change (Moyers & Miller, 2013). In Chapter 2, I discuss the literature that informed this research study.

Chapter 2: Literature Review

The purpose of this pretest, posttest, quantitative research study was to examine whether creating art could be an effective prime to enhance empathy in graduate-level counseling students. Counselor empathy is vital for reaching therapeutic goals, such as building a therapeutic alliance and patient compliance (Connors et al., 2016; DePue, Lambie, Liu, & Gonzalez, 2016; Reese et al., 2016; Smith-Hansen, 2016). Maintaining therapeutic relationships and a patient load is important for a successful counseling career (Moyers & Miller, 2013). The problem addressed in this study was the challenge of increasing counselor empathy, which, researchers have found, can increase counseling effectiveness.

In this chapter, I review the literature that pertains to increasing empathy in counseling students through the arts. Specifically, I address the relationship of the arts to the counseling profession as a therapeutic tool, historically and currently. I discussed the theoretical foundation and art protocol concerning the shared neuropathways used when creating art and when empathizing with others. I also present other research studies using art as a prime for empathy and using a pretest-posttest research design and survey approach. In addition, I review research conducted using the TEQ (Spreng et al., 2009) and art. The chapter begins with an overview of my literature search strategy.

Literature Search Strategy

To identify and find the literature for this study, I primarily conducted electronic searches using databases available through the Walden University Library. Although I

garnered some research from books of interest, I obtained the bulk of the literature for the study from peer-reviewed journal articles that I found and accessed through electronic databases. The databases explored for this literature review included ERIC, PsychInfo, PsychArticles, PsycEXTRA, PyscTESTS, Academic Search Complete, SOCINDEX, MEDLINE, Health and Psyc Instruments, Health Technology Instruments, Mental Measurements Yearbook, and Education Research Complete. Some of the search terms used included *art and therapy*, *art as a prime for empathy with counseling students*, *teaching empathy*, *training counselors to have empathy*, *empathy primed by art*, *counselor effectiveness*, *counselor empathy*, *neuroscience and imagination*, *creativity and empathy*, *neuroscience and empathy*, *therapies that use art*, *creativity and learning for counseling students*, and different definitions of *empathy*.

Theoretical Framework

History of Art Therapy Relational Neuroscience

A forerunner of ATR-N was art therapy trauma protocol (ATTP), which was proposed by Talwar in 2007 for use in overcoming psychological trauma (Talwar, 2007; see, also, Lyshak-Stelzer, Singer, John, & Chemtob, 2007). At the time, Talwar was interested in the developments that neuroscience offered on how the brain processed, reassembled, and remembered traumatic memories (Talwar, 2007). ATTP was proposed as an alternative when verbal therapies were found inadequate to assist the healing of the emotionally traumatized patient (Talwar, 2007).

Educator, art therapist, and the creator of ATR-N, Hass-Cohen, showed similar interest in art and neuroscience. Hass-Cohen published a journal article in 2006 entitled “Art Therapy and Clinical Neuroscience in Action.” Although Talwar (2007) proposed ATTP before Hass-Cohen proposed ATR-N, no further literature by Talwar concerning ATTP is available, according to my review of the literature. By 2008, Hass-Cohen had integrated neuroscience with art therapy thereby creating ATR-N. She also co-authored the first book about ATR-N with Carr: *Art Therapy and Clinical Neuroscience* (Belkofer, 2009). At that time, ATR-N referred to art therapy relational *neurobiology*, reflecting the physiological affect associated with trauma and healing through the ATR-N model of therapy from a neuroscience perspective (Hass-Cohen & Clyde Findlay, 2009). By 2015, Hass-Cohen and Clyde-Findlay revised and elaborated upon ATR-N in their book, *Art Therapy and the Neuroscience of Relationships, Creativity, and Resiliency: Skills and Practices* (King, 2016). In this last book, ATR-N was referred to as art therapy relational *neuroscience* as its final derivation (King, 2016).

Components of Art Therapy Relational Neuroscience

ATR-N is a model of therapy, which is grounded in traditional art therapy, education, and relational neuroscience (Czamanski-Cohen, & Weihs, 2016; King, 2016). The foundational component of ART-N is art therapy. Prominent art therapist, Kramer’s incorporated the theory of the *third hand* into the ATR-N (Franklin, 2010; King, 2016; Thompson, 2014). Kramer’s concept of the therapist as the intervening, but unobtrusive, third hand in therapeutic treatment is foundational in art therapy (Carr, 2014; Carr &

Hancock, 2017; Franklin, 2010). An example of an art therapist as the *third hand* is when patients are disabled or otherwise unable or unwilling to create art for themselves. In this instance, the art therapist may intervene and paint or draw pictures with or for the patient thereby co-designing a self-reflection for the patient (Carr, 2014). Although, the optimum in traditional art therapy is for the patient to create art unaided, when assistance is needed, an art therapist will adjust to the patient's needs accordingly (Carr, 2014; Carr & Hancock, 2017; Franklin, 2010). Traditional art therapy, whereby creating two and three-dimensional art, is used to reveal the unconscious and bring about insight with a *third hand* where needed, and is essential to ATR-N (Carr, 2014; Carr & Hancock, 2017; Hass-Cohen et al., 2014; Hass-Cohen & Findlay, 2009; King, 2016; Scope, Uttley, & Sutton, 2017).

The component that ATR-N integrates with art is relational neuroscience (Czamanski-Cohen, & Weihs, 2016; King, 2016). Neuroscience informs and educates the art therapist as to the interpersonal neurobiology (IPNB) taking place within his or her patients, and this understanding helps the art therapist to match appropriate directives to the patient's needs (Czamanski-Cohen & Weihs, 2016; Hass-Cohen & Clyde-Findlay, 2015). ATR-N protocol explains the neuroscientific theories related to (a) meaning-making; (b) the physiology of movement; (c) relating and attachment; (d) mentalizing and imagining; (e) affect regulation; (f) memory and stored meaning; (g) creating, touch, fear and stress response; (h) adaptive responding, anchoring, grounding, resiliency, connecting; and (i) empathizing (Hass-Cohen & Clyde-Findlay, 2015). Neuroplasticity,

mirroring, accessing emotions, and mindfulness are also explained from a neuroscientific perspective and integrated into the ATR-N protocol (Hass-Cohen & Clyde-Findlay, 2015).

ATR-N protocol is carried out through six principles: creative embodiment, relational resonating, expressive communicating, adaptive responding, transformative integrating, and empathizing and compassion (CREATE; Hass-Cohen & Clyde-Findlay, 2015; King, 2016). Based upon patient needs, an art therapist may choose directives that emphasize some of the CREATE principles over others; however, all six principles are activated each time the ATR-N protocol is used (Hass-Cohen & Clyde-Findlay, 2015). In this study, I used directives that emphasize the transformative integrating aspect of the CREATE principles, which focuses on mentalizing and imagination (Hass-Cohen & Clyde-Findlay, 2015). Mentalizing is the cognitive process of recognizing and understanding one's own mental state and perspective as well as imagining the mental state and perspective of others (Bo et al., 2017; Hass-Cohen & Clyde-Findlay, 2015; Hertzmann et al., 2016).

Use of Art Therapy Relational Neuroscience in Other Research

In all, I found two studies in the literature that referred to ATR-N as an art protocol used for research. The first study postulated that emotional and sensory pain and visual expressions shared the same neuropathways. The authors researched the therapeutic benefits of ATR-N to assess and treat the physical and emotional pain of a participant experiencing back pain (Hass-Cohen & Findlay, 2009). A participant followed

directives that instructed her to create four drawings meant to lead her from a representation of herself with the problem to imagining herself as problem free.

Following the art protocol, the researcher deconstructed art and experience. Two years after the single research session, the researcher conducted a follow-up interview whereby the participant reported positive changes after the research experience, including more self-awareness, self-empowerment, and better-coping skills with pain management.

The second study conducted was based on ATR-N and postulated another art therapy protocol umbrellaed under ATR-N principles: *The Check (Check, Change What You Need to Change and Keep What You Want) Art Therapy Protocol* (Hass-Cohen et al., 2014). The check art therapy protocol is a set of successive art directives used to treat traumatic memories in participants. IPNB of trauma and resiliency research informed the art directives. The researchers used a case study as an example of how the check directives could facilitate healing from trauma. The check directives begin with (a) the drawing of the autobiographical timeline of the trauma event, then (b) another drawing of an aspect of the trauma the patient is willing to share, (c) followed by the giving of a title and narrative to the art. After patients completed these steps, the researchers asked them to consider what they would keep or change and to make these changes to their artwork by painting over, gluing over, cutting out, or starting a new piece of art. Finally, the last directive instructed patients to draw *what an optimistic future would look like*. These art directives facilitated the processing and recontextualization of the trauma narrative and the rebalancing of stress responses, which lead to self-awareness and resilience.

The single participant in this study Hass-Cohen et al.'s (2014) study, a survivor of the September 11, 2001 attacks on the World Trade Center building in New York City, participated in weekly therapy sessions for 4 months where she built a trusting relationship with the therapist and learned some desensitization exercises. After the therapists laid the groundwork, they pretested the patient with the Beck Anxiety Index and the Centrality of Event Scale and then began to process the trauma using the art protocol in her weekly sessions with the same therapist (Hass-Cohen et al., 2014). After the several sessions needed to follow the directives in the art protocol, the participant was post-assessed with the Beck Anxiety Index and the Centrality of Event Scale (Hass-Cohen et al., 2014). Although Hass-Cohen et al. did not offer quantitative details about assessment results, they concluded, through comparison of the pre- and posttest assessments, that her anxiety level had decreased below clinical levels and some of her resiliency markers, such as insight and optimism, increased, while her avoidance decreased.

Appropriateness of Art Therapy Relational Neuroscience for this Study

The ATR-N protocol was appropriate for this study because ATR-N is flexible and can be adapted for different intervention purposes and short-term use (Hass-Cohen & Findlay, 2009). An art background, artistic talent, or any affiliation with the arts is inconsequential for participation in ATR-N directives, which made this an appropriate choice for the population in this study (Hass-Cohen & Findlay, 2009). ATR-N marries the creating of art with the neuroscience that informs prosocial behaviors, such as the

dependent variable in this study, empathy (Hass-Cohen & Clyde-Findlay, 2015; King, 2016). Using the CREATE principles, it is possible to choose art directives that emphasize the IPNB associated with mentalizing and imagination, as components of empathy (Czamanski-Cohen & Weihs, 2016). Finally, because research emphasizing art therapy and neuroscience was lacking, and this study sought to fill gaps in the literature, ATR-N was an appropriate foundation for this quantitative study (King, 2016).

Literature Review Related to Key Variables and Concepts

History of the Use of Art Therapy by Counselors

Near the turn of the 20th century, when psychology was developing as a profession and led by philosophers and psychologists, professionals did not consider the arts a distinct form of therapy (Green, Heidari, Chiacchia, & Martin, 2016; Kenny, 2015; Tweney & Budzynski, 2000). The development of the scientific method helped propel psychologists into academic and scientific arenas; however, much debate was on the finer details of the scientific method, such as how to measure psychological constructs (Tweney & Budzynski, 2000). Because the underpinnings of psychology were from philosophy, medicine, and academia, and psychology, establishing the value of art as a therapy or as a branch of psychology was historically premature (Green et al., 2016; D. Henderson, 2015; Rand, 2004).

Traditionally, psychoanalysis, founded by Sigmund Freud (1856-1939), was not credited for the use of art in therapy (Gravitz, 2004; D. Henderson, 2015). Freud developed psychoanalysis from his foundation of hypnosis (Gravitz, 2004).

Psychoanalysis was dubbed *talk therapy* because patients would freely talk or *free associate* to reveal unconscious thoughts (Barratt, 2017; Sheehy, 2014). However, Freud used his statues and sculptures for psychoanalysis (Martin, 2008). Hilda Doolittle, a poet and novelist, revealed that Freud used sculptural figurines as metaphors for the unconscious and stand ins for psychological trauma (Martin, 2008). Similarly, painter, Serge Pankejeff saw Freud for psychoanalysis where artifacts, sculptures, and figurines were used to help interpret Pankejeff's sexual conflicts (Davis, 1992).

Freud maintained an association with the arts through his collection of artifacts and sculptures and his association with those in the arts (Davis, 1992; Mecouch, 2016). Freud saw composers Anton Webern, Alan Berg, and wife, Helene Berg, professionally for psychoanalysis and personally (Carpenter, 2015). This fluidity between practitioner and friend was also apparent in Freud's relationship with Pankejeff, who Freud saw professionally, and who Freud helped to meet his rent payment for his apartment (Davis, 1992). A colleague and psychiatrist, Alfred Adler, came from a musical background and had been encouraged to pursue an opera career in his youth (Carpenter, 2015). Although Adler pursued medicine instead of the opera, he became yet another artistic mind Freud discussed when Freud invited Adler to join a discussion group, which came to be known as the Vienna Psychoanalytic Society (Carpenter, 2015; Fiebert, 1997).

Freud was interested in mythology and sculptures of antiquity, and once spent three weeks visiting, viewing, and analyzing the statue of Moses by Michelangelo (Foss, 2014; Kenny, 2015). He found it difficult to enjoy art unless he could understand why he

enjoyed it (Foss, 2014). Although Freud was a neurologist and considered himself a scientist, in 1930, Freud's writings, seen artistically, earned him the Goethe award for literature, not the Nobel Prize, for his advances in medicine (Kauders, 2011; Mecouch, 2016). A picture emerges here of analysis and art as inextricably linked; something that has been noted in modernity (Karbelnig, 2016; Mecouch, 2016; Teitelbaum, 2016).

One of the earliest psychological assessments, still in use at the time of data collection, is the Rorschach Method, or ink blot test, developed by Herman Rorschach (1884-1922) and copyrighted in 1921 (Hubbard & Hegarty, 1921/2016; Schwartz, 2014). In his youth, the art and game of making inkblots influenced Rorschach, which was credited to Justinus Kerner (1890/2017) and his 1857 book on poetry and inkblots, *Klecksographien* (Caldwell, 2014). Later Rorschach developed the 10 inkblots in his test and considered it a *perceptual experiment* (Carter, Daniels, & Zickar, 2013; Kleiger, 2015). After Rorschach's death in 1922, three distinct approaches were developed and used to assess the test based on these theories: empirical, psychoanalytic, and orthogenetic developmental (Kleiger, 2015; Leitchman, 2009). Thus, the Rorschach test has been used to assess personality in children and schizophrenia in adults (Beatriz Saraiva & Ferreira, 2016; Carter et al., 2013). Controversy over the Rorschach test exists to this day including criticisms concerning the scoring of the test (Carter et al., 2013; Kleiger, 2015). In the 1960s, John Exner (2001) developed a scoring system for the Rorschach test, which was published in 1974 and became the standard scoring method of the test, and it is still in use today (Dwivedi, 2015; Navran, 1983).

Developmental psychologist Florence Goodenough (1886-1959) created the Goodenough Draw A Man Test in 1926 (A. Johnson, 2015; Welder & Noller, 1953). By 1963, psychologist Dale Harris developed the test's scoring further and renamed the test the Goodenough-Harris Drawing Test (Vane, 1967). Under either name, this test was created to evaluate cognitive abilities in children and adolescents (Hanvik, 1953; Welder & Noller, 1953). The test requires children to draw a full-length picture of a woman and then a man, and afterward, aspects of the pictures were analyzed (Welder & Noller, 1953). Later, the test was referred to as the Draw a Person Test and was found useful with adults and to diagnose schizophrenia (Gustafson & Waehler, 1992; Shakir, Shah, & Mazhar, 2013).

Carl Gustav Jung (1875-1961), psychiatrist and psychoanalyst, also associated with the arts and artists, and he collaborated with Freud until disagreements dissolved their friendship (D. Henderson, 2015; Kenny, 2015; Mecouch, 2016). Jung developed the theories of archetypes and the collective unconscious (Mills, 2014; von Franz, 2016). Jung proposed that archetypes were intuitively known to all, as the collective unconscious, and professionals could access by analyzing dreams, mythology, religion, images, and art (N. B. Johnson, 1991; Kenny, 2015; Kim, 2016; Sedgwick, 2016; Van Denend, 2015). To this day, much controversy exists over Jung's psychology and view of the arts, especially regarding Jung's symbols, the collective unconscious, and theory (Rowland, 2015).

Jung used art to facilitate his own psychological healing and understanding. An example of this is his book, *Liber Novus*, which he worked on from 1913 to 1930 (Daalder-Van Iersel, 2017; Stein, 2012). In this book, he induced his imagination and followed the voice and character of his soul to experience his soul journey, which was an idea he had touched upon in his 1916 book, *The Transcendent Function* (Brutsche, 1916/2011; Mecouch, 2016). Through this journey, Jung developed and honed his theories about archetypes, the collective unconscious, and the process of individuation (Brutsche, 1916/2011). Inside *Liber Novus* are Jung's writings, calligraphy, and 73 full-page works of his art (Brutsche, 1916/2011).

By the 1940s, creating art was recognized as a therapeutic discipline in Europe and the United States, although the first art therapists in the United States did not incorporate until 1969 as the *Wisconsin Art Therapy Association* (WATA; Potash, Burnie, Pearson, & Ramirez, 2016). Anna Freud (1895-1982), psychoanalyst, psychologist, author, and daughter of Sigmund Freud, built upon her father's work and developed her groundbreaking views on child development, contributing to the field of child psychology (Joyce, 2016; Ludwig-Körner, 2017). Alongside Anna Freud, Melanie Klein (1882-1960), psychoanalyst and author, also focused on child psychology and is credited as one of the founders of object relations theory (Blos, 1976; Sherwin-White, 2017; Vulevic, 2018). Both psychoanalysts valued and developed play therapy as a form of child therapy (Friedman, 2017). Play therapy included the provision of paper, crayons, puppets, balls, dolls, furniture, and mediums useful to help children spark their

imagination and express their thoughts and feelings freely (Friedman, 2017). These techniques are still in use today.

The Melanie Klein Trust was established to further her techniques and psychoanalytic theory, and a website continues to promote this work today (Blos, 1976). Furthering her work in child psychoanalytic theory, Anna Freud helped to establish the Hampstead Clinic in 1952, which was later renamed the Anna Freud Centre, and still exists today (Koch, 2012; Penman, 2013; Zaphiriou Woods & Pretorius, 2016).

British artist Adrian Hill (1895-1977) was the first person to consider the creating of art as *art therapy* (Bitonte & De Santo, 2014). Hill developed the idea of using art therapeutically by drawing to assist his healing while in a sanatorium recovering from tuberculosis in 1938 (Bitonte & De Santo, 2014). Once recovered, he returned to the sanatorium to teach painting and drawing to patients to assist with their healing process (Cummings, 2017). After these experiences and observing that creating art helped to relieve emotional distress, Hill (1948) wrote *Art Versus Illness*, which he first published in 1945 (Bitonte & De Santo, 2014). Hill was instrumental in setting up a program through the British Red Cross Society whereby reproductions of famous artwork were lent to hospitals and brought to patients (Cummings, 2017).

British artist Edward Adamson (1911-1996) worked with Adrian Hill through the British Red Cross Society Picture Library program where he brought reproductions of paintings and lectured on them to tuberculosis patients (Cummings, 2017; Ostrowska, 2015). Shortly after visiting the inpatient psychiatric wing at the Netherne Hospital,

Adamson was appointed as the first official art therapist at the hospital in 1946 (Cummings, 2017; Ostrowska, 2015). A studio area was provided for handpicked psychiatric patients to paint at the hospital in 1948, and patients' paintings were then analyzed (Ostrowska, 2015). While serving as an art therapist, a psychiatric patient gave Adamson drawings that he created by drawing using the only available tools at the time, burnt matches on toilet paper. These drawings became the foundation for Adamson's collection of art, which came to be known as the *Adamson Collection* (Ostrowska, 2015).

In the United States, Edith Kramer (1916-2014), who was a trained artist and believer in psychoanalysis, saw art as a safe way to sublimate psychological drives, express emotions, and work through emotional conflicts toward resolution (Feen-Calligan, 2014; Kapitan, 2014; Thompson, 2014). Kramer viewed the creating of art as therapy in and of itself, and she also believed that the quality of the work produced mattered (Feen-Calligan, 2014). Kramer's first insight into art as therapy began when she reunited with her art teacher and mentor, Friedl Dicker, while working with political refugees who had fled Nazi Germany (Feen-Calligan, 2014). Kramer authored two books in the 1970s: *Art as Therapy with Children* (1993) and *Childhood and Art Therapy* (1979; Feen-Calligan, 2014; Kapitan, 2014). During her career, Kramer also taught at universities and contributed to art journals and art associations, such as the founding of the American Art Therapy Association and the New York Art Therapy Association (Feen-Calligan, 2014; Thompson, 2014). In recognition of her pioneering work and major

contributions to the field of art therapy, Kramer was offered an honorary doctorate from Norwich University, but she declined the honor (Agell,1996).

Psychologist, educator, author, and artist with a psychoanalytic background, Margaret Naumburg (1890-1983) created the *Dynamically Oriented Art Therapy* approach (Sands-Goldstein, 2008; Ulman, 2001). While Kramer used art *as* therapy, Naumburg used art *in* therapy (Ulman, 2001). Patients were asked to draw or paint freely, and professionals analyzed the artwork afterward (Naumburg, 2001). Naumburg considered artwork a form of verbal response and imaged projections emerging from the unconscious (Naumburg, 2001; Ulman, 2001). Naumburg used this approach with children and adults. She founded the Walden School of New York City and authoring numerous books including *Studies of Free Art Expression of Behavior Problem Children and Adolescents as a Means of Diagnosis and Therapy* (1947), *Schizophrenic Art: Its Meaning in Psychotherapy* (1950), *Psychoneurotic Art: Its Function in Psychotherapy* (1953), and *Dynamically Oriented Art Therapy: Its Principles and Practice* (Meltzer, 1953; Naumburg, 1947, 1950, 1953a, 1953b, 2001; Rickers-Ovsiankina, 1949; Sands-Goldstein, 2008; Woltmann, 1948).

Florence Cane (1882-1952), an artist and art teacher, was influenced by Jungian theory (Landgarten, 2009). Cane used art, music, dance, movement, and group writings to bring about awareness of the mind-body connection. Because of Cane's innovative approach to stimulate creativity through the experience of movement, she is considered the founding mother of expressive therapies. Cane created the scribble technique and

encouraged patients to scribble freely with eyes closed and to highlight and color to uncover, with the therapist, their unconscious thoughts (Landgarten, 2009). Cane published her book *The Artist in Each of Us* in 1951, which was considered by Hinz in her book, *Expressive Therapies Continuum: A Framework for Using Art in Therapy* (2009), as the first art therapy textbook (Czamanski-Cohen & Weihs, 2016; Landgarten, 2009).

The Thematic Apperception Test (TAT), a projective test, was created during the 1930s by psychologist Henry A. Murray and psychoanalyst Christina D. Morgan and was copyrighted by Murray and the Harvard Psychological Staff in 1943 (Carter et al., 2013; Piotrowski, 1957). The TAT is a set of handpicked images from magazines to help access the unconscious and conscious stories patients draw upon from their experiences thereby giving the therapist an overall picture of the whole person (Carter et al., 2013). By the 1970s, the TAT popularity had declined but was still in use to help patients gain insight into themselves for personal growth (Carter et al., 2013).

Mihaly Csikszentmihalyi (1934), a psychologist, recognized a mental state he termed *flow* (Henriksen & Hoelting, 2016). Csikszentmihalyi's theory explains, at least in part, why the creating of art can be therapeutic. When a person is absorbed in an activity, completely living in the moment, and concentrating on the activity at hand, he or she experiences flow (Beard, 2015; Kossak, 2009). When in a state of flow, anxiety, apathy, and boredom are overridden by a relaxation of worry, arousal, motivation, and feelings of empowerment and positivity (Beard, 2015; Csikszentmihalyi & LeFevre, 1989; Seemann

& Seemann, 2015). Csikszentmihalyi believed when a person experienced flow through creativity; the activity fostered happiness (Csikszentmihalyi & Hunter, 2003; Reiss, 2000).

Current Use of Art Therapy by Counselors

The use of art in therapy has evolved tremendously from the inception of psychology as an organized profession so much so that a search of five combined search engines (e.g., PsycINFO, Academic Search Complete, Medline, PsycARTICLES, and SocINDEX) by using the search term *art therapy* rendered more than 21,000 results. Art is currently used therapeutically by counselors in extraordinarily numerous ways.

Licensed mental health professionals including, but not limited to, counselors, social workers, and psychologists use art as an adjunct to their primary education. Also, artists may choose mental health education as an adjunct to their primary education and talents, and the artists are still organizing (Potash et al., 2016; Van Lith, 2016). Since the 1960s, with grassroots organizations such as the Wisconsin Art Therapy Association, artists such as Edith Kramer have worked to define and professionalize the profession of *art therapy* (Potash et al., 2016). As of the time of this study, a dedicated designation exists for the practitioner of art therapy. The American Art Therapy Association, founded in 1969, is encouraging all states to require licensure for all art therapists: another step closer to adopting national standards and recognition (McNiff, 1980; Potash et al., 2016). The American Art Therapy Association requires certification for membership, and several states require the licensure of art therapists; however, other states rely on cross-licensing

to credential art therapists as mental health practitioners (Wadeson, 2004). Licensure of art therapists may not change the inextricable link between psychology and art, but it may ethically change the practice of art therapy in the future (McNiff, 1980; Potash et al., 2016).

Although art therapists work with diverse populations, a meta-analysis performed by Van Lith (2016), which specifically included art therapies containing an explanation of methods, found art therapists to work primarily with four populations: depressed patients, borderline personality disordered patients, schizophrenic patients, and posttraumatic stress disordered patients. One of the therapies used with these populations included the Anthroposophic Art Therapy (AAT) approach (Van Lith, 2016). The AAT approach has evolved from 1921 to the present as an outgrowth and adjunct of anthroposophic medicine, which takes the whole person into account when considering illness and uses multi-disciplinary treatments (Abbing, Ponstein, Kienle, Gruber, & Baars, 2016). AAT may include the use of eurythmy movement, rhythmic massage, counseling, medication, creating art with clay or paint, dramatization through speech, through music, or nearly any creative means to express emotions (Abbing et al., 2016; Hamre, 2014; Hamre, Kiene, Glockmann, Ziegler, & Kienle, 2013; Van Lith, 2016). Professionals have used AAT with patients suffering from depression, anxiety, attention deficit hyperactive disorder, back pain, and migraines (Hamre, 2014; Hamre et al., 2013; Van Lith, 2016).

The expressive art therapies often use play acting, dramatization, music, poetry, and movement to help diverse populations, from children to adults, express themselves (Chiu, Hancock, & Waddell, 2015; Dieterich-Hartwell & Koch, 2017; Hertrampf & Wärja, 2017; Ko, 2016; Perryman et al., 2015; Powers & Duffy, 2016). Nordoff Robbins Music Therapy and Theater of the Oppressed are two forms of expressive art therapies (Barbosa & Ilídio, 2017; Ko, 2016; Tsiris, Spiro, & Pavlicevic, 2018). Nordoff Robbins Music Therapy uses group singing, improvised, and non-improvised music-making as therapy and was developed to use with children with neurological pathology, but has expanded for use with other populations without neuronal deficits (Graham, 2016; Mahoney, 2016; Tsiris et al., 2018). Theater of the Oppressed is similar to the traditional theatre in that a play is acted out (Tolomelli, 2016). Theater of the Oppressed empowers all who participate as a group to find and use their abilities to collaborate in the play writing, the performance, the meaning making, the image making, and the sounds involved in the performance (Powers & Duffy, 2016; Tolomelli, 2016).

Also used by art therapists to treat pathologies, such as depression, borderline personality disorder, traumatic brain injury, and schizophrenia, is Psychodynamic Art Therapy (AT; Bitonte & De Santo, 2014; Montag et al., 2014; Thyme et al., 2007; Van Lith, 2016). AT offers patients the opportunity to create freely during supervised art sessions, using paints, pencils, clays, papers, crayons, and similar art mediums, while art therapists may support the process (Montag et al., 2014). Finished artwork is then shared with the individual and the therapist or in group therapy whereby group sharing, and

feedback may occur (Montag et al., 2014; Van Lith, 2016). AT allows verbal and nonverbal patients to express and externalize emotions and thoughts with the assistance of an art therapist (Montag et al., 2014).

The therapy, AT, is the historical and traditional use of art and because of AT's few limitations and flexibility; AT is useful for many populations and as an adjunct to other therapies (Bitonte & De Santo, 2014; Schiltz & Zimoch, 2017). Some therapies used in conjunction with AT are cognitive behavioral therapy (CBT), dialectical behavioral therapy (DBT), trauma-focused cognitive behavioral therapy (TF CBT), and eye movement desensitization and reprocessing therapy (EMDR) (Van Lith, 2016). Some examples of AT used in conjunction with CBT, DBT, and TF CBT include: use with adolescents and veterans who are experiencing posttraumatic stress disorder (PTSD), use with adults presenting with anxiety, and use with adolescents overcoming emotional trauma (Kruger & Swanepoel, 2017; F. J. Morris, 2014; Ramirez, 2016; Smith, 2016; Sosin & Rockinson-Szapkiw, 2016). Some examples of AT used in conjunction with EMDR include use with adults and sexual addiction, veterans experiencing PTSD, and use with cancer patients (Jarero, Artigas, Uribe, & García, 2016; Miles, Cooper, Nugent, & Ellis, 2016; Smith 2016).

Empathy

The concept of empathy is precarious because as many definitions and theories exist about the phenomenon of empathy as there are researchers interested in the subject (Bayne & Hays, 2017; Bell, 2018; Wondra & Ellsworth, 2015). Empathy is a

multidimensional construct leading to diversity in measurement, research, and theories of practice (Bayne & Hays, 2017; Totan, Doğan, & Sapmaz, 2012). Hypothesized theories about the constructs of empathy often lead to the positive social outcomes of caring, understanding, and the validation of others (Wondra & Ellsworth, 2015). Various theories of the components of empathy may include emotional contagion, mimicry, an appraisal or judgement of another's and own emotional state, using imagination, drawing upon experience, problem-solving, externalization of internal visual images, emotional perspective taking, and artful communication (Bell, 2018; Buck, Powers, & Hull, 2017; Franklin & Grossenbacher, 2016; Van Boven et al., 2013; Wondra & Ellsworth, 2015). Neuroscience and the discovery of mirror neurons further elucidate the phenomenon of matching another's emotional state as a construct of empathy (Bayne & Hays, 2017; Wondra & Ellsworth, 2015). Neuroscientific research also supports theories of empathy that find a relationship with shared neuropathways between art, the imagination, and empathy (Franklin & Grossenbacher, 2016; Hass-Cohen et al., 2014).

Although researchers continue to debate theories of empathy and contend with probable components required for empathy, it is generally agreed that empathy should convey caring, understanding, and validation to others (Bayne & Hays, 2017; Wondra & Ellsworth, 2015). Wondra and Ellsworth found the concept of empathy could be defined as “affective resonance or experience sharing” (2015, p. 415) although they also offered that these definitions may fall short of other theorized components necessary to achieve empathy (p. 411). The definition of empathy for this research study is, “an affective state

that stems from the apprehension of another's emotional state or condition, and that is congruent with it" (Eisenberg & Miller, 1987, p. 91).

Empathy and Counselor Training

Because empathy is a phenomenon and a concept, the counseling profession continues to wrestle with multiple definitions and imaginative ways to elicit or influence empathic capabilities in counseling students (Palmer, 2018). Because empathy relies on the activation of neural pathways and capacities for emotional intelligence, it would be difficult, if not impossible, to teach (Shamay-Tsoory, 2011). Palmer noted that empathy could not be taught because there was no structured way to bring about empathy, nor could empathy be "faked" (p. 34). Therefore, the counseling profession has often relied on teaching therapeutic skills and asking counseling students to engage in some form of perspective taking as conduits for empathy with clients (Arnold, 2014; Egan, 1976; Miller & Moyers, 2017; Seay, 2010).

Seeking to broaden empathy in future counselors, Professors Anderton and King (2016) used experiential perspective taking in their research design to explore empathic responses in graduate-level counseling students from the University of Wisconsin. In their qualitative study, a virtual game was used to allow students to explore virtually different cultures and environments over four weeks in a cultural class that met two times a week. The game was designed to target cultural empathy and personal biases. Results indicated an increase in self-awareness and the ability to navigate through new cultures and an increase in understanding and empathy for others. The authors noted this game

allowed the participants to experience feelings they typically would not experience in everyday life. This combined holistically with a place where the students could feel free to express their vulnerabilities, the authors saw promise in the use of the game called Oblivion to help counseling students experience empathic behavior.

Anderton and King's (2016) research is one of the most similar research studies found to this study that used graduate-level counseling students for participants. Anderton and King used the arts from a narrative approach to broaden empathy in graduate-level counseling students, and although their research was qualitative, they also incorporated premilitary work for participants before the class, which was used in the final required projects, like a pre and posttest research design. However, Anderton and King's small sample size of four participants, 4-week length of time, and other activities used throughout the class, made their study ultimately dissimilar.

Professors of counseling and other caring fields have used different strategies to help their students become more empathetic. Bohecker and Doughty Horn (2016) conducted a quantitative study to compare empathetic behavior after one group had mindfulness training. The results only showed that mindfulness training, along with other strategies, may help counselors in training become more empathetic. Kenz and Sangganjanavanich (2013) used a photovoice to measure empathic behaviors with 38 master's counseling students. Visualization of their voices, or reviewing the way they spoke, showed marked improvement in an empathetic approach with the students.

Xiao, Imel, Georgiou, Atkins, and Narayanan (2015) recorded 200 students from Washington state during therapist-client sessions and had clients rate their therapist. The researchers held numerous sessions with the student-participants where they shared the findings of the ratings and listened to their vocal interactions with their clients using the empathy prediction model. The results showed a slight improvement after students listened to their vocalizations using the empathy prediction model and after comparing their clients' rating of empathic behavior against their own ratings.

Kenz and Sangganjanavanich (2013) found a marked improvement in empathetic behavior when counseling students visualized their voices. In a similar study, Xiao et al. (2015) showed how therapists could enhance their empathetic behavior by listening to themselves. Both studies are similar to my study wherein the purpose was to inquire if an independent variable is an effective prime to enhance empathy in counseling students. However, neither study used ATR-N or another art directive, as proposed in this research study.

Stepien and Baernstein (2006) studied the research for effective strategies to teach interventional strategies in the development of empathy for students. After reviewing several peer-reviewed articles on the strategies necessary to teach empathy, they found challenges to teaching empathy: a lack of a definition for empathy, small sample sizes, inappropriately managed control groups, and unreliable instruments to measure empathy. They recommended future researchers conduct studies with reliable instruments, larger sample sizes, and an adequate control group, which a few researchers have done for the

past 12 years. This research study will help to fill the gap in the literature by conducting quantitative research with a reliable instrument, using a set of replicable art directives not previously used to elicit empathy in a single session, and with a medium sized sample of graduate-level counseling students.

Art Therapy as a Prime for Empathy in Research

The most similar study to this research study was conducted using third-year medical students from Hong Kong (Potash et al., 2014). Participants were pretested using the student version of the Jefferson Scale of Empathy (JSE) and then asked to participate in a 3-hour art workshop during a semester. The workshop included writing a poem, creating artwork, and writing a reflective essay. At the close of the semester, participants were posttested with the JSE, and researchers chose 20 of the works, consisting of a combination of art, poems, and essays, as representations to determine qualitative results. Results were mixed. From the JSE, results indicated that participants lost empathy over the semester, but that items on the JSE relating to an emotional influence on making medical judgments had positively changed. The quantitative data collected showed improvements in self-awareness, gained an understanding for patients and their pain, as well as provided a better understanding of their role as practitioners.

Also seeking to increase empathy in medical students, Bentwich and Gilbey (2017) conducted a research study using Visual Thinking Strategies (VTS). VTS sessions were 90-minutes long, involved a lecture, and then viewing and discussing possible meanings of the visual arts thereby challenging the participants' comfort with ambiguity

and empathy. At the end of the VTS session, the 67 participants filled out a quantitative survey. Results indicated moderate and high correlations (0.528-0.744; $p \leq 0.01$) between comfort with ambiguity and increased empathy: 67% of the participants believed that the VTS enhanced their ability to accept multiple meanings, and 34% believed their ability to feel other's pain had increased.

Most of the research conducted using the arts to prime empathy appears to be qualitative in nature. Fearnside, Bereza, and McConn (2015) studied the impact of using photographs as interpretations of conversations to increase empathy in digital photography students. The visually-interpreted conversations were held between assisted living residents and 86 participating college-aged students enrolled in a college photography class. The students were given several weeks to translate the conversations they experienced into a visual narrative, write brief reflections papers, and share their work with the class. Results were determined through qualitative ethnography, using a list of questions previously created by the class to encourage discussion on their projects. In general, participants believed the project gave them better awareness, and they believed that empathy had increased toward their conversational partners; the researchers also noted that empathy was apparent in some of the photographs.

Researchers have used art to enhance or generate empathy with children. Bradshaw (2016) directed a qualitative research study using sixth grade gifted and talented educated children as his participants. Over four months, Bradshaw and his participants became acquainted before research began within a one, six-day teaching unit.

Bradshaw collaborated with three teachers who assisted him with the integration of visual arts with their curriculum. During the teaching unit used for this study, writing persuasively and environmental art were integrated with the assistance of the language arts teacher. Bradshaw taught each 80-minute class to a total of 82 students. Students were required to work in pairs to discuss and reflect on given topics, evaluate, and discuss the provided visual art, work in groups to analyze the art, and support their perspective through persuasive writing. Bradshaw found empathy to increase in his participants because of these collaborations, and that art was a useful tool for bringing students together for a common cause.

Chisholm and Whitmore (2016) also chose middle-school students ages 13-14 as participants to discover how the arts might facilitate empathy for Anne Frank, while also teaching them about themselves. Students participated in groups in which they thought about Anne Frank and used their bodies to move and pose and create images born out of empathy for Anne Frank. These visual conversations were photographed, videotaped, and then discussed. In this way, students used their bodies to generate and convey visual meaning. Chisholm and Whitmore used these video recording, photographs, and classroom observations to determine the results of their study. These researchers found the arts were an important tool to help the students empathize with others and found the arts to make empathy possible in general.

The future of research using the arts to prime for empathy and instruments to evaluate empathy are evolving. Unsatisfied with previous and antiquated theories of

visually generated empathy by art, Kesner and Horáček (2017) researched literature to postulate a more accurate theory of empathy, beyond a simple response from mirror neurons. Kesner and Horáček postulated that the sciences of the mind, including neuroscience and the humanities, needed to be integrated to acquire a more accurate view of empathic response to art. They concluded that visual arts could be the catalyst for complex empathic responses and might, therefore, be useful as practice before actual situations occur. After reviewing the literature, Kesner and Horáček offered a complex and integrated model of empathy, which functions through considering the disposition of the viewer of art, cognitively, culturally, and any possible combination of personal dispositions, which serve as the lens through which the viewer sees the art. Also, for consideration is the “socio-affective/cognitive and esthetic processing” of the art by the viewer that is also shaped by the features of the art and grows into “like/dislike” of the art (Kesner & Horáček, 2017, p. 9). Art that primes for empathy may use narratives, emotional cues in imagery, and design that helps the viewer feel like a witness to what is depicted in the art. Another consideration in the model of empathy are several possible modes of empathy, such as cognitive empathy or emotional empathy, that are generated by underlying processes. Viewing art may not always generate empathy, but when there is an empathic response to art, Kesner and Horáček believed these complex states were present and needed to be considered when conducting research involving the arts and the phenomenon of empathy.

History of the Use of the Toronto Empathy Questionnaire

The TEQ is a rather new instrument having been developed in 2009 (Spreng et al., 2009). Although no peer-reviewed journal articles were found using the TEQ with counseling students, several studies have used the TEQ with other populations. The TEQ is appropriate for use with a multitude of populations, including adolescents and adults (Spreng et al., 2009).

Research has shown that medical students seem to lose empathy for their patients starting in medical school, and that empathy continues to decrease as the practitioner advances toward graduation (Potash et al., 2014; Roff, 2015). Although empathy has been defined in many ways by physicians, some have defined empathy as understanding a patient's cognitive state (Hojat et al., 2001; Lelorain et al., 2013). Recognizing the importance of practitioner empathy for patients and the limited amount of empathy assessments available, the Jefferson Scale of Physician Empathy was created in response for the need to evaluate empathy in medical students (Hojat et al., 2001).

Also understanding the importance of empathy for patients by physicians and concerns that daily functioning of their practices might interfere with physician empathy, Lelorain et al. (2013) conducted research to evaluate empathy in general practitioners. Practitioners were asked to fill out the TEQ and the Jefferson Scale of Physician Empathy. In all, 295 physicians completed the surveys. The authors not only asked the respondents to rate their feelings on empathy, they asked them to rate information that dealt with the daily workings of a medical practice: length of consultations, personal

clinical experience, and managerial level. The researchers conducted a quantitative study using hierarchical regression analysis with clinical empathy as the dependent variable. The limitations of this study included the lack of a random sample and the use of a cross-sectional study design, which inhibited the identification of causal relationships. Clinical experience was not found to have a significant effect on empathy in this study.

Researchers have used the TEQ in research with nursing populations. Researchers Mathad, Pradhan, and Rajesh (2017) conducted a quantitative study with 194 Bachelor of Science in Nursing students to identify correlations and predictors. Self-report survey assessments were used, which included the TEQ, the Freiburg Mindfulness Inventory, the Perseverative Thinking Questionnaire, and the Connor–Davidson Resilience Scale. To analyze the results, the researchers used multiple regression and Pearson's correlation. Mathad et al. used Pearson's correlation "to determine the relationship between resilience, mindfulness, perseverative thinking and empathy" (Mathad et al., 2017, p. 6). The researchers continued, "The most obvious finding to emerge from the analysis was that resilience is positively correlated with mindfulness and empathy" (Mathad et al., 2017, p. 6). The results indicated a significant correlation between resilience and empathy, as well as mindfulness and perseverative cognition.

Professionals have used the TEQ with general university students. A quantitative study using the TEQ with 698 students from Ege and Sakarya Universities was conducted to help validate the TEQ after translation into Turkish from English (Totan et al., 2012). After the TEQ was translated into Turkish, it was then adapted to determine its

psychometric properties. The findings from the TEQ were correlated with the Empathic Tendency Scale and the Basic Empathy Scale. The results indicated the instruments were significantly correlated. Also, the translated instrument did not affect the validity of the results. The results also showed the TEQ to be reliable. The coefficient was .79, and the test-retest reliability was .73. The results of this research found the Turkish TEQ to be a reliable assessment for empathy in Turkish speaking university students.

Another research study conducted using the TEQ had young adults and older adults as participants. Researchers conducted a quantitative study with 144 young adults with a mean age of 19.5 and older adults with a mean age of 68.75 to determine empathy across the lifespan of adults (Gould & MacNeil Gautreau, 2014). Gould and MacNeil Gautreau were interested to see if a relationship existed between empathy and enjoyment of life. Professionals use the TEQ, the Interpersonal Reactivity Index, and the Affect Intensity Measure for assessment. Participants were asked to recall conversations from their past. On the Empathetic Concern scale, the older adults rated higher, and the younger adults rated higher on the Personal Distress and Fantasy subscales. In all, the older adults rated higher on empathy. Gould and MacNeil Gautreau concluded that empathy is multidimensional, and much more research is needed to learn about how empathy differs from different age groups.

Summary and Conclusions

Empathy is an elusive concept to define and measure and is a phenomenon that cannot be taught but may be primed. The arts have traditionally and up to this present

day, been used as a conduit for empathy. Although qualitative and ethnographic research studies were found to report increased empathy among participants primed through art, I could find few quantitative studies where researchers introduced an art variable that significantly increased empathic behavior within their participants. I could find no single agreement upon the definition of empathy. However, as Lelorain et al. (2013) noted, empathy is essential for clinical care of patients. Mathad et al. (2017) explained the necessity of empathetic behaviors for nursing students. Berg, Majdan, Berg, Veloski, and Hojat (2011) noted the need to help trainees in all helping fields learn empathic behaviors and stressed that more research must be conducted in this area. As well, Stepien and Baernstein (2006) stressed the need for more studies to be conducted with students in the caring fields on empathy. Palmer (2018), however, questioned the validity of teaching or trying to generate empathy at all. Much controversy surrounds the concept of empathy.

In the next chapter, I will include the methodology and design for this study. Chapter 3 will also contain ethical considerations and the role of the researcher. I also discuss reliability and validity of this study in Chapter 3. In Chapter 4, I will give the results of this study.

Chapter 3: Research Method

The purpose of this pretest, posttest, quantitative research study was to examine whether creating art could be an effective prime to enhance empathy in graduate-level counseling students. The problem addressed was the challenge of enhancing counselor empathy. Counselor success concerning the formation of a therapeutic alliance with clients and therapeutic outcome is largely contingent upon counselor empathy (Moyers & Miller, 2013). Traditionally, professionals have used the arts in various ways for counselor empathy development, and the advent of neuroscience has contributed to the understanding of how the arts may further assist in empathy development by using shared neuropathways (Carre et al., 2013; Hass-Cohen, 2006; Hass-Cohen, Clyde, & Findlay, 2009; Hass-Cohen et al., 2014; K. L. Henderson & Malone, 2012; Warren et al., 2012). In this study, I used art to activate empathic neuropathways in participants.

In this chapter, I provide the research design and rationale for this study. I also discuss the population pertaining to criteria for participant recruitment, inclusion, ethical considerations, and data collection. I also discuss the quantitative instrument used for the pretest, posttest art session. Finally, I address the operationalization constructs, such as permissions, ethical procedures, and data analysis in this chapter.

Research Design and Rationale

With this quantitative research design, 74 participants completed a pretest, posttest design to determine if the use of a single session of creating art was an effective prime to enhance empathy in graduate-level counseling students (Cohen, 1992, Faul,

Erdfelder, Buchner, & Lang, 2009). To determine the needed sample size for a multiple regression model, I used the G*Power 3.1 software program. With two predictors (age and gender) based on medium effect size ($f^2 = .15$) and an alpha of .05, the needed sample size to achieve sufficient power (.80) would be 68 respondents (Faul et al., 2009).

To answer RQ1, I used a paired *t*-test to determine whether there were any gains in the dependent variable, empathy. For RQ2, I conducted Pearson's correlations to determine if any gains in empathy occurred due to extraneous variables, rather than the art prime independent variable. For RQ3, a multiple regression test was conducted to reveal the relationship between variables.

The time predicted for the pretest and posttests, as well as the prime, was approximately 30 minutes. However, because of the use of SurveyMonkey for participants, it is unknown if any time restraints occurred for the participants. Various researchers have used a pretest, posttest design with quantitative studies (Belkofer, van Hecke, & Konopka, 2014; Cooley, Burns, & Cumming, 2016; Gencel, 2017). A pretest, posttest research design is often used in behavioral research to assess the impact of treatment or exposure on a group of participants (Dimitrov & Rumrill, 2003).

A pretest, posttest research design is concerned with quantitative data that can be measured on a nominal, ordinal, interval, or ratio scale (Martella, Nelson, & Marchand-Martell, 1999). In this study, I used ordinal data, which were appropriate to answer the RQs. For this reason, I opted against using a qualitative research design. Mixed-methods studies require both quantitative and qualitative data (Tashakkori & Teddlie, 2010). This

research study did not contain any qualitative data; therefore, I rejected mixed-methods research methodology. Among the various pretest-posttest research designs, those entailing the use of random participant assignment and a control group are often considered optimal in some research conditions (S. B. Morris, 2008). However, conducting a pretest, posttest, with a randomly assigned control group, was beyond the scope of this research because of time and financial constraints.

In this study, 74 participants completed the TEQ which measures participant empathy on an ordinal scale (Spreng et al., 2009). I administered the TEQ before an art session prime and again directly after the prime. Data were analyzed using a paired *t*-test, a Pearson's correlation, and multiple regression.

Methodology

Population and Participant Characteristics

The population for this study was psychological counseling graduate students from the Walden University participation pool and participants from SurveyMonkey, an online survey platform. My chair and I agreed that if the number of participants needed could not be reached through the Walden University participant pool, I could seek participants through SurveyMonkey's respondent database, which was necessary. In all, 74 graduate student participants completed the study. Criteria for this study follow:

- a current student at the time of data collection
- unknown to the researcher
- more than 18 years of age

- a graduate-level counseling student
- consents to participate freely for the express purpose of furthering research

Participants were not excluded based on gender identification, sex, ethnicity, or socioeconomic status.

Sampling Method

For this study, a nonprobability, convenience sampling method was appropriate. Nonprobability is a sampling method wherein a researcher selects the participants in a process that does not allow for an equal chance for all individuals to be chosen (i.e., random sampling; Etikan, Musa, & Alkassim, 2016). Convenience sampling is a method wherein the participants are selected based on convenience (Etikan et al., 2016). In this study, I recruited participants from a specific graduate program (counseling) from one university and an online survey database. The participants had to meet certain criteria to be eligible to participate.

Sample Size

Using Cohen's (1992) table to determine the power of analysis, a .05 significance was appropriate for this study. Choosing a medium effect size for a paired *t*-test, Pearson's correlation, and multiple regression suggested a population size between 64 and 76 participants. A standard power reference was consulted to determine the suitable sample size for the multiple regression model in RQ 3 (Cohen, 1992, p. 158, Table 2). Based on this table, the sample needed to achieve sufficient power based on an $\alpha = .05$ was 68.

Procedures for Recruitment, Participation, and Data Collection

Recruitment. After I obtained permission to proceed with data collection, I commenced with the steps necessary to complete this study. The first step to satisfy the appropriate protocol was to receive permission to proceed from the Institutional Review Board (IRB) of Walden University, approval number 12-06-18-0079108. Next, I obtained permission from SurveyMonkey to conduct research using their platform (see Appendix A).

Once permission had been granted to proceed with this study, I tried to recruit participants through the Walden University participant pool by posting my study on the Walden University participant pool virtual bulletin board. However, because of poor response, further participants were sought from SurveyMonkey's respondent database. The information all participants received contained an introduction to the study, which provided a link to the online survey hosted by SurveyMonkey.

Participation. Once in the survey hosted by SurveyMonkey, informed consent was agreed to, or the survey did not commence (see Appendix B). I provided a brief demographic survey next (see Appendix C). After these items, the participants could answer the TEQ questions (see Appendix D). Appendix E includes the authorization to use the TEQ in my research.

Art session. After completing the TEQ, participants were asked to draw a house and to decorate it using their imagination, thoughts, perceptions, and beliefs. Participants supplied their own paper and utensils. The instructions said they could decorate the inside

or the outside of their home, or they could choose to decorate both the interior and the exterior of the home. Participants were instructed that they could use as much or as little color as they wish. Participants were given 15 minutes for this activity. SurveyMonkey informed participants when their 15 minutes had lapsed.

After participants completed the art, a series of open-ended questions followed (see Appendix F). These questions asked for some explanation of the participants' choices for their rendering. The participants typed their answers in SurveyMonkey. Participants could share, for example, the reasons why they chose certain colors or chose, to draw the inside or the outside of the home, or what the meaning was behind decorations they drew, or share virtually anything about their drawing that was meaningful to them.

After answering the open-ended questions, the participants were asked to complete the TEQ questionnaire again. In conclusion of participation, on the last page of the survey, I thanked them for their participation and provided my contact information should they wish to contact me concerning this study.

Instrumentation and Operationalization of Constructs

Demographic survey. A short survey was used to acquire demographic information from participants. Descriptive statistics (e.g., frequency, mean, mode, median, standard deviation) were used to analyze the demographic data (Gravetter & Wallnau, 2013). The 6-question, brief survey inquired about each participant's age, gender, ethnicity, marital status, education, and art experience. This survey should not

have taken more than 5 minutes to complete. Age and gender were used for Pearson's correlation and the multiple regression analyses.

TEQ questionnaire. The TEQ is a quantitative, 16-question self-report instrument used to assess empathy (Spreng et al., 2009). Spreng et al. used an exploratory factor analysis with existing empathy scales to find a group of measures of empathic responding that were highly related, thereby creating a single factor for empathy. The TEQ takes approximately 2 to 5 minutes to complete. Participants answered the TEQ questions with *Never*, *Rarely*, *Sometimes*, *Often*, and *Always*. Each answer holds numerical value, and when added, the score is derived (Spreng et al., 2009).

Researchers honed the TEQ through three studies, which demonstrated good construct validity (i.e., positive correlation with the Empathy Quotient and concepts of interpersonal sensitivity and social comprehension), and high internal consistency (i.e., from $\alpha = 0.85$ to $\alpha = 0.87$), good test-retest reliability (i.e., $r = 0.81$, $p < 0.001$) (Kourmoussi et al., 2017; Spreng et al., 2009). The reliability of the TEQ was examined again in a study using 3,955 Greek teachers (Kourmoussi et al., 2017). These researchers found the internal consistency reliable with a resulting Cronbach's alpha coefficient of 0.72. Construct validity was determined by using an exploratory factor analysis that resulted in factor loading ranging from 0.40 to 0.67, which were in the same ranges as Spreng et al. (2009) findings (Kourmoussi et al., 2017).

Researchers used the TEQ in research in several countries. Because the TEQ was validated in English, more studies using the TEQ could be found in countries where

English is a primary language such as Canada, the United Kingdom, and the United States of America (Kourmoussi et al., 2017). Research studies using the TEQ could also be found from Turkey, Romania, Trinidad, and Tobago (Kourmoussi et al., 2017). The TEQ has been used with adolescent, university-aged, and adult populations (Brewer & Kerlake, 2015; Kourmoussi et al., 2017). Researchers have used the TEQ to assess empathy in populations with clinical disorders and with physicians (Kourmoussi et al., 2017). Just as in this study, researchers used the TEQ with populations exposed to the arts (Baltes & Miu, 2014).

Open-ended questions. The open-ended questions used for this study were based on ATR-N principles and an ATR-N experience titled, “My Home” (Hass-Cohen & Clyde-Findlay, 2015, p. 304). The questions were designed to help participants imagine inhabiting their home, imagine being part of a community, and thinking about prosocial connections. The open-ended questions built upon the art session and helped to prime the shared neuropathways toward empathic thinking (Hass-Cohen & Clyde-Findlay, 2015). These four questions took less than a minute or up to four minutes each, depending upon the amount of participant reflection.

Data Analysis Plan

After I downloaded the raw data from the 74 completed demographic information pages, the open-ended questions, and TEQ surveys from SurveyMonkey, I used SPSS 25 to analyze and compute the results. I conducted both descriptive and inferential analysis. Gains in the dependent variable, empathy, was determined by a paired *t*-test. A Pearson’s

correlation was also conducted to determine if any changes in empathy gain scores occurred due to age. An independent groups *t*-test was conducted to determine any differences in gain scores because of gender, rather than the art prime independent variable. A multiple regression test was also conducted to reveal the relationship between variables. The research questions follow:

RQ1: To what extent will graduate counseling students' empathy scores change from pretest to posttest after participating in a single art session?

H_{o1}: No significant change from pretest to posttest scores in empathy based on participation in a single art session will occur.

H₁: Significant change from pretest to posttest scores in empathy based on participation in a single art session will occur.

RQ2: To what extent will graduate counseling students' empathy gain score (posttest minus pretest) be related to age (measured continuously in years) or differ by gender?

H_{o2}: The empathy gain score will not be related to age.

H_{2a}: The empathy gain score will be related to age.

H_{o2b}: The empathy gain score will not differ by gender.

H_{2b}: The empathy gain score will differ by gender.

RQ3: To what extent will graduate counseling students' empathy gain score (posttest minus pretest) be related to the linear combination of age, gender, and the interaction of age and gender?

H03: The empathy gain score will not be related to the linear combination of age, gender, and the interaction of age and gender.

H3: The empathy gain score will be related to the linear combination of age, gender, and the interaction of age and gender.

Threats to Validity

External Validity

For generalization of the study, it was important to consider all external threats to validity. One external threat could be caused by using a study sample that did not represent the population (Rahman, Osmangani, Daud, Chowdhury, & Hassan, 2015). For this study, I selected English speaking, counseling graduate students (regardless of country of origin) from the population of counseling graduate students from Walden University Participant Pool and SurveyMonkey's respondent database. I did not include graduate students from other disciplines in the sample, which could cause a threat to external validity.

Internal Validity

Internal threats to validity can also occur. Researchers must caution against positing that a relationship exists between the dependent and independent variables or an interaction effect with the selection of the study variables (Rahman et al., 2015). Multiple treatment interference could also threaten internal validity. I chose the variables (empathy and art prime) carefully to protect against threats to internal validity. Multiple treatments were not an issue with this study as I conducted the study within a one-hour timeframe

with no multiple interventions. Therefore, I took due caution with respect to internal validity.

Ethical Procedures

Only after the Walden University IRB had granted permission to commence with data collection, I began the first steps of data collection. At all times, I followed the procedures outlined in the Belmont Report with respect to all participants in the study. According to the Belmont Report, all researchers who include human participants in their studies must follow three rules: (a) give respect to all participants, especially as it pertains to autonomy and confidentiality; (b) beneficence, or do no harm to any participant; and (c) justice, “in the sense of ‘fairness in distribution’ or ‘what is deserved’” (U.S. Department of Health & Human Services, 2016, para. 22).

First, I collected no identifying information from any participant. I sought participants from the Walden University participant pool and the SurveyMonkey respondent database. All data collected were anonymous to the researcher. No participant information was made available to me. I collected all data online. Second, the potential risk to participants was minimal, no more than they could expect in a normal day. Participants were not be subjected to any coercion by me or by any other, including that their grades were not impacted by participation or nonparticipation in any way. Third, participants volunteered on a *first come* basis from the population of counseling students with no bias for race, age, gender, or ethnicity. Fairness was foremost regarding participation.

Any participant who wished to withdraw from the study, either during data collection or before publication, could do so by simply contacting me with the request. No one requested to withdraw after completion of participation; however, one person withdrew before completion. I deleted all data from that person. Withdrawing from the study in no way impacted the student's grades or standing in the school. I provided my contact information to all participants along with a 4-digit number of their choice for this purpose. If someone had withdrawn, I would have destroyed the participant's permanent product and data and removed him or her from the study. No repercussions would occur. In the event any adverse event happened during data collection, such as someone becoming ill or an emergency of any type, a participant could decline to finish the online survey. No adverse events were brought to my attention.

During data collection and analysis, I kept all data kept in a locked file cabinet in my home, for which I have the only key. All data remained in a locked file cabinet at my home for the duration of the data analysis. After completion of this study, all data, including completed surveys, demographic questionnaires, Excel, and SPSS spreadsheets, will be kept in this locked file cabinet in my home for 5 years. After 5 years, I will shred and burn all permanent products and delete all computer information.

Summary

In this chapter, I discussed a pretest, posttest, quantitative research design appropriate to answer the research questions. I also explained the TEQ and art session prime, as well as the data analysis plan. Finally, I presented the population, sampling,

reliability, validity, and rationale for the study in Chapter 3. In Chapter 4, I will explain the test results and elaborate on the details concerning the analysis procedures.

Chapter 4: Results

The purpose of this pretest, posttest quantitative research study was to examine whether creating art was an effective prime to enhance empathy in graduate-level counseling students. The RQs and hypotheses explored in this study follow:

RQ1: To what extent will graduate counseling students' empathy scores change from pretest to posttest after participating in a single art session?

H₀₁: No significant change from pretest to posttest scores in empathy based on participation in a single art session will occur.

H₁₁: Significant change from pretest to posttest scores in empathy based on participation in a single art session will occur.

RQ2: To what extent will graduate counseling students' empathy gain score (posttest minus pretest) be related to age (measured continuously in years) or differ by gender?

H_{02a}: The empathy gain score will not be related to age.

H_{12a}: The empathy gain score will be related to age.

H_{02b}: The empathy gain score will not differ by gender.

H_{12b}: The empathy gain score will differ by gender.

RQ3: To what extent will graduate counseling students' empathy gain score (posttest minus pretest) be related to the linear combination of age, gender, and the interaction of age and gender?

H₀₃: The empathy gain score will not be related to the linear combination of age, gender, and the interaction of age and gender.

*H*₁₃: The empathy gain score will be related to the linear combination of age, gender, and the interaction of age and gender.

In this chapter, I will discuss the descriptive and inferential statistics pertinent to these research questions, including data collection, sample population, and the consequential results.

Data Collection

On December 6, 2018, I received IRB approval (approval number: 12-06-18-0079108). After I received approval from the Walden University participant pool director, I downloaded the online survey to the participant pool. The survey remained open from December 8, 2018, through January 8, 2019. Because of a low response rate from the participant pool, I obtained further participants from SurveyMonkey's pool of respondents. Except for two participants, all the participants were from SurveyMonkey's respondent database. I collected all data from the online surveys, which 74 participants completed on SurveyMonkey's online platform.

Description of Sample

Table 1 indicates the frequency rates of participants. Of the 122 participants who attempted to take the survey, 47 declined to agree to consent and withdrew from the online survey. Of the remaining 75 participants who did consent to take the survey, one participant did not complete the survey. Although the required sample size was 68, in total, 74 participants completed surveys. Of the 74 participants, 32 were female (42.7%), and 42 were male (56.0%).

Table 1

Demographic Information: Gender

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Female	32	42.7	43.2	43.2
	Male	42	56.0	56.8	100.0
	Total	74	98.7	100.0	

Note. Total number of respondents: 75; failed to complete the survey: 1 (1.3%)

Next, I analyzed the frequency distribution of age. Because of the limitation of not selecting participants under 18 years of age, the frequency distribution curve appeared to be weighted toward the left side of the frequency distribution of age graph (see Figure 1). Although the frequency seemed to be equally distributed, I analyzed kurtosis for significance.

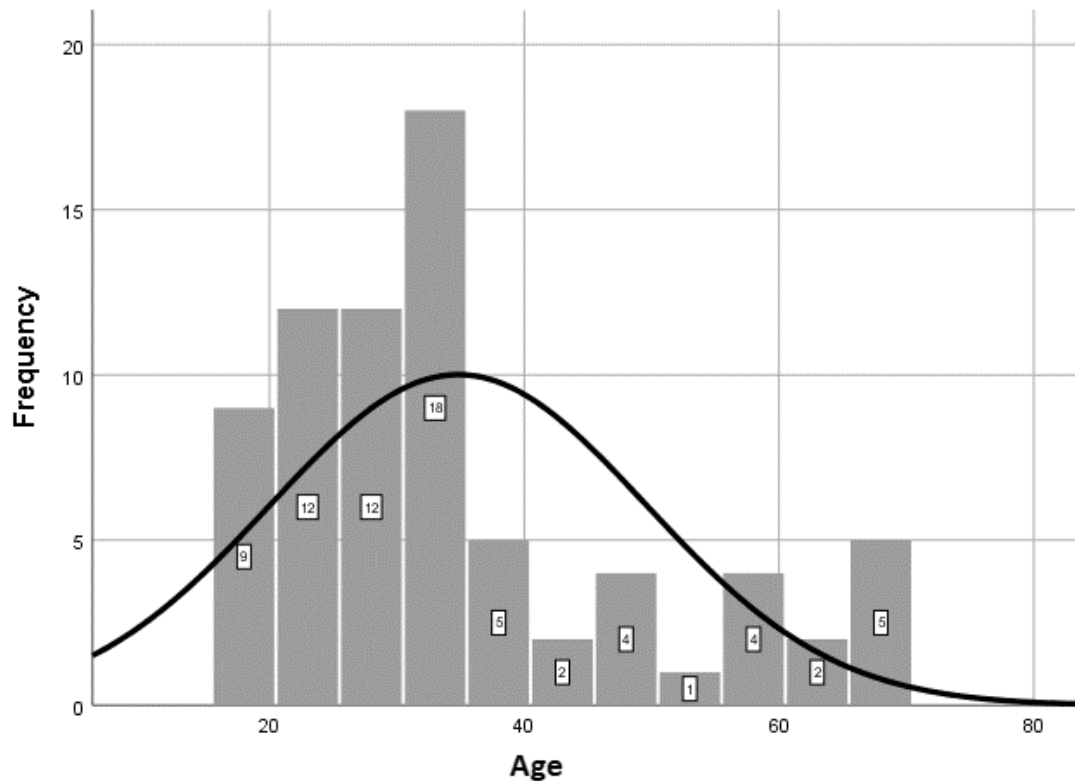


Figure 1. Frequency distribution of age

Table 2 displays descriptive statistics concerning participants' age. The age range for participants was from 18 to 70 years of age ($M = 34.81$, $SD = 14.745$). Another demographic question asked in the questionnaire was a self-reported item (ArtExperience), which asked the participants if they identified themselves as an *art hobbyist*, a *non-artistic*, or a *trained artist*. Of the 74 participants, 47 identified themselves as *non-artistic* (63.5%), 25 chose *art as a hobby* (33.8%), and two participants responded that they were *trained artists* (2.7%). No professional artists participated in this study. As shown in Table 2, the kurtosis value was 0.222, and the

standard error of kurtosis was 0.552. For kurtosis to be significant the ratio

$\frac{\text{Kurtosis}}{\text{Std. Error of Kurtosis}} > \pm 1.96$. Since $\frac{0.222}{0.552} = 0.402 < \pm 1.96$, kurtosis was deemed not

significant. Hence, the skewness was not found significant, and data were deemed fit for applying parametric statistics as planned (see Chapter 3).

Table 2

Descriptive Statistics for Age

	<i>N</i>	Minimum	Maximum	Mean	Std. deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. error
Your age	74	18	70	34.81	14.745	.222	.552
Valid <i>N</i> (listwise)	74						

Results

Research Question 1

For RQ1, the null hypothesis predicted no significant change from pretest to posttest empathy scores for participants after a single art session. A paired sample *t*-test was conducted to determine if the mean difference between the pretest scores and posttest scores was significant. Tables 3 and 4 display the results. The difference between the mean values of the pretest and posttest scores was calculated as 0.05. The *t*-test identified this small difference between the mean values of the pre and posttest as significant with a *p* value of 0.043. Although the mean difference was minor, the difference was identified as significant because the calculated significance value of 0.043 is smaller than 0.05. The

significance value of the t -test determined the mean difference between the pretest and posttest scores was statistically significant at a confidence level of 95%. Thus, I rejected the null hypothesis. Table 3 shows the calculated difference between the mean values of the pretest and posttest scores, and Table 4 shows the t -test results with a high significance ($p = 0.43$). Distribution of responses was further scrutinized visually to understand which items from the survey questionnaire carried heavier weight than others so that further insight might be garnered from collected responses. Specifically, questions from the TEQ were examined individually to see how participants answered them.

Table 3

Paired Sample Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair	Pretest Score	3.001689	74	.2249841	.0261539
	Posttest Score	2.959459	74	.2239015	.0260280

Table 4

Paired Sample Test

		Paired Differences							
					95% Confidence Interval of the Difference				Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	<i>t</i>	<i>df</i>	
Pair	Pretest Score - Posttest	.0422297	.1765065	.0205185	.0013365	.0831230	2.058	73	.043

Research Question 2

The null hypothesis for RQ 2 hypothesized that the Empathy Gain score would not be related to Age (measured continuously in years) or Gender. First, the Empathy Gain score and Age were analyzed (see Table 5). I conducted Pearson's correlation and calculated between the Empathy Gain scores (pretest/posttest) and Age (of the participants). I calculated a correlation of 0.672, which indicates a highly significant correlation between the two variables. I calculated the significance value (p) as 5.77E-11. The extremely low p value indicated the probability of obtaining this correlation as a chance was extremely low. Thus, I rejected the null hypothesis. The Empathy Gain score was found to be correlated with Age, which indicates that the likelihood of the art intervention to help gain empathy increases with the age of the participant.

Table 5

Correlations: Empathy Gained Score and Age

Your age		Empathy Gained	
Your age	Pearson Correlation	1	
	Sig. (2-tailed)		
	<i>N</i>	74	
Empathy Gained	Pearson Correlation	.672**	1
	Sig. (2-tailed)	.000	
	<i>N</i>	74	74

**Correlation is significant at the 0.01 level (2-tailed).

To determine if any differences in Empathy Gain scores were related to Gender, an independent groups *t*-test was conducted (see Table 6). I conducted a grouped *t*-test because of the nature of two variables: Empathy Gained is continuous in nature, and Gender is categorical. Table 6 shows the mean values of Empathy Gained for both genders.

Table 6

Gender and Empathy

Group Statistics					
	Gender	<i>N</i>	Mean	Std. Deviation	Std. Error Mean
Empathy Gained	1	32	-.031250	.1982789	.0350511
	2	42	-.050595	.1599341	.0246784

Table 7 shows that the mean difference between Empathy Gained scores of each gender was not significant ($p > 0.05$), which indicates that this difference could be present by chance. Therefore, I conducted no further tests and accepted the null hypothesis about the relationship between Gender and Empathy Gained scores. Acceptance of the null hypothesis means that the results did not provide evidence of any relationship between Gender and Empathy Gained.

Table 7

Independent Samples Test

		Levene's Test for Equality of Variances		<i>t</i> test for Equality of Means							
		<i>F</i>	Sig.	<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
										Lower	Upper
Empathy Gained	Equal variances assumed	1.406	0.24	0.465	72	0.644	0.0193452	0.0416411	0.0636648	0.1023553	

Research Question 3

The null hypothesis for RQ 3 hypothesized that the Empathy Gain score would neither be related to the linear combination of Age nor Gender, nor to the interaction of Age and Gender. I created a multiple regression model. Empathy Gain scores were the dependent/criterion variable with Age and Gender, and their interaction were the independent/predictor variables. Although previous results indicated that Gender was not

correlated with Empathy Gain scores, the relationship between Gender, as a predicting role, and Empathy Gain and Age was investigated. Tables 8, 9, and 10 display the results. The *R* squared value (0.432) in the model summary shows that the predicting variables can explain 43% of the variance in the criterion variable. The regression model shows an extremely significant relationship (2.69E-9) between the predictor variables (Gender and Age) and Empathy Gain scores.

Nevertheless, the standardized coefficients demonstrate that only the effect of Age (2.44) on the Empathy Gained was statistically significant, with a significance level of 0.0017 (smaller than 0.05). The effect of the interaction between Age and Gender (Age_Gender) on Empathy Gained was not calculated to be significant. Thus, I retained the null hypothesis. Figures 2 and 3 display cluster diagrams that demonstrate how an Age_Gender plot indicates less coverage of the variance than does the Age only plot against Empathy Gained.

Table 8

Model Summary

Model	<i>R</i>	<i>R</i> Square	Adjusted <i>R</i> Square	Std. Error of the Estimate
1	.675 ^a	.455	.432	.1330255

Predictors: (Constant), Gender: Your age: Age_Gender

In Table 9, the regression model shows an extremely significant relationship (2.69E-9) between the predictor variables, Gender and Age, and Empathy Gain scores.

Table 9

Results of ANOVA^a

Model		Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
1	Regression	1.036	3	.345	19.507	2.69E-9 ^b
	Residual	1.239	70	.018		
Total		2.274	73			

a. Dependent Variable: EmpathyGained

b. Predictors: (Constant), Gender: Age: Age, Gender

Nevertheless, the standardized coefficients (see Table 10) demonstrate that only the effect of Age (2.44) on Empathy Gained was statistically significant ($p = 0.017$). The effect of the interaction between Age and Gender (AgeGender) on Empathy Gained was calculated to be not significant ($p = 0.943$).

Table 10

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>Sig.</i>
		<i>B</i>	Std. Error	Beta		
1	(Constant)	-.356	.129		-2.751	.008
	Age_Gender	.000	.002	.023	.072	.943
	Your age:	.008	.003	.665	2.444	.017
	Gender:	.018	.082	.051	.220	.827

Dependent Variable: EmpathyGained

I also generated scatter plots to visually compare the effect of Gender as a moderator in the relationship between Age and Empathy Gain. Figure 2 and Figure 3 show that the linear combination of Age and Gender (calculated as the variable AgeGender) does not improve the explanation of variance in the criterion variable. Therefore, for Hypothesis 3, the null hypothesis was retained.

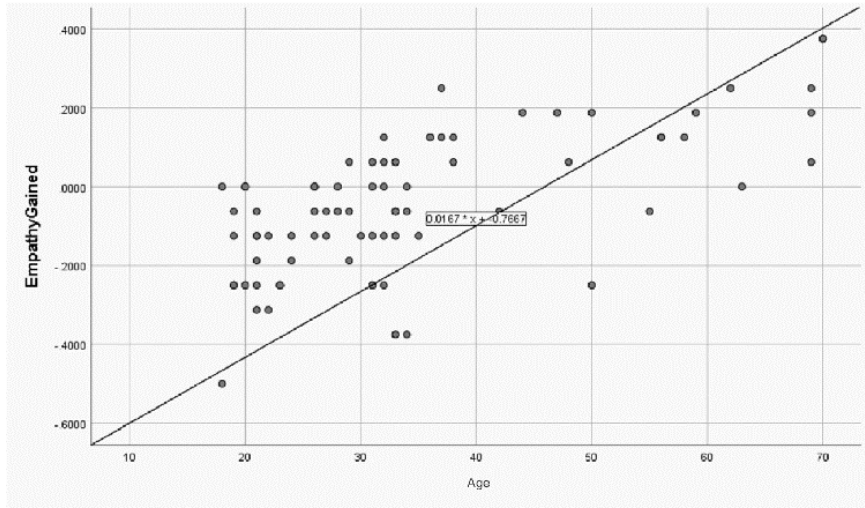


Figure 2. Cluster for variables Age and Empathy Gained

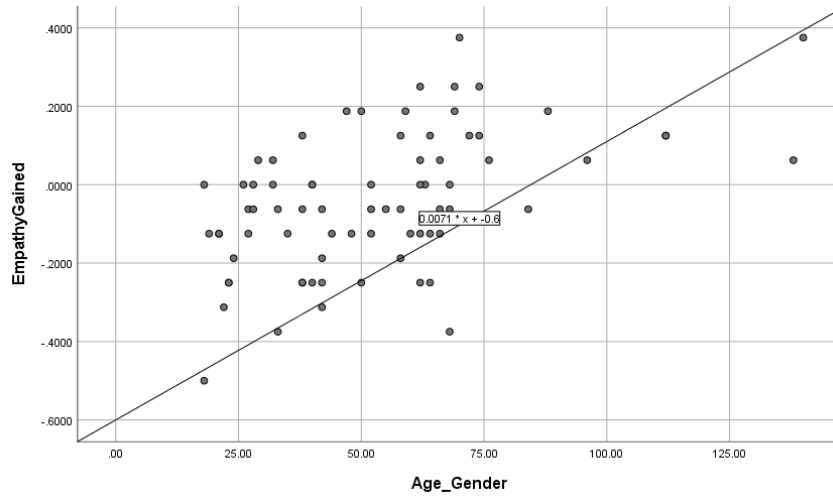


Figure 3. Cluster for variables Age_Gender and Empathy Gained

Additional Analysis

In addition, to better understand my participants, the demographic survey captured more data than was previously accounted for in the original hypotheses and research questions. I conducted further analysis using this additional data, looking for possible outliers in the data. Other predictors for Empathy Gain scores were tested using Pearson's correlations. None of the variables showed any correlations except for Art Experience. The data captured concerning Art Experience came from the self-report Art Experience scale, which was found in the demographic survey. Art Experience was found to be strongly correlated with Empathy Gain scores ($p = 0.353$, $\alpha = 2E-3$) and Age ($p = 0.467$, $\alpha = 2.8E-5$). Hence, two secondary relationships emerged (see Table 11).

These further findings, beyond the original hypotheses, enrich this study by revealing further significant results. Results in Table 11 indicated that self-reported ArtExperience (*hobbyist, non-artist, or trained artist*) was positively correlated with both Empathy Gained and Age. This result means that the ability to gain empathy because of the intervention of Art Exercise gains with an individual's art experience is possible. Likewise, the art experience of an individual increase with age.

Table 11

Correlations: Empathy Gained and Art Experience and Age

		Empathy Gained	Art Experience:	Your Age
Empathy Gained	Pearson	1		
	Correlation			
	<i>N</i>	74		
Art Experience:	Pearson	.353**	1	
	Correlation			
	Sig. (2-tailed)	.002		
	<i>N</i>	74	74	
Your Age:	Pearson	.672**	.467**	1
	Correlation			
	Sig. (2-tailed)	5.77E-11	2.8E-5	
	<i>N</i>	74	74	74

** . Correlation is significant at the 0.01 level (2-tailed).

To further investigate if Art Experience was a *moderator* in the relationship between Age and Empathy Gained (a relationship established earlier: H_{2a}), multiple regression was applied. The Empathy Gain scores were the criterion variable, while Age and Art Experience developed as an interaction between Age and Art Experience were the predictor criterion. The R squared value (0.454) in the model summary showed that the predicting variables could explain 45% of the variance in the criterion variable (see Table 12).

Table 12

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.674 ^a	.454	.438	.1322955

Predictors: (Constant), Age_Experience, Your age:

The regression model shows an extremely significant relationship ($4.8E-10$) between the predictor variables (AgeExperience) and Empathy Gained scores. Table 13 shows the standardized coefficients demonstrate that only the effect of Age (0.597) on the Empathy Gained was statistically significant, with a significance level of $2.8E-4$ (smaller than 0.05). The effect of AgeExperience on Empathy Gained was not calculated to be significant (0.577, which is > 0.05). Both Age and Art Experience were individually correlated with Empathy Gained and were not moderators in the relationship.

Table 13

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.032	2	.516	29.472	4.8E-10 ^b
	Residual	1.243	71	.018		
Total		2.274	73			

a. Dependent Variable: EmpathyGained

b. Predictors: (Constant), Age_Experience, Your age

Further, Table 14 shows that the standardized coefficients demonstrate that only the effect of Age (0.597) on the Empathy Gained was statistically significant, with a significance level of 2.8E-4 ($p < 0.05$). Whereas, the effect of Age-Experience on Empathy Gained was not calculated to be significant (p significance level of 0.565, $p > 0.05$). Both Age and Art Experience were individually correlated with Empathy Gained and were not moderators in the relationship, which means the ability of an individual to gain empathy scores after an art intervention may increase with both the age and with art experience.

Table 14

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
		<i>B</i>	Std. Error	Beta		
1	(Constant)	-.312	.043		-7.226	4.5E-10
	Your age:	.007	.002	.597	3.819	2.8E-4
	Age_Experience	.000	.001	.090	.577	.565

Dependent Variable: EmpathyGained

The scatter plot diagram (see Figure 4) demonstrates how AgeExperience provided less explanation of the variance in the criterion variable than the Age only plot against Empathy Gained (as previously presented in Figure 2). The scatter plot

demonstrated that ArtExperience does have a moderating role in the relationship between Age and Empathy Gained.

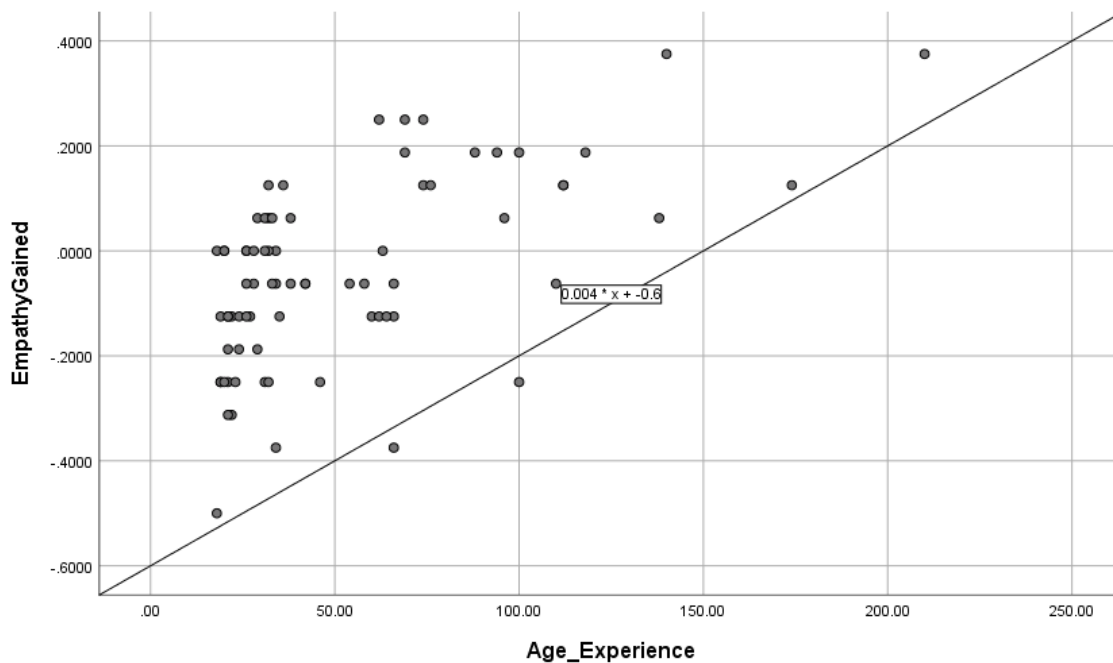


Figure 4. Cluster representing EmpathyGained and Art_Experience

Summary

In summary, an online survey was conducted with 74 participants to explore if a single session of creating art could influence empathy in graduate-level counseling students. The results were mixed. A *t*-test determined the results of RQ 1: The null hypothesis was rejected, indicating a change in Empathy scores, which means there was a significant difference recorded in the pre and posttest Empathy scored due to the art intervention.

Pearson's correlation was conducted to answer RQ 2. The null hypothesis was rejected for part of RQ 2, indicating that Empathy scores were correlated with Age. This means that increased Empathy scores were concomitant with increasing age. The null hypothesis was also accepted for RQ 2, finding that Gender did not correlate with Empathy scores. This result provided evidence that Gender did not play a role in gains in Empathy after the art session.

The third research question explored if Gender played a moderating role in the relationship between Empathy Gained and Age. The null hypothesis was retained; thus, I found no evidence of Gender playing a moderating role in the relationship between Empathy Gained and Age. Further inquiry led to insight beyond the original research questions, indicating that Art Experience was correlated with Empathy scores, which means that individuals who reported themselves as hobbyists or trained artists were more likely to improve their empathy scores due to an art intervention. In Chapter 5, I discuss the interpretation of these results, the limitations of this study, and recommendations for further research.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this pretest, posttest quantitative research study was to examine whether creating art was an effective prime to enhance empathy in graduate-level counseling students. I recruited participants from the Walden University participant pool and SurveyMonkey, an online survey platform. The survey consisted of a pretest containing the TEQ (Spreng et al., 2009), a self-guided art session, and posttest with the TEQ directly after the art session. In this chapter, I offer my analysis and interpretation of findings. I also discuss limitations, recommendations, and implications.

Key findings include confirmation of a statistically significant mean difference between the pretest and posttest scores and a positive correlation between age and empathy gain. I found no correlation between gender and empathy gain. Results also indicate that gender was not a moderator in the relationship between age and empathy gain. Age, independent of any other variable analyzed, was found to be positively correlated with empathy gain scores. Further investigation revealed a positive correlation between art experience and empathy gain and between art experience and age independently. I did not identify art experience as a moderator in the relationship between age and empathy gain, which I established because of testing a key hypothesis of this study.

Interpretation of the Findings

Results from this research suggest that the self-conducted art session enhanced empathy in participants. This finding concurs with other research showing that the use of art increased empathy in participants (Bentwich & Gilbey, 2017; Duffey & Haberstroh, 2013; Frei et al., 2010; Munt, 2009; Potash et al., 2014). With this research, I specifically focused on increasing empathy in the here and now, not over time, and was successful in doing so.

Art Therapy Relational Neuroscience Theory

The study findings also support ATR-N theory, which is the theory that informed this study. ATR-N protocol suggests that neuropathways are shared for processes of emotion and affect (Hass-Cohen & Clyde-Findlay, 2009; Hass-Cohen et al., 2014). Creating art and explaining it to others, therefore, can activate the neuropathways involved with imagining one's feelings and how others might feel, which is the core of empathy. Although many definitions of empathy exist, in this research I focused on the following definition: "An affective state that stems from the apprehension of another's emotional state or condition, and that is congruent with it" (Eisenberg & Miller, 1987, p. 91).

Participants were first asked to complete a survey and then take part in a drawing exercise. After the activating drawing section of the survey, participants were asked to answer open-ended questions designed to require them to imagine the reactions, thoughts, and feelings of others. The drawing and answering of open-ended questions are part of

the ATR-N directives (Hass-Cohen et al., 2014). These directives help to bring the imagination into an empathic state, thus imagining the “affective state that stems from the apprehension of another’s emotional state” (Eisenberg & Miller, 1987, p. 91). This research suggests that this process occurred. After the single art session, participants were able to increase their empathy scores from pretest to posttest.

Age and Gender

Further findings from this research suggest that older participants may activate their empathy in greater amounts than do younger participants after engaging in the arts and explaining their work. The age range in this study was 18 to 70 years of age, with an average age of participants of 35 years ($m = 34.81$). Thus, these findings support those of other researchers who found middle-aged counselors in the same age range to be more self-efficacious than were younger counselors (Lam et al., 2013). My research also concurs with a study whose authors found that empathic responding increased with age (Gould & MacNeil Gautreau, 2014). Conversely, other researchers found cognitive empathy to decline in participants 60 years of age or older (Lamm et al., 2018; Sun et al., 2018). However, in my study, those 60 years old or older did not show a decline in empathy; they exhibited greater empathy as measured on the TEQ than did the younger participants.

Although my study concurred with some research but not others, it is beyond the scope of this study to explain why empathy scores increased in my participants because age increased rather than decreased. Perhaps the small sample size contributed to the

increase in empathy scores among the older participants in my study: Ten percent of the participants were 60 years old or older. Khanjani et al. (2015) offered that the discrepancies found in research regarding empathy and gender might exist because researchers rarely study these two variables over the lifespan of participants.

Regarding gender and empathy, some controversy exists as to whether gender plays a role in the ability to empathize with others or not, and some research shows women to be more empathic than men (Willer et al., 2015). The results of my research did not indicate that gender moderates empathy. This finding supports those of other researchers who found men to be as empathic as women once the concept was reframed or made more socially acceptable, and the cultural veneer of masculinity was scrutinized (Burriss et al., 2016; Clarke et al., 2016). Still, some researchers, as with my study, have found gender to be a non-issue altogether, without the need for intervention or reframing of the concept of empathy (Lam et al., 2013).

Although the results in my study appear to concur with research showing men to be as empathic as women, because of my limited knowledge of participants in this study, given the online format, it was difficult to interpret why gender was insignificant in my results. An unexpected finding in my study was the ratio of female participants (43.2%; $n = 32$) to male participants (56.8%; $n = 42$). Research suggests that the field of psychological counseling students is dominated by women (Lam et al., 2013). Thus, female participants could have outnumbered male participants in my study, yet they do not in most other research (Lam et al., 2013). It is beyond the scope of this study to

speculate if the female-to-male ratio played a role in the findings of the current study, or why gender did not influence the results reported in Chapter 4.

In addition, in this study, I examined the possible strength of combined variables to moderate empathy. I did not find the combination of age and gender to moderate empathy scores in participants after the art session. This finding indicates that gender did not strengthen or detract from the positive gains seen with age alone. Considering the earlier findings, I surmise that older adults, regardless of gender, may derive greater gains in empathy after an art session than do younger adults.

Art Experience

I designed the demographic survey used in this study to afford some insight into the participants in this study. Although the demographic survey yielded more data than were needed to explore the hypotheses for this study, because I sought to analyze outliers, I decided to conduct further analysis, which was insightful and contributed to the rigor of my study. Specifically, those participants who identified themselves as either a *hobbyist* or *trained artist* showed greater empathy gains after the art session than did those who reported they did not have art experience. Because age and art experience were found to correlate with greater empathy gains for younger participants and nonartists, I conducted further analysis to find if this combination might have moderated empathy scores. Results indicated that age and art experience were not moderated by each other. This finding suggests that age and art experience influenced empathy scores independently of each other. Therefore, those of older age or those with art experience may expect their

empathy to increase directly after an art session. Also, because art experience was correlated with greater empathy gains in this study, this finding suggests that engaging in the arts over time helps to enhance empathic ability, overall. Because I did not discuss a possible correlation between art experience and empathy in my literature review, it is beyond the scope of this study to offer supporting research for this finding.

Age and Art Experience

Further scrutiny of the data garnered more insights. I visually looked for outliers on the individual answers to the TEQ. I found older and art experienced participants had the highest available scores for two of the questions compared to younger and non-artist participants. Responses to the individual questions from the TEQ results revealed Question 11 showed the most deviation from all other questions, followed by Question 7. Question 11 reads, “I become irritated when someone cries.” Question 7 reads, “When a friend starts to talk about his/her problems, I try to steer the conversation towards something else.” The answer on the TEQ for these questions that renders the highest available score for empathy is *never*. Responses to these questions not only suggest greater empathy gains after the art prime for these participants, but Question 7 revealed a behavioral response. This question shows how participants in this study would behave considering their empathic understanding. The higher scores chosen for Question 7, by older and art experienced participants, as a demonstration of the prosocial behaviors with which empathy is associated (Hass-Cohen & Clyde-Findlay, 2009, 2015; Wondra &

Ellsworth, 2015). This finding suggests that older individuals and art experienced individuals may display advanced prosocial behaviors to others.

Limitations of the Study

In Potash et al.'s (2014) mixed-methods study, the qualitative analysis indicated an increase in empathy in participants, but the quantitative analysis did not. My research study may have benefited from the inclusion of a qualitative method as well. Most research studies involving the arts are qualitative or mixed methods in nature (Anderton & King, 2016; Bradshaw, 2016; Chisholm & Whitmore, 2016; Hass-Cohen et al., 2014; Hass-Cohen & Findlay, 2009; Potash et al., 2014). Enlisting a qualitative method makes it possible for participants to share subtle nuances that a quantitative instrument may not be sensitive enough to find or are beyond the scope of the quantitative instrument. However, the use of a mixed methods study was beyond the scope of this research project.

Because of time and approval constraints, I conducted this study entirely online, which created several limitations: First, the discussion and sharing directive, as part of the ATR-N protocol, were limited to participants writing explanations for their artistic choices. Writing an explanation is different from actively sharing through discussions with other participants. This activity required participants to imagine what others would say about their explanations, rather than hearing what others would say. Some of the participants' responses to the survey questions that asked for explanations were quite brief. For example, Survey question, "Please explain what you imagine other's in your

life might say about this home you created, it's location, and your neighbors." Answer: "I don't care." Another answer, "I am crazy." Because participants did not engage in live discussions with each other about their artwork, neither the group of participants nor I was able to inquire into the meaning of the shorter answers. A group discussion may also have inspired more lengthy and informative answers.

Second, there is no way to know if participants drew the required drawing or to know how much time and effort they put into their drawings. Participants needed to supply their own paper and utensils; therefore, I do not know how participants chose different mediums and how different the art experience was for each person. Third, the criteria or inclusion required participants to be graduate-level psychological counseling students. The online platform and required anonymity of participants did not allow for any verification that the participants did indeed meet these requirements.

Question Phrasing

The TEQ appeared to cause difficulties for some participants whereas 8 of the 16 questions are phrased in a negative form. For example, Question 2 reads, "Other people's misfortunes do not disturb me a great deal." Some participants who had chosen the highest score for the TEQ's positively phrased questions also chose the same answer to Question 2 (e.g., they answered *always*). It is doubtful that these participants understood that they were choosing the least empathic response. Although this difficulty was not mentioned in other research using the TEQ, this instrument was less than 10 years old at the time of this data collection (Spreng et al., 2009). Perhaps this issue arose because of

the combination of the nature of the online survey format, which may have encouraged quick responses, while the negatively phrased questions required a more thoughtful and slower response.

Testing Effect

For this study, I used the TEQ for the pretest and posttest, which possibly contributed to the testing effect. Given the assessments were completed within minutes of each other, the first completion of the TEQ created a familiarity, which may have influenced the second completion of the assessment (Song & Ward, 2015). Another possible influence on TEQ responses was the knowledge by the participants of what they were being tested for. Participants gained this knowledge and understanding through informed consent.

Participant Characteristics and Sample Size

Participants for this study volunteered to take part in this research from the Walden University participant pool and the SurveyMonkey database of respondents. I do not know if these participants met criteria for this study. The geographical residencies of these participants are also unknown, making it unlikely that the results of this research are generalizable beyond this population. Furthermore, the sample size was too small ($n = 74$) for the results of this study to be generalizable to other populations.

Recommendations

Through this research, I did not find earlier quantitative pretest/posttest research using the arts and counseling students, either undergraduate or graduate level. Neither

could I find research that used a single art session to enhance empathy in undergraduate or graduate level counseling students. Although the arts are employed in many manifestations as therapeutic tools, and empathy is an intrinsic need to establish a therapeutic alliance with clients, few researchers have explored how the arts might enhance empathy in future counselors (Hass-Cohen et al., 2014; Stepien & Baernstein; 2006; Wondra & Ellsworth, 2015). Future researchers should explore further how to use this inexpensive, easily accessible, and highly adaptable intervention to activate the phenomenon of empathy in counseling students, a population whose success depends upon empathic response.

Successful replication of this study should include a qualitative method in conjunction with a quantitative assessment. Potash et al. (2014) found statistical significance with their qualitative instrument when their quantitative assessment failed to do so. Results from Potash et al.'s study suggest that more information may be gleaned from a mixed methods research design. Future research should be conducted in person where all participants can be provided with uniform utensils and a group discussion can take place to engage more fully in the ART-N directives. Group discussion and participation are elements of ATR-N, which are theorized to enhance prosocial behaviors such as empathy (Hass & Cohen & Findlay, 2009; Hass & Cohen et al., 2014).

In addition, ATR-N protocol has been found to activate shared neuropathways for empathy and other prosocial behaviors, although researchers have also found cognitive that empathy could decline with age (Hass & Cohen & Findlay, 2009; Hass & Cohen et

al., 2014; Lamm et al., 2018; Sun et al., 2018). In this research study, I found art to activate the neuropathways in participants and bring about greater gains for those of older age. This implication of stimulation and, thus, of possible neuroprotective properties of ATR-N, or any art protocol, should be explored.

Implications

Creating art contributes to empathy in the here and now. Neuropathways can be activated by creating art (Hass & Cohen & Findlay, 2009; Hass & Cohen et al., 2014). Activity in the arts over time also contributes to the ability to empathize with others. In this current study, those with art experience seemed to activate their neuropathways for empathy more fully, using the art prime; thus, their empathy scores showed greater gains than did those without interest in the arts. This finding suggests that the arts contribute to empathic responding and should be participated in at every age for the promotion of prosocial behaviors such as empathy.

Older participants, up to 70 years of age in this study, were more easily stimulated into greater empathy than were younger participants. Some research suggests that cognitive empathy for those 60 years of age and older begins to decline (Lamm et al., 2018; Sun et al., 2018). Regardless, my research suggests that engaging in the arts may be neuroprotective for empathy, given that neuropathways for art and empathy are shared (Hass-Cohen & Clyde-Findlay, 2009, 2015; Lamm et al., 2018). Lamm et al. suggested that interventions should be used to prevent the decline of empathy in older adults. These researchers also found that older counselors were less efficacious than were their middle-

aged counterparts, which also suggests that some intervention may aid in preserving empathy in older counselors for greater efficacy with clients. However, my research supports ATR-N theory as a practical intervention to activate neuropathways for empathy in participants (Hass & Cohen & Findlay, 2009; Hass & Cohen et al., 2014). The arts should be a lifetime activity, especially for counselors, because their ability to empathize with clients is intrinsic to forming therapeutic relationships.

Conclusions

Graduate level counseling students often must demonstrate empathy skills and an ability to form therapeutic relationships as a requirement for graduation and future professional success. This research contributes to a body of research that suggests participation in the arts engages similar neuropathways as those needed to produce empathy. ATR-N theory was supported in this pretest/posttest quantitative study. Thus, as ATR-N theory suggests, the art session activated and enhanced empathy in participants. Those with art experience, even hobbyists, were able to enhance their empathy more significantly than were those without an interest in the arts. This finding should encourage participation in the arts for all ages. Furthermore, in this study, those who were older in age had greater gains in empathy than did younger participants, which suggests that the arts and age, independently of each other, not only correlate with greater empathy but possibly may even be neuroprotective against cognitive empathy decline (Hass-Cohen & Clyde-Findlay, 2009; Lamm et al., 2018). The arts are important across a lifespan to promote empathy in people, especially future counselors.

This research contributes to positive social change by exploring and supporting an easily accessible and inexpensive intervention for use in the here and now and over a lifetime. The arts are extremely flexible for use with most populations, including the underrepresented populations in other research, for example, graduate-level psychological counseling students. As noted by Ohrt et al. (2009) and supported by the findings from my study, using art to enhance empathy in graduate counseling students can assist in creating therapeutic alliances. Therefore, using art to enhance empathy in graduate counseling students could assist with securing graduation, licensure, and therapeutic alliances with future clients (Bayne & Hays, 2017; Voutilainen et al., 2018).

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Appendix A: Survey Monkey Permission

SurveyMonkey Inc.

www.surveymonkey.com

For questions, visit our Help Center

help.surveymonkey.com

Re: Permission to Conduct Research Using SurveyMonkey

To Whom It May Concern:

This letter is being produced in response to a request by a student at your institution who wishes to conduct a survey using SurveyMonkey in order to support their research. The student has indicated that they require a letter from SurveyMonkey granting them permission to do this. Please accept this letter as evidence of such permission. Students are permitted to conduct research via the SurveyMonkey platform provided they abide by the Terms of Use at <https://www.surveymonkey.com/mp/legal/terms-of-use/>.

SurveyMonkey is a self-serve survey platform on which our users can, by themselves, create, deploy, and analyze surveys through an online interface. We have users in many different industries who use surveys for many different purposes. One of our most common usage cases is students and other types of researchers using our online tools to conduct academic research.

If you have any questions about this letter, please contact us through our Help Center at help.surveymonkey.com.

Sincerely,

SurveyMonkey, Inc.

Appendix B. Informed Consent

You are invited to take part in a research study that examines a possible relationship between creating art and the enhancement of the phenomenon of empathy. The researcher is inviting you to participate because you meet the criteria as follows:

- You are a graduate level counseling student
- You are at least 18 years of age

This form is part of a process called “informed consent” to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Annette Coletta, who is a doctoral student at Walden University.

Background Information:

The purpose of this study is to inquire if creating art is an effective prime to enhance empathy in graduate level counseling students.

Procedures:

If you agree to be in this study, you will be asked to:

- Fill out a brief demographic survey.
- Fill out a 16-question empathy assessment before participating in creating artwork.
- Draw and color on paper (You will need to provide the paper and utensils).
- Answer some questions about the art you created.
- Fill out a second 16 question empathy assessment after you have created art and answered questions about it.
- Commit to the above procedures which should take approximately 20-30 minutes.

Here are some sample questions you will be asked to rate from the empathy assessment:

- I enjoy making other people feel better
- I get a strong urge to help when I see someone who is upset
- I become irritated when someone cries

Here is an example of what you will be asked to explain about your artwork:

- Please share why you chose the colors and decorations you used
- Please share what is meaningful to you about your art

Voluntary Nature of the Study:

This study is voluntary. You are free to accept or turn down the invitation. No one at your school will treat you differently if you decide not to be in the study. Your grades will not be affected by participating, or not participating, in this research. If you decide to be in the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as accessing emotions which may cause upset, stress, or fatigue. Being in this study would not pose risk to your safety or wellbeing. The potential benefits of this study will contribute to a body of research involved in enhancing empathy, and this research may contribute to counselor empathy which is necessary to form a therapeutic alliance with clients.

Payment:

Participants will not be paid for participation.

Privacy:

Any information you will provide will be kept confidential. All participants will be anonymous. The researcher will not use your personal information for any purpose

outside of this research project. Data will be kept secure on the researcher's computer and secured by a confidential password. Any printed material will be stored in a locked file cabinet. Only the researcher will have access to the data and materials associated with this study. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via xxx-xxx-xxxx and/or xxx@waldenu.edu. If you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at xxx-xxx-xxxx Walden University's approval number for this study is **IRB will enter approval number here** and it expires on **IRB will enter expiration date.**

You should keep a copy of this consent form for you records. You may download a copy of this form or contact the researcher for a copy of this form.

Obtaining Your Consent

If you feel you understand the study well enough to decide to participate in this research, please indicate your consent by checking, "I agree" below.

- I agree

Appendix C: Demographic Survey

1. Your age: _____

2. Gender: Female Male Transgender Other _____

3. Education: Please choose highest level of education achieved:

Trade/technical/vocational training Associate degree Bachelors' degree

Master's degree Doctorate degree

4. Marital Status:

Single Married or domestic partnership Separated Divorced Widowed

5. Ethnicity:

African American/ Black Asian/Pacific Islander Caucasian Hispanic/

Latino Native American or American Indian Multiple ethnicities

Other _____

6. Art Experience:

Non- artistic Art as a hobby Trained artist Professional artist

Appendix D: Toronto Empathy Questionnaire

Participant #:

TEQ

Date:

Below is a list of statements. Please read each statement carefully and rate how frequently you feel or act in the manner described. Circle your answer on the response form. There are no right or wrong answers or trick questions. Please answer each question as honestly as you can.

		Never	Rarely	Sometimes	Often	Always
1.	When someone else is feeling excited, I tend to get excited too	0	1	2	3	4
2.	Other people's misfortunes do not disturb me a great deal	4	3	2	1	0
3.	It upsets me to see someone being treated disrespectfully	0	1	2	3	4
4.	I remain unaffected when someone close to me is happy	4	3	2	1	0
5.	I enjoy making other people feel better	0	1	2	3	4
6.	I have tender, concerned feelings for people less fortunate than me	0	1	2	3	4
7.	When a friend starts to talk about	4	3	2	1	0

	his\her problems, I try to steer the conversation towards something else					
8.	I can tell when others are sad even when they do not say anything	0	1	2	3	4
9.	I find that I am "in tune" with other people's moods	0	1	2	3	4
10.	I do not feel sympathy for people who cause their own serious illnesses	4	3	2	1	0
11.	I become irritated when someone cries	4	3	2	1	0
12.	I am not really interested in how other people feel	4	3	2	1	0
13.	I get a strong urge to help when I see someone who is upset	0	1	2	3	4
14.	When I see someone being treated unfairly, I do not feel very much pity for them	4	3	2	1	0
15.	I find it silly for people to cry out of happiness	4	3	2	1	0
16.	When I see someone being taken advantage of, I feel kind of protective towards him\her	0	1	2	3	4

Appendix E: Art Session Prime Questions

Please use your paper and utensils for this portion of our survey. You may use any medium available to you. (examples: colored makers, highlighters, pencils, pens, crayons, etc.) Any paper you choose to draw on is fine. (A piece of notebook paper or copy paper is fine.) Please keep in mind that this is not about artistic ability. You are not being judged on your art or artistic abilities. You are the only one who will see your drawing and you may do with it as you please after you have drawn it. Please focus on your art as a personal reflection without concern for the outcome. Let's begin:

1. Please draw a picture of a home. You may choose to draw the inside or the outside, or both. You may choose to draw a home you had in the past, live in now, or a home you would like to live in someday. It is your home. Please imagine living in the home. Decorate it with your thoughts, beliefs, and colors and items that resonate with you. (This should take you between 10 and 20 minutes).

When you have completed your home, please move to the next question.

2. Please explain one or more of your choices you made for choosing to draw the perspective or decorations you chose. (Example: Did you choose the inside or the outside? Did you choose particular colors or decorations? Why did you choose these?)

3. Please explain, if your home could be anywhere, where might it be located and who might live near you.

4. Please explain why you choose the location you chose and why you chose who might live near to you.

5. Please explain what you imagine other's in your life might say about this home you created, it's location, and your neighbors.