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DO HOLISTIC PRACTICES AS AN ADJUNCT TO TRADITIONAL PSYCHOTHERAPY AFFECT GENERALIZED ANXIETY DISORDER-7 (GAD-7) SCORES?

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A Project

Presented to the

Faculty of

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In Partial Fulfillment

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ABSTRACT

This study examined the effect of holistic practices on anxiety. The study used a pre-experimental design and measured any differences in outcomes in Generalized Anxiety Disorder clients as measured by General Anxiety Disorder-7 (GAD-7) between the two following groups: 1) the experimental group who received holistic services in addition to traditional treatment such as psychotherapy and/or medication as compared to 2) the control group who received psychotherapy and/or medication alone. Pretest of GAD-7 at intake and post-tests at about 4 months into treatment were measured along with a holistic practice survey and analyzed post-hoc through SPSS data analysis. This study found that GAD-7 scores were improved, with majority of the participants involved in some sort of holistic supplemental practices. However, there was no statistical correlation between the two phenomena in this small sample. More research is recommended with larger samples, as well as improved instrumentation that could vet out other possible effects on the GAD scores.

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CHAPTER ONE

ASSESSMENT

Introduction

This chapter covers the research question, paradigm rationale, literature review, theoretical orientation, and potential contributions to social work. The research question focused on differences in outcomes between the traditional treatment group and those receiving both traditional treatment *and additional holistic treatments for those who show mild to severe symptoms for generalized anxiety disorder (GAD)*. The independent variables were the various treatment methods, and the dependent variable was the anxiety measurement outcomes. This research used a positivist paradigm, and had literature support. The theoretical orientation spanned several different perspectives such as Systems Theory, Gestalt Theory, and Post-modern Theory. Outcomes analysis was expected to help compare treatment methods for practical application in micro-practice.

Research Focus and Question

Anxiety has been prevalent in the general population, and has also been expected to rise in the years to come (Keates, 2007; Hirschfeld, 2001). This increase combined with the fact that medications have shown to be only partially effective (Keates, 2007), alternative treatments need to be assessed for implementation for the large number of those who suffer from anxiety.

“There are a wide variety of anxiety disorders, including post-traumatic stress disorder, obsessive-compulsive disorder, and specific phobias to name a few. Collectively they are among the most common mental disorders experienced by Americans” (Kessler, 2005). Many of these have shared similar symptomatic features (American Psychiatric Association, 2013). For example, various phobias, Social Anxiety Disorders (SAD), Generalized Anxiety Disorder (GAD), and even Post-Traumatic Stress Disorder and others share the “anxiety” portion of symptoms such as marked fears and physical manifestations such as increased heart-rate, and restlessness (American Psychiatric Association, 2013). Recent acknowledgment of perinatal mood disorders has drawn attention to perinatal anxiety as well. Many who are pregnant refuse to take their anxiety medication. Thus, alternative coping interventions are needed. Thus, in researching better treatments for one diagnosis, one can gain knowledge into applying those treatments to similar diagnoses with overlapping symptomology. For convenience of measurement (which is be discussed in chapter 3), we will be researching the treatment of symptoms shown in Generalized Anxiety Disorder. Although specific symptoms will be discussed later (and shown in Appendix B), Generalized Anxiety Disorder is described by Baldwin (2008) as:

> characterized by excessive worrying ….[where] Common features include apprehension, tension, difficulty in concentrating and autonomic

anxiety, with symptoms such as dry mouth and abdominal discomfort. It is one of the most frequent mental disorders in primary care …. (p. 416)

Holistic methods have shown to be effective in treating various psychiatric conditions including anxiety. Thus, holistic approaches to mental health are becoming more prevalent (Evans, 2008; LaTorre, 2001; Nidhi, 2012, Keates, 2007; Srinivasan, 2010).

This research looked to measure differences in outcomes between those who received holistic treatments along with traditional treatments such as psychotherapy (and/or medication) compared to those who received those traditional therapies alone for….

In summary, the research question for this study was: would there be a difference in outcomes of Generalized Anxiety Disorder clients as measured by GAD-7 between 1) the experimental group who received holistic services in addition to traditional treatment such as psychotherapy and/or medication as compared to 2) the control group who received psychotherapy and/or medication alone?

The hypothesis was that given enough data, there would be a difference between the experimental and control groups, and that those who are involved in holistic practices in addition to traditional therapies will have better improvement in anxiety scores, as measured by the GAD-7 questionnaire for Generalized Anxiety Disorder. Their GAD-7 scores for anxiety would probably decrease, given GAD-7 would be calibrated to have

higher numbers represent higher level of anxiety. Details are discussed further in chapter 3.

Results from this study could aid in moving toward an integrated approach to treating anxiety and perhaps other related conditions, instead of relying on traditional approaches alone.

Paradigm and Rationale for Chosen Paradigm

The paradigm for this study was positivistic due to the causal nature of the research question defined above: Would the experimental group of those who receive supplemental holistic treatments have improvement in anxiety scores as compared to the control group of those who receive only traditional therapies like psychotherapy and medicine without holistic treatments?

Scores from Generalized Anxiety Disorder Test were used to measure the difference in anxiety between the experimental and the control groups. This self-reported test (GAD-7) measured excessive worry, nervousness, trouble relaxing, restlessness, irritability, and feelings that something awful will happen (see Appendix B).

Number of holistic services received or practiced *in addition to* traditional therapies would be the independent variable. Changes in the independent variable would be expected to result in the changes in the dependent variable, which would be the measure of anxiety shown through GAD test results of the clients. The control group would be those who receive

traditional treatments such as psychotherapy and/or medication without supplemental holistic treatment.

Differences in the anxiety levels could be objectively measured with the GAD-7 test for Generalized Anxiety Disorder. Seeing numerical data would help us to be able to see any differences in the holistic treatment approach.

Literature Review

Anxiety

As mentioned in the previous section, prevalence of anxiety was only expected rise along with other mental disorders in the United States (Keates, 2007; Hirschfeld, 2001). According to the Kessler et al. (2005), about a third (28.8%) of the United States population had a lifetime prevalence of anxiety (Kessler, 2005). Inevitably, this would have an effect on the population in many important respects. One measurable aspect of the effect of anxiety in the larger population was in the work place, and medical and economic losses due to anxiety.

For example, a retrospective case-control study was done based on employee information of 6 major employers in the United States. The control group was comprised of those who did not have anxiety. The experimental group was comprised of those who were diagnosed with anxiety. The results showed that those who were diagnosed were more likely to have other diagnoses, more medical visits, as well as hospitalizations, and more

absenteeism. “Results indicate that anxiety disorders are associated with significant medical and productivity costs” (Marciniak, 2004).

Another study done (Konnopka et al., 2009) also purported that anxiety disorders puts a significant economic burden on society.

> If one connects the costs from anxiety disorders with the number of inhabitants of a country rather than with the treated cases, then anxiety disorders result in a considerable economic burden, based on their high prevalence. The results of CEA indicate that this burden can be considerably reduced from a payer’s perspective and from a societal perspective via an adequate therapy. (Konnopka et al., 2009, p. 28-29)

As noted however, the above-mentioned quote provided a transition into exploring “adequate therapy” that would help reduce anxiety.

Growing Trend toward Holistic Treatments

There has been growing interest from patients and health care professionals alike regarding alternative treatment options. In reply to the growing demand, even Harvard Medical School Department of Continuing Education has offered classes on complementary and alternative medicine in psychiatry (Keates, 2007). This is partly due to the fact that traditional methods of treating psychiatric conditions have not proved 100 per cent effective. Only about half of the patients who took antidepressants responded (ibid). Thus many have been looking into alternative and supplemental methods to treat their conditions.

Data Supporting Alternative/Holistic Treatments

There has been research, which support the treatment of anxiety with holistic treatments such as meditation and yoga, and combination therapies. Some examples are discussed below.

Mindfulness and Meditation. Meditation is described in textbooks as being used effectively in social work practice. According to Turner, “meditation is a method that is adjunctive to social work practice. It is a mechanism for self-regulation and self-exploration. It can help reduce stress and aid coping” (Turner, 2010, p. 293).

According to La Torre (2001), “current approaches have combined cognitive behavior treatment with relaxation techniques such as breathing exercises and guided imagery. …since relaxation approaches seem as effective in reducing anxiety as medication while empowering the client at the same time” (p. 28). The reasoning is that meditative and relaxation techniques help and train the clients to deem anxiety-producing situations as opportunities of increasing awareness of alternative coping mechanisms, instead of only desensitizing them as medication would. “This holistic view of anxiety as a part of the process rather than as symptom to be eradicated” was important (La Torre, 2001, p. 29). La Torre’s article cites a case study where an anxiety–ridden husband was able to bring himself to a place below his anxiety level using this method (La Torre, 2001).

Yoga. Yoga is one of the emerging holistic methods that seem to help in psychiatric disorders such as PTSD, which have a lot of symptoms in common with anxiety. Compilation of case studies and results narrated by the patients themselves attest to the effectiveness (Srinivasan, 2010).

Anxiety due to medical conditions also has been shown to get better by such practices. In a study done on adolescent girls with polycystic ovarian syndrome who suffer from anxiety symptoms, a randomized controlled trial was done to see the effect of holistic yoga. Previous studies had investigated the effect of exercise, yet the form of holistic exercise of yoga proved to be more effective (Nidhi, 2012).

Combined Therapies. There are other studies that show the effectiveness of a holistic approach to mental health. A study done in the Native American Health Center near Oakland, CA showed that those who had inpatient level of holistic care such as talking circles, prayer, sweat tents, pow-wows, and smudging (herb incense burning), had effective rate of change in terms of serious depressions, suicide, serious anxiety or tension (Wright, 2011, table 2, p. 1426). This holistic approach mirrors western terms such as group psychotherapy, meditation, massage, and spa care, and spirituality. Thus, it shows the effectiveness of such holistic approaches to recovery.

In this particular research, these abovementioned approaches such as yoga, meditation, and other mindfulness practices served as the independent variables that were observed to see any affect on the dependent variable of

Generalized Anxiety Disorder symptoms as measured by GAD-7 scores. The hypothesis was that the more holistic practices, the lower the GAD-7 scores.

In short, literature supports that both the prevalence and the cost of anxiety is high. Furthermore, traditional methods of treatment have shown to have limitations. Thus, it is important to research alternative methods and their efficacy in treating anxiety, even as an adjunct. This particular study would be one such study that would look at a certain population and the relationship between the holistic independent variables such as mentioned above, and the dependent variable of anxiety symptoms reported through GAD-7 measuring Generalized Anxiety Symptoms.

Theoretical Orientation

The theoretical orientation of this research was based on systems theory, Gestalt theory, post-modern and client-centered theory.

Systems theory supports the idea that the individual in the environment is based on relationships of different environmental systems and subsystems interacting or transacting with one another. It is a synergistic relationship of the individual interacting with different environments, and the systems on one another that affect the individual in turn (Turner, 2011, p. 242). This synergy supports a holistic view because holistic approaches can be described as the transactions of the system of the mind to the system of the body, and the integrative relationship between the two. The treatment of one system should cause a shift and would allow the whole system to try to reach equilibrium. For

instance, treating the body with yoga, massage, acupuncture should affect the state of the mind and help anxiety. In turn, the system of the healthy individual would transact with the larger system of community, and society, having a domino effect for health.

Another theory, the Gestalt theory, supports the idea that the whole is greater than the sum of its individual parts (Turner, 2011, p. 255-257). Thus, it could be described that Gestalt theory strongly supports the holistic view of an individual's health. The "here and now experiential methods" (Turner, 2011, p. 256) of Gestalt theory mirrors the here-and-now focus on many meditative experiences use in holistic treatments (Turner, 2011, p. 293-299).

Applying Gestalt theory, an individual is not just a brain, and body, put together with bio-chemicals. Each person has unique value as a whole that just the brain or just the body cannot justify alone. For example, a person could be a brilliant academic, yet suffer from anxiety, and have chronic physical pain in addition. A person could also be a gifted and fit athlete, but still suffer from extreme performance anxiety, or have other psychological or social issues. Treating the person as a whole, and approaching the life of a person from their physical health, to their mental, spiritual, and relational health will seem the most effective in the wellness of an individual.

Elements of the Post-modern Theory can also be found in that many holistic practices come with honoring the individual experience without judgment. This allows the client to have the ability to choose alternative forms

of treatment. “From a postmodern social work perspective, alternative viewpoints (particularly when they are held by clients) are considered to be legitimate viewpoints, regardless of whether or not the social worker holds or values those particular views” (Turner, 2011, p. 356).

Along with honoring the individual’s right to choose, client self-determination is in line with the theory of empowerment. The clients in this research chose for themselves the kind of treatments they preferred, and picked the kind of services they found helpful. This was in line with client-centered approach to therapy as well. The phenomenological aspect of client-centered therapy is consistent with the holistic practices such as meditation that are non-judgmental and based on passive observation of phenomenon (Turner, 2011, p. 63).

Potential Contribution of Study to Micro and/or Macro Social Work Practice

“It is believed that over 46 per cent of the United States population might be affected with at least one psychiatric disorder and at least a quarter of the population have two or more disorders” (Srinivasan, 2010, para. 2). It is clear that at a macro level, that there is a clear need to attend to the psychiatric needs of the population when speaking of health needs.

“A study by the World Health Organization, Harvard University School of Public Health and the World Band found that by the year 2030, depression will be second only HIV/AIDS in terms of disability caused world-wide”

(Keates, 2007, para. 6). Further, there is known co-morbidity of depression with anxiety (Hirschfield, 2001). Thus, one can infer that similar increases in anxiety cases would follow by the year 2030. This increase combined with the abovementioned fact that medications are only partially effective, alternative treatments need to be assessed and implemented for the large number of anxiety sufferers.

Finding out if anxiety treatment can be more effective with holistic practices in addition to traditional treatments, could contribute to a new view in micro practice as well as macro practice. More outpatient services may incorporate holistic services or stress them in self-care suggestions. Macro social work practice would inevitably be affected by micro social work practice in that community agencies, which deal with addiction recovery, PTSD, other anxiety related conditions could incorporate holistic practices as part of their programs, as well.

Summary

Holistic practices are supported by literature and studies. This particular study weighed the difference in outcomes as measured by GAD-7 in the treatment of anxiety with holistic practices in addition to psychotherapy versus psychotherapy alone. Given the previous studies in literature, which show that holistic practices are effective, the hypothesis was that holistic practices in addition to psychotherapy would be more effective than psychotherapy alone in the treatment of anxiety.

CHAPTER TWO

ENGAGEMENT

Introduction

This chapter discusses the study site, its location, services and gatekeepers, as well as engagement strategies for each stage of study, such as self-preparation, diversity issues, ethical issues, political issues, technological roles.

Study Site

This study was carried out in an outpatient clinic for psychotherapeutic counseling and wellness in a suburban town in the Northeast of the United States. This practice provides psychotherapy as well as holistic services. The services provided by the psychotherapists include individual counseling as well as group workshops, and couples therapy. The gatekeepers were the partners of this practice. The practice is owned by 2-3 psychotherapists partner/owners who employ 7 other contracted psychotherapists. Mindfulness-workshops are also provided as service by therapists. They also rent out their space to holistic practitioners including a massage therapist, yoga teachers, a chiropractor, as well as an acupuncturist. The gatekeepers also work with MSW student interns. This provided an avenue for discussion in learning through researching topics that were of interest to the gatekeepers. In

considering the trend of clients, it was observed by the partner of the practice that there had been an increase in number of anxiety clients.

Engagement Strategies for Each Stage of Study

Engagement in this particular positivistic study involved engaging the gatekeepers of this agency. These decision makers were the three partners of this particular clinical group practice. The possibility of research came up in a supervision meeting when discussing tasks. The student researcher first asked if research could be done at the site while there is access to data during the field year. The answer was a “yes”. This particular study was one that the gatekeepers stated interest in when asked what micro-level research question they wanted to explore if their data were used in research. This research did not involve complicated client contact or paperwork. The gatekeepers agreed verbally and gave written permission (attached to the IRB application). It was straightforward surveys and tallying.

Self-Preparation

Since this was a positivist study, the majority of self-preparation involved researching the relevant literature, and preparing the research instruments such as questionnaires and surveys to be given to participants. Purchase of data analysis software SPSS was made and installed. Data recording instruments was also designed. The main ethical issue was maintaining privacy of the clients. Thus, copies of any data was made and

kept in a separate research folder separate from the clinical folders. Subject number coding system was made, and used. A master list was locked away in the cabinet. Thus preparations included the literature review, design of data collection, deciding the questionnaires, and the data analysis software to be used, and designing ways to keep confidentiality intact.

Diversity Issues

This study was taken from one particular outpatient practice. Due to singleness of locality, there was not be a wide range in population ethnically and socio-economically. Since majority of the client population were women, there was less range of gender representation. However, both anxiety and holistic services are known to be more prevalent in women (Horsfall, 2001; Keshet & Simchai, 2014). Thus, the study could still be microcosmic of typical anxiety populations.

Culturally, the population was also not too diverse--it was primarily upper-middle class Caucasian women in a fairly wealthy suburb. However, again, anxiety is more prevalent among Caucasians than other ethnicities according to a study (Asnaani et al., 2010). Thus, diversity issues in the sample are not expected to affect the outcomes significantly.

Ethical Issues

The study was presented to the Institutional Review Board. Confidentiality and privacy was protected, by coding the documents with

subject numbers to identify clients. The gatekeepers agreed to give access to clinical data. The agreement from the clients was obtained through informed consent, when the clinicians approached their clients. Copies of any clinical data were made and kept in a separate research folder separate from the clinical folders. Subject number system was used. A master list was locked up in client files in locked cabinets with authorized personnel only. Thus, there is no possibility for information to be “leaked” online. Informed consent was given to clients in the beginning of the study, with the option to withdraw if the participant wishes. The informed consent included the permission to use the records for research purposes (See appendix F).

Political Issues

Aside from outcomes affecting further research questions for treatment perspectives and approaching the clients, political issues were not a *major* concern of this particular study. Surveys were part of the intake forms for the usual clientele at this practice, and thus did not pose a political issue regarding access to a politically sensitive/vulnerable population. At a therapeutic level, the clinical relationship between the client and clinician could have been affected when engagement with the client occurred. Deciding whether to ask the clinicians to engage the clients to protect privacy (so the researcher does not see the client’s face), or have the researcher engage the client directly was a minor but potential “political” issue within the practice. Also, outcomes inevitably brought on more questions at a micro-and macro- level.

Those in authority were comfortable in obtaining any result whether it is favorable or not to holistic methods. The gatekeepers were aware of the process of answering research questions, and expressed that any result would give some helpful information.

Role of Technology in Engagement

Aside from the initial intake forms that are emailed to clients before the first therapy appointment, there was also not much technology involved in the engagement phase of this study, as most of the forms and surveys were hard copies of paper questionnaires.

Summary

Engagement phase with the gatekeepers in this study was short because the gatekeepers had already given permission. Engagement with the clients in this study included the informed consent, and the surveys that included the GAD 7 that is already in intake packet. However, this was also anticipated to be short since the study is a brief follow-up survey with mostly a post-hoc analysis. The stakeholders had verbally showed interest. There does not need to be an extra step of reaching out of the program or services to engage. Political, ethical, technological issues had been addressed, and were not anticipated to be major factors in the study.

CHAPTER THREE

IMPLEMENTATION AND METHODOLOGY

Introduction

This chapter will cover the basics of implementation of the study of effects of supplemental holistic treatment on anxiety. This includes the study participants, selection of participants, data gathering, phases of data collection, data recording data analysis, termination and follow up methods will all be discussed. Communication of findings and dissemination plan will also be discussed.

Study Participants

There were 20 study participants taken from a convenience sample in an outpatient counseling services group practice with sites in suburban Northeastern town as well as in the metro-area. The practice also shared the site with holistic service providers as well. The study participants were clients who had commercial insurance, and were from the metro and suburban area. Most of the participants were Caucasian adult women ranging in ages 20-44 years; 11 participants were in their 20's; 4 participants were males (ages 23; 32; 38; 44); 16 participants were females (ages in primarily 20's and 30's). 19 of 20 participants identified themselves as Caucasians; 1 participant identified as African American.

From the socio-economic demography of the local area, which feeds the client pool, the clients are generally well educated with at least a bachelor's degree. Many of them likely had a regular family income at time of study because majority of them had their services funded through their employer's commercial insurance plan or private pay. Majority if not all most likely spoke English fluently as there is no bilingual service provider in the research site.

Most importantly, these study participants had a baseline score of GAD that shows some level of anxiety that can leave margin for improvement or change--a numerical value of at least 5 (or larger) for GAD-7. This will be further discussed in the next section "Selection of Participants".

Selection of Participants

The selection criteria for participation in this study were baseline GAD-7 scores that were 5 or above at intake of the client. Current client chart audits were used to identify a list from which to build the population of this study. Those clients whose charts audits indicate that there is a GAD-7 filled already at intake (at least 4 months before the study) served as a sampling frame. This required auditing as many charts as possible (Intake process will be further explained in next section). From those, *only* those who had a score on GAD indicating some level of anxiety were engaged and with informed consent, included in the study and given identification numbers. GAD-7 test translates

the total GAD-7 score of 5 as “mildly anxious”; score of 10 as “moderately anxious”; and 15 “severely anxious” (Spitzer et al., 2006).

Thus, those who had a score of 5 or above in the GAD-7 test at intake and were accessible and gave written consent served as the population for data collection. In addition, the clients were in therapy for at least 4 months. Once identified, these participants were asked to participate with a consent. Then they were given a post-test and survey, by the clinicians to protect anonymity, which then were retroactively analyzed.

This was a convenience sample because the selection of the participants was based on convenient access to the data, and external validity is not addressed. The data was collected through approximately three therapists, with heavy data set from one particular clinician, unfortunately. Since the research question is a causal one within the chosen population (does holistic treatment effect the GAD scores in any way?) internal validity need to be addressed. Threats to internal validity will be addressed in the next section “data gathering”.

Data Gathering

Data gathering instrumentation was done through self-administered questionnaires, in both the GAD-7 and the holistic practice questionnaire. These are shown in the appendix A. The GAD-7 post-test were the same instrument as given at intake (which would serve as “pre-test”).

When clients called at intake to receive psychotherapy or counseling services in this outpatient clinic, intake papers were given for the clients to fill out. These papers were sometimes emailed and filled out at home, and brought to the first visit with a therapist. Other times, if they forget the papers, they were given the papers at the first visit, to be filled out in the waiting room, or to be taken home and filled out and brought back next time. The packet of intake forms included identification forms, insurance verification forms, contracts for services, adult/adolescent checklist of concerns, a PHQ-9 test to screen for depression and also a GAD-7 test to screen for, and measure, anxiety.

Every effort was made to keep the information confidential. GAD-7 tests were pulled out of the chart, copied, and de-identified and assigned a subject number, and placed in a separate research binder. A master list was locked separate from the data, which was protected.

The self-administered post-tests were given together with the informed consent by the client's own therapist. The GAD-7 was self-administered, either a minute or two before or after a regularly scheduled session to fill it out, or at home through email. The more the environment of the post-test resembled the environment of the pre-test, the instrumentation and testing threats would be mitigated.

The post-tests consisted of the same GAD-7 that was given at intake as a pre-test, along with a holistic service questionnaire to see what holistic

involvement the clients had while in therapy. These post-tests were given to those clients who had been in service for longer than 4 months, and had 5 or above in their initial GAD-7 scores. The holistic service questionnaires were taken after the final GAD, to see if they have had supplemental holistic practices in addition to counseling services and how often and how long.

Typical internal threats to validity are listed as follows: “history, maturation, testing, instrumentation, statistical regression, selection bias, experimental mortality” (Morris, 2006, p. 21-22).

History is not thought to have posed a significant threat, since there were no significant events that would have affected the anxiety level of the whole population. More specifically, the population is not receiving services as a result of some uniform event in the local environment such as natural disaster, or catastrophe. Also they have not had sudden access to anti-anxiety treatments all at once, which would affect the results of the study.

The variety of dates of intakes would lend themselves to a variety of length of services, which would mitigate the maturation threats to validity in comparing the two groups. Some were in therapy as little as 4 months, others as long as 2 years. Absolute maturation factors cannot be eliminated. Most likely, the more and longer exposure to self-care, the better a client is likely to be, one would hypothesize. And it is possible that the longer a person is counseling, they might try other forms of self-care such as holistic practices because the trusted counselor may have suggested it along the way. Either

way, the whole population selected would be similar in this regard, since one group would not have longer maturation length than the other. For instance, neither the control nor experimental group was starting one type of treatment before the other group.

Further, analyzing the significant levels of *difference* in GAD scores between the two groups (those who received holistic service and those who did not) was hypothesized to mitigate such threat, since we are not looking at absolute scores for the post-test and survey. We would be looking at relative improvement.

Testing threat was insignificant for the initial “pre-test” because the test will was taken during intake before the follow-up study even began. It was retroactive data.

In terms of instrumentation, since the same GAD-7 was used for both pre and post-tests, instrumentation threat to internal validity was significant, either.

In terms of statistical regression, although we did initially anticipate extreme scores due the fact that there was selection of people with score of 5 or above (as opposed to 10 or above), we did have a few outlying extreme scores that may have affected the data. We also did not anticipate any 0’s in post-test score even if there is improvement, which proved true. The fact that the “control group” is still receiving therapy services was thought to buffer to extreme differences in improvement of anxiety that would pose a statistical

internal threat. Yet, there were a couple of high pre-test scores which did not improve, and one that even increased which may've affected data.

Selection bias was not thought to pose a significant threat, although one could argue, it was a convenience sample taken from a small clinical practice. It could also be argued those who are more determined to improve their anxiety would take every opportunity to help themselves. This could include doing more self-care whether it is "holistic" or not, and just by virtue of more hours of self-care, there could be improvement in GAD scores, not that the holistic practices themselves were effective. There was an example of that where a couple of clients answered "no" to holistic practices yet wrote down they exercised every day, and ran. Those who are motivated to improve and monitor themselves may be more apt to give consent to the study. To mitigate this effect, we have built into the questionnaire how often they receive both services (psychotherapy as well as holistic practices). Selection bias cannot be obliterated, but awareness can mitigate the effects in analysis.

Fortunately, experimental mortality would not pose a significant threat because the post-test and survey was given at the time of consent. Since pre-test to this study is retroactive, one did not necessarily have to ensure the clients stay on 4 months from the date of the consent. If one knew they had done intake forms including GAD-7 at least 4 months ago and were still in counseling, as long as they consented, the data was collected right away. Even if the particular client filled out the post-tests, and decided to drop out of

counseling the next week, the study can still use the data as long as they signed the consent form. If a longer-term longitudinal study took repeated post-tests at 4 months, 6 months, then a year for the same person, then, this would have been an issue. However, this was not the case.

Because this was a convenience sample where the researcher has access and permission to get data with consent, internal threats to validity could not be eliminated. However, as noted, efforts were made for internal threats to be mitigated as discussed above.

Phases of Data Collection

The *first* phase of data collection required that as many files can be audited as possible for intake papers that are filled, and to have those files labeled with grid shown in Appendix A. This was because for the pre-test initial baseline anxiety levels of the clients was established at intake or early in the treatment phase with the initial GAD-7 scores in the client's files.

Then the *second* phase was gathering a sample frame of those who have filled out GAD-7 as shown in the grid in Appendix A. Then, from that list, in the *third* phase we selected clients who had a GAD-7 score of 5 or above at baseline GAD who have also been in therapy for at least 4 months.

Then, in the *fourth* phase we engaged the appropriate therapist/counselors with the list and ask them to ask these clients to be involved in the study and present them with a consent form and post-tests

(GAD and questionnaire). The account numbers can be noted on top of the post-tests as participant identification.

The *fifth* phase would be to physically collect the post-test. This took a few months. Then, we had to total the GAD scores, as well as distribute the piles into control group and experimental post hoc.

Then in the *sixth* phase, data entry was made into the SPSS. Then the final and *seventh* analysis phase will be discussed in chapters 4-6.

Data Recording

At each phase of data collection, each list was recorded. Another way to mark the files to look at was a sticker or highlight to the part of the audit grid that showed that the GAD-7 had been filled. Then, of those marked, we looked at the total GAD scores to be recorded (with 5 or above on pretest) on the Data recording instrument in Appendix E, which has columns for account numbers that have filled GAD pretest, the total pre-test GAD scores, intake dates, length of therapy in months, post-test GAD scores, holistic (yes/no), frequency of holistics, as well as frequency of counseling.

These values will were entered in as numerical values for easy entry into SPSS data software for a t-test, and Pearson's correlation between the various independent variables (types of treatment and holistic practices) and the dependent variable (the GAD scores).

Answers to each question on both GAD-7 as well as the survey was given a numerical value. For instance, in the post- test questionnaire, "never"

could be given a numerical value of “1” and, “tried at least once” a “2”, and “1-3x/month” a “3”, and “1-3x/wk” a “4” and “daily” a “5”. [For a more detailed study possibly in the future, each of the answers to GAD could also be given similar numerical values, if we want to look at the results in detail. For instance, even if overall GAD score does not improve, maybe a certain aspect such as irritability on the GAD test may improve.]

Data Analysis Procedures

Data analysis software SPSS was used for quantitative analysis. Pearson correlation and t-tests were run. We created a new variable to measure the difference in score of the initial GAD and the final GAD. “GAD_difference_variable” was defined as “Initial GAD – final GAD” -- thus, the larger the value, the larger the improvement. We also created “GAD_difference_category” variable (interval/ratio variable) into a categorical variable. For example, GAD_difference score between -11 to 0 was “1,”; 1-5 as “2”; and 6 or higher scores as “3”. Also, we created a “holistic_total” variable, adding yoga, meditation, massage, acupuncture, chiropractic, and other variables, so see sum impact of holistic practice if any.

Basic statistical analyses were run which included: 1) frequencies on all the variables (plus means and standard deviations), 2) a “paired samples t-test” on the “Initial GAD” and “Final GAD” variables, 3) a series of Chi-square tests between the holistic interventions (categorical variable) and “GAD_difference_category” variable (categorical variable), as well as 5) a

series of Pearson's correlation tests between each holistic intervention (treating each as a continuous variable) and "GAD_difference" variable (continuous variable).

Summary

This section covered the implementation of the research. The selection of participants was made through audits, and pre-test data were post-hoc. Then post-tests were administered with consent. Then, the data were entered into an SPSS software, and analysis were run on the relationship between independent and dependent variables. The results will be analyzed and discussed in the following chapters.

CHAPTER FOUR

EVALUATION

Introduction

This chapter will cover data analysis and interpretations. Implications to micro social work practice as well as to macro level social work practice will be discussed.

Data Analysis

The demographic characteristics are shown in Table 1. There were 20 participants in this study (N = 20). Ninety percent of the participants were White/Caucasian, 5 per cent were African American/black, and 5 percent identified themselves as Latino. Participants ranged from age 22 to 44. Fifty-five percent were in their 20's, 35 per cent were in their 30's and 10 percent were in their 40's. Out of 15 out of 20 participants who identified a gender, 11 were female, and 4 were male.

In terms of psychotherapy history, 25 percent of the participants had been in therapy for 0-2 months, 20 percent had been in therapy for 3-5 months, 10 per cent were in therapy for 6-8 months, 5 percent were in therapy for 9-11 months, and 40 per cent were in therapy for over 12 months. In terms of frequency of psychotherapy, 30 per cent received it 2-3 times a month. Seventy percent received therapy 4-5 times a month (almost weekly) (please see Table 1).

In terms of medications taken by participants, 4 participants were on medication, 16 did not indicate medication. Thus, a majority of the participants were not on medication.

In terms of number of participants with any holistic practice reported, 8 participants reported no holistic practice while 16 participants indicated they participated in some holistic practice at least one or more times, regardless of any specific category (including “other”).

Yoga, meditation, and “other” had the most participation of the choices given in the survey as shown in Table 1. Fifty-five percent of the study participants practiced yoga regularly, and 55 percent of the study participants also practiced meditation regularly. Only 35 percent received massages regularly. Only 5 percent (one participant) received acupuncture regularly. 55 percent indicated “other” practices.

For those who did not indicate any participation in holistic practice, additional questions were asked on reasons listed as “unfamiliar”, “lack of time”, “lack of resources”, and “other”. 44.4 percent cited “lack of time” as reason for not participating in holistic practices; 11.1 cited “lack of resources”; 33.3 percent cited “other” reasons for lack of holistic practice.

Table 3 presents the frequencies of both final GAD scores as well as initial GAD scores. The scores for the initial GAD scores ranged from 3-27 with an average of 12 (SD = 6.03) and the scores for the final GAD scores ranged from 1 to 27 with an average of 8.75 (SD = 6.67).

There was improvement in GAD scores, as the table 3 shows higher frequency in the lower numbers in the final GAD scoring. A paired samples t-test was run on initial GAD scores and final GAD scores, and the finding was statistically significant ($t = 2.493$, $df = 19$, $p = .022$) improvement in GAD scores. The results are shown in Table 3.2. As shown in table 3.2, there was statistically significant improvement in GAD score

In terms of the GAD difference categorical variable, 35 percent of participants had GAD results that did not improve or got worse. 25 per cent had improvement 1-5 points in the score; 40 percent had improvement of 6 or more points in GAD scores.

An independent samples t-test was run between the GAD difference variable (improvement in GAD scores) and two groups (group 1 w/ no holistic practice at all and group 2 with one or more holistic practice) to assess any significant difference in GAD scores in two groups. Finding was not statistically significant ($t-1.272$, $df = 18$, $p = .219$)

A Pearson correlation test was done to see any correlation between the holistic variables and the GAD_difference variable (improvement in GAD scores). There was no statistical significant correlation. Chi square tests were run to see effect of each of the various holistic interventions on the GAD difference categorical variable (the effect on the GAD score improvement). Again, there was no statistical significance.

Data Interpretation

The study was done with a convenience sample, and would need further study with a larger sample. In chapter 1, the hypothesis was stated as:

> "…that given enough data, there would be a difference between the experimental and control groups, and that those who are involved in holistic practices in addition to traditional therapies will have better improvement in anxiety scores, as measured by the GAD-7 questionnaire for Generalized Anxiety Disorder."

Although the hypothesis was that there would some correlations between the holistic practices with any improvement in GAD scores, the study did not indicate any statistically significant finding. There was statistically significant improvement in GAD scores. However, the question remains 'to what could improvement be attributed to'? One commonality through all participants was that they received psychotherapy at this particular study site. Majority of them had some holistic practice reported, yet the overall frequency of holistic practices done in general did not statistically correlate with GAD improvements in this sample.

The holistic practices as an adjunct to psychotherapy did not seem to affect the GAD scores in a statistically significant way in this small sample study. This may seem inconsistent with Evans' (2008) findings, which showed that mindfulness based CBT reduced anxiety levels., as well as other findings such as LaTorre (2001), which also showed reduced anxiety levels with

holistic practices. However, much of the current research on holistic practices is more qualitative than quantitative.

The results of the current study do not support the hypothesis. However, it is difficult to say it refutes it given the many facets of improvement in GAD, and the qualitative nature of the holistic experience, not to mention many limitations of research.

There were many limitations of research in this study. While there were 4-5 psychotherapists who allowed their clients to participate, many of the study participants were from primarily from one psychotherapist who actively recruited. The GAD-7 score improvement could be attributed to various factors such as the psychotherapist's style, the participants' interpretations of "holistic practices" as a separate entity, even if it was incorporated into their weekly therapy sessions (such as meditation in the beginning of session, mindful coloring books during sessions, and other practices).

The instruments could have been more specific in the use of holistic practices, including during the sessions as well. For example, asking whether the psychotherapists integrate or do not integrate holistic practices into individual sessions. It may have been helpful to have a third group who had only holistic practices and no psychotherapy. Most of all, the sample size was small, and thus not ideal for the SPSS analysis.

Implications of Findings for Micro and/or Macro Practice

The study shows the importance of psychotherapy as a baseline practice to improve anxiety. Whether holistic practices help or not could not be thoroughly answered through this particular study because the sample was too small. However, the importance of psychotherapy for anxiety could be shared in macro practice, with organizations that could help fund schools to provide psychotherapy for their students, or for health insurances that could help reimburse at higher rates psychotherapy costs. Psycho-education could be brought into public places, and places of healthcare providers, to promote the benefits of psychotherapy, and self-care.

Summary

This chapter outlined the results of the study. The participants ranged in 20-40 years of age. Most were women. A little over half participated in yoga and meditation as the most common practices. There was GAD score improvements overall in the participants, but no direct correlation could be established between those improvements and the holistic practices. The sample was very small, presenting a notable limit to research in this study.

CHAPTER FIVE

TERMINATION AND FOLLOW-UP

Introduction

This chapter will cover termination plans with the site of research, and the research participants. Communication of the findings and dissemination plans will be discussed.

Termination of Study

Since the study was a retroactive study, the follow-up collection of data marked the beginning of the termination with the study participants themselves. Ongoing relationship with the site of study has been occurring due to clarifications, hand-over of data from the clinicians who collected the data.

Communication Findings to Study Site and Study Participants

Ongoing communication has been occurring with the study site. The finished research report will be shared with the owners of the site, as well as with the clinicians who participated by collecting the data.

Ongoing Relationship with Study Participants

Due to confidentiality, there will not be ongoing relationship with study participants/clients themselves. However, there will be ongoing relationship with those clinicians who participated in supporting this study.

Dissemination Plan

Final results and report will be shared through email to the study site. When the thesis is published and recorded in CSUSB library, access may be given to the study site to retrieve the study. Otherwise, a copy will be emailed as an attachment.

APPENDIX A

AUDIT FORMS

FORMS FOR ACCT:	FILL	SIGN	DATE	O= OK X= NEED
ADOL/ADULT CHECKLIST				
CLIENT RTS				
CONSENT TO VIDEOTAPE IF NEED				
CREDIT CARD FORM				
HIPAA				
INSURANCE VERIFICATION FORM				
INTAKE ASSESSMENT SHEET				
MLCWC CLIENT/COUPLES CONTRACT				
MLCWC INTAKE ASSESMENT				
PHONE SCREENER IF NEED				
PHQ/GAD				
PROGRESS NOTES				

APPENDIX B

DATA COLLECTION INSTRUMENT GENERAL

ANXIETY DISORDER-7

DATA COLLECTION INSTRUMENT GAD-7

Generalized Anxiety Disorder 7-item (GAD-7) scale

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all sure	Several days	Over half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3
Add the score for each column	+	+	+	
Total Score *(add your column scores)* =				

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____
Somewhat difficult _____
Very difficult _____
Extremely difficult _____

Source: Spitzer RL, Kroenke K, Williams JBW, Lowe B. A brief measure for assessing generalized anxiety disorder. *Arch Inern Med.* 2006;166:1092-1097.

APPENDIX C

GENERAL ANXIETY DISORDER-7 INTERPRETATION TABLE

GAD-7 INTERPRETATION TABLE

Interpreting the Score:

Total Score	Interpretation
≥10	Possible diagnosis of GAD; confirm by further evaluation
5	Mild Anxiety
10	Moderate anxiety
15	Severe anxiety

Source: Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Lowe, B. (2006). A brief measure for assessing generalized anxiety disorder. *Archives of Internal Medicine*, 166, 1092-1097 Retrieved from https://www.dhs.wisconsin.gov/mh/conferences/generalized-anxiety-scale-2-11-16.pdf

APPENDIX D

POST-TEST HOLISTIC SURVEY

POST-TEST HOLISTIC SURVEY

Supplemental Survey to accompany GAD-7 (post-test)

Have you participated in the following holistic practices on your own or received holistic services (either here, elsewhere), since you started counseling services? Please Circle one that best describes the frequency with which you are involved in holistic practices:

1. Yoga:

Never tried at least 1x 1-3 x/mo 1-3/weekly daily

2. Meditation:

Never tried at least 1x 1-3x/mo 1-2/weekly daily

3. Massage:

Never tried at least 1x 1-3 x/mo 1-2/weekly daily

4: Acupuncture:

Never tried at least 1x 1-3 x/mo 1-2/weekly daily

5: Chiropractic

Never tried at least 1x 1-3 x/mo 1-2/weekly daily

6. Other: (describe)_____

Never tried at least 1x 1-3 x/mo 1-2/weekly daily

7. I have been in counseling for:

4months 5-11 months 1yr+

8. I see my counselor:

1-2x/month 3-4x/month 4+/month (1+/wkly)

[designed by Samantha S. Woo under supervision of S Wesnoski, 2015]

APPENDIX E

INFORMED CONSENT

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

College of Social and Behavioral Sciences
School of Social Work

RISKS: This research is considered to be a minimal risk. There are no foreseeable overt risks. However, some people may experience slight discomfort in answering questions about anxiety.

BENEFITS: The findings of this research may result in future benefit of improvements to integrative treatments. There will be no compensation to participate in this research.

CONTACT: For any questions regarding this study, please contact student researcher Samantha Woo, woos300@coyote.csusb.edu; Research advisor, Dr. Janet Chang, 951-537-5184, jchang@csusb.edu , Professor of Social Work, California State University, San Bernardino.

RESULTS: The results of this study will be available in the library of California State University, San Bernardino 5500 University Parkway, San Bernardino, CA 92407, as well as at with the director of Main Line Counseling and Wellness Center , 600 Haverford Rd, Suite 201, Haverford, PA 19041.

CONFIRMATION STATEMENT

I understand that I must be 18 years of age or older to participate in your study, have read and understand the consent document and agree to participate in your study.

By agreeing to participate in this study, I agree to allow my initial GAD-7 survey from intake, as well as the follow-up GAD-7 and holistic survey, to be included in this study.

SIGNATURE:

California State University, San Bernardino
Social Work Institutional Review Board Sub-Committee
APPROVED VOID AFTER
IRB CHAIR

Signature: _____ Date: _____

Witness: _____ Date: _____

909.537.5501 909.537.7029
5500 UNIVERSITY PARKWAY, SAN BERNARDINO, CA 92407-2393

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

California State University, San Bernardino
Social Work Institutional Review Board Sub-Committee
APPROVED VOID AFTER
CHAIR

College of Social and Behavioral Sciences
School of Social Work
INFORMED CONSENT

Thank you for your consideration in participating in this study. The study in which you are being asked to participate is designed to investigate the following question: "Do holistic practices as an adjunct to traditional psychotherapy affect GAD-7 scores for anxiety?" This study is being conducted by MSW student researcher Samantha Woo, under the supervision of Dr. Janet Chang and Dr. Teresa Morris, professors of Graduate School of Social Work, *California State University, San Bernardino*. **This study has been approved by the School of Social Work Sub-Committee of the California State University, San Bernardino, Institutional Review Board.**

PURPOSE: The purpose of this research is to evaluate holistic supplements to counseling and their relationship to measures for anxiety.

DESCRIPTION: This is a one time 5-10 minute session, where you will be asked to fill out the included 2 short surveys, each 1 page, 7-10 multiple choice questions. In addition, we will be utilizing the GAD-7 questionnaire, which you already completed at intake. You will complete the same GAD-7 survey as a follow-up as one of the short surveys. The second survey is a 1-pg supplemental survey on holistic practices. All three will be included in this study. There is a slight chance that we may need to ask for future follow-up if there is a change in direction of the study.

PARTICIPATION: Your participation is appreciated and completely voluntary and you do not have to answer any questions you do not wish to answer. You may skip or not answer any questions and can freely withdraw from participation at any time. Your decision whether to participate or not will not affect your treatment at MLCWC. You can choose not to participate.

CONFIDENTIALITY: Please be assured that all personal information will be kept strictly confidential and all of the HIPAA (Health Insurance and Portability and Accountability Act) protections will apply to protect your personal health information. Your data will be given a subject number rather than your identity while handling data, as well as being analyzed, to add another layer of confidentiality. All data will be kept in a locked cabinet separate from clinical information, as well. Any publication of results will be with anonymity of data, and your confidentiality will be protected.

DURATION: This participation should take you 5-10 minutes or less to fill out.

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APPENDIX F

INSTITUTIONAL REVIEW BOARD APPROVAL

CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO
SCHOOL OF SOCIAL WORK
Institutional Review Board Sub-Committee

Researcher(s) _____

Proposal Title _____

_____

_____

Your proposal has been reviewed by the School of Social Work Sub-Committee of the Institutional Review Board. The decisions and advice of those faculty are given below.

Proposal is:

__X__ approved

_____ to be resubmitted with revisions listed below

_____ to be forwarded to the campus IRB for review

Revisions that must be made before proposal can be approved:

_____ faculty signature missing

_____ missing informed consent _____ debriefing statement

_____ revisions needed in informed consent _____ debriefing

_____ data collection instruments missing

_____ agency approval letter missing

_____ CITI missing

_____ revisions in design needed (specified below)

_____

_____

_____

_____

_____

_____

_____

Committee Chair Signature Date

Distribution: White-Coordinator; Yellow-Supervisor; Pink-Student

APPENDIX G

TABLES

TABLES

Table 1. Demographic Characteristics of the Participants

Variable	Frequency (n)	Percentage
Ethnicity		
African American	1	5
White	18	90
Latino	1	5
Age		
20’s	11	55
30’s	7	35
40’s	2	10
Length of therapy		
0-2 months	5	25
3-5 months	4	20
6-8 months	2	10
9-11 months	1	5
12 + months	8	40
Frequency of therapy		
2-3x/month	6	30
4-5x/month	14	70
Medication		
Yes	4	21.1
No	15	78.9

Table 2. Holistic Uses of the Participants

Variable	Frequency (n)	Percentage (%)
Use of holistic practices		
Yoga		
Never	9	45
1x/month	6	30
2-3x/mo	1	5
1x/wk	4	20
daily	0	0
Meditation		
Never	9	45
1x/month	3	15
2-3x/month	1	5
1x/wk	4	20
daily	3	15
Massage		
Never	12	60
(1x/yr)	1	5
1x/month	5	25
2-3x/mo	2	10
1/wk	0	0
daily	0	0
Acupunture		
Never	19	95
1x/month	1	5
2-3x/month	0	0
1x/wk	0	0
daily	0	0
Chiropractic		
Never	18	90
1x/month	1	5
2-3x/month	0	0
1x/wk	1	5
daily	0	0
Other		
Never	4	19
1x/month	0	0
2-3x/month	1	11.1
1x/wk	2	22.2
daily	2	22.2
[missing 11]		

Table 3. GAD initial and GAD final frequencies

Variable	Frequency (n)	Percentage (%)
Initial GAD scores		
3	1	5
5	3	15
6	1	5
9	1	5
10	3	15
11	1	5
12	2	10
13	1	5
14	1	5
15	1	5
16	1	5
18	1	5
19	1	5
20	1	5
27	1	5
Final GAD scores		
1	1	5
2	1	5
3	1	5
4	1	5
5	3	15
6	3	15
7	1	5
8	4	20
11	1	5
18	2	10
19	1	5
27	1	5

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