THE IMPACT OF PSYCHOTHERAPEUTIC REIKI ON ANXIETY AND
MINDFULNESS: A SINGLE-CASE DESIGN

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Reiki healing is one of several complementary and integrative therapies becoming increasingly prevalent in mental health counseling. It has been identified in the medical field for its usefulness in treating anxiety, depression, distress, and pain but has rarely been studied for its counseling impact on client wellness. I conducted single-case research to explore psychotherapeutic Reiki's (PR's) influence on adult clients' anxiety symptoms and perceived sense of mindfulness and provided analysis of data collected from two assessments administered weekly: the Adult Manifest Anxiety Scale-Adult and the Mindful Attention Awareness Scale. Three of the four participants demonstrated significant improvement in both anxiety and mindfulness over the course of the PR intervention. The study revealed potential therapeutic benefits for integrating PR with conventional talk therapy. Included in discussion of study results are clinical implications and importance, suggestions for future research, and limitations.
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THE IMPACT OF PSYCHOTHERAPEUTIC REIKI ON ANXIETY AND MINDFULNESS: A SINGLE-CASE DESIGN

Introduction

The term *complementary therapies* (CTs) includes any practice that falls outside of the realm of conventional medicine and the practitioner of which favors a holistic conceptualization of health (Lumadue, Munk, & Wooten, 2005; Nichols, 2015). CTs fall within the domain of the U.S. National Institutes of Health’s (NIH’s) complementary health approaches (National Center for Complementary and Integrative Health [NCCIH], 2016). In 2012, one-third of adults reportedly used complementary approaches – a proportion consistent with findings from the previous decade (Clarke, Black, Stussman, Barnes, & Nahin, 2015). CTs have gained popularity in the counseling profession and include integration of Eastern mind and body concepts in mainstream Western psychotherapy (Judith, 2004). In particular, mind and body practices such as Qigong, hypnotherapy, mindfulness, breathwork, meditation, and Reiki may assist clients to attain a wide variety of counseling goals, including development of coping skills, stress reduction, self-regulation, energy balancing, and physical healing (Fernros, Furhoff, & Wandell, 2008; Lumadue et al., 2005; Nichols, 2015). Individuals who utilize CTs typically experience various enhancements in their quality of life. Researchers have linked CTs featuring mind-body techniques, such as meditation, body awareness, mindfulness, and breathwork, to many positive mental health outcomes including improved wellbeing and cognitive functioning and decreased symptoms of pain, anxiety, and depression (Fernros, Furhoff, & Wandell, 2008; Kluepfel et al., 2013). CTs have also been found beneficial for improvements in coping, regulating behavior, and mindfulness (Kotecki, Khubchandani, Simmons, & Sharma, 2015; Leppma, 2009).
Although mental health professionals have adopted alternative mind and body practices as complementary approaches to traditional talk therapy, little research exists concerning the integration of the two and the impact of both on client wellness.

CT of Focus: Reiki

The spiritual energy practice of Reiki was originally developed in Japan in the early 20th century. Through the intentional directing of healing energy, Reiki is intended for the cleansing of the mind, emotions, and physical body (Rand, 2011). It has gained recent popularity in the United States along with the emerging paradigm shift towards a greater acceptance of CTs and is included among the NCCIH’s complementary health approaches (Lumadue et al., 2005; NCCIH, 2016). Reiki was selected as the CT of focus for this study because, to date, little is known about its effectiveness beyond anecdotal report. Unlike other CTs, such as mindfulness and hypnosis, Reiki has not been empirically standardized for the counseling profession.

A typical Reiki session lasts 30 to 75 minutes and is conducted in a quiet room conducive to relaxation (Miles & True, 2003). Recipients may sit in a chair or lie on a treatment table, depending on comfort and availability. Recipients remain fully clothed as Reiki practitioners either lightly touch the recipient or hover their hands near the recipient’s body, avoiding contact with sexually explicit areas. In a full treatment session, practitioners lay their hands on or near 12 areas of the body. Immediate effects of a Reiki treatment include changes in bodily sensations, such as variability in temperature and a pulsation feeling as the practitioner’s hands pass over the body (Miles, 2005). Treatment can be adapted according to each recipient’s presenting physical, mental, and emotional issues. Due to the holistic approach of Reiki, the length of treatment
varies from person to person. Therefore, speed of symptom reduction cannot be predicted.

The effectiveness of Reiki as a CT to conventional medical care has yet to be fully understood. However, most of the existing literature on Reiki can be found in the medical field, where it has been offered as a cost-effective and non-invasive option for improving patient care (Rand, 2015b). According to the NCCIH (2015), although little is known about the effectiveness of Reiki, it is considered a generally safe treatment approach that is delivered with an absence of harmful effects. Reiki has expanded to numerous hospitals nationwide as a complementary health care service provided by doctors, nurses, and auxiliary staff. In 2007, over 800 U.S. hospitals listed Reiki as a routine treatment offered to patients (Gill, 2008).

Several researchers have investigated the effects of Reiki on medical and mental health conditions. Preliminary medical research has demonstrated that Reiki has the potential to reduce stress, anxiety, pain, and physiological symptoms as well as enhance mood and wellbeing. In an extensive review of the professional counseling literature I found primarily conceptual treatment of the use of Reiki with mental health counseling and only two outcome studies.

LaTorre (2005) asserted that clients who presented as anxious, stressed, depressed, or with pain might benefit the most from Reiki in psychotherapy. Stockham-Ronollo and Poulsen (2012) made the claim that Reiki combined with couple therapy had the potential to stabilize partners’ states of emotional arousal and to heighten intimacy. Curtin (2012) and Harrison (2015) each offered recommendations for mental health professionals desiring to integrate Reiki into their sessions. In one of the outcome
studies, Novoa and Cain (2014) examined the impact of Reiki on the potential for mental health professionals to experience secondary traumatic stress (STS). The research design included three treatment groups: a control, a Reiki treatment, and a sham Reiki treatment. The researchers reported no significant differences in risk level for STS between the three groups. In the other outcome study, Kelley (2009) randomly assigned 73 participants experiencing symptoms of depression to one of two groups: counseling treatment as usual or treatment with the addition of distance Reiki. Distance Reiki, which is sent to the recipient from another location and time, was provided through a blind research design to the experimental Reiki group. Results indicated that participants in the experimental group experienced a significantly greater reduction in depressive symptoms than those in the control group.

Psychotherapeutic Reiki

Originally coined by Curtin (2012), psychotherapeutic Reiki (PR) is an adaptation of Reiki for use by mental health professionals as an adjunct to traditional psychotherapy. The intention behind psychotherapeutic Reiki is to provide clients of psychotherapy with the restoration of their imbalanced energetic layers that may have been the source of physical, emotional, or psychological pain. Curtin described appropriate Reiki techniques to enhance therapy sessions and organized them around four treatment tasks: (1) practicing presence; (2) exploring the body-mind; (3) releasing and clearing energy blocks; and (4) installing corrective experience.

Curtin (2012) also described how to incorporate specific Reiki techniques into counseling. A few he presented were imagery and visualization, body scanning, exploration and release, installing corrective messages, and meditation exercises.
Imagery and visualization may be used to direct the client’s attention to the body-mind and access symptoms held there. Body scanning enables the Reiki counselor (RC) to detect issues residing in the body. For this technique, the RC may invite the client to visually and sensually scan the body from head to toe for imbalances or restricted energy. Once the client has identified an area of tension, the RC may proceed to exploration and release. While instructing the client to focus on breathing, the RC may give Reiki to the identified areas of tension. Next, the RC may instruct the client to explore thoughts or feelings that arise with an attitude of acceptance prior to releasing them. To install corrective messages, the client should first identify a chakra imbalance. While the RC applies Reiki to the chakra, the client and RC repeat a corrective message for that chakra, such as “I honor the power within me” to the third chakra (p. 167). Lastly, meditation exercises can help ground and center clients whenever they experience powerful emotions.

Purpose of the Study

The purpose of this study was to examine what impact PR might have on clients’ anxiety and mindfulness levels. PR is an integrative therapy that has not been researched as a localized intervention for clients presenting with borderline or clinical anxiety. PR provided within the context of a therapeutic relationship is likely to reduce psychological distress and improve self-care indicators.

The American Psychological Association (2015) defined anxiety as “an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure” (para. 1). In the counseling profession, individuals frequently present to intake with feelings of anxiety, not knowing where they came from or what to
do about them. The National Institute of Mental Health (2015) reported that anxiety disorders affect 18% of American adults yearly. Although anxiety can sometimes be motivating, it is often considered distressing by those afflicted with it. Unlike anxiety disorders, anxiety is developmentally normative and does not persist for longer than six months (American Psychiatric Association, 2013). It is differentiated from fear in that it is an emotional response in anticipation of an impending threat rather than to a real or perceived existing threat. The American Psychological Association (2010) suggested that untreated anxiety could result in avoidance behaviors and interfere with basic tasks of daily living. Furthermore, anxiety commonly co-occurs with other psychological problems such as depression, substance abuse, and suicidal ideation. The benefits of treating anxiety extend beyond increased productivity and daily functioning to physical advantages including the reduction of symptoms indicative of gastrointestinal and respiratory diseases, as well as the prevention of heart disease (Harvard Health Publications, 2008). It has been suggested that Reiki can benefit recipients by alleviating feelings of anxiety in favor of restoration, calm, and relaxation (Curtin, 2012; Fuerst, 2015; Miller, 2015).

For the purpose of this study, the operational definition of mindfulness is the purposeful and nonjudgmental awareness of the present moment (Kabat-Zinn, 2003). In theory, mindfulness is believed to connect the mind and body for the achievement of four objectives: attention regulation, orientation to the present experience, awareness of the immediate experience, and nonjudgmental acceptance of the experience (Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007). Mindfulness-based interventions such as Mindfulness-Based Stress Reduction, Mindfulness-Based Cognitive Therapy, and
Dialectical Behavior Therapy, facilitate change by presenting clients with a nonthreatening avenue for exploring disagreeable thoughts, feelings, and behaviors. Similarly, Reiki is a spiritual mind-body healing practice that increases awareness, relaxation, and wellbeing (Fleisher et al., 2013; LaTorre, 2005; Raingruber & Robinson, 2007; Ring, 2009). Davis and Hayes (2011) suggested several benefits for mindfulness, including reduced rumination, stress reduction, improved working memory, improved focus, less emotional reactivity, increased cognitive flexibility, and enhanced relationship satisfaction. Mindfulness has been implicated as an effective intervention for individuals with generalized anxiety disorder (Hoge et al., 2013). The similarities between Reiki and mindfulness could suggest that mindfulness is a potential outcome of anxiety reduction. To date, however, no researcher has specifically addressed mindfulness as a potential outcome for Reiki treatment. In light of the trend towards mindfulness objectives in counseling, I aimed to measure Reiki’s effectiveness at increasing clients’ sense of mindfulness.

Specifically, I attempted to answer two questions related to this purpose:

1. What impact does psychotherapeutic Reiki demonstrate on clients’ anxiety levels?

2. What impact does psychotherapeutic Reiki demonstrate on clients’ sense of mindfulness?

Methodology

Participants

Research participants included four adults recruited from a community counseling and training clinic located on the campus of a large public university in the southwestern
region of the United States. Voluntary participation was open to both new clients at intake and existing clients who met participation criteria: (a) was 18 years of age or older, (b) spoke English, (c) was a candidate for individual counseling, (d) was not involved in any other individual counseling service for the length of the study, and (e) scored in the borderline or clinical range for anxiety problems on the Adult Self-Report (ASR; Achenbach System of Empirically Based Assessment [ASEBA], 2015). In accordance with recommendations from Ray, Barrio Minton, Schottelkorb, and Garofano Brown (2010) regarding possible participant attrition, in order to retain at least three participants, I aimed initially to recruit at least six participants. Of six participants who began the study, four completed it. The remaining two experienced personal conflicts that prevented them from meeting the study requirements of sequential weekly counseling session. Following are the four participants’ demographic and clinical information presented with pseudonyms to maintain confidentiality.

Alan was a 57-year old, divorced Caucasian male who was self-employed at the beginning of the study. A new client recruited at intake, he qualified for study participation due to his ASR anxiety scale scores falling in the clinical range. He cited both anxiety and major depressive disorder (MDD) as his presenting issues in need of counseling. His treatment goals included clarity of thought and increased motivation. Alan was first diagnosed with posttraumatic stress disorder (PTSD) and MDD within the first six months prior to initiating PR services at the study site. He attributed his mental health concerns to his son’s suicide and a recent debilitating vehicle accident. He reported that although he received mental healthcare in the past, he did not find it very helpful beyond appreciating the opportunity to vent. Alan identified his career field as
sales and recognized that many of his anxiety symptoms resulted from occupational stress. Gabriela was a 22-year old single female of Asian and Mexican ethnicity who worked as a writing consultant at a university while completing her bachelor’s degree. An existing client in talk therapy for nearly 18 months prior to participation in the study, she qualified for participation due to her ASR anxiety scale scores falling in the clinical range. Gabriela cited depression and anxiety as her presenting issues, although she had never received a formal diagnosis for either. Her goal for treatment was to be at peace with life events and reduce the power they had over her. Gabriela reported she had received counseling services in the past with varying degrees of success and benefit. She attributed her initial need for counseling to the suicide of her romantic partner.

Steve was a 40-year old, single Caucasian male who was a full-time graduate student at the beginning of the study. A new client recruited at intake, he qualified for participation due to his ASR anxiety scale scores falling in the clinical range. He stated that his presenting issues were anxiety, depression, and loneliness. He identified himself as a gay man and reported having trouble initiating and sustaining fulfilling romantic relationships. He also acknowledged experiencing distress in his program of study. His treatment goals included the exploration of mindfulness. Over the past five years, Steve had been diagnosed with the following mental health diagnoses: generalized anxiety disorder, major depressive disorder (MDD), bipolar disorder, and attention deficit hyperactivity disorder (ADHD). He reported having previously received
mental health services from various community agencies and the local Veterans Affairs clinic.

Natalie was a 35-year old, divorced Caucasian female who worked as an administrative assistant at a university throughout the length of the study. She had received individual talk therapy with another counselor at the study site for 2 years prior to participation in the study, and she qualified for participation due to her ASR anxiety scale scores falling in the clinical range. She explained that her presenting issues all stemmed from anxiety. In particular, she reported worrying about judgment from others, job security, and getting accepted to a graduate school program. Natalie identified herself as a single working mother. She reported having received counseling services on and off since 1998. At the time of commencing the study, she had mental health diagnoses for anxiety and ADHD.

Instrumentation

The ASR is a self-administered instrument used for the assessment of adults and comprised of the following scales: adaptive functioning, syndrome, DSM-oriented, and substance use (Achenbach & Rescorla, 2003). The ASR was normed for adults spanning the ages of 18 to 59. The ASR includes 126 scaled response items, for which respondents are asked to describe themselves over the past six months as “not true,” “somewhat or sometimes true,” or “very true or often true” for them. The instrument also features a demographics section. The two ASR scales I focused on for the screening of eligible participants were the empirically based syndrome scale and the DSM-oriented scale because both scales specifically addressed symptoms of anxiety. The syndrome scale consists of eight subscales that measure a respondent’s self-reported levels in the
following symptom categories: anxious/depressed, withdrawn, somatic complaints, thought problems, attention problems, aggressive behavior, rule-breaking behavior, and intrusive behaviors (ASEBA, 2015). The DSM-oriented scale consists of six subscales that compare a respondent’s symptoms to diagnoses found in the *Diagnostic and Statistical Manual of Mental Disorders* (2013). For both scales, subscale means are interpreted as falling into normal, borderline, or clinical score categories. Intake counselors at the study site were required to use the ASR as the standard assessment and diagnostic tool for all adults seeking counseling services. Potential participants took the ASR to qualify for the present study.

The Adult Manifest Anxiety Scale (AMAS) measures the nature and level of anxiety as experienced by adults (Reynolds, Richmond, & Lowe, 2003). Three versions of the AMAS address different life stages: AMAS-C for college students, AMAS-A for adults aged 19-59, and AMAS-E for elderly adults. The AMAS includes 36-49 questions, depending on version. Each version of the AMAS contains a worry/oversensitivity scale, a physiological anxiety scale, and a lie scale to test response validity. The AMAS-A and the AMAS-C also include a scale for social concerns and stress. I utilized the AMAS-A version for this study because all of the participants fell into the young to middle adulthood range. For the 36 questions of the AMAS-A, the worry/oversensitivity scale comprises 14 test questions, the physiological anxiety scale comprises 9 questions, the social concerns/stress scale comprises 7 questions, and the lie scale comprises 6 questions. The total anxiety score is the sum of all subscales, excluding the lie subscale (Reynolds, Richmond, & Lowe, n.d.). The AMAS-A follows a self-report format, and respondents are instructed to answer yes or no to each item. According to Reynolds et
al. (n.d.), the instrument takes only 10 minutes to administer and is easy to score. The sum of the number of yes responses indicates the total score, with higher scores indicating greater anxiety. Because the AMAS-A may be utilized to examine the existence of anxiety as a symptom or a distinct disorder, it does not include cutoff scores.

Test-retest reliability estimates for the AMAS-A are considered strong, with alpha coefficients of .92 for Total Anxiety scale scores (Lowe & Reynolds, 2004). Temporal stability alpha coefficients for the worry/oversensitivity, physiological anxiety, and lie scales ranged from .85 to .89, indicating relatively high internal consistency reliability (Nunnally, 1967). Lowe and Reynolds also demonstrated construct, convergent, and discriminant validity for the AMAS-A. Significant correlation coefficients were found between the Total Anxiety and the State-Trait Anxiety Inventory scale scores as well as between the subscales of the AMAS-A and the subscales of the Multiscore Depression Inventory. Reynolds et al. (n.d.) suggested that the absence of known practice effects from responding to the AMAS-A indicates that the instrument is appropriate for repeated administration. Thus, the scale fit the weekly administration design necessary for both phases of this study. The AMAS-A was also used to determine stability at baseline.

Developed by Brown and Ryan (2003), the Mindful Attention Awareness Scale (MAAS) is a self-report instrument used to measure the frequency of mindful states. The construct of mindfulness is considered to be an attribute of consciousness that enhances psychological wellbeing and is predictive of self-regulation. The authors purported the instrument’s objective is to gauge awareness of present-moment experiences. The instrument takes 10 minutes or less to complete. It consists of 15
statements that respondents are instructed to answer using a six-point Likert-type scale through which respondents rate the frequency with which they experience each statement in daily life. Administrators of the measure calculate the mean of the 15 items to determine the respondent's dispositional mindfulness. The highest score is 6, and the lowest score is 1, with an average score in the 3-4 range. Higher scores on the MAAS indicate elevated states of mindfulness.

The MAAS was compared to other measures to demonstrate convergent, discriminant, and criterion validity (Johnson, 2007). The MAAS was positively correlated with two other mindfulness scales: the Freiburg Mindfulness Inventory and the Cognitive and Affective Mindfulness Scale. It has good test-retest reliability and internal consistency alphas ranging from .82 to .87. The instrument’s reliability coefficient of .81 after multiple administrations indicates its suitability for weekly administration for both phases of the current study.

Procedures

I used an AB design for my single-case methodology (Engel & Schutt, 2008). The basic structure of single-case design features a baseline phase (A) followed by an intervention phase (B). I measured the clients' symptoms of anxiety and mindfulness repeatedly throughout both phases to assess change as a result of the intervention. An ABA structure, which is common for single-case methodology, would extend the research to include a withdrawal phase. According to Engel and Schutt (2008), a withdrawal phrase could potentially complicate the carryover effect of therapy because the overall goal of counseling is for improvements to maintain over time after the intervention has discontinued. Moreover, I had ethical concerns about completely
withdrawing treatment for clients who might benefit from additional services. Therefore, the basic AB design was more applicable for the purpose of my study.

A distinguishing feature of single-case research design is that participants act as their own controls (Morgan & Morgan, 2008). The dependent variables – anxiety and mindfulness – were measured repeatedly before and during the intervention. A participant could move into the intervention phase only after a stable data pattern became apparent in the baseline phase, which then served as a basis for treatment evaluation. Thus, participants’ symptoms were continuously compared against themselves over time.

Prior to beginning the data collection portion of this study, I identified two additional colleagues to help me administer the intervention and assessments. They were properly trained and prepared to take on this kind of research, as evidenced by the following qualifications: (1) credentialed as Licensed Professional Counselor – Interns or Licensed Professional Counselors; (2) completed training in Reiki I and II; (3) practiced Reiki healing for a minimum of 30 days prior to working with study participants; (4) provided certificate proof of their completed training in human subjects protection; and (5) participated in preparatory and weekly activities to standardize treatment, as detailed below.

Screening for participants began with intake interviews. Intake counselors working at the clinic provided information about the study to incoming clients and assessed their level of interest. The intake counselors administered and scored new clients’ ASR responses and submitted to me the names of interested clients who qualified. Counselors of continuing clients reviewed ASR data for eligibility and
submitted the names of qualified clients for consideration for participation. All data were collected and analyzed independently to assess the changes that occurred for each individual. Upon receiving informed consent, I conducted an opening interview with each participant in the first week of data collection.

The study formally began with the initial baseline phase of assessment. All participants completed the AMAS-A and MAAS weekly at the end of each counseling session until a stable baseline in their instrument results became evident. This phase lasted for a minimum of three weeks, which is in accordance with Engel and Schutt’s (2008, pp. 209-212) recommendation that at least three observations are required to predict a participant’s next scores. I determined that a stable baseline had been achieved by graphing each week’s AMAS-A results and confirming with a single-case design expert that one of three graphic patterns had emerged: a stable line (flat line with minimal variability), a trend (a descending or ascending line), or a cycle (ups and downs depending on the time the measurement was taken). Once a baseline was established, the participants moved into the intervention phase. During the intervention phase, participants engaged in 50-minute PR sessions once a week for a minimum of six sessions. Participants continued to take the AMAS-A and MAAS weekly immediately following each counseling session throughout the intervention phase. Table 1 provides specific information about each participant’s movement through the two phases of this study.
Psychotherapeutic Reiki Intervention

As previously described, PR is a conceptual framework for integrating Reiki with traditional talk therapy. Still in its infancy, this intervention was adapted as needed for the individual needs of each participant. The three RCs on the research team were regularly counseled clients at the identified clinic setting. I taught the two assisting RCs selected techniques recommended by Curtin (2012), and together we solidified a list of standard PR approaches (Appendix G) prior to beginning the research. Mirroring the varying subjective experiences of each participant, we attended to the four treatment tasks at different times throughout the intervention phase. Every session featured an element of conventional Reiki practice, with the primary focus on scanning the body for energy blocks and sending healing energy as needed. We utilized the following additional techniques recommended by Curtin (2012) to achieve our treatment tasks: imagery and visualization; noticing, allowing, opening, and relaxing; exploration and release; sweeping; installing corrective messages to chakras; and meditation exercises. The research team met weekly for peer supervision and treatment modification as needed.

I conducted follow-up interviews during the final week of the study to fully assess any changes participants perceived throughout the span of the research (Appendix F).
According to Ray (2015), the participants’ interview responses provide valuable context for data interpretation. After the study ended, participants were invited to continue in PR or counseling as usual. Three participants continued receiving a mixture of Reiki and conventional counseling services at the study site after fulfilling the research requirements. The fourth participant sought free counseling services closer to home.

Data Analysis

I examined the results of this study primarily through visual analysis. Standard visual analysis consists of three components: level, trend, and variability (Ray, 2015). Vannest and Ninci (2015) recommended extending visual analysis to six evaluation variables when used in conjunction with effect size indices: level, trend, variability, overlap, intercept gap, and consistency. However, consistency does not apply in the present study because it would require analysis of data from multiple phases within the same condition (e.g., ABAB designs). Thus, my visual analysis incorporated the following five visual analysis points. Level refers to the central tendency of the data for each phase, thereby providing a snapshot of client progress between phases. Trend represents the slope of assessment data within each phase. The slope resulted from the line of best fit for the data within each phase. Variability refers to the difference between trend comparison to each data point in a phase, which is conveyed as the standard deviation of assessment results (Ray, 2015). Overlap represents to what degree the data points in the baseline phase match the range of data scores in the intervention phase, and vice versa (Vannest & Ninci, 2015). Lastly, intercept gap refers to the change in behavior between the baseline and intervention phases. This change may be interpreted in terms of immediacy or accumulation. I chose this method of analysis
because it offers the greatest insight into the individual data points of each participant’s treatment process.

For the within-phase analysis, I plotted the participants’ data from the AMAS-A and MAAS from each phase on individual graphs using Microsoft Excel software and examined them for level, trend, and variability. I also investigated between-phase patterns upon first implementation of the treatment phase. In order to account for potential errors made from misinterpreting graphed data, I confirmed all of my interpretations of the data with an expert in single-case design. I met regularly with the expert, who earned her doctorate in counseling and has conducted and refined single-case research methods in the counseling profession, to jointly interpret baseline stability and analyze visual patterns in the data.

Lastly, in an attempt to determine the strength of the relationship between my variables, I calculated effect size using nonoverlap of all pairs (NAP) combined with visual analysis. I did this by using Vannest, Parker, and Gonen’s (2011) online calculation technique to pair baseline data points with treatment data points and to identify how many pairs do not overlap. Finally, I interpreted the effect size of the treatment according to the following delineations offered by Parker and Vannest (2009): 0-.65 for weak, .66-.92 for medium, and .93-1.00 for strong effectiveness.

Results

Following are graphs of each participant’s scores as well as statistical data to assist in the analysis and interpretation of any perceived changes in participants’ behavior.

Participant 1: Alan
Table 2 lists the means, standard deviations, and effect sizes for each subscale of Alan’s AMAS-A scores. The NAP effect sizes for Social Concerns/Stress revealed a medium treatment effect, whereas the remaining three subscales indicated a strong treatment effect. Figure 1 presents all of Alan’s AMAS-A data in graph format.

**Table 2**

*Alan: Means, Standard Deviations, and Effect Sizes for AMAS-A Scores*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline</th>
<th>Intervention</th>
<th>NAP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Worry/Oversensitivity (WOS)</td>
<td>75.00</td>
<td>0.00</td>
<td>63.67</td>
</tr>
<tr>
<td>Physiological Anxiety (PHY)</td>
<td>65.67</td>
<td>1.16</td>
<td>52.33</td>
</tr>
<tr>
<td>Social Concerns/Stress (SOC)</td>
<td>62.67</td>
<td>2.31</td>
<td>50.67</td>
</tr>
<tr>
<td>Total Anxiety (TOT)</td>
<td>69.33</td>
<td>1.53</td>
<td>59.00</td>
</tr>
</tbody>
</table>

*Note.* Decreased mean scores indicate improvement.

**Figure 1.** Alan’s AMAS-A scores during baseline and intervention. (Decreased scores indicate improvement).
Table 3 lists the means, standard deviations, and effect sizes of Alan’s MAAS scores for both baseline and intervention phases. The NAP coefficient for this scale indicated a medium treatment effect. Figure 2 presents all of Alan’s MAAS data in graph format.

Table 3

*Alan: Means, Standard Deviations, and Effect Sizes for MAAS Scores*

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th></th>
<th>Intervention</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>M</strong></td>
<td></td>
<td><strong>M</strong></td>
</tr>
<tr>
<td><strong>MAAS Score</strong></td>
<td>2.60</td>
<td>0.46</td>
<td>3.18</td>
<td>0.44</td>
</tr>
</tbody>
</table>

*Note.* Increased mean scores indicate improvement.

*Figure 2.* Alan’s MAAS scores during baseline and intervention. (Increased scores indicate improvement).

Participant 2: Gabriela

Table 4 lists the means, standard deviations, and effect sizes for each subscale of Gabriela’s AMAS-A scores. NAP effect sizes indicated a weak treatment effect for Physiological Anxiety and a medium treatment effect for the remaining subscales.

Figure 3 depicts all of Gabriela’s AMAS-A data in graph format.
Table 4

**Gabriela: Means, Standard Deviations, and Effect Sizes for AMAS-A Scores**

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline</th>
<th></th>
<th>Intervention</th>
<th></th>
<th>NAP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Worry/Oversensitivity (WOS)</td>
<td></td>
<td>65.00</td>
<td>1.73</td>
<td>63.50</td>
<td>1.97</td>
</tr>
<tr>
<td>Physiological Anxiety (PHY)</td>
<td></td>
<td>75.00</td>
<td>0.00</td>
<td>74.17</td>
<td>2.04</td>
</tr>
<tr>
<td>Social Concerns/Stress (SOC)</td>
<td></td>
<td>73.00</td>
<td>3.46</td>
<td>69.17</td>
<td>0.41</td>
</tr>
<tr>
<td>Total Anxiety (TOT)</td>
<td></td>
<td>73.00</td>
<td>2.00</td>
<td>69.67</td>
<td>1.97</td>
</tr>
</tbody>
</table>

*Note.* Decreased mean scores indicate improvement.

![Figure 3](image)

**Figure 3.** Gabriela’s AMAS-A scores during baseline and intervention. (Decreased scores indicate improvement).

Table 5 lists the means, standard deviations, and effect sizes of Gabriela’s MAAS scores. The NAP effect size for this scale indicated a medium treatment effect. Figure 4 presents all of Gabriela’s MAAS data in graph format.
Table 5

*Gabriela: Means, Standard Deviations, and Effect Sizes for MAAS Scores*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline</th>
<th>Intervention</th>
<th>NAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAAS Score</td>
<td>2.58</td>
<td>2.80</td>
<td>.75</td>
</tr>
</tbody>
</table>

*Note.* Increased mean scores indicate improvement.

*Figure 4.* Gabriela’s MAAS scores during baseline and intervention. (Increased scores indicate improvement).

Participant 3: Steve

Table 6 lists the means, standard deviations, and effect sizes for each subscale of the AMAS-A. NAP effect sizes revealed a weak treatment effect for all four subscales.

*Figure 5.* presents all of Steve’s AMAS-A data in graph format.

Table 6

*Steve: Means, Standard Deviations, and Effect Sizes for AMAS-A Scores*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline</th>
<th>Intervention</th>
<th>NAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry/Oversensitivity (WOS)</td>
<td>71.67</td>
<td>74.17</td>
<td>.25</td>
</tr>
<tr>
<td>Physiological Anxiety (PHY)</td>
<td>75.00</td>
<td>75.00</td>
<td>.50</td>
</tr>
<tr>
<td>Social Concerns/Stress (SOC)</td>
<td>75.00</td>
<td>75.00</td>
<td>.50</td>
</tr>
</tbody>
</table>
Table 7 lists the means, standard deviations, and effect sizes of Steve’s MAAS scores. The NAP effect size for this scale indicated a weak treatment effect. Figure 6 presents all of Steve’s MAAS data in graph format.

Table 7

Steve: Means, Standard Deviations, and Effect Sizes for MAAS Scores

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th></th>
<th>Intervention</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>NAP</td>
<td></td>
</tr>
<tr>
<td>MAAS Score</td>
<td>2.42</td>
<td>0.71</td>
<td>2.09</td>
<td>0.65</td>
<td>.33</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Increased mean scores indicate improvement.*
Figure 6. Steve's MAAS scores during baseline and intervention. (Increased scores indicate improvement).

Participant 4: Natalie

Table 8 lists the means, standard deviations, and effect sizes for each subscale of Natalie's AMAS-A scores. The NAP effect size for Worry/Oversensitivity revealed a strong treatment effect. The remaining three subscales indicated a medium treatment effect. Figure 7 presents all of Natalie's AMAS-A data in graph format.

Table 8

Natalie: Means, Standard Deviations, and Effect Sizes for AMAS-A Scores

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline M</th>
<th>Baseline SD</th>
<th>Intervention M</th>
<th>Intervention SD</th>
<th>NAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry/Oversensitivity (WOS)</td>
<td>73.33</td>
<td>2.89</td>
<td>62.71</td>
<td>3.55</td>
<td>.94</td>
</tr>
<tr>
<td>Physiological Anxiety (PHY)</td>
<td>75.00</td>
<td>0.00</td>
<td>62.71</td>
<td>11.56</td>
<td>.80</td>
</tr>
<tr>
<td>Social Concerns/Stress (SOC)</td>
<td>60.00</td>
<td>0.00</td>
<td>57.00</td>
<td>3.32</td>
<td>.79</td>
</tr>
<tr>
<td>Total Anxiety (TOT)</td>
<td>72.33</td>
<td>1.15</td>
<td>63.00</td>
<td>4.86</td>
<td>.71</td>
</tr>
</tbody>
</table>

Note. Decreased mean scores indicate improvement.
Figure 7. Natalie’s AMAS-A scores during baseline and intervention. (Decreased scores indicate improvement).

Table 9 lists the means, standard deviations, and effect sizes of Natalie’s MAAS scores. The NAP effect size for this scale indicated a strong treatment effect. Figure 8 presents all of Natalie’s MAAS data in graph format.

Table 9

<table>
<thead>
<tr>
<th>Natalie: Means, Standard Deviations, and Effect Sizes for MAAS Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>M</td>
</tr>
<tr>
<td>MAAS Score</td>
</tr>
</tbody>
</table>

Note. Increased mean scores indicate improvement.
Figure 8. Natalie’s MAAS scores during baseline and intervention. (Increased scores indicate improvement. Data was not collected for the first two weeks).

Summary of Results

Table 10 presents a summary of the results for all four participants in this study. Three participants exhibited favorable results indicating that the intervention was beneficial for anxiety and mindfulness. One participant demonstrated mixed results indicating that PR may not be effective for anxiety reduction or increased mindfulness for all clients. Mean scores for Physiological Anxiety and Social Concerns/Stress either improved or remained constant for all participants during the intervention phase. According to NAP calculations, two participants experienced strong treatment effects for more than one assessed construct.
Table 10

Summary of Results

<table>
<thead>
<tr>
<th>Participant</th>
<th>WOS M</th>
<th>NAP</th>
<th>PHY M</th>
<th>NAP</th>
<th>SOC M</th>
<th>NAP</th>
<th>TOT M</th>
<th>NAP</th>
<th>MAAS M</th>
<th>NAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alan</td>
<td>I</td>
<td>S</td>
<td>I</td>
<td>S</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>S</td>
<td>I</td>
<td>M</td>
</tr>
<tr>
<td>2. Gabriela</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>W</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>M</td>
</tr>
<tr>
<td>3. Steve</td>
<td>D</td>
<td>W</td>
<td>NC</td>
<td>W</td>
<td>NC</td>
<td>W</td>
<td>D</td>
<td>W</td>
<td>D</td>
<td>W</td>
</tr>
<tr>
<td>4. Natalie</td>
<td>I</td>
<td>S</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>S</td>
</tr>
</tbody>
</table>

Note. WOS = Worry/Oversensitivity; PHY = Physiological Anxiety; SOC = Social Concerns/Stress; TOT = Total Anxiety; NAP = Nonoverlap of all pairs; I = mean improved from baseline phase to intervention phase; D = mean deteriorated from baseline phase to intervention phase; NC = no change in mean from baseline phase to intervention phase; S = strong; M = medium; W = weak effect.

Discussion

The purpose of this study was to examine whether the selected intervention, PR, had an impact on client anxiety and mindfulness. The results of this study demonstrated that PR was a helpful treatment for the reduction of anxiety and advancement of mindfulness in three participants, as evidenced by mean improvements from baseline phase to intervention phase. The fourth participant experienced either no change or deterioration in means in each subscale of anxiety and deterioration in the mean for mindfulness. The three participants who benefitted from the intervention responded with the greatest impact in the anxiety subscale of Worry/Oversensitivity. The intervention may not have been as helpful for the fourth participant due to his extreme baseline scores; he had the highest baseline anxiety scores and the lowest baseline mindfulness score. It is likely that more severe cases would require lengthier or more frequent exposure to the intervention to evidence a noticeable impact. In addition, this participant’s counselor reported having observed that this client exhibited exceptional difficulty with trust and with building a collaborative therapeutic alliance; these factors
may have played a role in his results and suggest possible considerations for screening clients for their potential to benefit from PR.

Impact on Anxiety and Mindfulness

In this study, PR was helpful in the reduction of anxiety for three out of four participants. These three participants improved in all four categories of anxiety on the AMAS-A, as demonstrated by decreases in means from the baseline phase to the intervention phase. Together, they experienced the greatest impact in the category of Worry/Oversensitivity. Within that subscale, one participant had a medium treatment effect and two participants had a strong treatment effect. The means for two subscales, Physiological Anxiety and Social Concerns/Stress, indicated either improvement or no change for all four participants. Physiological Anxiety received the most variable results, with treatment effects ranging from weak to strong. The participant with weak treatment effects for all four AMAS-A subscales struggled with attachment issues that may have prevented him from experiencing positive outcomes from the intervention. The fact that he demonstrated little to no change in anxiety throughout the intervention phase may actually suggest that PR helped him maintain stability with his symptoms. Although participants demonstrated improvement in both constructs, mindfulness did not appear to be impacted by the reduction of anxiety as originally postulated.

In this study, PR was useful in the improvement of mindfulness for three out of four participants. One participant experienced deterioration in means from baseline phase to intervention phase, whereas three participants experienced mean gains from baseline phase to intervention phase. Of the three participants whose means improved, two experienced medium treatment effects and one experienced a strong treatment
effect. Excluding the participant with a strong treatment effect, the participants demonstrated moderate variability in their MAAS scores throughout the intervention phase. It is possible that this variability is the consequence of high self-consciousness and the tendency to self-monitor and engage in reflexive thought. These traits are related to and characteristic of clinical anxiety, which was a presenting concern for all four participants. Such traits are unrelated to mindfulness (Brown & Ryan, 2003).

Clinical Considerations

Participant receptivity is an important consideration for this study because the intervention is unconventional for most counseling settings. Every participant in this study was open and receptive to integrative therapies and PR in particular. Although two participants reported some knowledge of Reiki prior to commencing their participation in this study, none had ever personally received Reiki healing. Most conveyed hesitation immediately before their initial body scans due to its novelty but quickly adjusted to the intervention shortly thereafter. One participant opted to have Reiki beamed to her from across the room during her first session, whereas all of the remaining sessions involved her RC transmitting Reiki from mere inches away. We were careful to respect participants’ boundaries and readiness whenever we interacted directly with their energy fields. All four participants reported sensing changes in their energetic bodies during the first treatment, and three participants reported noticing minor improvements in their functioning after the first treatment. All of the participants indicated they would be interested in receiving Reiki again in the future, and two participants specifically requested to continue PR at the study site.
Several practical implications emerged as the three RCs learned and refined the PR intervention. As implied by Curtin (2012), it is impossible to script PR techniques because recipients require the treatment tasks and techniques at varied times. We continuously re-evaluated the progress of the treatment and tailored it to meet the unique needs of the participants. Thus, we utilized the PR Treatment Tasks protocol (Appendix G) primarily as a framework rather than as a step-by-step guide. Another theme that transpired during our weekly supervision meetings was the need for the RCs to adequately prepare themselves for session. Similar to the concept that counselors need to practice wellness and self-care to prevent burnout and compassion fatigue, Reiki also requires mental and emotional readiness on behalf of the practitioner in order to transmit energy without feeling drained or absorbing recipients’ energy. Rand (2016) recommended clearing the room with fresh air, sage, or essential oils; drawing the Reiki symbols on the walls, floor, and ceiling with one’s fingers; and receiving Reiki from others on a regular basis. An additional topic discussed in peer supervision was establishing trust with the participants and assessing their comfort level with receiving Reiki healing. It was important to clearly communicate to the participants the procedures for sending Reiki as well as allow them to decide when they were ready to receive it.

Pursuant to the initial objectives of this research, several clinical implications are indicated for using PR as a beneficial intervention for anxiety and mindfulness. First of all, PR appears to be a valuable approach for treating adults struggling with anxiety features, especially those with symptoms of worry and oversensitivity or social stress. Three participants demonstrated advancement in these categories, and one participant demonstrated decline or no change. PR also appears to have the potential to positively
impact mindfulness. Three participants demonstrated improvement in mindfulness, and one participant demonstrated minor deterioration. All of the participants observed some improvement in their daily functioning. Moreover, a clinical implication of this research is the need for adults with anxiety to receive the PR intervention for a greater length of time. Whereas the average Reiki recipient may be able to achieve symptom relief with only 4 sessions (National Center for Complementary and Alternative Medicine, 2008), individuals presenting with clinical anxiety might require more time to notice major improvements in their daily functioning due to the severity of their presenting concerns. Finally, I speculate that one precondition for success in treatment might be clients’ ability to trust and form collaborative relationships with a counselor. Noting the difference in changes between participants, it seems that the benefits of PR may be stronger or quicker to develop in adults who have fewer issues with trusting others and working within a therapeutic relationship to set and achieve goals.

The present study is significant in that it sets a foundation for counselors seeking to integrate alternative therapies with counseling. To date, little is known about the appropriateness of energy-based practices in counseling. As presented in the findings and discussion of this study, PR may be a valuable intervention for adult clients who seek something new or unique to treatment-as-usual. The interaction between RC and client when transmitting Reiki energy necessitates the development of trust and vulnerability, which might further strengthen the outcomes of therapy. Lastly, PR encourages creativity on the part of the counselor. This intervention and others like it provide clinicians with a variety of options for how to conceptualize and treat imbalances and deficiencies.
Additional Research and Limitations

Additional research on the effectiveness of PR could be accomplished in several recommended ways. First, researchers may consider studying the impact of Reiki on clients who are new to counseling. Every participant in the present study had been previously involved in mental health counseling services, so their expectations may have differed from participants who had never initiated counseling before. The largely positive results from this study provide the rationale for a future investigator to conduct a randomized, controlled study comparing PR to treatment as usual and waitlist with a large and diverse sample. I recommend that such a study include assessment of client capacity for trust and for development of a therapeutic relationship as a factor in potential effectiveness of the intervention.

Despite its value, there are several inherent limitations within this research design pertaining to sampling, sample size, generalizability, and instrumentation. According to Creswell (2014), convenience sampling is far less desirable than random sampling because it limits the researcher’s ability to generalize outcomes to an identified population. I recognize that selecting participants based on their availability and ease of access to the research setting does not account for a broad variety of individuals. Also, the voluntary basis on which the participants were recruited increases the likelihood that the participants have a favorable disposition to the proposed treatment prior to its administration, thereby potentially influencing self-report measures towards positive outcomes. However, this likelihood coincides with the probability that only clients with favorable dispositions will consent to Reiki in real life. Another limitation pertains to the inability to control what happens from treatment session to treatment session. The
process and methods employed in both counseling and Reiki are dependent upon the client’s needs in the moment. No two sessions were alike, thus restricting comparability. Moreover, the small sample size limits the potential for greater variety in client attributes and presenting problems, which further inhibits generalizability to a larger population. The AB design of the research presented one final limitation to this study. Ray (2015) noted that the AB design, compared to an ABA withdrawal design, is threatened by internal validity concerns including the inability to control for history and the influence of unnecessary factors.

Conclusion

The use of CTs is steadily increasing in Western societies as individuals have begun to incorporate Eastern spiritual and somatic practices in the quest for wellness (Clarke, Black, Strussman, Barnes, & Nahin, 2015; Judith, 2004). Practitioners and patrons of CTs such as Reiki purport indications for anxiety reduction and increased mindfulness (Fleisher et al., 2013). The purpose of this study was to explore the impact of PR on adult clients’ symptoms of anxiety and mindfulness. The results of this study demonstrate support for PR as an intervention that can help adults increase their awareness of anxiety and mindfulness as well as manage indicators of each. Three out of the four participants included in this study exhibited improvement in every category measured. All four participants reported benefitting from their participation in PR and expressed desire to continue PR services in the future.
References


doi:10.1177/0898010113495975


doi:10.1177/1524839914563747


APPENDIX A

EXTENDED LITERATURE REVIEW
In this era of increased attention towards holistic wellness practices, individuals may seek complementary and alternative therapies to augment wellbeing. The term *complementary therapies* (CTs) includes any practice that falls outside of the realm of conventional medicine and the practitioner of which favors a holistic conceptualization of health (Lumadue, Munk, & Wooten, 2005; Nichols, 2015). CTs fall within the domain of the U.S. National Institutes of Health’s (NIH’s) complementary health approaches (National Center for Complementary and Integrative Health [NCCIH], 2016). In 2012, one-third of adults reportedly used complementary approaches – a proportion consistent with findings from the previous decade (Clarke, Black, Stussman, Barnes, & Nahin, 2015). CTs have gained popularity in the counseling profession and include integration of Eastern mind and body concepts in mainstream Western psychotherapy (Judith, 2004). In particular, mind and body practices such as Qigong, hypnotherapy, mindfulness, breathwork, meditation, and Reiki may assist clients to attain a wide variety of counseling goals, including development of coping skills, stress reduction, self-regulation, energy balancing, and physical healing (Fernros, Furhoff, & Wandell, 2008; Lumadue et al., 2005; Nichols, 2015). Although mental health professionals have adopted alternative mind and body practices as complementary approaches to traditional talk therapy, little research exists concerning the integration of the two and the impact of both on client wellness.

Previous studies on the use of CTs for health and wellbeing have indicated the prevalence of mind, body, and energy practices in care settings across the United States (Clarke et al., 2015; Harris, Cooper, Relton, & Thomas, 2012). Recipients of CTs also frequently describe them as being effective and capable of providing great benefits.
to their physical and mental health (Garland, Valentine, Desai, Li, Langer, Evans, & Mao, 2013; Liu, Huynh, Broukhim, Cheung, Schuster, & Najm, 2014). For example, cancer patients have increasingly sought out CTs to manage the psychological, spiritual, and physical effects of their diagnosis (Brauer, Sehamy, Metz, & Mao, 2011; Garland et al., 2013; Mao, Palmer, Healy, Desai, & Amsterdam, 2010). Individuals with other medical as well as non-medical concerns have sought and used CTs for similar benefits.

Individuals who utilize CTs typically experience various enhancements in their quality of life. Researchers have linked CTs featuring mind-body techniques, such as meditation, body awareness, mindfulness, and breathwork, to many positive mental health outcomes including improved wellbeing and cognitive functioning and decreased symptoms of pain, anxiety, and depression (Fernros, Furhoff, & Wandell, 2008; Kluepfel et al., 2013). CTs have also been found beneficial for improvements in coping, regulating behavior, and mindfulness (Kotecki, Khubchandani, Simmons, & Sharma, 2015; Leppma, 2009). Researchers have also found that CTs might be more preferable than talk therapy for racial and ethnic minorities due to cultural biases in traditional Western mental health services (Yeh, Hunter, Mandan-Bahel, Chiang, & Arora, 2004). Natural and energy healing therapies, for example, mirror the indigenous healing practices of American Indians and Asian Americans and emphasize the interconnectedness of spirit, mind, and matter and the interrelatedness of all life forms (Constantine, Myers, Kindaichi, & Moore, 2004).

Only a handful of researchers have conducted empirical studies that target the integration of CTs with counseling and counselor training. In a grounded theory study,
Nichols (2015) identified four themes that characterized the use of CTs in professional counseling: (1) experience and exposure to one or more CTs; (2) personal beliefs that foster openness to CTs; (3) development of professional competence in CTs; and (4) reinforcement of CTs’ use in counseling practice. According to the author, CTs’ use in professional counseling has the potential to effectively and efficiently meet a diverse array of wellness needs. Although a large majority of faculty members and students in therapy and counseling programs in North America believe CTs involving mind-body techniques should be taught as complementary treatments (Olson, Robinson, Geske, & Springer, 2011), only half of the programs accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) include CTs in their courses and training seminars (Lumadue et al., 2005). When incorporated as a 15-week course for counseling students at the graduate level, a mindfulness-based stress reduction program yielded positive results in the areas of physical, emotional, mental, spiritual, and interpersonal change (Schure, Christopher, & Christopher, 2008). Furthermore, most students reported the intention to apply the techniques they learned in the course to their future counseling profession.

Introduction of Selected CT: Reiki

The spiritual energy practice of Reiki was originally developed in Japan in the early 20th century. Through the intentional directing of healing energy, Reiki is intended for the cleansing of the mind, emotions, and physical body (Rand, 2011). It has gained recent popularity in the United States along with the emerging paradigm shift towards a greater acceptance of CTs and is included among the NCCIH’s complementary health approaches (Lumadue et al., 2005; NCCIH, 2016). Reiki has been selected as the CT of
focus for this study because, to date, little is known about its effectiveness beyond anecdotal report. Unlike other CTs, such as mindfulness and hypnosis, Reiki has not been empirically standardized for the counseling profession.

According to the NCCIH (2015), although little is known about the effectiveness of Reiki, it is considered a generally safe treatment approach that is delivered with an absence of harmful effects. In an extensive review of the professional counseling literature I found primarily conceptual treatment of the use of Reiki with mental health counseling and only two outcome studies. LaTorre (2005) asserted that clients who presented as anxious, stressed, depressed, or with pain might benefit the most from Reiki in psychotherapy. She provided a case example of a woman who struggled to communicate effectively with her husband. Through the use of psychotherapeutic Reiki, the woman felt more empowered in the counseling process. Stockham-Ronollo and Poulsen (2012) made the claim that Reiki combined with couple therapy had the potential to stabilize partners’ states of emotional arousal and to heighten intimacy. Curtin (2012) and Harrison (2015) each offered recommendations for mental health professionals desiring to integrate Reiki into their sessions. Curtin (2012) described appropriate Reiki techniques to enhance therapy sessions and organized them around four treatment tasks: (1) practicing presence; (2) exploring the body-mind; (3) releasing and clearing energy blocks; and (4) installing corrective experience. Harrison (2015), on the other hand, explained how to prepare for counseling with Reiki and use it to increase one’s client load.

In one of the outcome studies, Novoa and Cain (2014) examined the impact of Reiki on the potential for mental health professionals to experience secondary traumatic
stress (STS). The research design included three treatment groups: a control, a Reiki treatment, and a sham Reiki treatment. The researchers reported no significant differences in risk level for STS between the three groups. In the other outcome study, Kelley (2009) randomly assigned 73 participants experiencing symptoms of depression to one of two groups: counseling treatment as usual or treatment with the addition of distance Reiki. Distance Reiki, which is sent to the recipient from another location and time, was provided through a blind research design to the experimental Reiki group. Results indicated that participants in the experimental group experienced a significantly greater reduction in depressive symptoms than those in the control group.

Statement of the Problem

Whereas a wealth of information exists regarding the advantages of using CTs for personal health and wellness, a dearth of empirical research exists regarding the incorporation of CTs in mental health counseling. In particular, the literature lacks sufficient evidentiary support for or against the use of Reiki in a counseling setting. It is also unknown whether Reiki impacts clients' perceived sense of mind-body integration and cognitive-affective awareness, as many other CTs used in counseling – such as meditation, mindfulness, and guided imagery – have been shown to do. Moreover, it remains unclear whether clients presenting with depression and anxiety are likely to experience symptom reduction from counseling combined with localized Reiki, as compared to the participants who benefited from distance Reiki in Kelley’s (2009) study. Although Kelley found results supporting the use of distance Reiki to decrease symptomology, Reiki is most commonly sent to participants locally and with their
knowledge. Additional research is needed to better comprehend the impact of localized Reiki on self-selected counseling clients.

Purpose of the Proposed Study

There is some literature to support Reiki’s usefulness as an alternative therapy to improve psychological distress and self-care indicators, but it is still unknown whether psychotherapeutic Reiki has an impact on mindfulness – the non-judgmental focus of one’s attention on the present moment – and anxiety within clients. The purpose of this study was to examine whether psychotherapeutic Reiki has an impact on clients’ mindfulness and anxiety levels. In this study, I attempted to answer two questions related to its purpose:

3. What impact does psychotherapeutic Reiki demonstrate on clients’ anxiety levels?

4. What impact does psychotherapeutic Reiki demonstrate on clients’ sense of mindfulness?

Results from this study have the potential to inform mental health practitioners about the use of Reiki healing as a complementary treatment method to traditional talk therapy. Additionally, they have the potential to enhance overall client wellbeing in a safe and holistic way. Whereas traditional mental health counseling affords clients the opportunity to discuss personal issues with the general aim of gaining insight about their problems, psychotherapeutic Reiki has the potential to connect insight with body responses for a reduction in cognitive, emotional, physical, and energetic blockages (Curtin, 2012). Moreover, results from this study may provide significant implications for incorporating creative and alternative therapies in counselor training programs.
Definitions

In this study, I utilized several terms with specialized meanings. Although many of these terms have broad and varying meanings across research and popular usage, I offer clearly delineated definitions for consistency of understanding throughout the remainder of this paper.

Reiki is a Japanese healing practice that relies on the direct or indirect transfer of universal energy (Kelley, 2009). Based on energy field theory, a subset of quantum physics, proponents purport the practice's therapeutic benefits on clients who consent to interfacing with Reiki practitioners' energetic vibrations. Reiki may be conducted locally or from a distance. Localized Reiki involves the laying of hands on or near the body as a channel for sending Reiki healing energy. Distance Reiki involves the sending of Reiki healing energy through space or by proxy, whereby an object, such as a teddy bear or a personal memento, represents the recipient.

Originally coined by Curtin (2012), psychotherapeutic Reiki (PR) is an adaptation of Reiki for use by mental health professionals as an adjunct to traditional psychotherapy. The intention behind psychotherapeutic Reiki is to provide clients of psychotherapy with the restoration of their imbalanced energetic layers that may have been the source of physical, emotional, or psychological pain. The interventions operationalized for this study incorporated several techniques presented in Curtin’s manual but varied slightly as deemed therapeutically appropriate for each client.

For the purpose of this study, a Reiki counselor (RC) refers to a Licensed Professional Counselor or Licensed Professional Counselor-Intern who has received practitioner-level training in Reiki I and II and incorporates Reiki in counseling sessions.
The American Psychological Association (2015) defined anxiety as “an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure” (para. 1). In the counseling profession, individuals frequently present to intake with feelings of anxiety, not knowing where they came from or what to do about them. The National Institute of Mental Health (2015) reported that anxiety disorders affect 18% of American adults yearly. Although anxiety can sometimes be motivating, it is often considered distressing by those afflicted with it. Unlike anxiety disorders, anxiety is developmentally normative and does not persist for longer than six months (American Psychiatric Association, 2013). It is differentiated from fear in that it is an emotional response in anticipation of an impending threat rather than to a real or perceived existing threat. The American Psychological Association (2010) suggested that untreated anxiety could result in avoidance behaviors and interfere with basic tasks of daily living. Furthermore, anxiety commonly co-occurs with other psychological problems such as depression, substance abuse, and suicidal ideation. The benefits of treating anxiety extend beyond increased productivity and daily functioning to physical advantages including the reduction of symptoms indicative of gastrointestinal and respiratory diseases, as well as the prevention of heart disease (Harvard Health Publications, 2008). It has been suggested that Reiki can benefit recipients by alleviating feelings of anxiety in favor of restoration, calm, and relaxation (Curtin, 2012; Fuerst, 2015; Miller, 2015). I aimed to extend the literature base surrounding Reiki and anxiety by measuring anxiety as a construct in this study.

For the purpose of this study, the operational definition of mindfulness is the purposeful and nonjudgmental awareness of the present moment (Kabat-Zinn, 2003). In
theory, mindfulness is believed to connect the mind and body for the achievement of four objectives: attention regulation, orientation to the present experience, awareness of the immediate experience, and nonjudgmental acceptance of the experience (Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007). Mindfulness-based interventions such as Mindfulness-Based Stress Reduction, Mindfulness-Based Cognitive Therapy, and Dialectical Behavior Therapy, facilitate change by presenting clients with a nonthreatening avenue for exploring disagreeable thoughts, feelings, and behaviors. Similarly, Reiki is a spiritual mind-body healing practice that increases awareness, relaxation, and wellbeing (Fleisher et al., 2013; LaTorre, 2005; Raingruber & Robinson, 2007; Ring, 2009). Davis and Hayes (2011) suggested several benefits for mindfulness, including reduced rumination, stress reduction, improved working memory, improved focus, less emotional reactivity, increased cognitive flexibility, and enhanced relationship satisfaction. Mindfulness has been implicated as an effective intervention for individuals with generalized anxiety disorder (Hoge et al., 2013). The similarities between Reiki and mindfulness could suggest that mindfulness is a potential outcome of anxiety reduction. To date, however, no researcher has specifically addressed mindfulness as a potential outcome for Reiki treatment. In light of the trend towards mindfulness objectives in counseling, I intended to measure Reiki’s effectiveness at increasing clients’ sense of mindfulness.

To summarize, CT use in North America has skyrocketed in the past decade as consumers have discovered improvements in their personal wellbeing (Clarke et al., 2015; Garland et al., 2013; Harris et al., 2012; Leppma, 2009). The selected CT, Reiki, has the potential to enhance reduction of clients’ symptoms related to anxiety,
depression, pain, and STS (Kelley, 2009; LaTorre, 2005; Novoa & Cain, 2014).

Currently, little is known about the impact of psychotherapeutic Reiki on clients’ levels of anxiety and mindfulness. As an anticipated result of this study, professional counselors could better understand the effectiveness of Reiki integrated with counseling. I will review the existing literature on Reiki in the following sections of this appendix.

Literature Review

Precise information about how Reiki works as a healing practice is unavailable due to its basis in spiritual and energetic concepts that fall outside the parameters of the currently accepted scientific paradigm. The National Center for Complementary and Alternative Medicine (NCCAM; 2008), now renamed as the NCCIH, identified Reiki as a form of biofield therapy, which relies on the theory that interaction with individuals’ energy fields has the potential to enhance health and wellbeing. Professional Reiki practitioners like Pamela Miles (2008), however, purported that it is a spiritual healing practice that restores holistic balance through light touch. Regardless of the perspective one chooses to take, explanations about what Reiki does and how it works vary as a result of its ambiguous source. With that caveat in mind, I have attempted to provide a comprehensive review of the existing literature and research on Reiki’s history, training, theoretical foundations, and observed effectiveness.

History of Reiki

Conflicting accounts surrounding the origin of Reiki endured between the Japanese and American lineages of Reiki traditions until the 1990s (Miles, 2008; Rand, 2011). A more accurate account of the history of Reiki became clear as Rand (2011) came into contact with early Japanese Reiki Masters. The reason behind Americans’
lack of understanding about the beginnings of Reiki rested in the post-World War II era, during which the United States government banned Eastern healing practices in Japan. At that time, however, the original organization of Reiki healers – the Usui Reiki Ryoho Gakkai – continued to practice in secret. This organization’s clandestine existence and perseverance despite American opposition made it difficult for anyone to learn about traditional Japanese Reiki. To contemporary researchers’ knowledge, the most precise account of the beginnings of Reiki is as follows.

Mikao Usui, the founder of Reiki, was born in Japan in 1865 and trained in a Buddhist monastery as a child (Miles & True, 2003). Upon climbing Mount Kurama as an adult, he experienced a spiritual awakening through which he discovered the Reiki cure (Rand, 2011). He began healing others and eventually established an institute in Tokyo where he began instructing others to give the Reiki treatment. According to the inscription on his memorial stone, Usui saved many lives by relieving the sick and injured victims of an earthquake in Tokyo with the use of Reiki treatment (Doi, 1998). Over 2,000 people learned Reiki from him before his death in 1926. Prior to his death, Usui left the Usui Reiki Ryoho Gakkai to one of his students, Chijujo Hayashi, and instructed him to open a Reiki clinic to continue training individuals in the practice of Reiki. Hawayo Takata, an American by birth, received Reiki healing at Hayashi’s clinic while visiting her parents in Japan and eventually trained to become a Reiki Master under his tutelage. Takata attributed her recovery from respiratory ailments and abdominal pain to Reiki and desired to bring the practice back to the United States, where she initiated 22 Reiki Masters (Miles & True, 2003). Most Western practices and ideals of Reiki passed on today have been influenced by Takata, even though she
altered some of the original training and spiritual concepts of Reiki to better align with Western ideals (Rand, 2011).

Overview of Reiki Principles

The word “Reiki” derives from two Japanese kanji, or ideograms. The meaning of “Rei” is similar to “universal,” and the meaning of “Ki” is “life energy.” Thus, “reiki” literally means “universal life energy.” It is channeled by spiritual consciousness that is passed on through the transfer of Reiki energy from master to student during a process known as attunement (NCCAM, 2008; Rand, 2011). In the inscription on the Usui Memorial erected in 1927, Juzaburo Ushido wrote that the aim of Reiki included healing diseases, keeping the body healthy, enjoying wellbeing in life, and correcting the mind by virtue of divine spiritual abilities (Doi, 1998). Additionally, Usui encouraged his students to adhere to the following five admonitions initially set forth by Emperor Meiji (Doi, 1998):

1. Don’t be angry today.
2. Don’t be grievous.
3. Express your thanks.
4. Be diligent in your business.
5. Be kind to others.

These five admonitions have persisted as the basis for Western Reiki ideology taught in trainings endorsed by the International Center for Reiki Training (Rand, 2011). In order to give Reiki while in a healing state, practitioners are instructed to engage The Three Pillars of Reiki: Gassho, Reiji-ho, and Chiryo. The Gassho technique is a meditation that helps practitioners clear their minds and open their hearts prior to giving
Reiki. Reiji-ho is a technique used to enhance intuitive guidance so that practitioners know where recipients need Reiki. Chiryo refers to the treatment itself, which is uniquely fulfilled according to each recipient’s wellness needs.

A typical Reiki session lasts 30 to 75 minutes and is conducted in a quiet room conducive to relaxation (Miles & True, 2003). Recipients may sit in a chair or lie on a treatment table, depending on comfort and availability. Recipients remain fully clothed as Reiki practitioners either lightly touch the recipient or hover their hands near the recipient’s body, avoiding contact with sexually explicit areas. In a full treatment session, practitioners lay their hands on or near 12 areas of the body. Immediate effects of a Reiki treatment include changes in bodily sensations, such as variability in temperature and a pulsation feeling, as the practitioner’s hands pass over the body (Miles, 2005).

Treatment can be adapted according to each recipient’s presenting physical, mental, and emotional issues. Due to the holistic approach of Reiki, the length of treatment varies from person to person. Therefore, speed of symptom reduction cannot be predicted.

Reiki Ethics and Training

William Lee Rand (2015a) standardized Western practice and training of Reiki when he founded the International Center for Reiki Training (ICRT) in 1991. ICRT Reiki Master Teachers endorse the methods taught by both Hawayo Takata and Mikao Usui and promote the philosophy and ethical standards of the ICRT. The code of ethical standards includes such practices as treating students and clients with the utmost respect, which includes abstaining from the use of alcohol and drugs during the provision of services and refraining from touching the genitals and breasts; educating
clients about the value of Reiki healing and stipulating that it is not a guaranteed cure; referring clients to other licensed health care providers when applicable; and refraining from diagnosing clients with medical or psychological conditions.

Currently, the ICRT offers basic training to become a Reiki practitioner and advanced training to become a Licensed Reiki Master/Teacher (Rand, 2015a). There are no prerequisites to take the practitioner-level training, and it can be accomplished over a two-day weekend. These basic courses are known as Usui Reiki I and II. Trainings involve certain practices unique to Reiki. These include attunement and drawing the Reiki symbols. *Attunement* refers to the passing on of the unlimited supply of life force energy from Reiki Master to student. Attunement is said to be available to anyone who desires to heal using Reiki methods. *Reiki symbols* are considered transcendental representations that tap into spiritual consciousness, affecting the source of Reiki energies (Rand, 2011). The symbols are considered sacred and therefore held in confidence by Reiki practitioners, Masters, and Master Teachers. Trainees receive Reiki I and II attunements and learn Reiki hand positions, treatment for self and others, distance healing, and Reiki symbols. In the Advanced Reiki Training and Reiki Master Training, trainees receive the Reiki III Usui/Tibetan Master attunement and learn advanced Reiki symbols, advanced meditations, and aura clearing – that is, removing impediments from the various layers of energy theorized to surround the body.

**Theoretical Basis of Reiki**

Theoretical justification for mind-body energy practices like Reiki is couched in a branch of psychology known as energy psychology. Lumadue et al. (2005) recognized the new trend in psychotherapy for the integration of mind-body awareness with subtle
energy concepts. Energy psychology proponents assess, diagnose, and treat psychological and physical problems by attending to the subtle energy imbalances of the body. This holistic energy approach focuses on treating the entire issue even if it appears in only one mode: physical, mental, emotional, or spiritual. In essence, energy psychology fills in what recent mind-body connection research leaves out: bioenergy fields, or electromagnetic radiations, discharging from the human body. In the ensuing subsections, I will describe in depth three proposed theoretical foundations of Reiki.

One theoretical foundation is the six pillars of energy medicine. A newcomer to the shifting paradigm of health care, energy medicine was founded on the assumption that distress in the energy fields causes the majority of known illnesses (Feinstein & Eden, 2008). In anticipation of the burgeoning future in energy medicine, Feinstein and Eden (2008) identified six pillars to enhance current models of conventional medicine. The first pillar, reach, identifies how energy medicine has the potential to address biological functions at their energetic roots. The second pillar, efficiency, refers to the capability of energy medicine to regulate biological functions with accuracy and speed. The third pillar, practicality, explains the ease of energy medicine approaches as well as the economic and noninvasive application of them. The fourth pillar, patient empowerment, suggests the appropriateness of most energy medicine practices for use at home and implementation by patients themselves. The fifth pillar, quantum compatibility, refers to the exploration of methods that impact consciousness and incorporate distance healing. Lastly, the sixth pillar, holistic orientation, promotes the interconnection of mind, body, and spirit for achieving greater wellbeing. Together, the
six pillars establish a theoretical basis for selecting energy medicine practices as a complement to conventional care methods.

A second theoretical foundation is energy field theory. Curtin (2012) attributed his justification for the practice of psychotherapeutic Reiki to energy field theory, which shares basic tenets with energy psychology. Energy field theory rests on the premise that subtle energy exists at the root of all life forms and vibrates at different frequencies throughout the body’s energy fields (Curtin, 2012; Lake, 2007). He depicted Ki energy as flowing in and out of the Human Energy Field of each person, which is uniquely constructed by individual genetic makeup and life experience. Seven subtle energy layers surround each person, and each successive layer vibrates at a higher frequency than the one beneath it. From the closest to the furthest from the physical body, the layers are: the etheric body, the emotional body, the mental body, the astral body, the etheric template, the celestial body, and the causal body (Stephenson, 2008). The first three subtle energy bodies relate to one’s physical existence, the astral body acts as a bridge between the first three bodies and the upper three bodies, and the last three subtle energy bodies correlate with one’s spiritual existence. Diverse experiences and processes have the potential to disturb particular energy layers and throw them out of balance. Energy practices like Reiki are purported to help restore balance by restoring the vibrations of the energy layers.

A third theoretical foundation of Reiki is the chakra system. Located on the etheric layer, which connects the physical body with higher energy layers, the chakras are conceptualized as an energy channel that flows vertically through the center of the body from the lowest chakra located at the base of the spine to the highest located at
the crown of the head (Curtin, 2012). In theory, the chakras pull Ki through the body. The freedom and completeness with which Ki moves from lowest to highest chakras determines the extent to which the chakras are functioning well and, thereby, manifesting in an individual's actual and perceived sense of health and wellbeing (Koda, 2008). Each of the seven chakras corresponds with one of the seven layers of the Human Energy Field (Eden & Feinstein, 2008). Subtle energy becomes compromised when maladaptive thoughts or feelings block or interfere with one or more of the chakras (Rand, 2011). By scanning and activating the various chakras, Reiki practitioners attempt to balance the energy bodies associated with each area.

The first, or root, chakra is located at the base of the spine. It energizes the physical body, including the bones, blood, muscles, and tissues. The root chakra connects one to the earth and is related to survival, security, and attachment (Curtin, 2012; Koda, 2008). The second, or sacral, chakra is located in the lower abdomen, immediately above the pelvis. It energizes the bladder, spleen, and sexual organs and is related to issues surrounding creativity, emotionality, and sexuality. The third chakra, or solar plexus, is located between the chest and the bellybutton. It energizes the stomach, diaphragm, and large intestine. The solar plexus connects one's mental and emotional processes and is related to issues of power, stress, balance, and individual identity. The fourth, or heart, chakra is located in between the lungs, in the center of the chest. It energizes the heart and circulatory system and is related to issues of love, empathy, relationships, beauty, and self-esteem. The fifth, or throat, chakra is located in the throat and encompasses the area between the heart and the forehead. The throat chakra energizes the throat, thyroid, ears, and jaw. It is related to issues of communication,
self-expression, and symbolic thinking. The sixth, or brow, chakra is located in the forehead, near the pineal gland. The brow chakra energizes the endocrine and nervous systems. It is related to issues of intuition, dreams, memory, and visualization. The seventh, or crown, chakra is located at the top of the head and points upward to the heavens. The crown chakra energizes the brain and the pineal gland. It is related to issues surrounding spiritual guidance, connection to the divine, and intellectualization (Curtin, 2012; Koda, 2008).

Effectiveness of Reiki

The effectiveness of Reiki as a CT to conventional medical care has yet to be fully understood. However, most of the existing literature on Reiki can be found in the medical field, where it has been offered as a cost-effective and non-invasive option for improving patient care (Rand, 2015b). Reiki has expanded to numerous hospitals nationwide as a complementary health care service provided by doctors, nurses, and auxiliary staff. In 2007, over 800 U.S. hospitals listed Reiki as a routine treatment offered to patients (Gill, 2008). Preliminary medical research has demonstrated that Reiki has the potential to reduce stress, anxiety, pain, and physiological symptoms as well as enhance mood and wellbeing. Several researchers have investigated the effects of Reiki on medical and mental health conditions. In the following section, I review them and critique their results in light of the quality of methodology used in their studies.

Reiki in Medical Settings

Three research groups have assessed the effect of Reiki on diagnosed medical diseases. Meland (2009) studied the stress-related effects of eight Reiki sessions over the course of four weeks on six elderly participants diagnosed with dementia. In the
case study assessment of the qualitative data, the nurse working with the participants utilized the Wong-Baker Smiley Face Scale, self-report, and observation to measure participants’ pain and sense of wellbeing. Overall, the participants reported feeling more relaxed and less anxious, and their caregivers described them as being less irritable. Although blood pressure and heart rate were also obtained, the focus of the data in this study was on unstructured self-report and observation. Findings might be stronger if the researcher had utilized structured interviewing or a reliable self-report form.

Fleisher et al. (2013) also included levels of distress as outputs for their research on cancer patients ($N = 213$) who had received at least one Reiki session at a medical oncology center. Quantitative analyses revealed a statistically significant decrease of more than 50% in self-reported distress and fatigue. Qualitative analyses conducted from participants’ written feedback of the Reiki program conveyed an increase in overall relaxation and improved spiritual wellbeing. This mixed methods study provided a more comprehensive picture of cancer patients’ experience of Reiki. However, this study was limited to patients’ first treatment session only. It would be helpful to know whether the positive results extended to additional sessions.

In a study conducted by Cuneo et al. (2011), registered nurses received Reiki I training for self-practice. After three weeks of practicing Reiki on themselves, nurse participants were found to experience a statistically significant decrease in work-related stress as measured using Cohen’s Perceived Stress Scale. Process diary entries written by the participants further indicated improvements in sleep and relaxation. Given that there was no control group in this study, the likelihood for the placebo effect was high. Also, the sample size was very small ($N = 17$).
Several researchers from the medical literature on Reiki sought to determine the impact of Reiki on mood, wellbeing, and quality of life. Orsak, Stevens, Brufsky, Kajumba, and Dougall (2015) examined variables of mood and quality of life in 36 chemotherapy patients who were assigned to either a companionship group or Reiki treatment. Participants in the treatment group received Reiki from one of six Level II or Master-level Reiki practitioners. Participants in the companionship group were accompanied by one of the Reiki practitioners during chemotherapy but were not physically touched or given therapeutic intervention. Data from the two groups were also compared to data collected from former patients who had received care as usual. The Reiki and companionship groups had similar outcomes, with both resulting in a medium effect size (partial $\eta^2 = .08$), indicating significant improvements in quality of life across time. Whereas this study indicated that Reiki was more effective at improving patients’ quality of life than care as usual, it seemed to have no greater impact than companionship groups, which are more cost-effective than Reiki. Catlin and Taylor-Ford (2011) evaluated 189 outpatient chemotherapy recipients’ experiences of one of three treatments using the Healing Touch Comfort Questionnaire and the Well-Being Analog Scale. Participants were randomly assigned to a control, sham Reiki placebo, or Reiki group, with 63 in each group, for one administration of the assigned intervention. Research findings indicated that both Reiki and the sham Reiki placebo were statistically significant in increasing patients’ levels of comfort and wellbeing. The researchers attributed the positive outcomes to the presence of a nurse providing one-to-one support rather than to the particular treatments.
Anxiety and pain emerged the most frequently in the medical research as variables of primary concern. Thrane and Cohen (2014) conducted a systematic literature review of randomized clinical trials using Reiki to treat pain and anxiety. One such trial by Tsang, Carlson, and Olson (2007) used a randomized crossover design in which participants received sequences of two conditions: Reiki sessions and rest. The participants \((N = 16)\) revealed a decrease in anxiety and large effect size \((d = .83)\) for cancer patients in the Reiki condition from before their first treatment to their last. Those same patients experienced a statistically significant decrease in pain and a medium effect size \((d = .76)\). Comparable results were not found in the rest condition. Similarly, in a randomized control trial investigating the impact of Reiki treatment on women’s symptoms of anxiety and pain after undergoing a hysterectomy, Vitale and O’Connor (2006) reported results indicating a statistically significant decrease in anxiety and a large effect size \((d = 1.36)\) for their 10 participants receiving Reiki, as well as a decrease in pain after surgery and a borderline large effect size \((d = .79)\). Compared to the usual care group \((n = 12)\), the Reiki treatment group took less pain medication at three time measurements with large effect sizes. Gillespie, Gillespie, and Stevens (2007) designed a 12-week randomized control trial for adults living with Type 2 diabetes. The 207 participants were divided between three treatment groups: Reiki, sham Reiki, and usual care. At the end of the intervention, the researchers discovered no statistically significant differences in total pain between the three groups. Concluding their review, Thrane and Cohen (2014) offered the following suggestions for future research on Reiki’s effect on pain and anxiety: (1) Use three-group designs that include a placebo treatment; (2) utilize crossover designs to ensure all participants receive the
intervention; (3) standardize intervention protocol for greater comparability; and (4) consider Reiki’s appropriateness for various conditions.

Although most medical research indicates Reiki’s efficacy for reducing pain and anxiety, Potter’s (2007) analysis of 32 women undergoing breast biopsy conveyed no statistically significant mean differences in anxiety levels between the Reiki treatment group and the conventional care control group. However, Purnell’s (2007) commentary on Potter’s study exposed design flaws regarding the expertise of the Reiki treatment providers and the inherent challenge of subjecting a subtle energy healing practice to a scientific paradigm. Miles (2003) piloted a preliminary study of HIV patients at a hospital clinic who reported symptoms of pain related to their diagnosis. Upon receiving Reiki I training, they were assigned to self-administered or peer-administered Reiki treatment groups. Immediate declines in pain and anxiety from pre- to post-evaluation scores were determined after four days of treatment, with no statistically significant difference in results between the two treatment groups.

Fleisher et al. (2013) and Meland (2009), mentioned earlier, included additional variables of anxiety for Reiki treatment with cancer and dementia patients. Cancer patients \((n = 213)\) reported a 50% or greater reduction in anxiety after their first session (Fleisher et al., 2013), and 5 out of 6 participating elderly dementia patients reported a reduction in anxiety after eight Reiki sessions (Meland, 2009). In a study involving 118 cancer patients undergoing chemotherapy, 22 received a full treatment of Reiki, which was identified as four sessions (Birocco et al., 2012). Pain and anxiety scores for those 22, recorded using a Visual Analog Scale, decreased from 4.4 to 2.32 and 6.77 to 2.28, respectively. The volunteer Reiki practitioners in this study were provided with two years
of theory and training, which likely contributed to the participants’ positive reports and represented a strength of the research design. Additionally, Cassidy, Collins, Cyr, and Magni (2010) used an experimental design to evaluate Reiki’s impact on preoperative anxiety in adult women at an ambulatory surgery center. Participants were assigned to one of two treatment groups: Reiki with music or music alone. The researchers found a statistically significant decrease in anxiety scales for the 20 patients receiving the experimental Reiki treatment with music as compared to music alone. Essential information such as length of intervention, group assignment, and control group data were not reported in this article.

Physiological symptoms including heart rate, heart rate variability, and blood pressure, indicate general health and wellness in the medical field. Several researchers have examined changes in these symptoms to determine Reiki’s effectiveness. Pizzinato et al. (2012) and Diaz-Rodriguez et al. (2011) studied Reiki’s impact on heart rate variability, which serves as a marker for heart health and fitness. In the first experiment, participants receiving two Reiki treatment sessions were evaluated to find a statistically significant stronger improvement in heart rate variability upon receiving the Reiki treatment than the control rest period (Pizzinato et al., 2012). Diaz-Rodriguez et al. (2011) measured heart rate variability, which is desired for its indications for self-regulation and resilience, in 21 mental health care professionals with burnout syndrome. They implemented rigorous methodology with a random assignment, repeated measures, crossover, placebo-controlled, single-blind experimental design. Those receiving Reiki treatment experienced statistically significant higher heart rate variability and body temperature at the conclusion of treatment than the sham Reiki placebo
group, suggesting improvements in heart functioning and increased relaxation. Mackay, Hansen, and McFarlane (2004) and Cassidy et al. (2010) observed the effects of Reiki on blood pressure. The first experimental study included 66 hypertensive patients who were assigned to one of three groups: control, sham Reiki placebo, or experimental Reiki (Mackay et al., 2004). Analysis of variance results revealed that although all three groups showed a decrease in diastolic blood pressure, the drop was greatest in the experimental group ($p < .001$). The experimental design by Cassidy et al. (2010), which was mentioned earlier, yielded a decrease in heart rate and systolic blood pressure for preoperative patients receiving Reiki with music. Similar to the research reviewed earlier, those studies conducted by researchers who utilized both a placebo and a control group provided the most robust information about Reiki’s effect on participants’ physiological symptoms.

As presented in this section, Reiki has been studied primarily as a treatment approach for individuals suffering pain and other physiological symptoms resulting from a medical condition. Researchers have discovered that it has potential to reduce pain, improve blood pressure and heart functioning, increase one’s sense of relaxation, and decrease anxiety leading up to medical procedures. Although much less has been written about Reiki’s use in the mental health profession, these findings provide a strong basis for its conceivable effectiveness in clients receiving counseling for the diminution of anxiety and the enhancement of mindfulness.

Reiki in Non-Medical Settings

Beyond the medical literature, the mental health literature contains studies on the effect of Reiki on mood and depression. In 2011, Bowden, Goddard, and Gruzelier
repeated their 2010 randomized controlled single-blind trial of Reiki’s impact on depression. Forty university students received six sessions of either guided relaxation alone or guided relaxation with Reiki and provided self-report measures regarding mood, illness, and sleep. The researchers waited five weeks to follow up with the participants, thereby indicating a strength of this study; most research on the effect of Reiki has been conducted immediately or shortly after the conclusion of treatment. Whereas the experimental group presented a progressive improvement in mood in both studies, only the earlier study (2010) demonstrated a greater diminution in symptoms of illness. Shore’s (2004) blind study on 46 adults presenting with depression indicated a statistically significant reduction in depressive symptoms and a large effect size after six weeks of hands-on Reiki or distance Reiki, compared to a placebo group ($\eta^2$ ranging from .09-.18 for hands-on; $\eta^2$ ranging from .14-.18 for distance). Retested one year later, Shore found the treatment recipients’ outcomes had persisted ($\eta^2$ ranging from .12-.44 for hands-on; $\eta^2$ ranging from .13-.44 for distance). Again, the lapse of time between treatment and follow-up implies that Reiki may have a significant and lasting impact on individuals with depression.

Charkhandeh, Talib, Yaacob, and Mansor (2012) also studied the effects of Reiki on depression, but they specifically targeted adolescents diagnosed with a mental disorder. Using the Children’s Depression Inventory, the researchers measured the participants’ ($N = 65$) symptoms of depression after receiving six weeks of distance Reiki therapy. The researchers made no mention of a control group as a source for comparison. The results revealed a statistically significant decrease in depression scores from pre-test to post-test with a large effect size ($\eta^2 = .35$). These findings are
particularly beneficial because the researchers provided the magnitude of Reiki’s impact on depression symptoms rather than simply reporting statistical significance.

Unlike most research on the effectiveness of Reiki, Engebretson and Wardell (2002) conducted a thematic analysis on volunteer participants’ (N= 23) experiences of their first Reiki session. The study resulted in themes relating to participants' liminal states of awareness and encounters with paradoxical symbolic phenomena. According to the researchers, the results upheld the nature of healing therapies in that body, mind, and spirit were connected in a unique way that allowed the participants to come into contact with paradox. These implications may support Schiller’s (2003) conceptualization of Reiki as a spiritual healing intervention that empowers individuals to engage in holistic self-care and may challenge prescriptive ideas of wellness.

To sum up this section, Reiki is likely to positively impact counseling clients’ mood and sense of wellbeing. Although the research to date lacks evidence that hands-on Reiki could improve states of anxiety and mindfulness, the current literature reflects positive outcomes for using Reiki to treat mental health concerns. The body, mind, and spirit integration inherent within Reiki also appears to align with the wellness model of counseling, thereby supporting the overarching objectives of the therapeutic enterprise.

Counseling with Reiki

Most of the information about using Reiki to complement traditional talk therapy is conceptual or anecdotal in nature. Although the evidence supporting the use of Reiki in counseling is lacking, several mental health researchers and practitioners have encouraged the integration and provided practical and ethical considerations in doing so (Curtin, 2012; Harrison, 2015; LaTorre, 2005). LaTorre (2005) asserted that Reiki
amplifies the connectedness aspect of the therapeutic relationship and exemplifies processes for clients to practice self-healing. She echoed the training recommendation to practice Reiki on oneself daily for three weeks prior to incorporating it into counseling sessions. The incubation period for self-treatment allows practitioners to center their minds, bodies, and spirits; increase comfort in their healing abilities; and strengthen personal boundaries to boost healthy detachment.

Harrison (2015) offered practical suggestions for mental health professionals desiring to use Reiki with clients in session. She recommended adding a description of Reiki, including training background, in informed consent documents. Moreover, she advised counselors and therapists to consult their professional ethical standards and legislative codes to determine how the Reiki should be given. Professionals who are prohibited by law or ethics from touching their clients may choose to use localized hands-off Reiki or distance Reiki as an adjunct to client treatment.

Psychotherapeutic Reiki Intervention

Curtin (2012) created a training manual for the explicit purpose of using Reiki in psychotherapy. Along with the four tasks of treatment mentioned earlier, he described how to incorporate specific Reiki techniques into counseling. A few he presented were imagery and visualization, body scanning, exploration and release, installing corrective messages, and meditation exercises. Imagery and visualization may be used to direct the client’s attention to the body-mind and access symptoms held there. Body scanning enables the RC to detect issues residing in the body. For this technique, the RC may invite the client to visually and sensually scan the body from head to toe for imbalances or restricted energy. Once the client has identified an area of tension, the RC may
proceed to exploration and release. While instructing the client to focus on breathing, the RC may give Reiki to the identified areas of tension. Next, the RC may instruct the client to explore thoughts or feelings that arise with an attitude of acceptance prior to releasing them. To install corrective messages, the client should first identify a chakra imbalance. While the RC gives it Reiki, the client and therapist repeat a corrective message for that chakra, such as “I honor the power within me” to the third chakra (p. 167). Meditation exercises can help when a client experiences powerful emotions. The RC may tell the client to visualize a relaxing place while employing the Sei Hei Ki technique to teach the client self-soothing practices. The presented recommendations and techniques served as the basis for this study’s psychotherapeutic Reiki intervention.

Conclusion

Reiki has existed as an energy healing treatment since the 19th century. Scholars have attempted to theorize how Reiki works, drawing from Feinstein and Eden’s (2008) six pillars of medicine, energy field theories, and the chakra system. Although scholars have yet to establish one consistent theoretical basis for Reiki, anecdotal reports of Reiki’s positive outcomes for recipients exist and include such benefits as enhanced relaxation, improved mood and wellbeing, and decreased pain. The literature from the medical field generally supports many benefits of Reiki, including improved physiological symptoms and reduced anxiety surrounding medical procedures (Cassidy et al., 2010; Diaz-Rodriguez et al., 2011; Fleisher et al., 2013; Meland, 2009; Pizzinato et al., 2012). Mental health research also supports the use of Reiki for decreasing symptoms of depression and augmenting one’s sense of wellness (Bowden et al., 2011; Charkhandeh et al., 2012; Shore, 2004). However, a gap remains in the
literature regarding the use of localized Reiki as a complementary therapy for counseling, as well as for its potential to improve clients' anxiety and mindfulness. A few Reiki practitioners have conceptualized the use of localized Reiki as an adjunct to traditional talk therapy, but it has yet to be studied as a viable treatment option. Using Curtin's (2012) manual as a guide, I intended to integrate Reiki into counseling sessions as a therapeutic intervention for clients with normal to borderline anxiety. In the following section, I will outline the methodology I utilized to study psychotherapeutic Reiki and present the steps I took to ensure that my research was conducted in a methodologically sound and ethical manner.
APPENDIX B

DETAILED METHODOLOGY
The purpose of this study was to determine the impact of psychotherapeutic Reiki on clients receiving counseling services. Specifically, I aimed to investigate the effectiveness of psychotherapeutic Reiki on clients’ levels of anxiety and mindfulness. Given that the intervention is relatively new to the field of mental health counseling, I utilized an experimental single-case research design, through which I collected data from a small number of cases over a series of times (Lundervold & Belwood, 2000; Ray, 2015; Sharpley, 2007). Single-case design has been used as an exploratory design to demonstrate experimental control and evaluate counseling processes with only a few participants (Lundervold & Belwood, 2000; Ray, 2015). I selected single-case design to enable a deeper understanding of the change process involved in psychotherapeutic Reiki and preliminary evaluation of the intervention itself. The methodology I used for this research is outlined below, with attention to the research questions, selection of participants, instruments, procedures, data collection, data analysis plan, and study limitations.

Research Questions

The research questions for this study were as follows:

1. Is psychotherapeutic Reiki effective for decreasing clients’ levels of anxiety?

2. Is psychotherapeutic Reiki effective for increasing clients’ mindfulness?

Participants

For this study, I drew a sample from the American population of adults who seek out community counseling services for issues with borderline to clinical anxiety. Participants sought services from a clinic providing individual and group counseling across the lifespan and located on the campus of a large public university in the
southwestern region of the United States. Voluntary participation was open to both new and existing clients who met participation criteria: (a) was 18 years of age or older, (b) spoke English, (c) was a candidate for individual counseling, (d) was not involved in any other individual counseling service for the length of the study, and (e) scored in the borderline or clinical range for anxiety problems on the Adult Self-Report (ASR; Achenbach System of Empirically Based Assessment [ASEBA], 2015). If new to the clinic, participants were recruited at intake by an intake counselor. Counselors also recruited existing clients who were deemed appropriate for participation in the intervention. Clients’ fees for counseling were waived or reduced as compensation for their participation. In accordance with recommendations from Ray, Barrio Minton, Schottelkorb, and Garofano Brown (2010) regarding possible participant attrition, in order to retain at least three participants, I aimed initially to recruit at least six participants. Two participants were recruited and completed the baseline phase of the study only. One such participant withdrew participation shortly after completing the baseline phase due to an unanticipated change in her course of graduate study. Another participant attended three intervention sessions but did not return the following week and failed to respond to subsequent communication attempted by her RC. Four participants completed all the requirements of the research. Following are the four participants’ demographic and clinical information presented with pseudonyms to maintain confidentiality.

Participant One was Alan, a 57-year old, divorced Caucasian male who was self-employed at the time of the initial interview. A new client to the study site, he qualified for study participation due to his ASR anxiety scale scores falling in the clinical range.
He cited both anxiety and MDD as his presenting issues in need of counseling. His treatment goals included clarity of thought and increased motivation.

Alan was first diagnosed with posttraumatic stress disorder (PTSD) and MDD within the six months prior to initiating PR services. He attributed his mental health concerns to a few personal crises, including one son’s death by suicide, divorce, and a debilitating car accident. He reported that although he received mental healthcare in the past to help him deal with pain, he did not find it very helpful beyond appreciating the opportunity to vent. Alan identified his career field as sales and recognized that many of his anxiety symptoms resulted from occupational stress. He stated that his anxiety typically begins when he first wakes up and goes over everything he needs to accomplish for work that day. He expressed a desire to lessen the power of these worries.

At the time of the intake interview for the study, Alan also shared health related concerns, such as fatigue, burning eyes, and lightheadedness, which had persisted for more than three months. At the time of the interview, he reported having prescriptions for and regularly taking two antidepressant medications and one anti-seizure medication with no known side effects. Alan described his reason for agreeing to participate in the study as openness to finding help for his mental health concerns.

Participant Two was Gabriela, a 22-year old single female of Asian and Mexican ethnicity. She worked as a writing consultant at a university while completing the requirements for her bachelor’s degree. An existing client in talk therapy for nearly 18 months prior to participation in the study, she qualified for participation due to her ASR anxiety scale scores falling in the clinical range. Gabriela cited depression and anxiety
as her presenting issues in need of counseling. She stated that she would like to become more comfortable with her range of emotional expression. Her goal for treatment was to be at peace with life events and reduce the power they had over her.

Gabriela reported she had received counseling services in the past with varying degrees of success and benefit. She attributed her initial need for counseling to the suicide of her romantic partner. She stated that her most recent counseling experience had proven to be the most helpful. Gabriela and her previous counselor agreed that she could potentially benefit from forming a therapeutic relationship to a different counselor since finding success in rebuilding her trust in others.

Although Gabriela had never been given a specific mental health diagnosis, she believed she exhibited symptoms for depression and anxiety over the past few years. At the time of the interview, she reported having a prescription for an antidepressant and taking it as suggested. She stated that her doctor recently dropped her dosage due to unwelcome side effects, but she continued to experience milder side effects of vivid dreams and sweating at night. Other than suffering a minor injury from a recent car accident, Gabriela did not indicate having any illnesses, hospitalizations, or mental health concerns. She identified the spiritual component of PR as one reason for participating in the study. Additionally, she hoped that it would help her manage her symptoms of depression.

Participant Three was Steve, a 40-year old, single Caucasian male who was a full-time graduate student at the time of the initial interview. A new client to the study site, he qualified for participation due to his ASR anxiety scale scores falling in the clinical range. He stated that his presenting issues were anxiety, depression, and
loneliness. He identified himself as a gay man and reported having trouble initiating and sustaining fulfilling romantic relationships. He also acknowledged experiencing distress in his program of study in a fine arts field. His treatment goals included knowledge of his mind and the exploration of mindfulness.

Steve stated that he had been diagnosed with the following mental health diagnoses, although he did not believe that they were all accurate or current: generalized anxiety disorder, major depressive disorder (MDD), bipolar disorder, and attention deficit hyperactivity disorder (ADHD). He reported having previously received mental health services from various community agencies and the local Veterans Affairs clinic over the past five years. Most recently, Steve had received counseling services from another clinic on the same university campus as the study site. His terminal session took place several months prior to commencing participation in the present study. He reported having had fleeting thoughts of suicidal ideation throughout his life, which he attributed to his father’s death by suicide when he was two years old. I conducted a brief suicidal risk assessment upon this admission and determined his current risk for suicide to be low. Steve stated that he had a history of abusing drugs and alcohol but that he had mostly gotten it under control. He described his current substance use as social drinking and smoking marijuana an average of one time per week.

At the time of the intake interview, Steve disclosed shared that he had recently recovered from the following illnesses within the past couple of weeks: influenza, pneumonia, and strep throat. He also reported having prescriptions for and taking as suggested without side effects, an ADHD medication, an antidepressant, and an
antipsychotic medication. Steve explained his desire to participate in the study as openness to any kind of positive reinforcement for his life stage and psychological growth.

Participant Four was Natalie, a 35-year old, divorced Caucasian female who worked as an administrative assistant at a university at the time of the initial interview. She had received individual talk therapy with another counselor at the study site for nearly two years prior to participation in the study, and she qualified for participation in due to her ASR anxiety scale scores falling in the clinical range. She explained that her presenting issues all stemmed from anxiety. In particular, she reported worrying about judgment from others, job security, and getting accepted to a graduate school program. Natalie identified herself as a working mother who had recently graduated with her bachelor’s degree. She expressed mild psychological and safety concerns for herself and her daughter in regards to her ex-husband’s past stalking behavior and aggressive tendencies. She reported having solicited police support in prior circumstances but felt that she and her daughter were not in any present danger. Her treatment goals included feeling more peaceful about her life and finding success in her career pursuits.

Natalie reported having received counseling services on and off since 1998. She first initiated counseling for depression and had continued over the years for various reasons, including support for her diagnoses of anxiety and ADHD. Although she had current mental health diagnoses, she reported having no concerns about keeping them under control. At the time of the interview, Natalie had prescriptions for and was taking as suggested without side effects, an ADHD medication and an anti-anxiety medication. She did not indicate any other recent health concerns, illnesses, or hospitalizations.
Natalie described her reasons for participating in the study as a willingness to experience different forms of counseling, a desire to help with research, and a desire to become more mindful of her anxiety responses.

Instrumentation

Sources of data came from the results of three instruments. The first instrument, the ASR (ASEBA, 2015), was administered prior to the first counseling session as a qualifier for eligibility and requirement by the clinical setting. The remaining two instruments were the Adult Manifest Anxiety Scale (AMAS; Reynolds, Richmond, & Lowe, 2003) and the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003). The AMAS and MAAS were administered weekly throughout the baseline and treatment phases.

The Adult Self-Report

The ASR is a self-administered instrument used for the assessment of adults and comprised of the following scales: adaptive functioning, syndrome, DSM-oriented, and substance use (Achenbach & Rescorla, 2003). The ASR was normed for adults spanning the ages of 18 to 59. The normative data was obtained over the course of two years through home interview surveys from a national probability sample. The ASR includes 126 scaled response items, for which respondents are asked to describe themselves over the past six months as “not true,” “somewhat or sometimes true,” or “very true or often true” for them. The instrument also features a demographics section that is comprised of scaled, checkbox, and fill-in-the-blank response items pertaining to the respondent’s gender, age, ethnicity, education, type of work friends, relationships, family of origin, job satisfaction, illnesses, disabilities, and presenting concerns.
retained the demographic information as a breakdown of the participants’ personal characteristics to determine the representativeness of my sample.

The two ASR scales I focused on for the screening of eligible participants were the empirically based syndrome scale and the DSM-oriented scale because both scales specifically addressed symptoms of anxiety. The syndrome scale consists of eight subscales that measure a respondent’s self-reported levels in the following symptom categories: anxious/depressed, withdrawn, somatic complaints, thought problems, attention problems, aggressive behavior, rule-breaking behavior, and intrusive behaviors (ASEBA, 2015). The DSM-oriented scale consists of six subscales that compare a respondent’s symptoms to diagnoses found in the Diagnostic and Statistical Manual of Mental Disorders (2013). For both scales, subscale means are interpreted as falling into normal, borderline, or clinical score categories.

Validity data for the ASR was derived from content validity, criterion validity, and construct validity (Rescorla & Achenbach, 2004). Achenbach and Rescorla (2003) presented the instrument’s associations with diagnoses and other assessment tools as a basis for the ASR’s construct validity. Specifically, every problem scale in the ASR was significantly correlated with every Symptom Checklist-90-Revised scale. Content validity was established over a lengthy process of item testing and revision. Criterion validity was confirmed through the significance in discrimination between referred and nonreferred adults on the various scales.

Rescorla and Achenbach (2004) reported good reliability for the ASR supported by 1-week test-retest results and found substantial long-term stability of the scores over a 2-year time span. Mean alpha coefficients for the empirically based syndrome and
DSM-oriented scales were .83 and .78, respectively. The subscales of greatest interest for this study, anxious/depressed and anxiety problems, yielded reliability coefficients of .88 and .68, respectively, indicating relatively high internal consistency reliability for the anxious/depressed subscale and acceptable reliability for the anxiety problems subscale (Nunnally, 1967).

The Adult Manifest Anxiety Scale

The AMAS measures the nature and level of anxiety as experienced by adults (Reynolds, Richmond, & Lowe, 2003). Three versions of the AMAS address different life stages: AMAS-C for college students, AMAS-A for adults aged 19-59, and AMAS-E for elderly adults. The AMAS includes 36-49 questions, depending on version. Each version of the AMAS contains a worry/oversensitivity scale, a physiological anxiety scale, and a lie scale to test response validity. The AMAS-A and the AMAS-C also include a scale for social concerns and stress. I utilized the AMAS-A version for this study because all of the participants fell into the young to middle adulthood range. For the 36 questions of the AMAS-A, the worry/oversensitivity scale comprises 14 test questions, the physiological anxiety scale comprises 9 questions, the social concerns/stress scale comprises 7 questions, and the lie scale comprises 6 questions. The total anxiety score is the sum of all subscales, excluding the lie subscale (Reynolds, Richmond, & Lowe, n.d.). The AMAS-A follows a self-report format, and respondents are instructed to answer yes or no to each item. According to Reynolds et al. (n.d.), the instrument takes only 10 minutes to administer and is easy to score. The sum of the number of yes responses indicates the total score, with higher scores indicating greater
anxiety. Because the AMAS-A may be utilized to examine the existence of anxiety as a symptom or a distinct disorder, it does not include cutoff scores.

Test-retest reliability estimates for the AMAS-A are considered strong, with alpha coefficients of .92 for Total Anxiety scale scores (Lowe & Reynolds, 2004). Temporal stability alpha coefficients for the worry/oversensitivity, physiological anxiety, and lie scales ranged from .85 to .89, indicating relatively high internal consistency reliability (Nunnally, 1967). Lowe and Reynolds also demonstrated construct, convergent, and discriminant validity for the AMAS-A. Significant correlation coefficients were found between the Total Anxiety and the State-Trait Anxiety Inventory scale scores as well as between the subscales of the AMAS-A and the subscales of the Multiscore Depression Inventory. Reynolds et al. (n.d.) suggested that the absence of known practice effects from responding to the AMAS-A indicates that the instrument is appropriate for repeated administration. Thus, the scale fit the weekly administration design necessary for both phases of this study. I determined participants’ stability at baseline using AMAS-A data.

Mindful Attention Awareness Scale

Developed by Brown and Ryan (2003), the MAAS is a self-report instrument used to measure the frequency of mindful states. The construct of mindfulness is considered to be an attribute of consciousness that enhances psychological wellbeing and is predictive of self-regulation. The authors purported the instrument’s objective is to gauge awareness of present-moment experiences. The instrument takes 10 minutes or less to complete. It consists of 15 statements that respondents are instructed to answer using a six-point Likert-type scale through which respondents rate the frequency with which they experience each statement in daily life. Administrators of the measure
calculate the mean of the 15 items to determine the respondent’s dispositional mindfulness. The highest score is 6, and the lowest score is 1, with an average score in the 3-4 range. Higher scores on the MAAS indicate elevated states of mindfulness.

The MAAS was compared to other measures to demonstrate convergent, discriminant, and criterion validity (Johnson, 2007). The MAAS was positively correlated with two other mindfulness scales: the Freiburg Mindfulness Inventory and the Cognitive and Affective Mindfulness Scale. It has good test-retest reliability and internal consistency alphas ranging from .82 to .87. The instrument’s reliability coefficient of .81 after multiple administrations indicates its suitability for weekly administration for both phases of the current study.

Procedures

I used an AB design for my single-case methodology (Engel & Schutt, 2008). The basic structure of single-case design features a baseline phase (A) followed by an intervention phase (B). I measured the clients’ symptoms of anxiety and mindfulness repeatedly throughout both phases to assess change as a result of the intervention. An ABA structure, which is common for single-case methodology, would extend the research to include a withdrawal phase. According to Engel and Schutt (2008), a withdrawal phrase could potentially complicate the carryover effect of therapy because the overall goal of counseling is for improvements to maintain over time after the intervention has discontinued. Moreover, I had ethical concerns about completely withdrawing treatment for clients who might benefit from additional services. Therefore, the basic AB design was more applicable for the purpose of my study. This sequence provided for the analysis of change that coincided with the PR intervention phase and
afforded fundamental “evidence of an association between the intervention and the change” (Engel & Schutt, 2008, p. 229; Rubin & Bellamy, 2012).

Recruitment

Prior to beginning the data collection portion of this study, I identified two additional colleagues to help me administer the intervention and assessments. They were properly trained and prepared to take on this kind of research, as evidenced by the following qualifications: (1) credentialed as Licensed Professional Counselor – Interns or Licensed Professional Counselors; (2) completed training in Reiki I and II; (3) practiced Reiki healing for a minimum of 30 days prior to working with study participants; (4) provided certificate proof of their completed training in human subjects protection; and (5) participated in preparatory and weekly activities to standardize treatment, as detailed below. The assistant researchers and I met regularly for peer supervision to ensure consistency with the treatment implementation. Before beginning the baseline and intervention phases of the study, I obtained approval from the Institutional Review Board (IRB) at the University of North Texas.

After securing approval from the director of the training clinic, I commenced screening through intake interviews. Intake counselors working at the clinic provided information about the study to incoming clients and assessed their level of interest utilizing an IRB-approved recruitment script. The intake counselors administered and scored new clients’ ASR responses and submitted to me the names of interested clients who qualified. Counselors of continuing clients reviewed ASR data for eligibility and submitted the names of qualified clients for consideration for participation. After participants were identified, I provided them with informed consent documents
explaining the structure of the research and potential risks and benefits to the participants, as established in the IRB approval process (see Appendix E). All data were collected and analyzed independently to assess the changes that occurred for each individual. I conducted an opening interview with each participant in the first week of data collection to confirm demographic information, inquire about prior mental health services and existing health conditions, and ascertain personal goals for the counseling intervention, as well as attend to any additional questions they might have about the study (see Appendix F).

Data Collection

A distinguishing feature of single-case research design is that participants act as their own controls (Morgan & Morgan, 2008). The dependent variables – anxiety and mindfulness – were measured repeatedly before and during the intervention. A participant could move into the intervention phase only after a stable data pattern became apparent in the baseline phase, which then served as a basis for treatment evaluation. Thus, participants' symptoms were continuously compared against themselves over time.

The study formally began with the initial baseline phase of assessment. All participants completed the AMAS-A and MAAS weekly until a stable baseline in their AMAS-A results became evident. This phase lasted for a minimum of three weeks, which is in accordance with Engel and Schutt's (2008, pp. 209-212) recommendation that at least three observations are required to predict a participant's next scores. I determined that a stable baseline had been achieved by graphing each week's results and confirming with a single-case design expert that one of three graphic patterns had
emerged: a stable line (flat line with minimal variability), a trend (a descending or ascending line), or a cycle (ups and downs depending on the time the measurement was taken). Once a baseline was established, the participants moved into the intervention phase. During the intervention phase, participants engaged in 50-minute PR sessions once a week for a minimum of six sessions. Researchers have found brief counseling – 10 sessions or less – to be moderately effective and sufficient for lasting change (Draper, Jennings, Baron, Erdur, & Shankar, 2002; Howard, Kopta, Krause, & Orlinsky, 1986; Wong, Tambling, & Anderson, 2013). Furthermore, on average, Reiki practitioners deliver a minimum of four sessions to treat clients’ ailments (National Center for Complementary and Alternative Medicine, 2008). Participants continued to take the AMAS-A and MAAS following their counseling session each week until a data pattern was established. Table 1 provides specific information about each participant’s movement through the two phases of this study. All researchers maintained weekly written documentation of client assessment, conceptualization, and progress, and stored all documentation in a secured filing cabinet at the site of the study.

Table 1

*Participant Procedures Throughout Baseline and Intervention Phases*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># of Weeks</td>
<td># of Weeks</td>
</tr>
<tr>
<td>Alan</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Gabriela</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Steve</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Natalie</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>
Psychotherapeutic Reiki Intervention

As previously described, PR is a conceptual framework for integrating Reiki with traditional talk therapy. Still in its infancy, this intervention was adapted as needed for the individual needs of each participant. The three RCs comprised the research team and regularly counseled clients at the identified clinic setting. They volunteered to assist with this research, and their Reiki training was provided by a reputable Reiki Master Teacher more than six months before the start of the study, giving them ample time to practice Reiki on friends and relatives prior to working with clients.

Additionally, I, the primary researcher, taught the assisting RCs selected techniques recommended by Curtin (2012), and together we solidified a list of standard PR approaches (Appendix G) prior to beginning the research. Keeping our clients’ original goals in mind, we structured all PR treatment around the following four treatment tasks: practicing presence, exploring the body-mind, releasing and clearing energy blocks, and installing a corrective experience. Mirroring the varying subjective experiences of each participant, we attended to different treatment tasks at different times throughout the intervention phase. Every session featured an element of conventional Reiki practice, with the primary focus on scanning the body for energy blocks and sending healing energy as needed. We utilized the following additional techniques recommended by Curtin (2012) to achieve our treatment tasks: imagery and visualization; noticing, allowing, opening, and relaxing; exploration and release; sweeping; installing corrective messages to chakras; and meditation exercises. The research team met weekly for peer supervision and treatment modification as needed.
I conducted follow-up interviews during the final week of the study to fully assess any changes participants perceived throughout the span of the research (Appendix F). According to Ray (2015), the participants’ interview responses provide valuable context for data interpretation. After the study ended, participants were invited to continue in PR or counseling as usual. Three participants continued receiving a mixture of PR and conventional counseling services at the study site after fulfilling the research requirements. The fourth participant initiated free counseling services closer to home.

Data Analysis

I examined the results of this study primarily through visual analysis. Standard visual analysis consists of three components: level, trend, and variability (Ray, 2015). Vannest and Ninci (2015) recommended extending visual analysis to six evaluation variables when used in conjunction with effect size indices: level, trend, variability, overlap, intercept gap, and consistency. However, consistency does not apply in the present study because it would require analysis of data from multiple phases within the same condition (e.g., ABAB designs). Thus, my visual analysis incorporated the following five visual analysis points. Level refers to the central tendency of the data for each phase, thereby providing a snapshot of client progress between phases. Trend represents the slope of assessment data within each phase. The slope resulted from the line of best fit for the data within each phase. Variability refers to the trend comparison to each data point in a phase, which is conveyed as the standard deviation of assessment results (Ray, 2015). Overlap represents to what degree the data points in the baseline phase match the range of data scores in the intervention phase, and vice versa (Vannest & Ninci, 2015). Lastly, intercept gap refers to the change in behavior
between the baseline and intervention phases. This change may be interpreted in terms of immediacy or accumulation. I chose this method of analysis because it offers the greatest insight into the individual data points of each participant’s treatment process.

Four steps are involved in the visual analysis procedure (Kratochwill, 2010):

1. The researcher documents baseline data pattern.
2. The researcher studies data from each phase for within-phase patterns.
3. The researcher compares data from one phase to data from an adjacent phase to conclude whether control of the independent variable was linked to an effect.
4. The researcher integrates information from all phases to determine if there was an experimental effect (evidence of three incidences of an effect at three different times).

For the within-phase analysis, I plotted the participants’ data from the AMAS-A and MAAS from each phase on individual graphs using Microsoft Excel software and examined them for level, trend, and variability. I identified the mean score of the data from each phase for each participant (level). The closer data points were to the line of best fit, the more stable they seemed (trend). Lastly, I visually inspected the data within each phase and made interpretations based on standard deviations of the level means (variability). In order to account for potential errors made from misinterpreting graphed data, I confirmed all of my interpretations of the data with an expert in single-case design. I met regularly with the expert, who earned her doctorate in counseling and has conducted and refined single-case research methods in the counseling profession, to jointly interpret baseline stability and analyze visual patterns in the data.
I also investigated between-phase patterns upon first implementation of the treatment phase. I analyzed the weight of overlap from phase to phase, recognizing that minimal overlap implies a larger effect (Horner et al., 2012). Additionally, I looked for immediacy of the effect, which resembled data pattern deviations after the independent variable had been manipulated (intercept gap).

Lastly, in an attempt to determine the strength of the relationship between my variables, I calculated effect size using Nonoverlap of All Pairs (NAP) combined with visual analysis. I did this by using Vannest, Parker, and Gonen's (2011) online calculation technique to pair baseline data points with treatment data points and to identify how many pairs do not overlap. Finally, I interpreted the effect size of the treatment according to the following delineations offered by Parker and Vannest (2009): 0-.65 for weak, .66-.92 for medium, and .93-1.00 for strong effectiveness.
APPENDIX C

UNABRIDGED RESULTS
In this study, I analyzed the impact of PR on adult clients’ anxiety and mindfulness. I used the primary instrument, the Adult Manifest Anxiety Scale-Adult (AMAS-A), to measure the following subcategories of anxiety, in addition to engendering a total anxiety score for each participant: worry/oversensitivity, physiological anxiety, and social concerns/stress. As the primary measure, the AMAS-A total score was used to determine baseline stability. I utilized the secondary measure, the Mindful Attention Awareness Scale (MAAS), to measure each participant’s level of mindfulness throughout the course of the study. In this section, I present graphs of each participant’s scores as well as statistical data to assist in the analysis and interpretation of any perceived changes in participants’ behavior. The data collected from the assessments and follow-up interviews informed these results. Procedurally, I took the following steps to arrive at my findings: (1) hand-scored each assessment using the official manuals associated with each instrument; (2) graphed the subscale scores from the AMAS-A and the total scores from the MAAS on individual graphs; (3) used visual analysis to evaluate the data and interpreted the data with my research team; and (4) calculated and reported effect sizes for each scale and subscale using NAP effect size index.

Participant 1: Alan

Alan participated in 3 weeks of a baseline phase before beginning the intervention phase. He completed 6 PR sessions during his 6 weeks of intervention. Alan completed the AMAS-A and MAAS each week of the baseline phase and immediately after receiving PR throughout the intervention phase. Alan began the PR intervention phase the fourth week after achieving three weeks of stable AMAS-A data during the baseline phase.
AMAS-A Results

Table 2 lists the means, standard deviations, effect sizes, and correlation coefficients for each subscale of Alan’s AMAS-A scores. For all four subscales, the means decreased from intervention phase to baseline phase, indicating improvement in every area assessed. Table 3 displays Alan’s weekly AMAS-A data, and Figure 1 presents all of his data in graph format.

Table 2

Alan: Overview of AMAS-A Data

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline</th>
<th></th>
<th>Intervention</th>
<th></th>
<th>NAP</th>
<th>r</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
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<tr>
<td>Worry/Oversensitivity (WOS)</td>
<td>75.00</td>
<td>0.00</td>
<td>63.67</td>
<td>4.55</td>
<td>1.00</td>
<td>.96</td>
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<tr>
<td>Physiological Anxiety (PHY)</td>
<td>65.67</td>
<td>1.16</td>
<td>52.33</td>
<td>7.87</td>
<td>1.00</td>
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<tr>
<td>Social Concerns/Stress (SOC)</td>
<td>62.67</td>
<td>2.31</td>
<td>50.67</td>
<td>7.66</td>
<td>.89</td>
<td>.82</td>
</tr>
<tr>
<td>Total Anxiety (TOT)</td>
<td>69.33</td>
<td>1.53</td>
<td>59.00</td>
<td>5.40</td>
<td>1.00</td>
<td>.93</td>
</tr>
</tbody>
</table>

*Note.* Decreased mean scores indicate improvement.
### Table 3

*Alan: Weekly Data Points for AMAS-A Scores*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline</th>
<th>Intervention</th>
<th>Baseline</th>
<th>Intervention</th>
</tr>
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<tr>
<td></td>
<td>Week 1</td>
<td>Week 2</td>
<td>Week 3</td>
<td>Week 4</td>
</tr>
<tr>
<td>WOS</td>
<td>75</td>
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<td>PHY</td>
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<td>SOC</td>
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<td>TOT</td>
<td>68</td>
<td>71</td>
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*Note.* Decreased scores indicate improvement. WOS = Worry/Oversensitivity; PHY = Physiological Anxiety; SOC = Social Concerns/Stress; TOT = Total Anxiety.
Figure 1. Alan’s AMAS-A Scores During Baseline and Intervention. (Decreased scores indicate improvement).

Next, I evaluate Alan’s AMAS-A data by subscale in order to provide a more thorough understanding of how his anxiety changed throughout the study. I visually analyzed each subscale according to five points of evaluation: level, trend, variability, overlap, and intercept gap. I also calculated an effect size using the NAP statistic and interpreted the treatment’s effect size per anxiety subscale according to Parker and Vannest’s (2009) recommendations.

Figure 2 features Alan’s data points and trend line for Worry/Oversensitivity throughout the baseline and intervention phases of the study. Level analysis revealed a decrease in means from baseline phase \( (M = 75.0) \) to intervention phase \( (M = 63.67) \). Analysis of the trend line displayed a downward trend throughout the study \( (r = .96) \), indicating a significant relationship between PR and Worry/Oversensitivity. The scores in the baseline phase were unchanging at all three data points \( (R = 0.0; SD = 0.0) \), which indicated no variability and high stability in Alan’s Worry/Oversensitivity.
symptoms prior to receiving PR. After introducing the intervention, Alan’s scores became more variable, with a range of 13 and a standard deviation of 4.55. No overlap existed between data in the baseline phase and data in the intervention phase. Analysis of intercept gap revealed a difference in behavior from the last data point in the baseline phase to the first data point in the intervention phase, demonstrating an immediate decrease in Worry/Oversensitivity behaviors.

Figure 2. Alan’s Worry/Oversensitivity Scores During Baseline and Intervention. (Decreased scores indicate improvement).

In addition to visual analysis, I calculated the treatment’s effectiveness by comparing the data in each phase using the NAP statistic. First, I paired the data points from the baseline phase with the data points from the intervention phase for a total of 18 pairs. I analyzed each pair for improvement, deterioration, or no change over time (Parker & Vannest, 2009). To determine how much of the data overlapped, I used the following formula: Overlap Sum = n_{pos} + (0.5 \times n_{tie}). The overlap sum was 18. When divided by the total number of pairs, I calculated the NAP to equal 1.00, indicating a strong treatment effect.
Figure 3 portrays Alan’s data points and trend for Physiological Anxiety during the baseline and intervention phases of the study. Level analysis demonstrated a decrease in means from the baseline phase ($M = 65.67$) to the intervention phase ($M = 52.33$). Analysis of the trend line revealed a downward trend in Physiological Anxiety scores from baseline through intervention ($r = .94$). Alan’s scores in the baseline phase were very stable with low variability ($R = 2$; $SD = 1.16$) and became wider ranging and significantly more variable in the intervention phase ($R = 20$; $SD = 7.87$). There was no overlap between data in the baseline phase and data in the intervention phase since all data points in the intervention phase were lower than the data points in the baseline phase. Analysis of intercept gap indicated a slight but immediate decrease in behaviors from baseline to intervention. By the second intervention data collection, Alan’s scores demonstrated a substantial difference in behaviors, indicating a strong relationship between PR and Physiological Anxiety.

![Figure 3. Alan’s Physiological Anxiety Scores During Baseline and Intervention.](image)

(Decreased scores indicate improvement.)
I determined the effectiveness of the treatment using NAP. I paired each data point from the baseline phase with each data point from the intervention phase for a total of 18 pairs. The overlap sum of Alan’s Physiological Anxiety data was 18. When divided by the number of total pairs, I calculated that the NAP equaled 1.00, which indicates a strong treatment effect.

Figure 4 visually depicts Alan’s data points and trend line for Social Concerns/Stress throughout both the baseline phase and intervention phase of the study. Level analysis, determined by phase means, revealed a decrease in mean from baseline phase ($M = 62.67$) to intervention phase ($M = 50.67$). Analysis of the trend line displayed a downward trend ($r = .82$), which was largely affected by scores reported during the last five data collection points in the intervention phase. Alan’s Social Concerns/Stress scores were fairly stable until week 5, at which point his scores drastically decreased until regaining stability in the last three weeks. Comparing the two phases, his baseline scores demonstrated low variability ($R = 4; SD = 2.31$), whereas his intervention scores demonstrated high variability ($R = 18; SD = 7.66$). Two data points in the baseline phase (weeks 2 and 3) overlap at one data point in the intervention phase (week 4). No remaining data overlapped between phases. Intercept gap analysis revealed a cumulative difference in behaviors, as demonstrated by the means of the last two data points in the baseline phase ($M = 64$) and the last two data points in the intervention phase ($M = 46$). Behavior change was not apparent until the second week of intervention.
Beyond visual analysis, I utilized NAP to examine the intervention’s effect size. Pairing each data point from the baseline phase with each data point from the intervention phase, I got a total of 18 pairs. Using the overlap sum equation, I found that the overlap sum was 16. I divided the overlap sum by the total number of pairs and determined the NAP to be .89, which indicates a medium effect.

Figure 5 conveys Alan’s data points and trend line for Total Anxiety across the baseline and intervention phases of the study. I determined the level analysis by comparing the means from each phase. Alan’s scores revealed a mean decrease from baseline phase ($M = 69.33$) to intervention phase ($M = 59.0$). Trend line analysis demonstrated a downward trend ($r = .93$), which was largely affected by a nearly consistent decrease in scores throughout the intervention phase. Variability analysis indicated high variability between baseline phase ($R = 3; SD = 1.53$) and intervention phase ($R = 15; SD = 5.40$). Data was more stable in the baseline phase than in the intervention phase. There was minimal data overlap, as scores began to decrease from...
the baseline mean once the intervention was introduced. Analysis of intercept gap revealed a slight but immediate difference in behaviors from the last data point in the baseline phase to the first and second data points in the intervention phase.

![Graph showing TOT Scores over weeks in Baseline and Intervention phases.](image)

*Figure 5. Alan’s Total Anxiety Scores During Baseline and Intervention. (Decreased scores indicate improvement).*

In addition to visual analysis, I analyzed the intervention’s effectiveness by comparing the data in each phase using NAP. I paired all of the data points in the baseline phase with the data points in the intervention phase for a total of 18 pairs. The sum of overlapping data points was 18. When divided by the total number of pairs, I calculated that the NAP equaled 1.00, indicating a strong treatment effect.

**MAAS Results**

Table 4 presents the means, standard deviations, effect size, and correlation coefficient of Alan’s MAAS scores. Table 5 displays Alan’s weekly MAAS data, and Figure 6 illustrates all of his data in graph format. Alan’s scores revealed a mean increase from baseline phase \((M = 2.60)\) to intervention phase \((M = 3.18)\). Trend analysis across both phases revealed a moderate upward trend in MAAS scores \((r = \text{missing value})\).
.63). Analysis of variability indicated minimal variability between the baseline phase ($R = .80; SD = .46$) and the intervention phase ($R = 1.34; SD = .44$). The scores were most wide ranging in the intervention phase. Data visibly increased during the second week of the intervention phase and stabilized for two weeks before ending the intervention with his highest MAAS score of the study. There was moderate data overlap between phases. His initial MAAS score overlapped with the range of scores in weeks 7 and 8 of the intervention.

Table 4

*Alan: Overview of MAAS Data*

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th></th>
<th>Intervention</th>
<th></th>
<th>NAP</th>
<th>$r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>2.60</td>
<td>0.46</td>
<td>3.18</td>
<td>0.44</td>
<td>.86</td>
<td>.63</td>
</tr>
</tbody>
</table>

*Note.* Increased mean scores indicate improvement.
Table 5

*Alan: Weekly Data Points for MAAS Scores*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Baseline</th>
<th></th>
<th></th>
<th>Intervention</th>
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<tr>
<td></td>
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<td>Week 2</td>
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<td>Week 4</td>
<td>Week 5</td>
<td>Week 6</td>
<td>Week 7</td>
<td>Week 8</td>
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<td>MAAS</td>
<td>3.13</td>
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<td>3.4</td>
<td>3.4</td>
<td>3.07</td>
<td>3.13</td>
</tr>
</tbody>
</table>

*Note.* Increased scores indicate improvement.
**Figure 6.** Alan’s MAAS Scores During Baseline and Intervention. (Increased scores indicate improvement).

To analyze the treatment’s effectiveness, I compared the data points in each phase using NAP. I paired all of the data points in the baseline phase with the data points in the intervention phase for a total of 18 pairs. I calculated the overlap sum for these data pairs as 15.5. Then, I divided the overlap sum by the total number of pairs for a NAP of .86, which indicates a medium treatment effect.

Follow-Up Interview

Shortly after concluding the baseline and intervention phases of the study, Alan participated in a follow-up interview. Since first beginning the intervention, Alan started a new job in sales at a department store. He stated that he would not have been able to be as successful in his new career if it were not for his experiences participating in this study. He identified four personal outcomes from his participation: First, he reported a complete eradication of physical tremors. Second, he stated that he has a greater ability to initiate tasks and responsibilities he used to put off doing as a result of his anxiety. He also reported noticing an improvement in attention regulation and being able to focus...
without fear of missing out on something else. Lastly, he shared that he has noticed a significant change in the frequency of worrisome thoughts and tension. He reported no change in his heart rate but attributed that to having a pre-existing slow heart rate. He valued learning new tool to overcome stress, such as breathing exercises and self-healing practices. Overall, Alan reported having a positive experience and would be interested in receiving PR again in the future.

Participant 2: Gabriela

Gabriela completed 3 weeks of a baseline phase without intervention and 6 weeks of an intervention phase, during which she participated in 6 sessions of PR. Gabriela completed the AMAS-A and MAAS each week of the baseline phase and immediately after receiving PR throughout the length of the intervention phase. Gabriela began receiving the PR intervention after obtaining three similar Total Anxiety data points during the baseline phase. Her scores started to improve slightly before the intervention was introduced for three subscales, which could be attributed to her anticipation for restarting counseling services. The three weeks of her baseline phase coincided with the only time period in several months during which she was not actively receiving counseling services. Gabriela did not miss any scheduled appointments.

AMAS-A Results

Table 6 presents the means, standard deviations, effect sizes, and correlation coefficients for each subscale of the AMAS-A for both baseline and intervention phases. The means for all four subscales decreased from baseline phase to intervention phase. One subscale, physiological anxiety, experienced only a slight decrease, whereas the
others decreased one full point or more. Table 7 displays Gabriela’s weekly AMAS-A scores, and Figure 7 depicts all of Gabriela’s AMAS-A data in graph format.

Table 6

_Gabriela: Overview of AMAS-A Data_

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline</th>
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<th>Intervention</th>
<th></th>
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<th></th>
</tr>
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<tr>
<td></td>
<td>M</td>
<td></td>
<td>M</td>
<td></td>
<td>NAP</td>
<td>r</td>
<td></td>
</tr>
<tr>
<td>Worry/Oversensitivity (WOS)</td>
<td>65.00</td>
<td>1.73</td>
<td>63.50</td>
<td>1.97</td>
<td>.81</td>
<td>.16</td>
<td></td>
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<tr>
<td>Physiological Anxiety (PHY)</td>
<td>75.00</td>
<td>0.00</td>
<td>74.17</td>
<td>2.04</td>
<td>.58</td>
<td>.41</td>
<td></td>
</tr>
<tr>
<td>Social Concerns/Stress (SOC)</td>
<td>73.00</td>
<td>3.46</td>
<td>69.17</td>
<td>0.41</td>
<td>.81</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>Total Anxiety (TOT)</td>
<td>73.00</td>
<td>2.00</td>
<td>69.67</td>
<td>1.97</td>
<td>.89</td>
<td>.55</td>
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*Note.* Decreased mean scores indicate improvement.
Table 7

**Gabriela: Weekly Data Points for AMAS-A Scores**

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline Week 1</th>
<th>Baseline Week 2</th>
<th>Baseline Week 3</th>
<th>Intervention Week 4</th>
<th>Intervention Week 5</th>
<th>Intervention Week 6</th>
<th>Intervention Week 7</th>
<th>Intervention Week 8</th>
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<td>69</td>
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<td>70</td>
</tr>
<tr>
<td>TOT</td>
<td>73</td>
<td>75</td>
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<td>69</td>
<td>71</td>
<td>73</td>
<td>68</td>
<td>69</td>
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</tbody>
</table>

*Note. Decreased scores indicate improvement. WOS = Worry/Oversensitivity; PHY = Physiological Anxiety; SOC = Social Concerns/Stress; TOT = Total Anxiety.*
Figure 7. Gabriela's AMAS-A Scores During Baseline and Intervention. (Decreased scores indicate improvement).

Next, I analyze her AMAS-A data by subscale in order to provide a more thorough understanding of her anxiety and how it changed throughout the study. I conducted a visual analysis of each subscale according to the following five points of evaluation: level, trend, variability, overlap, and intercept gap. I also used the NAP statistic to calculate an effect size. I interpreted the intervention’s effectiveness per anxiety subscale according to Parker and Vannest’s (2009) recommendations.

Figure 8 features Gabriela’s data points and trend line for Worry/Oversensitivity during the baseline and intervention phases of the study. Level analysis, which I calculated by comparing phase means, revealed a small decrease in means from the baseline phase ($M = 65.0$) to the intervention phase ($M = 63.5$). Analysis of the trend line demonstrated a slight downward trend across the baseline and intervention phases ($r = .16$), indicating weak relationship between PR and Worry/Oversensitivity. Analysis of variability between Gabriela’s baseline scores ($R = 3; SD = 1.73$) and intervention
scores ($R = 6; \ SD = 1.97$) conveyed low variability between the two phases. Data values were generally inconsistent throughout both phases. Analysis of data overlap revealed a high degree of data points in the intervention phase falling into the range of baseline data points. Intercept gap analysis indicated an immediate difference in behaviors from the last data point in the baseline phase to the first data point in the intervention phase.

**Figure 8.** Gabriela’s Worry/Oversensitivity Scores During Baseline and Intervention. (Decreased scores indicate improvement).

To extend my data analysis, I calculated the treatment’s effectiveness by comparing the data in each phase using NAP. I paired each data point in the baseline phase with each data point in the intervention phase for a total of 18 pairs. I determined whether each paired data conveyed improvement, deterioration, or no change over time (Parker & Vannest, 2009). Using the following equation, I figured out how much overlapped existed in the data pairs: 

$$\text{Overlap Sum} = n_{\text{pos}} + (0.5 \times n_{\text{tie}})$$

The overlapping sum of Gabriela’s Worry/Oversensitivity data was 14.5. When divided by the number of total pairs, I calculated that the NAP equaled .81, which indicates a medium treatment effect.
Figure 9 illustrates Gabriela’s data points and trend for Physiological Anxiety across the baseline and intervention phases of the study. Level analysis revealed a slight decrease in the mean scores from baseline phase ($M = 75.0$) to intervention phase ($M = 74.17$). Trend analysis displayed a downward trend between phases ($r = .41$), although the trend was largely impacted by only one data point in the intervention phase (week 8). Analysis of variability between conditions demonstrated low variability from baseline phase ($R = 0; SD = 0.0$) to intervention phase ($R = 5; SD = 2.04$), with greater stability in the baseline phase. There was significant overlap in the range of data values between phases, as only one data point (week 8) varied from the others. Analysis of the intercept gap demonstrated a negligible difference in behaviors from baseline to intervention. Comparing the means of the last two data points in the baseline phase ($M = 75.0$) to the first two data points in the intervention phase ($M = 75.0$), it is clear that any difference in behaviors was delayed.

![Figure 9. Gabriela's Physiological Anxiety Scores During Baseline and Intervention. (Decreased scores indicate improvement).](image)

I calculated the intervention’s effect size using the NAP statistic. I paired each data point from the baseline phase with each data point from the intervention phase for
a total of 18 pairs. I utilized Parker and Vannest’s (2009) equation steps to determine an overlap sum of 10.5. When divided by the number of total pairs, I calculated that the NAP equaled .58, which indicates a weak treatment effect.

Figure 10 depicts Gabriela’s data points and trend for Social Concerns/Stress throughout both phases of the study. Level analysis demonstrated a decrease in mean scores between the baseline phase ($M = 73.0$) and the intervention phase ($M = 69.17$). Analysis of the trend line conveyed a downward trend in the data ($r = .67$), indicating a moderate relationship between PR and Social Concerns/Stress. Analysis of variability revealed medium variability from the baseline phase ($R = 6; SD = 3.46$) to the intervention phase ($R = 1; SD = .41$). Gabriela’s scores were more stable in the intervention phase than in the baseline phase with a narrower range of values. There was moderate overlap in data from baseline to intervention; five intervention data points overlapped with the final baseline data point. Analysis of the intercept gap revealed a cumulative difference in behaviors. The mean of the last two baseline data points ($M = 72$) was greater than the mean of the first two intervention data points ($M = 69$), indicating that the change was immediate.
Figure 10. Gabriela’s Social Concerns/Stress Scores During Baseline and Intervention. (Decreased scores indicate improvement).

I utilized NAP to examine the intervention’s effect size. Pairing each data point from the baseline phase with each data point from the intervention phase, I found a total of 18 pairs. Then, I conducted the overlap sum equation to calculate an overlap sum of 14.5. When divided by the total number of pairs, I obtained a NAP outcome of .81. According to Vannest and Parker (2009), this result indicates a medium treatment effect.

Figure 11 conveys Gabriela’s data points and trend line for the Total Anxiety subscale throughout both phases of the study. Level analysis indicated improvement, as demonstrated by a decrease in mean scores from the baseline phase ($M = 73.0$) to the intervention phase ($M = 69.67$). Analysis of the trend line displayed a moderate downward trend across both phases ($r = .55$). Analysis of variability between the baseline phase ($R = 4; SD = 2.0$) and the intervention phase ($R = 5; SD = 1.97$) revealed low variability. Data values were no more stable in the intervention phase than they were in the baseline phase. There was moderate data overlap between the phases, with two intervention data values falling into the range of two baseline data points. Analysis of the intercept gap indicated an immediate difference in behaviors with the introduction of the intervention. Comparing the mean of the last two data points in the baseline phase ($M = 73$) with the mean of the first two data points in the intervention phase ($M = 68.5$) reveals an abrupt change that receded and changed again later in the intervention phase.
Beyond visual analysis, I calculated the intervention’s effectiveness by comparing the data in each phase using NAP. I paired each data point in the baseline phase with each data point in the intervention phase for a total of 18 pairs. The sum of overlapping data points was 16. When divided by the total number of pairs, I calculated that the NAP equaled .89, which indicates a medium treatment effect.

MAAS Results

Table 8 lists the means, standard deviations, effect size, and correlation coefficient of Gabriela’s MAAS scores. Table 9 displays Gabriela’s weekly MAAS scores, and Figure 12 presents all of her data in graph format. The means (level) of her MAAS scores slightly increased from baseline phase ($M = 2.58$) to intervention phase ($M = 2.80$). Trend analysis across both phases revealed an upward trend ($r = .34$).

Analysis of variability indicated low variability between the baseline phase ($R = .20$; $SD = .10$) and the intervention phase ($R = .80$; $SD = .29$). Gabriela’s MAAS scores were more stable in the baseline phase than in the intervention phase. There was minimal data overlap, with only one intervention point (week 5) mirroring two baseline data points.
points (weeks 1 and 2). Analysis of the intercept gap revealed an immediate difference in behaviors from the last data point in the baseline phase to the first data point in the intervention phase.

Table 8

*Gabriela: Overview of MAAS Data*

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<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Intervention</th>
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</thead>
<tbody>
<tr>
<td>M</td>
<td>2.58</td>
<td>2.80</td>
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<tr>
<td>SD</td>
<td>0.10</td>
<td>0.29</td>
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<tr>
<td>NAP</td>
<td>.75</td>
<td>.34</td>
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*Note.* Increased mean scores indicate improvement.
Table 9

*Gabriela: Weekly Data Points for MAAS Scores*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Baseline</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tr>
<tr>
<td>MAAS</td>
<td>2.67</td>
<td>2.6</td>
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</table>

*Note.* Increased scores indicate improvement.
In addition to visual analysis, I calculated the intervention's effectiveness by comparing the data in each phase using NAP. I paired all of the data points in the baseline phase with the data points in the intervention phase for a total of 18 pairs. The sum of overlapping data points was 13.5. When divided by the total number of pairs, I calculated that the NAP equaled .75, which indicates a medium treatment effect.

Follow-Up Interview

Shortly after concluding the baseline and intervention phases of the study, Gabriela participated in a follow-up interview. Unlike the other three participants, she did not report experiencing any significant life events or changes over the course of this study. The anniversary of the death of Gabriela’s former romantic partner occurred during the intervention phase of the study, and we acknowledged that it may have contributed to the downward turn in her assessment scores that week. Gabriela stated that her childhood asthma had returned during the week following her final PR session. She identified two specific personal changes since participating in the intervention: She can get into a calmer headspace faster, and she falls asleep quicker now that she has

Figure 12. Gabriela’s MAAS Scores During Baseline and Intervention. (Increased scores indicate improvement).
started meditating before bedtime. Although she stated that she has not noticed any changes in her ability to regulate her attention or the frequency of worrisome thoughts, she reported a slight improvement in her ability to orient herself to the present moment, a significant improvement in her acceptance of immediate experiences, and improvements in her heart rate and blood pressure. Gabriela described feeling a release in her body as a result of being able to get to a calmer state more often. Overall, she found PR to be very interesting and indicated that she intends to continue receiving the intervention using one of the referrals provided by the interviewer.

Participant 3: Steve

Steve completed 3 weeks of a baseline phase without intervention and 6 weeks of an intervention phase, during which he participated in 6 sessions of PR. Steve completed the AMAS-A and MAAS each week of the baseline phase and after receiving PR throughout the intervention phase. He began receiving the PR intervention after three weeks of a baseline phase. Overall, his scores during baseline either remained stable or worsened, indicating that he could benefit from the introduction of treatment. Steve did not complete any assessments during the week he had to cancel his appointment.

AMAS-A Results

Table 10 lists the means, standard deviations, effect sizes, and correlation coefficients for each subscale of the AMAS-A. For two subscales, worry/oversensitivity and total anxiety, the means slightly increased from intervention phase to baseline phase. The means for the other two subscales, physiological anxiety and social concerns/stress, did not change from baseline phase to intervention phase. Table 11
displays Steve’s weekly AMAS-A scores, and Figure 13 presents all of his AMAS-A data in graph format.

Table 10

*Steve: Overview of AMAS-A Data*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Worry/Oversensitivity (WOS)</td>
<td>71.67</td>
<td>2.89</td>
</tr>
<tr>
<td>Physiological Anxiety (PHY)</td>
<td>75.00</td>
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<tr>
<td>Social Concerns/Stress (SOC)</td>
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<tr>
<td>Total Anxiety (TOT)</td>
<td>79.33</td>
<td>2.31</td>
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</table>

*Note.* Decreased mean scores indicate improvement.
Table 11

Steve: Weekly Data Points for AMAS-A Scores

<table>
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<th>Subscale</th>
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<th>Intervention</th>
</tr>
</thead>
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<td></td>
<td>Week 1</td>
<td>Week 2</td>
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<tr>
<td>WOS</td>
<td>70</td>
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<tr>
<td>PHY</td>
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<td>75</td>
</tr>
<tr>
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<td>75</td>
</tr>
<tr>
<td>TOT</td>
<td>78</td>
<td>78</td>
</tr>
</tbody>
</table>

*Note.* Decreased scores indicate improvement. WOS = Worry/Oversensitivity; PHY = Physiological Anxiety; SOC = Social Concerns/Stress; TOT = Total Anxiety.
Figure 13. Steve’s AMAS-A Scores During Baseline and Intervention. (Decreased scores indicate improvement).

Next, I evaluate his AMAS-A data by subscale in order to provide a more thorough understanding of his anxiety throughout the study. I visually analyzed each subscale according to five points of evaluation: level, trend, variability, overlap, and intercept gap. I also calculated an effect size using the NAP index and interpreted the intervention’s effectiveness on each anxiety subscale according to Parker and Vannest’s (2009) recommendations.

Figure 14 features Steve’s data points and trend for Worry/Oversensitivity across both the baseline and intervention phases of the study. Steve’s data conveyed an increase in the means from 71.67 in the baseline phase to 74.17 in the intervention phase. The line of best fit revealed an upward trend in the data ($r = .55$). Analysis of variability revealed minimal change from baseline phase ($R = 5; SD = 2.89$) to intervention phase ($R = 5; SD = 2.04$). Data visibly remained mostly the same except for two data collection points: There was an increase in scores at the third date of the...
baseline phase and a temporary decrease in scores halfway through the intervention phase. Analysis of overlap indicated moderate overlap in the data. Specifically, one baseline data point matched five data points in the intervention. The intercept gap between baseline and intervention revealed a delay in noticeable behavior change, as data did not decrease until the third collection point in the intervention phase.

![Figure 14. Steve’s Worry/Oversensitivity Scores During Baseline and Intervention.](image)

(Decreased scores indicate improvement).

Beyond visual analysis, I determined the intervention’s effectiveness by comparing the data in each phase using NAP. I paired all of the data points in the baseline phase with the data points in the intervention phase for a total of 18 pairs. I determined whether each paired data conveyed improvement, deterioration, or no change over time (Parker & Vannest, 2009). I used the following formula to calculate how much overlapped existed in the data pairs: Overlap Sum = $n_{pos.} + (0.5 \times n_{tie})$. The overlapping sum of Steve’s Worry/Oversensitivity data was 4.5. Then, I divided the overlap sum by the total number of pairs and calculated the NAP as .25, which indicates a weak treatment effect.
Figure 15 portrays Steve’s data points and trend for Physiological Anxiety throughout the baseline and intervention phases of the study. I analyzed the level of Steve’s data by comparing the means of his baseline and intervention phases. The means remained constant throughout the entirety of the study ($M = 75.0$), indicating no difference in physiological anxiety from one phase to the next. Trend analysis revealed no trend line because his scores did not change across phases. The data indicated no variability, as demonstrated in the constant range and standard deviation in both phases ($R = 0; SD = 0$). Data was stable from the beginning of the study to the conclusion. As a result of unchanging data, there was no intercept gap and all data overlapped.

![Graph showing baseline and intervention data for Physiological Anxiety scores.](image)

*Figure 15. Steve’s Physiological Anxiety Scores During Baseline and Intervention.*

(Decreased scores indicate improvement.)

I calculated the intervention’s effect size using NAP. I paired each data point from the baseline phase with each data point from the intervention phase for a total of 18 pairs. Each pairing received .5 point because the data represented no change over time. This resulted in an overlap sum of 9. When divided by the number of total pairs, I calculated that the NAP equaled .50, which indicates a weak treatment effect.
Figure 16 illustrates Steve’s data points and trend for Social Concerns/Stress across both phases of the study. Level analysis revealed no change in mean throughout the study ($M = 75.0$). Trend analysis revealed no trend line because his scores were consistent from the first to last data collection point. As such, there was no variability in the data, as indicated by the range and standard deviation in both phases ($R = 0; SD = 0$). Due to the unchanging nature of the data, there was no intercept gap and all data overlapped.

![Figure 16. Steve’s Social Concerns/Stress Scores During Baseline and Intervention. (Decreased scores indicate improvement).](image)

I utilized NAP to examine the intervention’s effect size. Pairing each data point from the baseline phase with each data point from the intervention phase, I was left with a total of 18 pairs. Each pairing received .5 point, resulting in an overlap sum of 9. When the overlap sum was subtracted from the total number of pairs, the remainder equaled 9 pairs. I then divided the remainder by the total number of pairs for a NAP score of .50, which indicates a weak treatment effect.
Figure 17 conveys Steve’s data points and trend for Total Anxiety throughout the baseline and intervention phases of the study. Level analysis revealed a slight increase in the means from 79.33 in the baseline phase to 81.33 in the intervention phase. The trend line demonstrated an upward trend in the data ($r = .55$). Analysis of variability revealed low variability from baseline phase ($R = 4; SD = 2.31$) to intervention phase ($R = 4; SD = 1.63$). Data visibly remained mostly the same except for two data collection points: There was an increase in scores at the third date of the baseline phase and a temporary decrease in scores halfway through the intervention phase. The data indicated moderate overlap with one baseline data point matching five data points in the intervention. The intercept gap between baseline and intervention demonstrated a deferment in noticeable behavior change, as data did not decrease until the third collection point in the intervention phase.

Figure 17. Steve’s Total Anxiety Scores During Baseline and Intervention. (Decreased scores indicate improvement).

In addition to visual analysis, I determined the intervention’s effectiveness by comparing the data in each phase using NAP. I paired all of the data points in the baseline phase with the data points in the intervention phase for a total of 18 pairs. The
sum of overlapping data points was 4.5. When divided by the total number of pairs, I calculated that the NAP equaled .25, which indicates a weak treatment effect.

**MAAS Results**

Table 12 lists the means, standard deviations, effect size, and correlation coefficient of Steve’s MAAS scores. Table 13 displays Steve’s weekly MAAS scores, and Figure 18 presents all of his MAAS data in graph format. The means of his MAAS scores slightly decreased from baseline phase \((M = 2.42)\) to intervention phase \((M = 2.09)\). Trend analysis across both phases revealed a slight downward trend in MAAS scores \((r = .24)\). Analysis of variability indicated minimal variability between the baseline \((R = 1.4; \text{SD} = .71)\) and the intervention \((R = 1.74; \text{SD} = .65)\). The scores were unstable in the intervention phase, indicating inconsistency in behavior change. Analysis of overlap revealed minimal overlap between the two phases. Analysis of the intercept gap revealed a slight delay in improved behavior; the mean of the last two data points of the baseline \((M = 2.04)\) was higher than the mean of the first two data points in the intervention \((M = 1.6)\).

Table 12  

*Steve: Overview of MAAS Data*

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Intervention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(M)</td>
<td>(SD)</td>
<td>(M)</td>
<td>(SD)</td>
<td>NAP</td>
<td>(r)</td>
</tr>
<tr>
<td>MAAS Score</td>
<td>2.42</td>
<td>0.71</td>
<td>2.09</td>
<td>0.65</td>
<td>.33</td>
<td>.24</td>
</tr>
</tbody>
</table>

*Note.* Increased mean scores indicate improvement.
Table 13

*Steve: Weekly Data Points for MAAS Scores*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Baseline</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Week 1</td>
<td>Week 2</td>
<td>Week 3</td>
<td>Week 4</td>
<td>Week 5</td>
<td>Week 6</td>
<td>Week 7</td>
<td>Week 8</td>
<td>Week 9</td>
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<tr>
<td>MAAS</td>
<td>3.2</td>
<td>1.8</td>
<td>2.27</td>
<td>1.47</td>
<td>1.73</td>
<td>3.21</td>
<td>2.53</td>
<td>1.87</td>
<td>1.73</td>
</tr>
</tbody>
</table>

*Note.* Increased scores indicate improvement.
Figure 18. Steve’s MAAS Scores During Baseline and Intervention. (Increased scores indicate improvement).

Beyond visual analysis, I determined the intervention’s effectiveness by comparing the data in each phase using NAP. I paired all of the data points in the baseline phase with the data points in the intervention phase for a total of 18 pairs. The sum of overlapping data points was 6. When divided by the total number of pairs, I calculated that the NAP equaled .33, which indicates a weak treatment effect.

Follow-Up Interview

Shortly after concluding the baseline and intervention phases of the study, Steve participated in a follow-up interview. Steve reported that since the start of the study, he had experienced one significant life change: He decided to leave the fine arts program with no plans to reenroll in the future. He also acknowledged that he began taking a new medication, an antipsychotic drug, at the beginning of the intervention phase and stated that he felt a boost of energy he had not previously experienced with his other prescriptions. Shortly after beginning the intervention phase of the study, Steve
experienced one extreme external stressor that was believed to have impeded his progress towards his treatment goals. Although he did not report any changes in his ability to orient himself to the present moment, attention regulation, or the frequency of worrisome thoughts, he did state that he found himself to be more vulnerable in counseling sessions during this study than he had with previous treatment; he attributed this change to the openness expressed by his RC. Steve described one positive outcome of his participation as the decrease in daily experiences of tension. He valued having a clearer mind and feeling more prepared and centered than before the study commenced. Overall, Steve was satisfied with his experience with PR and would be interested in receiving it again in the future.

Participant 4: Natalie

Natalie participated in 5 weeks of a baseline phase and 10 weeks of an intervention phase, during which she received 7 sessions of PR. Natalie completed the AMAS-A and MAAS each week of the baseline phase and immediately after receiving PR throughout the intervention phase. She began PR after five weeks of receiving no treatment during the baseline phase. Natalie waited in baseline phase two weeks longer than the other participants while her AMAS-A data stabilized. She terminated with her previous counselor shortly before beginning the baseline phase, which might explain the difference in her scores from the first two weeks to the last three weeks. Natalie did not complete any assessments during the weeks she had to cancel her PR sessions.

AMAS-A Results

Table 14 provides the means, standard deviations, effect sizes, and correlation coefficients for each subscale of Natalie’s AMAS-A scores. For all four subscales, the
means decreased from intervention phase to baseline phase, indicating improvement.

Table 15 lists Natalie’s weekly AMAS-A scores, and Figure 19 presents all of her AMAS-A data in graph format.

Table 14

Natalie: Overview of AMAS-A Data

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Worry/Oversensitivity (WOS)</td>
<td>73.33</td>
<td>2.89</td>
</tr>
<tr>
<td>Physiological Anxiety (PHY)</td>
<td>75.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Social Concerns/Stress (SOC)</td>
<td>60.00</td>
<td>0.00</td>
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<tr>
<td>Total Anxiety (TOT)</td>
<td>72.33</td>
<td>1.15</td>
</tr>
</tbody>
</table>

Note. Decreased mean scores indicate improvement.
Table 15

*Natalie: Weekly Data Points for AMAS-A Scores*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Baseline Week 1</th>
<th>Baseline Week 2</th>
<th>Baseline Week 3</th>
<th>Baseline Week 4</th>
<th>Baseline Week 5</th>
<th>Intervention Week 6</th>
<th>Intervention Week 7</th>
<th>Intervention Week 8</th>
<th>Intervention Week 9</th>
<th>Intervention Week 10</th>
<th>Intervention Week 11</th>
<th>Intervention Week 12</th>
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<tr>
<td>WOS</td>
<td>64</td>
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<tr>
<td>PHY</td>
<td>59</td>
<td>75</td>
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<td>70</td>
<td>67</td>
<td>63</td>
<td>70</td>
<td>43</td>
<td>51</td>
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<tr>
<td>SOC</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>51</td>
</tr>
<tr>
<td>TOT</td>
<td>58</td>
<td>58</td>
<td>73</td>
<td>71</td>
<td>73</td>
<td>69</td>
<td>64</td>
<td>67</td>
<td>63</td>
<td>65</td>
<td>57</td>
<td>56</td>
</tr>
</tbody>
</table>

*Note.* Decreased scores indicate improvement. WOS = Worry/Oversensitivity; PHY = Physiological Anxiety; SOC = Social Concerns/Stress; TOT = Total Anxiety.
Figure 19. Natalie’s AMAS-A Scores During Baseline and Intervention. (Decreased scores indicate improvement).

I analyzed Natalie’s AMAS-A data by subscale to better understand her anxiety throughout the two phases of the study. I conducted a visual analysis for each subscale according to the five points of evaluation: level, trend, variability, overlap, and intercept gap. I also used the NAP statistic to calculate an effect size. I interpreted the effectiveness of the treatment according to Parker and Vannest’s (2009) recommendations.

Figure 20 illustrates Natalie’s data points and trend for the Worry/Oversensitivity subscale throughout the baseline and intervention phases of the study. Level analysis, which I determined by comparing phase means, revealed a decrease in means from baseline phase ($M = 73.33$) to intervention phase ($M = 62.71$). Analysis of the trend line displayed a downward trend across baseline and intervention phases ($r = .62$), indicating a moderate relationship between PR and Worry/Oversensitivity scores. Analysis of variability indicated low variability between Natalie’s baseline scores ($R = 11$;
SD = 2.89) and intervention scores (R = 10; SD = 3.55). Although data values were not very stable in either phase, the range of values was wider in the baseline phase. Analysis of data overlap revealed moderate overlap between baseline and intervention. Her initial baseline score mirrored two data points in the intervention phase (weeks 10 and 12). However, her initial baseline data point was substantially lower than the resulting mean of the baseline phase. The decrease in behaviors was immediate, as demonstrated by comparing the mean of the last two baseline values (M = 72.5) with the mean of the first two intervention values (M = 62).

Figure 20. Natalie’s Worry/Oversensitivity Scores During Baseline and Intervention. (Decreased scores indicate improvement).

In addition to visual analysis, I calculated the effectiveness of the intervention by comparing the data in each phase using the NAP statistic. First, I paired all of the data points from the baseline phase with all of the data points from the intervention phase for a total of 35 pairs. I analyzed each pair for improvement, deterioration, or no change over time (Parker & Vannest, 2009). I utilized the following formula to determine how much of the data overlapped: Overlap Sum = n_{pos} + (0.5 \times n_{tie}). The overlap sum was
33. I divided the overlap sum by the total number of pairs and calculated the NAP to equal .94, which indicates a strong treatment effect.

Figure 21 graphically displays Natalie’s data points and trend for Physiological Anxiety during the baseline and intervention phases of the study. Level analysis revealed a decrease in mean scores from baseline phase \((M = 75.0)\) to intervention phase \((M = 62.71)\). Analysis of the trend line displayed a moderate downward trend across both phases of the study \((r = .59)\), which was largely impacted by decreasing values in the intervention phase. Analysis of variability indicated high variability between baseline \((R = 16; SD = 0.0)\) and intervention \((R = 32; SD = 11.56)\) with greater stability in values during the baseline phase. There was minimal overlap in data between phases. The first intervention data point revealed a continuation of Physiological Anxiety symptoms from the baseline phase, but that quickly changed with the second intervention data point. Analysis of the intercept gap indicated a cumulative change in behaviors because it took a few weeks of intervention to see a visible drop in her scores.

\[\text{Figure 21. Natalie’s Physiological Anxiety Scores During Baseline and Intervention.} \]
\[(\text{Decreased scores indicate improvement).}\]
To determine the effectiveness of the treatment, I employed the NAP statistic. First, I paired each data point from the baseline phase with each data point from the intervention phase for a total of 35 pairs. Using the overlap sum formula, I calculated 28 overlapping pairs. I divided this number by the total number of pairs to obtain a NAP of .80, which indicates a medium treatment effect.

Figure 22 depicts Natalie’s data points and trend line for the Social Concerns/Stress subscale throughout the baseline and intervention phases of the study. Level analysis revealed a slight decrease in means from baseline phase ($M = 60.0$) to intervention phase ($M = 57.0$). Analysis of the trend line demonstrated a significant downward trend from baseline to intervention ($r = .80$), which was largely impacted by data values collected in the last half of the intervention phase. Analysis of variability indicated high variability between the baseline phase ($R = 0.0; SD = 0.0$) and the intervention phase ($R = 9; SD = 3.32$). Data points showed more stability in the baseline phase and indicated a wider range of scores in the intervention phase. There was moderate data overlap between the two phases, as seen by comparing the mean of the baseline phase ($M = 60.0$) with the mean of the first three intervention data points ($M = 60.0$). Analysis of the intercept gap revealed a cumulative rather than an immediate difference in behaviors from baseline to intervention since scores did not begin to decrease until the fourth week of intervention.
Figure 22. Natalie’s Social Concerns/Stress Scores During Baseline and Intervention. (Decreased scores indicate improvement).

Beyond visual analysis, I analyzed the effectiveness of the PR intervention using the NAP statistic. I paired the data points from the baseline phase with the data points from the intervention phase for a total of 35 pairs. Inputting all comparison data into the overlap sum equation, I found an overlap sum of 27.5. When divided by the total number of pairs, I calculated an NAP of .79, which represents a medium effect size.

Figure 23 visually portrays Natalie’s data points and trend for Total Anxiety across the baseline and intervention phases of the study. Level analysis indicated a decrease in means from baseline phase ($M = 72.33$) to intervention phase ($M = 63.0$). Trend analysis demonstrated a slight downward trend across phases ($r = .30$), conveying a minimal relationship between PR and Total Anxiety scores. Analysis of variability revealed low variability between phases, with a range of 15 and standard deviation of 1.15 in the baseline phase and a range of 13 and standard deviation of 4.86 in the intervention phase. The data values were not significantly more stable in one
phase over the other. Analysis of the intercept gap indicated an immediate difference in behaviors, as demonstrated by comparing the mean of the last two data points in the baseline phase (\(M = 72\)) to the mean of the first two data points in the intervention phase (\(M = 66.5\)).

![Graph showing Natalie's Total Anxiety Scores During Baseline and Intervention](image)

**Figure 23.** Natalie’s Total Anxiety Scores During Baseline and Intervention. (Decreased scores indicate improvement).

In addition to visual analysis, I calculated the treatment’s effectiveness by comparing the data in each phase using NAP. I paired all of the data points in the baseline phase with the data points in the intervention phase for a total of 35 pairs. The sum of overlapping data points was 25. When divided by the total number of pairs, I calculated that the NAP equaled .71, indicating a medium treatment effect.

**MAAS Results**

Table 16 lists the means, standard deviations, effect size, and correlation coefficient of Natalie’s MAAS scores. Table 17 presents Natalie’s weekly MAAS scores, and Figure 24 illustrates all of her MAAS data in graph format. She did not provide
complete responses to several MAAS test items the first two weeks of baseline; therefore, that data was rendered incomplete and omitted from the following analysis.

Table 16

*Natalie: Overview of MAAS Data*

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>MAAS Score</td>
<td>3.13</td>
<td>0.29</td>
</tr>
</tbody>
</table>

*Note.* Increased mean scores indicate improvement.
Table 17

*Natalie: Weekly Data Points for MAAS Scores*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Baseline</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Week 1</td>
<td>Week 2</td>
</tr>
<tr>
<td>MAAS</td>
<td>n.d.</td>
<td>n.d.</td>
</tr>
</tbody>
</table>

*Note.* Increased scores indicate improvement. n.d. = no data available.
Figure 24. Natalie’s MAAS Scores During Baseline and Intervention. (Increased scores indicate improvement. Data was not collected for the first two weeks).

The means (level) of her MAAS scores increased from baseline phase ($M = 3.13$) to intervention phase ($M = 3.96$). Trend analysis across both phases revealed a significant upward trend in MAAS scores ($r = .85$). Analysis of variability indicated moderate variability between the baseline phase ($R = .53; SD = .29$) and the intervention phase ($R = 1.4; SD = .45$). The scores had the widest range of values in the intervention phase. There was minimal data overlap, with only one intervention data point (week 6) mirroring one baseline data point (week 5). Analysis of the intercept gap revealed that the data did not increase until the second week of intervention, indicating that the effect was more cumulative than immediate.

I compared the data points of the baseline phase to the data points from the intervention phase in order to analyze the treatment’s effectiveness. Utilizing the NAP statistic, I found a total of 35 data pairs. I calculated the overlap sum for these data pairs
as 20.5. Then, I divided the overlap sum by the total number of pairs for a NAP of .98, which indicates a strong treatment effect.

Follow-Up Interview

Shortly after concluding the baseline and intervention phases of the study, Natalie participated in a follow-up interview. Natalie identified two significant life events that took place during the intervention phase of this study: She went on a mission trip to Brazil, and she experienced conflict with her ex-husband over his possession of firearms in the home he shares with their daughter. She stated that she was able to process both of those situations with her RC. She reported having switched her ADHD medication towards the end of the intervention phase but did not report any noticeable side effects. She also stated that she received treatment for a pre-existing thyroid concern during the study. Natalie described herself as more mindful since beginning PR and stated that she now dwells less on the past and the future. Although she reported still having difficulty regulating her attention, she has noticed improvements in her acceptance of immediate experiences, the frequency of worrisome thoughts, and her daily experience of tension. Specifically, she stated that she is better at embracing life events, she has fewer unwelcomed thoughts about her ex-husband, and she feels less strain in her neck and head. Natalie reported that her blood pressure has both increased and decreased at different doctors’ offices throughout the course of this study. She described herself as skeptical at the beginning of the study but experienced positive results after the first session. Overall, Natalie valued having felt a stronger connection between her body and emotions and would be interested in receiving PR again in the future.
Summary of Results

Table 18 presents a summary of the results for all four participants in this study. Three participants exhibited favorable results indicating that the intervention was beneficial for anxiety and mindfulness. One participant demonstrated mixed results indicating that PR may not be effective for anxiety reduction or increased mindfulness for all clients. Mean scores for Physiological Anxiety and Social Concerns/Stress either improved or remained constant for all participants during the intervention phase. According to NAP calculations, two participants experienced strong treatment effects for more than one assessed construct.

Table 18

<table>
<thead>
<tr>
<th>Participant</th>
<th>WOS M</th>
<th>NAP</th>
<th>PHY M</th>
<th>NAP</th>
<th>SOC M</th>
<th>NAP</th>
<th>TOT M</th>
<th>NAP</th>
<th>MAAS M</th>
<th>NAP</th>
</tr>
</thead>
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<tr>
<td>1. Alan</td>
<td>I</td>
<td>S</td>
<td>I</td>
<td>S</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>S</td>
<td>I</td>
<td>M</td>
</tr>
<tr>
<td>2. Gabriela</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>W</td>
<td>I</td>
<td>M</td>
<td>I</td>
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<td>3. Steve</td>
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<td>D</td>
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<td>4. Natalie</td>
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<td>S</td>
<td>I</td>
<td>M</td>
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<td>M</td>
<td>I</td>
<td>M</td>
<td>I</td>
<td>S</td>
</tr>
</tbody>
</table>

Note. WOS = Worry/Oversensitivity; PHY = Physiological Anxiety; SOC = Social Concerns/Stress; TOT = Total Anxiety; NAP = Nonoverlap of all pairs; I = mean improved from baseline phase to intervention phase; D = mean deteriorated from baseline phase to intervention phase; NC = no change in mean from baseline phase to intervention phase; S = strong; M = medium; W = weak effect.
APPENDIX D

EXTENDED DISCUSSION
The purpose of this study was to examine whether the selected intervention, psychotherapeutic Reiki (PR), had an impact on client anxiety and mindfulness. Anxiety was measured using the Adult Manifest Anxiety-Adult instrument (AMAS-A; Reynolds, Richmond, & Lowe, 2003), and mindfulness was measured using the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003). I implemented the study using a single-case research design featuring one baseline phase and one intervention phase. Four adult participants received no treatment throughout the baseline phase and a minimum of six PR sessions throughout the intervention phase to discover whether PR might be a beneficial intervention for anxiety and mindfulness.

The results of this study demonstrated that PR was a helpful treatment for the reduction of anxiety and advancement of mindfulness in three participants, as evidenced by mean improvements from baseline phase to intervention phase. The fourth participant experienced either no change or deterioration in means in each subscale of anxiety and deterioration in the mean for mindfulness. The three participants who benefitted from the intervention responded with the greatest impact in the anxiety subscale of Worry/Oversensitivity. The area of Social Concerns/Stress, another subscale of anxiety, demonstrated the most positive results for all four participants. The intervention may not have been as helpful for the fourth participant due to his extreme baseline scores; he had the highest baseline anxiety scores and the lowest baseline mindfulness score. It is likely that more severe cases would require lengthier or more frequent exposure to the intervention to evidence a noticeable impact. In addition, this participant’s counselor reported having observed that this client exhibited exceptional difficulty with trust and with building a collaborative therapeutic
alliance; these factors may have played a role in his results and suggest possible considerations for screening clients for their potential to benefit from PR. Every participant reported experiencing improvement in anxiety or mindfulness as an outcome of receiving the PR intervention. Although participants demonstrated improvement in both constructs, mindfulness did not appear to be impacted by the reduction of anxiety as originally postulated. By way of interview, four participants reported decreases in daily tension, and three participants reported increases in their acceptance of immediate experiences.

Impact on Anxiety

Described by the American Psychological Association (2015) as a feeling depicted by tension, worry, and somatic changes, anxiety is a common concern for clients seeking counseling services. Although anxiety may result as a normal response to stressful or uncertain situations, anxiety as a clinical condition is excessive, unrealistic, and persists for long periods of time (Anxiety and Depression Association of America, n. d.). Adults struggling with anxiety often experience difficulty performing daily tasks, concentrating, sleeping, and forming social relationships. Reynolds, Richmond, and Lowe (2003) delineated anxiety by its most frequent symptoms and created subscales of the same names in the AMAS-A: Worry/oversensitivity, physiological anxiety, social concerns/stress, and total anxiety.

Reiki has the potential to ease symptoms of anxiety. Theoretically, Reiki unblocks congested energy centers and redistributes energy throughout the body, resulting in holistic balance and centeredness. Immediate effects of Reiki healing, such as temperature change and heart rate variability, are likely to provide somatic relief for
individuals who carry tension in their bodies (Miles, 2005). In PR, clients have the advantage of receiving Reiki within the context of a therapeutic relationship. Clients may engage in cognitive and emotional discourse about anxiety with a professional counselor in addition to receiving mental, spiritual, and physical relief of anxiety through Reiki healing. PR can positively impact the individual's experience of anxiety through the increase of awareness about anxiety, enhanced understanding about its meaning, release of energetic charges, and installation of healing thoughts or feelings (Curtin, 2012). This can have significant effects on clients who have struggled with anxiety for a prolonged time and on those who have failed to find symptom reduction through conventional treatment methods.

In this study, PR was helpful in the reduction of anxiety for three out of four participants. These three participants improved in all four categories of anxiety on the AMAS-A, as demonstrated by decreases in means from the baseline phase to the intervention phase. Together, they experienced the greatest impact in the category of Worry/Oversensitivity. Within that subscale, one participant had a medium treatment effect and two participants had a strong treatment effect. Every participant was given the opportunity to discuss frequent worries with their Reiki counselor (RC) and invited to identify corresponding energy centers for personalized Reiki healing. One participant experienced a strong treatment effect in two additional categories: Physiological Anxiety and Total Anxiety. The means for two subscales, Physiological Anxiety and Social Concerns/Stress, indicated either improvement or no change for all four participants. Physiological Anxiety received the most variable results, with one participant experiencing no change in means and a weak treatment effect, another participant
experiencing mean improvement with a weak treatment effect, a third participant experiencing a medium treatment effect, and the final participant experiencing a strong treatment effect.

Three participants exhibited tremendous anxiety in establishing and maintaining relationships with others. In particular, they had difficulty trusting others and having confidence in their social desirability. Such tendencies impeded the formation of a collaborative and trusting therapeutic relationship. As a result, these participants did not fully engage in the intervention at first, and they were slower to acknowledge positive outcomes from PR. Two participants expressed concerns that their RC would abandon them upon completion of the study and subsequently hesitated to discuss topics requiring considerable vulnerability. The participant with weak treatment effects for all four subscales struggled with attachment issues that may have prevented him from experiencing positive outcomes from the intervention. The fact that he demonstrated little to no change in anxiety throughout the intervention phase may actually suggest that PR helped him maintain stability with his symptoms. Despite these limitations, the participants noted several favorable outcomes from the intervention that improved their anxiety, including feeling more centered and clear-minded, having less frequent worrisome thoughts, and experiencing changes in heart rate and blood pressure. By participating in PR, the participants were able to increase their awareness of anxiety and how it impacts their body. They also allowed another person to enter their energy field, thereby developing trust and openness with others. Furthermore, most of the participants learned methods for self-healing that they could use to treat their anxiety beyond the conclusion of the study.
Impact on Mindfulness

Brown and Ryan (2003), the developers of the MAAS, referred to mindfulness as an attribute of consciousness that is distinguished by “clarity and vividness of current experience and functioning” (p. 823). Despite its varied representation in contemporary research, they operationalized the concept by drawing upon two essential processes: attention and awareness. The process of awareness involved in mindfulness features characteristics of openness and receptivity, and both processes focus on present, moment-to-moment experiences. The absence of mindfulness may lead to reliance on unhealthy behavior patterns. For example, individuals avoiding the here and now may become preoccupied with future events that are beyond one’s control. Moreover, the absence of mindfulness has negative implications for individuals needing to focus and regulate their attention on immediate or pressing matters. Individuals struggling with anxiety are also likely to have difficulty with mindfulness. Although the MAAS provides only one total mindfulness score, the creators generated the test items to reflect a variety of daily experiences that include an individual’s attention to and awareness of “actions, interpersonal communication, thoughts, emotions, and physical states” (Brown & Ryan, 2003, p. 825). By improving mindfulness, one can expect to have a greater sense of calm, centeredness, presence, and purposeful consciousness.

Reiki is positively correlated with constructs of mindfulness. In particular, outcomes of Reiki may include awareness of the present and focused attention on the body-mind (Curtin, 2012). Localized Reiki is sent directly from practitioner to recipient in the here and now, thereby drawing the recipient’s attention to the present moment and the relational space between the practitioner’s hands and the recipient’s body. Many
Reiki practitioners incorporate meditation, imagery, and visualization to help recipients regulate their attention and uncover symptoms stored within the body. Noticing, Allowing, Opening, and Relaxing (NAOR), is a mindfulness technique used in PR to help clients focus on a present concern and identify emotional and somatic sensations that arise while receiving Reiki. Another PR technique, body scanning, encourages clients become more aware of energy blocks and sources of imbalance within their bodies. PR can benefit clients by improving consciousness of emotional, cognitive, and somatic processes, as well as cultivating an attitude of openness and acceptance.

In this study, PR was useful in the improvement of mindfulness for three out of four participants. One participant experienced deterioration in means from baseline phase to intervention phase, whereas three participants experienced mean gains from baseline phase to intervention phase. Of the three participants whose means improved, two experienced medium treatment effects and one experienced a strong treatment effect. Excluding the participant with a strong treatment effect, the participants demonstrated moderate variability in their MAAS scores throughout the intervention phase. It is possible that this variability is the consequence of high self-consciousness and the tendency to self-monitor and engage in reflexive thought. These traits are related to and characteristic of clinical anxiety, which was a presenting concern for all four participants. Such traits are unrelated to mindfulness, which is pre-reflexive by nature (Brown & Ryan, 2003).

The RCs utilized mindfulness-based techniques, such as meditation and guided relaxation, to help orient participants to the present moment whenever their anxiety prevented them from focusing normally. Whereas the treatment tasks were
implemented based upon individual need and readiness, practicing presence was a key component of the majority of the intervention sessions for each participant. Most of the participants requested mindfulness practices at least once throughout the intervention phase, and all four participants reported attempting a mindfulness technique on their own. Participants reported favorable outcomes in mindfulness as a result of receiving PR, including increased acceptance of immediate experiences, orientation of self to the present moment, and improved attention regulation. Although mindfulness was an objective of treatment identified by the participants, it was difficult to sustain week to week. Akin to many wellness practices, mindfulness takes time to become a habit, and the intervention phase might have been too short to produce lasting change in the construct of mindfulness.

Clinical Considerations and Implications

Participant receptivity is an important consideration for this study because the intervention is unconventional for most counseling settings. Every participant in this study was open and receptive to integrative therapies and PR in particular. A few participants had some skepticism that it would be effective, but they did not let their doubts deter them from seeking alternative treatment. Four of the original six participants recruited for this study indicated that they were interested in trying something new in hopes of finding relief for chronic anxiety problems. Although two participants reported some knowledge of Reiki prior to commencing their participation in this study, none had ever personally received Reiki healing. Most conveyed hesitation immediately before their initial body scans due to its novelty but quickly adjusted to the intervention shortly thereafter. All four participants reported sensing changes in their
energetic bodies during the first treatment, and three participants reported noticing minor improvements in their functioning after the first treatment. All of the participants indicated they would be interested in receiving Reiki again in the future, and two participants specifically requested to continue PR at the study site.

Several practical implications emerged as the three RCs learned and refined the PR intervention. As implied by Curtin (2012), it is impossible to script PR techniques because each recipient has different areas of mental health concern. Participants required the treatment tasks and techniques at varied times. We continuously re-evaluated the progress of the treatment and tailored it to meet the unique needs of the participants. Thus, we utilized the PR Treatment Tasks protocol (Appendix D) primarily as a framework rather than as a step-by-step guide. Clinicians wanting to integrate Reiki with counseling may do well to engage in regular peer supervision while they familiarize themselves with the intervention.

Another theme that transpired during our weekly supervision meetings was the need for the RCs to adequately prepare themselves for session. Similar to the concept that counselors need to practice wellness and self-care to prevent burnout and compassion fatigue, Reiki also requires mental and emotional readiness on behalf of the practitioner in order to transmit energy without feeling drained or absorbing recipients’ energy. Rand (2016) recommended clearing the room with fresh air, sage, or essential oils; drawing the Reiki symbols on the walls, floor, and ceiling with one’s fingers; meditating or praying prior to a session; and receiving Reiki from others on a regular basis. For this study, each RC diffused essential oils in the clinic room, drew the Reiki symbols prior to session, and sent each other Reiki as requested.
An additional topic discussed in peer supervision was establishing trust with the participants and assessing their comfort level with receiving Reiki healing. As discussed above, all of the participants were new to Reiki, so it was important to clearly communicate with them the procedures for sending Reiki as well as allow them to decide when they were ready to receive it. One participant opted to have Reiki beamed to her from across the room during her first session, whereas all of the remaining sessions involved her RC transmitting Reiki from mere inches away. We were careful to respect participants' boundaries and readiness whenever we interacted directly with their energy fields.

Pursuant to the initial objectives of this research, several clinical implications are indicated for using PR as a beneficial intervention for anxiety and mindfulness. First of all, PR appears to be a valuable approach for treating adults struggling with anxiety features, especially those with symptoms of worry and oversensitivity or social stress. Three participants demonstrated advancement in these categories, and one participant demonstrated decline or no change. PR also appears to have the potential to positively impact mindfulness. Three participants demonstrated improvement in mindfulness, and one participant demonstrated minor deterioration. All of the participants observed some improvement in their daily functioning, such as decreased tension, acceptance of immediate experiences, increased vulnerability, and more frequent states of calm.

Moreover, a clinical implication of this research is the need for adults with anxiety to receive the PR intervention for a greater length of time. Whereas the average Reiki recipient may be able to achieve symptom relief with only 4 sessions (National Center for Complementary and Alternative Medicine, 2008), individuals presenting with clinical
anxiety might require more time to notice major improvements in their daily functioning due to the severity of their presenting concerns. Furthermore, many adult clients with clinical anxiety may need several weeks or months of maintenance therapy extending beyond the reduction of anxiety symptoms (Bystritsky, Khalsa, Cameron, & Schiffman, 2013). Finally, I speculate that one precondition for success in treatment might be clients’ ability to trust and form collaborative relationships with a counselor. Noting the difference in changes between participants, it seems that the benefits of PR may be stronger or quicker to develop in adults who have fewer issues with trusting others and working within a therapeutic relationship to set and achieve goals.

Clinical Significance and Future Research

The present study is significant in that it sets a foundation for counselors seeking to integrate alternative therapies with counseling. Although a few complementary therapies, such as meditation and yoga, have been successfully integrated with talk therapy, less is known about the appropriateness of energy-based practices in counseling. As presented in the findings and discussion of this study, PR may be a valuable intervention for adult clients who seek something new or unique to treatment-as-usual. The interaction between RC and client when transmitting Reiki energy necessitates the development of trust and vulnerability, which might further strengthen the outcomes of therapy. Lastly, PR encourages creativity on the part of the counselor. The nature of energy psychology precludes the reliance on concrete evidence to inform practice. Rather, counselors must be willing to tap into energetic frequencies that exist on physical, emotional, mental, and spiritual planes. This intervention and others like it
provide clinicians with a variety of options for how to conceptualize and treat imbalances and deficiencies.

As one of few evidence-based studies on the integration of Reiki with counseling, this study set the groundwork for future research in the area of complementary and integrative therapies. Additional research on the effectiveness of PR could be accomplished in several recommended ways. First, researchers may consider studying the impact of Reiki on clients who are new to counseling. Every participant in the present study had been previously involved in mental health counseling services, so their expectations may have differed from participants who had never initiated counseling before. New clients may be less hesitant or resistant to trying out new treatment modalities and take less time to adjust to the selected intervention. The largely positive results from this study provide the rationale for a future investigator to conduct a randomized, controlled study comparing PR to treatment as usual and waitlist with a large and diverse sample. I recommend that such a study include assessment of client capacity for trust and for development of a therapeutic relationship as a factor in potential effectiveness of the intervention.

Limitations

One major strength of the study was the ideographic nature of single-case design. The case study component allows for deeper examination of the intervention effects on individual participants, which demonstrates the clinical significance of this research. Additionally, this design provided quantitative data collection for an innovative intervention for the counseling profession.
Despite its value, there are several inherent limitations within this research design pertaining to sampling, sample size, generalizability, and instrumentation. According to Creswell (2014), convenience sampling is far less desirable than random sampling because it limits the researcher’s ability to generalize outcomes to an identified population. I recognize that selecting participants based on their availability and ease of access to the research setting does not account for a broad variety of individuals. Also, the voluntary basis on which the participants were recruited increases the likelihood that the participants have a favorable disposition to the proposed treatment prior to its administration, thereby potentially influencing self-report measures towards positive outcomes. However, this likelihood coincides with the probability that only clients with favorable dispositions will consent to Reiki in real life. Another limitation pertains to the inability to control what happens from treatment session to treatment session. The process and methods employed in both counseling and Reiki are dependent upon the client’s needs in the moment. No two sessions were alike, thus restricting comparability. Moreover, the small sample size limits the potential for greater variety in client attributes and presenting problems, which further inhibits generalizability to a larger population. Furthermore, there are limitations in the instrumentation. Albeit consistent with the emerging psychometric tools measuring mindfulness, the MAAS is a largely under-utilized assessment with a limited basis for validity and reliability. The term, mindfulness, varies in its definition and is therefore difficult to operationalize as a measurable construct in this study. The AB design of the research presented one final limitation to this study. Ray (2015) noted that the AB design, compared to an ABA
withdrawal design, is threatened by internal validity concerns including the inability to control for history and the influence of unnecessary factors.

Conclusion

The use of CTs is steadily increasing in Western societies as individuals have begun to incorporate Eastern spiritual and somatic practices in the quest for wellness (Clarke, Black, Strussman, Barnes, & Nahin, 2015; Judith, 2004). Practitioners and patrons of CTs such as Reiki purport indications for anxiety reduction and increased mindfulness (Fleisher et al., 2013). The purpose of this study was to explore the impact of PR on adult clients’ symptoms of anxiety and mindfulness. The results of this study demonstrate support for PR as an intervention that can help adults increase their awareness of anxiety and mindfulness as well as manage indicators of each. Three out of the four participants included in this study exhibited improvement in every category measured. All four participants reported benefitting from their participation in PR and expressed desires to continue PR services in the future.
APPENDIX E

INFORMED CONSENT
Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

**Title of Study:** The Impact of Psychotherapeutic Reiki on Mindfulness and Anxiety

**Principal Investigator:** Jan Holden, Ed.D., Licensed Professional Counselor - Supervisor (LPC-S), Licensed Marriage and Family Therapist (LMFT), National Certified Counselor (NCC), University of North Texas, Department of Counseling & Higher Education.

**Lead Student Research Assistant:** Lindsay Webster, M.S., Licensed Professional Counselor - Intern (LPC-Intern), Certified School Counselor (CSC), National Certified Counselor (NCC), University of North Texas, Department of Counseling and Higher Education.

**Purpose of the Study:**
You are being asked to participate in a research study to explore the impact of psychotherapeutic Reiki on counseling clients’ levels of anxiety and mindfulness. Recent research shows that Reiki is beneficial for the reduction of psychological distress and the enhancement of wellbeing. Reiki has been utilized to diminish symptoms of anxiety, depression, stress, discomfort, and pain. Researchers have suggested that Reiki techniques used in conjunction with traditional talk therapy could potentially enhance mood, improve the therapeutic relationship between counselor and client, and support overall wellness.

**Study Procedures:**
Upon your consent, you will be assigned to work with a Reiki counselor for six sessions of psychotherapeutic Reiki at the Child and Family Resource Clinic. Sessions will be video-recorded for the provision of supervision to the Reiki counselors in order to ensure you are receiving the best services possible. Psychotherapeutic Reiki is an adaptation of Reiki, a Japanese energy healing practice, for use by mental health professionals as an adjunct to traditional psychotherapy. The intention behind psychotherapeutic Reiki is to provide clients of psychotherapy with the restoration of their imbalanced energetic layers that may have been the source of physical, emotional, or psychological pain. The psychotherapeutic Reiki sessions have been designed as a combination of traditional talk-based therapy with Reiki healing interventions adapted specifically to reduce symptoms of anxiety and improve your overall sense of mindfulness. Your Reiki counselor will ask for your permission prior to sending healing energy by holding his/her hands near your body while you remain seated. Each Reiki counselor is a Licensed Professional Counselor or Licensed Professional Counselor-Intern who has received practitioner-level training in Reiki I and II and incorporates Reiki in counseling sessions.

You will meet with your Reiki counselor for 45 minutes each week for a total of six sessions. Prior to beginning your psychotherapeutic Reiki sessions, you will be asked to complete two assessments weekly for a minimum of three weeks, until the Student Investigator determines a stable pattern in your results. The assessments require you to report your experiences of anxiety and mindfulness within the past week. You will be asked to complete the same two assessments after each of your six psychotherapeutic Reiki sessions. It will take approximately 20 minutes to complete both assessments each week.

Additionally, you will be asked to participate in a 15-minute individual interview with the Student
Investigator prior to commencing your psychotherapeutic Reiki sessions and once again after your sessions have ended.

Foreseeable Risks: The potential risks involved in this study are minimal. You may be inconvenienced by the time lost by participating in this study. As with any counseling intervention, participants may experience cognitive and emotional changes that have the potential to affect significant relationships, career, and/or life perspectives. You may feel temporary discomfort due to some of the things you learn about yourself or some of the changes you make. In the event that you have a difficult time adapting to the effects of counseling, your Reiki counselor will work with you to adjust your treatment as needed.

Benefits to the Subjects or Others: Possible positive outcomes for participating in the project may include reduction in anxiety symptoms such as fear, worry, and fatigue, and increase in signs of mindfulness such as active attention on the present moment and nonjudgmental awareness of self and others. The results of this study may inform counselors of the implications for incorporating creative and alternative therapies into mental health counseling.

Compensation for Participants: Clients’ fees for counseling will be partially reimbursed upon the completion of six psychotherapeutic Reiki sessions and accompanying assessments.

Procedures for Maintaining Confidentiality of Research Records: All video recordings and information obtained from the instruments will be kept in a locked cabinet in the Child and Family Resource Clinic at the University of North Texas. Only the research team will have access to the locked cabinet. Research records will be kept for a period of 3 years following the termination of this study. At that time, all records will be destroyed. Names of participants will not be disclosed in any publication or discussion of this material. Only the research team will have a list of the participants’ names.

Questions about the Study: If you have any questions about the study, you may contact Dr. Jan Holden at (940) 565-2919 or Jan.Holden@unt.edu.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants’ Rights: Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- You understand the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

Printed Name of the Participant
For the Investigator or Designee:
I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.
APPENDIX F

PARTICIPANT INTERVIEWS
Initial Participant Interview

Date:

Interviewer: Interviewee:

Address:

Phone number:

**General Information**

Date of birth: Age:

Gender: Ethnicity:

Marital status: Occupation:

Presenting issue:

Why do you wish to participate in this study?

What are you hoping to gain from participating in this study?

**Mental Health**

Have you ever received a mental health diagnosis?

Have you ever received counseling services in the past? If so, describe what for and when the services took place. Did you find counseling helpful?

Do you currently have any mental health concerns for yourself?

**Health**

Have you had any recent illnesses, accidents, or hospitalizations?

Do you have any health concerns?

Do you currently take any medications? If so, do you experience any side effects?

Do you have any questions about the study or counseling in general?
Follow-Up Participant Interview

1. Since the start of this study, have you experienced any significant events or changes in your work, school, or personal life?

2. Have there been any changes in your health or medications?

3. Please describe any changes you’ve observed since the start of this study.

4. Have there been any changes in your ability to orient yourself to the present moment?

5. Have there been any changes in your ability to regulate your attention?

6. Have there been any changes in your acceptance of immediate experiences?

7. Have you noticed any changes in the frequency of worrisome thoughts?

8. Have there been any changes in your daily experience of tension?

9. Have you noticed any changes in your heart rate or blood pressure?

10. What has this experience been like for you?

11. Do you think you would be interested in receiving psychotherapeutic Reiki in the future? Why or why not?

12. Is there anything else you would like for me to know at this time?
APPENDIX G

PSYCHOTHERAPEUTIC REIKI INTERVENTION
Psychotherapeutic Reiki: Four Treatment Tasks

1) Practicing Presence: Assist clients in staying present with their symptoms in a nonjudgmental manner.

2) Exploring the Body-Mind: Full investigate and explore the nature and quality of clients’ symptoms.

3) Releasing and Clearing Energy Blocks: Help clients let go of painful thoughts, emotions, and memories.

4) Installing Corrective Experience: Replace negative thoughts and beliefs with positive messages of self-compassion.

Psychotherapeutic Reiki: Proposed Treatment Techniques

Imagery and Visualization
Purpose: Direct client’s attention to the body-mind and access symptoms stored within.
Procedure: Send Reiki to calm client and then present sensory imagery.

Noticing, Allowing, Opening, and Relaxing (NAOR)
Purpose: Open symptoms, explore them fully, and decrease fear surrounding them in order to amplify personal empowerment and control.
Procedure: Have client focus on the present concern and bring attention to any bodily sensations or emotions that arise while giving Reiki.

Body Scan
Purpose: Detect issues residing in the body by identifying energy blocks.
Procedure: Prompt clients to scan the inside of their bodies for areas of imbalance and treat with Reiki.

Exploration and Release
Purpose: Explore repressed traumatic experiences and feel them in the body-mind in the present moment.
Procedure: Use Reiki to find areas of tension or pain and instruct clients to hold relaxed attention and acceptance while focusing on memories or feelings held in various parts of the body.

Sweeping
Purpose: Treat areas of imbalance in clients’ energy fields.
Procedure: Pass hands above areas of excessive or deficient energy.
Installing Corrective Messages to Chakras
Purpose: Rebalance past trauma and abuse with healing messages.
Procedure: Repeat corrective messages while sending Reiki to one or more chakras.

Meditation Exercises
Purpose: Teach clients self-soothing strategies to use when burdened by anxiety.
Procedure: Apply Sei He Ki technique (counselor draws the Sei He Ki symbol in the air) while clients visualize a relaxing location.

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