

AN ABSTRACT OF THE DISSERTATION OF

Jocelyn K. Novella for the degree of Doctor of Philosophy in Counseling presented on June 7, 2019.

Title: A Comparison of Online and In-Person Counseling Using Solution-Focused Brief Therapy for College Students With Mild to Moderate Anxiety

Abstract approved: _____

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Emerging adulthood is a newly-defined developmental phase that occurs during the traditional college years (18-22) (Arnett, 2015). These students at colleges and universities are showing a dramatic increase in emotional distress, with the largest increase occurring in anxiety and stress symptomology (Association of University and College Counseling Center Directors, 2017). As these numbers increase, so do requests for appointments at campus counseling centers. Staff at these centers are struggling to keep up with the demand for anxiety treatment, resulting in long waiting lists and inadequate services. In addition, many of the most at-risk college students do not access mental health treatment (Eisenberg, Golberstein & Gollust, 2007).

Therefore, there is a need to offer effective short-term strategies to alleviate anxiety, as well as to create a variety of non-traditional delivery methods to improve access. College counseling centers rely on research to make decisions about effective and efficient options. However, there is a paucity of studies looking at solution-focused brief therapy (SFBT)—a brief counseling model that was developed in the late '80s—in the college setting, and none combining that therapeutic model with an online delivery system. The present dissertation was designed to examine two main areas of research related to the use of SFBT in a college

counseling setting with emerging adults who reported mild to moderate anxiety levels. Two studies were developed to address these, and both were conducted in a university counseling center in the northeastern United States. Both studies involved the same set of participants ($N=49$) who were randomly assigned to in-person or online counseling. Students were recruited through e-mailed flyers and posters around campus, as well as during typical screening appointments at the counseling center. Participants qualified for the study based on generalized anxiety and social anxiety subscale scores on the Counseling Center Assessment of Psychological Symptoms-62 (CCAPS-62).

The first study examined outcome for anxiety treatment to determine the effectiveness of SFBT in both in-person and videoconference/online treatment delivery. A non-inferiority analysis was conducted to look at equivalency outcomes with the two delivery methods. The research questions guiding this study were:

1. “Is SFBT effective for reducing symptoms of mild to moderate anxiety in emerging adults at college as measured by the Beck Anxiety Inventory (BAI) at three time points (pretest, posttest, and 3-week follow-up)?;
2. Is online counseling using SFBT as effective as in-person counseling using SFBT to reduce the symptoms of mild to moderate anxiety in emerging adults in college as measured by the BAI?;
3. Is online counseling using SFBT as effective as in-person counseling using SFBT to reduce symptoms of mild to moderate anxiety in emerging adults in college as measured by the CCAPS?”

The Welch’s t test results for Question 1 show statistically significant improvement in BAI scores over the 3 time periods (pretest, posttest, and follow-up), supporting the hypothesis that

SFBT is effective for this treatment. A repeated measures ANOVA was used to evaluate Question 2, and the results showed that there was no statistically significant difference in outcomes for the two delivery methods. For the CCAPS, reliable change indices (RCI) (Jacobson & Truax, 1991) were compared using a chi square test which showed no statistically significant difference in the two delivery methods. The non-inferiority analysis indicated equivalency between the two delivery methods. Again, all of these results supported the original hypotheses.

The second study looked at therapeutic working alliance (TWA) as evaluated by the working alliance inventory (WAI) for the two delivery methods (online compared to in-person). The TWA was examined due to the central role it plays in the effectiveness of counseling (Bachelor & Horvath, 1999). The research questions guiding this study were:

1. “Is the TWA (as measured by the client version of the WAI) using online counseling comparable to the TWA with in-person counseling after the initial session when using SFBT to treat emerging adults at college with mild to moderate anxiety?;
2. Is the TWA (as measured by the client version of the WAI) using online counseling comparable to the TWA using in-person counseling after the third session when using SFBT to treat emerging adults at college with mild to moderate anxiety?”

Welch’s *t* tests, designed to have greater power than doing a Levene’s test for equal variances and then a Student’s *t* test, were conducted at first and third sessions. They indicated that there was no statistically significant difference in the TWA between online and in-person delivery. Again, non-inferiority analysis suggested equivalency to the two delivery methods. This supported the original hypotheses. Both studies randomly assigned participants to delivery method in order to increase the robustness of the results.

The findings in these studies indicate support for the equivalency of online to in-person delivery of counseling. They also support the use of SFBT in college settings and the power of this brief, strength-based method to create change quickly. These results can inform counseling centers on proven techniques to reach more at-risk students as well as more efficient interventions for anxiety treatment for emerging adults. Additionally, these findings provide additional strength for the equivalency of delivery methods, even when students are randomly assigned. As counseling centers continue to grapple with the increase in anxiety-related issues, they can move to easier access through online delivery, while seeing symptom improvement in a shorter time period with SFBT.

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A Comparison of Online and In-Person Counseling Using Solution-Focused Brief Therapy for
College Students With Mild to Moderate Anxiety

by
Jocelyn K. Novella

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APPROVED:

Major Professor, representing Counseling

Dean of the College of Education

Dean of the Graduate School

I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

Jocelyn K. Novella, Author

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CHAPTER 1: GENERAL INTRODUCTION

Thematic Introduction

Anxiety disorders are some of the most common mental health diagnoses, especially in emerging adults (Reetz, Krylowicz, & Mistler, 2015). In the *Healthy Minds Study 2017–2018*, 31% of the college students surveyed showed symptoms of anxiety on the Generalized Anxiety subscale of the Counseling Center Assessment of Psychological Symptoms (CCAPS-62), with 13% of those having severe anxiety symptoms. The National College Health Assessment has been conducted by the American College Health Association (ACHA) for 20 years, and the number of students reporting a current mental health issue has grown by 58% in the last 10 years, with the most common diagnosis being anxiety (ACHA, 2018).

Colleges struggle to accommodate all of the students requesting anxiety treatment at campus counseling centers (Kwai, 2016), while realizing that many students who are in distress will never reach out for help (Merikangas et al., 2011). From a social justice perspective, college counseling centers need to begin to shift from traditional delivery and intervention options to alternatives to ensure students have access to an appropriate level of care.

Online counseling is one possible solution to this issue. First, emerging adults are comfortable with the use of technology as a means of communication, and making counseling more youth-friendly is essential (Hanley, 2012). Gerrits, van der Zanden, Visscher, and Conjin (2007) found that students preferred discussing problems over the Internet to in-person. This may have to do with the stigma that is still associated with mental health care and continues to be the number one reason distressed individuals do not seek help (National Alliance on Mental Illness, 2012).

Currently, counseling centers in the United States have just begun to offer a few online mental health options to students. Many clinicians in these settings continue to have concerns

about this new delivery system for several reasons. Although some randomized controlled trials have been conducted in countries like Australia and the United Kingdom (e.g., Gerrits et al., 2007; Hanley, 2012; Ryan, Shochet, & Stallman, 2010), few have been conducted at colleges in the United States. This may lead to a concern about the efficacy of online treatment compared to in-person treatment. In addition, many clinicians have concerns about the therapeutic working alliance (TWA) in a web-based intervention of any kind. Some of the early studies indicate a concern among psychologists about the impact of videoconferencing on the TWA (Rees & Stone, 2005). However, Simms, Gibson, and O'Donnell (2011) found that clinicians who had more training on the use of technology as well as more experience as therapists were more likely to try this new delivery option. In addition, training on ethical delivery of services through technology has only begun to be accessed by mental health practitioners (Center for Credentialing & Education, Board Certified-Telemental Health, n.d.-a).

Due to the numerous types of web-based interventions, the research methodology is fairly heterogeneous, making it difficult to draw conclusions. Many online studies have focused on limiting the therapist time in treatment, known as *low intensity interventions* (Therapist-Assisted Online; Benton, Heesacker, Snowden, & Lee, 2016). This type of intervention is driven by attempts to alleviate the waiting lists that are ubiquitous in the college counseling world. Clients can use a web-based module to learn cognitive-behavioral strategies to address their issues with occasional therapist contact; these are especially effective with anxiety and depression (Andrews, Cuijpers, Craske, McEvoy, & Titov, 2010). Some studies involved regular communication with the therapist, either through phone calls or web-based chat (e.g., Cuijpers & Andersson, 2009; Mallen, Jenkins, Vogel, & Day, 2011; Wangberg, Gammon, & Spitznogle, 2006). Finally, using

synchronous videoconferencing is showing the most promise, given the improved compliance (Yellowlees, Shore, & Roberts, 2010).

However, few randomized controlled studies have been conducted using synchronous videoconferencing, and none have been conducted with college students with anxiety. If research supported the idea that the TWA through videoconferencing is similar to TWA for in-person counseling, clinicians may be more open to this modality. Also, if similar clinical effectiveness of each delivery system is shown through a non-inferiority trial, college counseling clinicians may develop a comfort with this type of videoconferencing.

Another possible solution to the increasing demand for college counseling centers is brief interventions. College students have shown a tendency to access mental health care in brief episodes (Center for Collegiate Mental Health, 2015). In fact, the mean number of sessions for a student who goes to a college counseling center is 4.71 (Center for Collegiate Mental Health, 2015). This creates an ideal setting for the use of short-term interventions, like solution-focused brief therapy (SFBT). Talley's (1992) research showed significant improvement in General Health Questionnaire scores after brief therapy in this setting. However, research on the effectiveness of using SFBT in this setting is needed.

Dissertation Overview

This dual-manuscript dissertation examines issues of SFBT and delivery method in a college setting. The studies provide more rigorous data on (a) impact on anxiety symptoms of college undergraduates using videoconference counseling compared to in-person treatment using SFBT, and (b) a comparison of the TWA for these delivery systems. The randomized, non-inferiority design provides a greater initial picture of the clinical effectiveness of this new delivery system than the limited studies on this population, especially in the United States.

The overarching theme connecting these articles is the exploration of efficacy for a unique delivery system. The use of technology in this way could provide access to many more students who suffer from anxiety symptoms during their college years. Additionally, SFBT has not been studied in an online setting and could be an ideal therapeutic approach to use with students who prefer engagement in brief counseling. The two manuscripts look at three different aspects of treatment with the college student participants: (a) clinical effectiveness of SFBT for mild to moderate anxiety, (b) comparison of online delivery to in-person effectiveness, and (c) comparison of the TWA in both delivery systems.

The first manuscript evaluates effectiveness using results from the Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown, & Steer, 1988) at three time periods: (a) pretest, (b) posttest, and (c) follow-up after 3 weeks. In addition, the CCAPS-62 (Locke et al., 2009) is used at pretest and at follow-up (CCAPS-34) (Locke et al., 2009) for a further look at effectiveness using a college counseling inventory. The second manuscript focuses on the TWA by giving clients the Working Alliance Inventory (WAI) at two time periods: after the first session and after the third session. SFBT was delivered by two counselors at the university counseling center who received training and supervision in this approach.

There are differences to point out as well. Chapter 2 uses a pretest, posttest, and follow-up collection of outcome data on anxiety using the BAI, as well as a pretest and follow-up with the CCAPS. Because the TWA is only applicable once therapy has begun, the WAI was given after counseling began. Additionally, follow-up data was collected after 3 weeks for the anxiety symptoms. However, TWA is not relevant once therapy has been discontinued and was not collected in follow-up. In the following section, the primary research questions in each manuscripts will be discussed in detail.

Research Questions

Manuscript 1 - Chapter 2

This study, titled “A Comparison of Online and In-Person Counseling Outcomes Using Solution-Focused Brief Therapy for College Students With Anxiety,” addresses outcomes using SFBT for treating anxiety in college students and whether those outcomes differ when therapy is delivered through videoconferencing versus in-person (non-inferiority study). Participants were emerging adults (ages 18–22), who were college students at a Catholic university in the northeastern United States. The inclusion criterion was a clinically significant anxiety score on the screening instrument. The research questions were as follows:

1. Is SFBT effective for reducing symptoms of mild to moderate anxiety in emerging adults at college, as measured by the BAI at three time points (pretest, posttest, and 3-week follow-up)?

H₁: There will be a significant difference in anxiety between study participants at posttest and follow-up compared to pretest when using SFBT to address anxiety.

2. Is online counseling using SFBT as effective as in-person counseling using SFBT to reduce symptoms of mild to moderate anxiety in emerging adults at college, as measured by the BAI?

H₂: The effectiveness of the two treatment delivery modalities will not differ significantly in reducing anxiety symptoms among college students. This is a non-inferiority study.

3. Is online counseling using SFBT as effective as in-person counseling using SFBT to reduce symptoms of mild to moderate anxiety in emerging adults at college, as measured by the CCAPS?

H₃: The two delivery methods will be equivalent, as determined by this type of non-inferiority study.

If the hypotheses are correct, this study will pave the way for a greater acceptance of web-based delivery of mental health services for college students with anxiety.

Manuscript 2 - Chapter 3

This study, entitled “Therapeutic Working Alliance: A Comparison of Online and In-Person Counseling Using Solution-Focused Brief Therapy for College Students With Anxiety,” addresses the importance of the TWA. Given that clinicians are hesitant about providing brief counseling in an online delivery system due to concerns about the TWA (Wray & Rees, 2003), this study adds data to the existing body of knowledge in this area. The research compares the TWA in a videoconferencing setting to the TWA in in-person settings using an SFBT protocol for college students with mild to moderate anxiety. Participants were emerging adults between the ages of 18 and 22 attending a Catholic university in the northeast United States who demonstrated mild to moderate anxiety per initial screening criteria from the CCAPS-62. The research questions were as follows:

3. Is the TWA (as measured by the client version of the WAI) using online counseling comparable to the TWA with in-person counseling after the initial session when using SFBT to treat emerging adults at college with mild to moderate anxiety?

H₄: The TWA scores reported by clients using the two delivery methods will not differ significantly, as determined by this non-inferiority study.

4. Is the TWA (as measured by the client version of the WAI) using online counseling comparable to the TWA using in-person counseling after the third session when using SFBT to treat emerging adults at college with mild to moderate anxiety?

H_5 : The TWA scores reported by clients using the two delivery methods will not differ significantly, as determined by this non-inferiority study.

Chapter 4

In Chapter 4, I will discuss the results of the research questions in more detail by focusing on implications of the findings. I will also address the limitations of the study and provide recommendations.

Glossary of Terms

Distance counseling: A counseling approach “that takes the best practices of traditional counseling as well as some of its own unique advantages and adapts them for delivery to clients via electronic means in order to maximize the use of technology-assisted counseling techniques” (Center for Credentialing & Education, n.d.-b).

Emerging adulthood: According to Arnett (2004),

There are five main features [of emerging adulthood]: 1. Identity explorations: answering the question ‘who am I?’ and trying out various life options, especially in love and work; 2. Instability, in love, work, and place of residence; 3. Self-focus, as obligations to others reach a life-span low point; 4. Feeling in-between, in transition, neither adolescent nor adult; and 5. Possibilities/optimism, when hopes flourish and people have an unparalleled opportunity to transform their lives. (p. 9)

Non-inferiority study: A study that confirms the null hypothesis, or examines whether an experimental treatment is equivalent to treatment-as-usual (Chen, Kianifard, & Dhar, 2006).

Online counseling: “The delivery of therapeutic interventions in cyberspace where the communication between a trained professional counselor and client(s) is facilitated using computer-mediated communication (CMC) technologies” (Richards & Vigano, 2013, p. 994).

Telehealth/telemental health: “Telehealth encompasses a broad variety of technologies and tactics to deliver virtual medical, health, and education services. Telehealth is not a specific

service, but a collection of means to enhance care and education delivery” (Center for Connected Health Policy, n.d.).

Therapeutic working alliance: According to Ghosh, McLaren, and Watson (1997), the TWA refers to the

collaborative aspects of the relationship that provide the client with an opportunity to take advantage of the therapist’s interventions and consists of three components: bonds (the complex network of positive personal attachments between the client and the therapist, such as trust, acceptance and confidence), goals and tasks (in-therapy behaviours and cognitions of the therapist and client that form the substance of the therapy). (p. 33)

Solution-focused brief therapy: According to Corey (2017), SFBT is a theory of psychotherapy that

emphasizes strengths and resiliencies of people by focusing on exceptions to their problems and their conceptualized solutions. It is an antideterministic, future-oriented approach based on the assumption that clients have the ability to change quickly and can create a problem-free language as they strive for a new reality. (p. 371)

Videoconferencing: “Refers to conducting a video conference or video teleconference in which two or more sets of hardware and software interact while simultaneously transmitting and receiving video and audio signals from two or more geographic locations” (“Videoconferencing,” n.d.).

Journal Submissions

Both studies will be submitted to the *Journal of American College Health*, which publishes articles on evidence-based practices in the physical and mental health field for college students.

CHAPTER 2: A COMPARISON OF ONLINE AND IN-PERSON COUNSELING
OUTCOMES USING SOLUTION-FOCUSED BRIEF THERAPY FOR
COLLEGE STUDENTS WITH ANXIETY

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Abstract

Two groups of participants ($N = 49$) were randomly assigned to online counseling through synchronous video and in-person counseling and were compared for the reduction in symptoms of anxiety as measured by the Beck's Anxiety Inventory (BAI) and the Counseling Center Assessment of Psychological Symptoms-62/34 (CCAPS-62/CCAPS-34). Solution-focused brief therapy (SFBT) was used for both treatment groups. Participants were included based on scoring on the CCAPS-62. The results showed significant change in scores on the BAI and the CCAPS using SFBT and no significant difference in effectiveness of the two delivery methods. The findings offer data for treating college students with anxiety with SFBT through videoconferencing.

Keywords: solution-focused brief therapy, online counseling, videoconferencing, telemental health, college counseling

A Comparison of Online and In-Person Counseling Outcomes Using Solution-Focused Brief Therapy for College Students With Anxiety

The period of emerging adulthood is a crucial time for the assessment and treatment of mental health issues. According to data from the 2014 National Survey on Drug Use and Health, the percentage of adults 18 or older having a past year major depressive episode with severe impairment in 2014 was highest for those aged 18 to 25 (6.0 %; Center for Behavioral Health and Quality, 2015). In addition, the combined data from 2009 to 2013 National Survey on Drug Use and Health showed that an annual average of 1.5 million young adults aged 18 to 25 felt they needed mental health services but did not receive any services in the past year (Merikangas et al., 2011). While college students did not differ from the general population in terms of distress, data from the National Collegiate Health Assessment-II for Spring 2018 (American College Health Association, 2018) indicated that anxiety was the highest diagnosed or treated mental health disorder in the college population, with 9.5% of men and 19.8% of women diagnosed. The same survey showed a 58% increase in the number of students with a current mental health issue from 10 years ago. Additionally, 58.4% of students indicated that they felt overwhelming anxiety in the last 12 months (American College Health Association, 2018). With the increase in the percentage of young adults attending college and university (National Center for Education Statistics, 2016), higher education institutions are struggling to proactively reach these distressed students (Kwai, 2016).

Like the general population, a large subset of troubled students may never enter a college counseling center for in-person treatment. One study indicated that the majority of students who had seriously considered suicide had not received psychological help in the past year (Eisenberg, Golberstein, & Gollust, 2007). Further, according to a survey of the Association for University

and College Counseling Center Directors' (AUCCCD, 2018) survey, 80% of college students who died by suicide had never been to the college counseling center. In fact, students who reported suicidal ideation also indicated low intentions to seek help, a phenomenon known as the *help-negation effect* (Yakunina, Rogers, Waehler, & Werth, 2010). The question then arises: How will colleges reach at-risk students who may not seek help in the traditional way?

Online Counseling

Online counseling is an innovative delivery system that has the potential to reach students who do not seek in-person counseling (Benton, Heesacker, Snowden, & Lee, 2016). There are a variety of methods for this delivery, as well as terminology in the mental health field. The counseling profession has used terms like *online counseling* or *distance counseling*.

Psychologists and psychiatrists often refer to *telemental health*, connecting it to telehealth initiatives in the medical field (Telemental Health Institute, n.d.). This paper will refer to the synchronous delivery of mental health services via videoconferencing as online counseling.

There are multiple benefits to offering online counseling to college students. They include (a) the increase in intention to use online interventions as psychological distress increases (Ryan, Shochet, & Stallman, 2010), (b) easy access to counseling delivered in a digital format (youth-friendly counseling; Hanley, 2012), and (c) lack of confidentiality concerns related to in-person treatment in a physical space on campus (Gerrits, van der Zanden, Visscher, & Conjin, 2007). Ryan et al. (2010) studied Australian university students and found that

57.7% of students in the high distress category were likely to use an online student [mental health] program, as opposed to 36.1% in the low distress category . . . [this] implies that an online intervention for students might particularly be utilized by those individuals who are both more in need of help and less likely to seek it from other sources. (p. 80)

Secondly, “as the internet becomes more engrained into the lives of young people, health seeking behaviours are likely to change significantly too” (Hanley, 2012, p. 35). In order to increase the

youth-friendliness of counseling interventions, online delivery may be necessary. Finally, concern about stigma is the number one reason students do not seek help (National Alliance on Mental Illness, 2012). Gerrits et al.'s (2007) findings indicate that if students are experiencing problems they have difficulty talking to others about, meeting someone over the Internet versus face-to-face is preferred.

Web-based mental health interventions vary greatly. For example, psychoeducational modules are available at the user's convenience with no interaction with a professional mental health provider. Synchronous connection with a professional is another resource, either through audio communication, text, or video. There are also hybrid approaches that provide therapist-assisted support in conjunction with asynchronous web-based interventions. However, best practices in telemental health are only beginning to emerge indicating that two-way, synchronous videoconferencing is the most effective of the delivery styles (Yellowlees, Shore, & Roberts, 2010). The benefit of therapist involvement for individualized treatment and to address the motivation of the client is evident (Spek et al., 2008). Currently, 36.9% of college counseling centers offer some kind of telemental health intervention, with most of those offerings involving little therapist time (Association of University and College Counseling Center Directors, 2017).

Certain therapeutic issues have been shown to have positive outcomes with online counseling. For example, Robinson and Serfaty (2001, 2008) communicated through e-mail twice a week for 3 months with clients diagnosed with an eating disorder. Although the samples were small and there was no comparison with face-to-face counseling, there was a significant reduction in the number of participants who met the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text revised; American Psychiatric Association, 2000) criteria for an eating disorder post-treatment. In addition, Simpson and colleagues (Simpson, Bell, Knox, & Mitchell,

2005; Simpson, Deans, & Brebner, 2001) used synchronous videoconferencing to reach eating disorder clients in remote locations. Their findings suggested improvement in bulimic behaviors, borderline characteristics, and depression. However, the samples continued to be small and did not include follow-up.

Cohen and Kerr (1999) conducted one of the first studies considering web-based counseling efficacy with anxiety. One session of face-to-face counseling was compared to an online synchronous chat session, and the State-Trait Anxiety Inventory was given as a pre- and posttest. Both delivery methods showed improvement in anxiety post-treatment, although non-professionals (students) conducted all of the sessions.

More recently, randomized controlled trials have been conducted using online interventions for anxiety disorders. Titov, Andrews, Johnson, Robinson, and Spence (2010) created a transdiagnostic treatment for a variety of anxiety disorders, which was delivered via online educational programs, homework, weekly phone or e-mail contact with a professional, an online discussion group, and automatic e-mails. The control group was a waitlist control, not a treatment-as-usual group (in-person). However, the treatment group showed significant reduction in anxiety symptoms immediately post-treatment and at follow-up. Another study (Carlbring et al., 2011) tailored the web-based treatment to the specific needs of the participants with anxiety. It was also a randomized controlled trial with an online support group for the treatment-as-usual group. The therapy consisted of a combination of online modules individually designed with some therapist guidance. These therapists were clinical psychology students in their last term of studies. This study showed a reduction in anxiety symptoms and included a 2-year follow-up indicating stability after treatment. However, due to the tailored

protocol, the selection of various modules depending on the therapist's views of the needs of the clients might not have been reliable.

Our study sought to examine the efficacy of a synchronous web-based treatment for mild to moderate anxiety in comparison with in-person treatment in the emerging adult, undergraduate student population (ages ranging from 18–22). Solution-focused brief therapy (SFBT) was used for treatment protocol in both delivery modalities. Before discussing the methodology, we will review the literature base for the following: (a) prevalence of mild to moderate anxiety in the university population, (b) benefits of offering online counseling in addition to face-to-face delivery to expand treatment for anxiety, and (c) efficacy of SFBT for anxiety disorders.

Anxiety Disorders

Anxiety disorders are the most commonly diagnosed mental health issue on college campuses today, with 48.2% of students having issues with anxiety during their college career (AUCCCD, 2018). In addition, students reported stress as the number one health issue that impacted their ability to succeed in college (American College Health Association, 2018). All anxiety disorders develop gradually and can begin at any point in the life cycle, although the years of highest risk are in young adulthood (Robins & Regier, 1991). Due to the prevalence of anxiety in this age group, addressing this disorder effectively in the college population has far-reaching implications for societal mental health issues.

Studies have begun to focus on alternative strategies for providing treatment for anxiety as the problem becomes more widespread. In a meta-analysis of 22 articles on cognitive-behavioral therapy (CBT) delivered over the Internet for anxiety and depressive disorders, Andrews, Cuijpers, Craske, McEvoy, and Titov (2010) found a mean effect size superiority of 0.88 for major depression, panic disorder, social phobia, and generalized anxiety disorder. Five

of these studies investigated the benefit of online CBT in comparison with face-to-face CBT, and both delivery systems appeared to be equally beneficial. The follow-up data available in 14 of the studies included in this meta-analysis showed no evidence of relapse in the 4 to 52 weeks post-treatment. Participants seemed to be satisfied with the treatment, with a median of 86% satisfied or very satisfied, and adherence was 80%. In a later study looking at social anxiety specifically, the findings demonstrated significant improvements in levels of social anxiety as well as quality of life when using evidence-based anxiety treatments through videoconferencing delivery (Yuen et al., 2013). Looking at yet another anxiety-related issue, a 2014 study (Goetter, Herbert, Forman, Yuen, & Thomas, 2014) on using exposure and ritual prevention for obsessive-compulsive disorder found videoconferencing to be a feasible delivery method, also showing preliminary efficacy. Finally, Benton et al. (2016) demonstrated support for the idea of using an online program—Therapist-Assisted Online (TAO)—to reduce college student anxiety.

Much of the research in anxiety treatment focuses on CBT, applied relaxation, exposure and response prevention, cognitive processing therapy, and stress inoculation training (Chambless & Ollendick, 2001). Stewart and Chambless (2009) conducted a meta-analysis of these techniques for adults with anxiety disorders. The effect sizes for disorder-specific symptoms were large, 0.92 to 2.59, indicating significant improvement. Six studies included a control group and showed that these techniques led to significantly larger effect sizes than for waiting list or treatment-as-usual participants. Researchers in college counseling center settings have been evaluating other types of interventions to address the need for effective, brief treatment methods (Ratanasiripong, Sverduk, Prince, & Hayashino, 2012). However, there is a gap in the literature on the efficacy of SFBT, a major brief therapeutic model, for college students with anxiety.

Solution-Focused Brief Therapy

Steve DeShazer and Insoo Kim Berg developed SFBT during the period of 1988 to 2007. Though relatively new in the counseling field as a treatment modality, research has shown evidence supporting SFBT's effectiveness. For example, Littrell, Malia, and Vanderwood (1995) studied 29 females and 32 male students in a large, urban high school in the Midwest. These researchers compared a one-session solution-focused approach with two problem-focused approaches and showed that even one-session of a solution-focused approach was as effective as other approaches, while taking much less time. Franklin, Moore, and Hopson's (2008) experimental design study showed that SFBT was effective in the reduction of behavior problems in the classroom, further supporting its use in school settings. Kim and Franklin (2009) conducted a review of seven studies on SFBT's effectiveness from the American school system and found modest but positive effect sizes, averaging .50.

More recently, researchers evaluated the outcomes of SFBT through several quantitative meta-analyses. In 2006, Stams, Dekovic, Buist, and De Vries reviewed 21 studies and found that SFBT had a small to medium effect on reported outcomes (similar to other approaches, like CBT). Kim (2008) reviewed 22 SFBT studies and reported that SFBT had a small but statistically significant effect on internalizing disorders. In 2013, Gingerich and Peterson completed a systematic qualitative review of 43 studies and reported significant positive outcomes for 65% of dissertation studies and 81% of non-dissertation studies. But, these researchers noted that the "vote-counting" approach that they used in their analysis did not show size or statistical significance. In terms of anxiety treatment, research from Helsinki on 326 outpatients with mood or anxiety disorders showed SFBT was efficacious in providing a rapid

reduction in anxiety symptoms and maintaining the impact for a year after treatment (Knekt et al., 2008).

Although there is a paucity of research on SFBT in college settings, several articles provide some background. Cruz and Littrell (1998) conducted a study with 16 Hispanic American students using brief therapy. The majority of students felt they had reached 50% or more of their stated goal by the end of the second session. They also described being “more positive and more realistic” (Cruz & Littrell, 1998, p. 234) about themselves and their issues. Ng, Parikh, and Guo (2012) reported a case study with a Chinese college student using an integrative solution-focused approach and found that SFBT helped the student to achieve cognitive, emotive, and behavioral improvements, providing support for the use of SFBT in a cross-cultural setting.

College students tend to access mental health care in a short-term format. The mean number of sessions for students in a college counseling center is 4.71, and the mode is one (Center for Collegiate Mental Health, 2015). Given this brevity of contact, brief therapy approaches are considered the preferred mode of treatment in this setting (Cooper & Archer, 1999). Research findings on SFBT support its claim that fewer sessions are sufficient for the improvement of symptoms (Beauchemin, 2015). Other research findings further support the utility of brief therapeutic models in college counseling settings (e.g., Mathers, Shipton, & Shapiro, 1993; Talley, 1992).

Without randomized controlled studies examining the outcomes of online counseling and comparing it with treatment-as-usual, clinicians will continue to have doubts about this delivery system. Although some research has been done in these areas, the need for more rigorous, randomized controlled trials is evident.

The Purpose of the Study

In response to the lack of randomized trials focused on online counseling in a college setting and SFBT for college students with anxiety, the present study was designed to examine the efficacy of synchronous web-based counseling for mild to moderate anxiety in comparison with in-person treatment in the undergraduate student population at one university in the Northeast. SFBT was used for the treatment protocol in both delivery modalities. The following research questions guided this study:

1. Is SFBT effective for reducing symptoms of mild to moderate anxiety in emerging adults at college, as measured by the BAI at three time points (pretest, posttest, and 3-week follow-up)?

H₁: There will be a significant difference in anxiety between study participants at posttest and follow-up compared to pretest when using SFBT to address anxiety.

2. Is online counseling using SFBT as effective as in-person counseling using SFBT to reduce symptoms of mild to moderate anxiety in emerging adults at college, as measured by the BAI?

H₂: The effectiveness of the two treatment delivery modalities will not differ significantly in reducing anxiety symptoms among college students. This is a non-inferiority study.

3. Is online counseling using SFBT as effective as in-person counseling using SFBT to reduce symptoms of mild to moderate anxiety in emerging adults at college, as measured by the CCAPS?

H₃: The two delivery methods will be equivalent, as determined by this type of non-inferiority study.

Method

Participants

Participants were recruited from the undergraduate student population at a private, Catholic university in the Northeast. We recruited 52 participants, and, due to self-attrition, 49 remained in the study. Four participants identified as male, and 48 as female. Although this percentage of male students seems low (8%), ACHA (2018) data shows a similar percentage of men (9%) nationally identify as having anxiety. Five participants identified as African American, two as Asian American, four as Latinx, and 41 as White. In terms of previous counseling, 25 indicated that they had previous counseling while 27 had not. Twenty of the participants were first-year students, 11 sophomores, 12 juniors, and nine seniors. Participants' ages ranged from 18-22 ($M = 19.29$, $SD = 1.2$).

The majority of participants were recruited by counselors conducting screenings in the university counseling center. To avoid influencing decisions to participate, the first author of this study and another clinician in the center who delivered the research protocol did not participate in these screenings. Additional participants were recruited by flyers that were distributed in residence halls, high-traffic areas on campus, and through global e-mails to undergraduates (see Appendix A). Finally, professors were informed about the study and the availability of SFBT for students with anxiety symptoms. As an incentive, all participants were offered a \$30 Amazon gift card upon completion of the study.

Inclusion criteria were based on scores on the Counseling Center Assessment of Psychological Symptoms (CCAPS-62; Locke et al., 2009). The range of scores for inclusion was between 40 and 90 for generalized anxiety and 50 and 95 for social anxiety, based on cutoff scores for mild anxiety on the low end and more extreme clinical anxiety on the high end (Locke

et al., 2009). Scores below the minimal cutoff score indicate a subclinical anxiety issue, while the highest scores indicate a possible need for more intensive services. There were several other exclusion criteria. Students scoring above 80 on the substance use subscale were not considered for the study, given the impact of substances on anxiety symptoms and possible need for substance use treatment. These students were referred to the alcohol/drug counselor for further evaluation. Finally, any student who responded to the item “I have thoughts of ending my life” with *very much like me* or *extremely like me* were not included in the study; instead, they were immediately seen by other counselors at the counseling center for risk assessment and treatment. Students who were taking psychotropic medications were included in the study as long as their symptoms indicated the appropriate level of anxiety per the protocol at pretest. No students initiated the use of anxiety medication during the study period.

Treatment

Participants attended three counseling sessions post-screening using SFBT. The average number of sessions attended for this counseling center was three after the initial screening, based on data from the Titanium system. Therefore, the goal of a minimum of three sessions reflects the average attendance rate for this population at this site. In addition, SFBT is most effective in the three- to five-session range (Beyebach et al., 2000).

Two counselors from the counseling center implemented the SFBT treatment protocol (see Appendix B): one of them was this first author who is a licensed professional counselor, and the other was a licensed clinical social worker. Both have over 20 years of experience in college counseling. This first author became board certified in telemental health as part of this process. In preparation for delivery of the SFBT protocol, a 2-day intensive training was provided by the second author of this study in fall 2016. The second author continued to provide web-based

supervision for treatment providers during spring 2017. Sample online sessions were recorded by the counselors as part of training feedback before the actual research began, and the textbook *Interviewing for Solutions* (4th ed.; DeJong & Berg, 2013) was used as an instructional text. The second author continued to provide supervision throughout the period of the study from November 2017 through December 2018.

Procedure

The institution's review board approved this study prior to participant recruitment (see Appendix G). If a student expressed interest, either by responding to one of the recruitment flyers or by entering the counseling center for an appointment, that student was scheduled for an in-person screening, as is the procedure for all counseling center clients. Students filled out the intake forms through the Titanium system, which includes the CCAPS-62. Titanium Schedule is a college counseling electronic medical record program used by numerous college and university counseling centers in the United States and internationally. This symptoms checklist was reviewed by the screening counselor before meeting with the student to determine initial eligibility. The intake screening involved conducting a brief clinical interview and making final determination of eligibility. Screeners did not begin the counseling process or begin a therapeutic relationship at this point. Although there was no specific protocol for determination of inclusion other than the range of anxiety scores, screeners would suggest the study to anyone in that range unless there was a specific clinical determination of the need for another treatment strategy. If the student qualified, the screener described the study and reviewed the written informed consent (see Appendix C). The student then chose to participate or not; those who were not interested or who did not qualify were scheduled for follow-up counseling in accordance with the counseling center's established procedures. These initial screening

appointments were the same, whether the student was randomly assigned to an online or in-person counseling group.

The screening counselor was responsible for reviewing and signing the informed consent with the student. The participant then was directed to the administrative assistant's desk to schedule future appointments and receive a randomized assignment. The administrative assistant had all participants complete a demographic questionnaire with basic information on gender identity, age, race/ethnicity, year at the university, and whether they had previously had counseling (Appendix F). The administrative assistant then used a six-sided die to assign them to the online or in-person counseling group (1–3 = in-person, 4–6 = online). She also assigned them to one of the participating counselors based on scheduling and a general balance of sessions between counselors. Participants could not choose the counselor with whom they would work. In addition, each participant was given an identification (ID) number for anonymity. The administrative assistant reviewed with participants the use of this number when filling out any survey or forms on the computer. Those who were in the in-person group ($n = 29$) had an ID starting with 1, and those in the online group ($n = 23$) with 2. The administrative assistant was the only staff member to have access to the names that coincided with the ID numbers, and she maintained this file in a confidential Excel document. Participants who did not remember their assigned ID number before filling out any online forms or questionnaires were instructed to consult with this staff member.

All participants receiving online counseling were given instructions on (a) how to access the online platform, Doxy.me, (b) use of audio and video components with the device they were using, and (c) how to upload documents. The administrative assistant of the counseling center provided these instructions on an appointment card when the student was randomly assigned to

the online treatment group. Each online participant then was given a technology check appointment. This allowed participants and their counselors to test the audio and video before they had their first session together. In addition, counselors e-mailed online participants an additional informed consent document specific to online issues, which was reviewed during this appointment (see Appendix D). The participants then signed the document and e-mailed it back to the counselor before the first session. The goal of this technology check appointment was to ensure participants understood the components of the online system and were informed of all issues specific to this delivery method before beginning therapy.

The university is a wireless campus; therefore, participants were able to find quiet, confidential places on campus to connect with their counselors online. For those who lived in private, local housing, there were instructions on using their own wireless networks for connection to the web if they had questions about it. The HIPAA-secure aspect of Doxy.me was an important part of the selection of this software, and its security features were explained to online participants. The procedures for continuing the session if there were a technology failure (i.e., phone contact) and emergency procedures were reviewed with the participants at the technology check appointment per the American Counseling Association (2014) *Code of Ethics* for distance counseling.

Participants completed the Beck Anxiety Inventory (BAI) during the screening (pretest), after the third session (posttest), and at the 3-week follow-up (follow-up). The BAI was given through Qualtrics to both in-person and online participants. The pretest BAI was taken on an iPad after the screening appointment in which it was determined if the student would be participating in the study; the student was assigned a research ID number. At posttest, the in-person participants took the BAI on an iPad at the front desk before they left after their third

session. The online participants were e-mailed the link to the BAI Qualtrics survey at the end of their online session by the counselor and told to complete it immediately following the session. Finally, for the follow-up, all participants were e-mailed the Qualtrics link to the BAI after 3 weeks of not attending counseling and asked to complete it as soon as possible. In all cases, the only identifying information included with the BAI was the student's research ID number.

The CCAPS-34, which serves as the follow-up measure of the CCAPS-62 to assess treatment response, was sent to all participants at follow-up, 3 weeks post-treatment. The results were collected with the Titanium system which computes reliable change indices (RCIs) for determining clinically significant change in clients.

As part of the SFBT protocol, participants were given a feedback sheet at the conclusion of each session (see Appendix E). For in-person sessions, participants were asked to leave the counselor's office for a "break" toward the end of the session. During this time, the counselor completed the sheet, indicating what they had noticed in that session and possible tasks for the week based on the client's goals and solutions. For online participants, two variations on feedback were used. If there was time, the client and counselor would remain on Doxy.me but take a 5-minute break in order for the counselor to fill out the feedback form. This form was reviewed online and then e-mailed to the client. If time was limited, the counselor and client would exit Doxy.me, and the feedback form would be e-mailed to the participants immediately following the session.

Treatment fidelity was assessed by the second author, and another counselor who participated in the initial SFBT training together with the two counselors who delivered the treatment. These two fidelity assessors reviewed recordings of all first sessions and 10 randomly selected subsequent sessions. All initial sessions, whether in-person or through Doxy.me, were

recorded for the purpose of evaluating SFBT fidelity. Because Doxy.me does not allow for recording to ensure HIPAA compliance, sessions were recorded externally through an audio digital recorder. The agreement to record sessions was included in the informed consent document for all participants. An adherence checklist was developed using the *Solution-Focused Therapy Treatment Manual for Working With Individuals: Revised 2013* (Solution Focused Brief Therapy Association, 2013; see Appendix B). Separate checklists were developed for first sessions and follow-up session based on the SFBT treatment process.

Measures

Counseling Center Assessment of Psychological Symptoms-62. The CCAPS-62 (Locke et al., 2009) was used for screening purposes. It was first released in June 2009 and updated in 2012. It has 62 items with eight distinct subscales of psychological symptoms in college students. It also indicates the distress level through an index. Through factor analysis, eight subscales were created using a minimum factor loading of .32 for each item and an item total correlation of at least .30. The eight CCAPS-62 subscales are as follows: (a) Depression (13 items), (b) Generalized Anxiety (nine items), (c) Social Anxiety (seven items), (d) Academic Distress (five items), (e) Eating Concerns (nine items), (f) Family Distress (six items), (g) Hostility (seven items), and (h) Substance Use (six items). Examples of items on the Generalized Anxiety subscale are “My heart races for no good reason” and “I feel tense.” The Social Anxiety subscale has items like “I am concerned that other people do not like me” and “I am shy around others.” The CCAPS-62 takes approximately 7 to 10 minutes to complete and is considered to be most useful for first-session assessment and post-treatment evaluation. Clinicians find the range of items under each subscale clinically useful during initial assessment and at termination as a useful check on treatment effects (Locke et al., 2009).

The CCAPS-62 (Locke et al., 2009) was developed using a rational-empirical approach. Test-retest reliability for the Generalized Anxiety subscale was .782 after 1 week and .842 for a 2-week period. The internal consistencies of the subscales were above .80 for all subscales, using Cronbach's alpha. Due to the diversity of college students included in the four studies described by Locke et al. (2011), the CCAPS has reliability coefficients greater than .75 for the various identity groups (gender, race/ethnicity, and country of origin) and is considered valid for diverse groups. McAleavey et al. (2012) provided evidence that the CCAPS-62 has good convergent validity with other established measures of psychological symptoms in the clinical population. The correlation results for the anxiety subscales used in McAleavey et al.'s study were .692 and .643 (Generalized Anxiety) and .747 and .733 (Social Anxiety).

Beck Anxiety Inventory. The BAI (Beck, Epstein, Brown, & Steer, 1988) was used to assess levels of clinical anxiety at the start and end of treatment. The BAI is a 21-question, multiple-choice, self-report inventory that asks the subject to rate symptoms of anxiety during the last week from 0 = *not at all* to 3 = *severely*. Examples of items include somatic symptoms, like "feeling hot," and cognitive symptoms, like "fear of losing control" or "fear of worst happening." This inventory was specifically designed to minimize the overlap between depression and anxiety in these measures and is less contaminated by depressive content (Clark, Steer, & Beck, 1994).

Evidence of reliability of the BAI is indicated by an aggregated internal consistency of .91 and test-retest reliability of .65 in a meta-analysis conducted by Bardhoshi, Duncan, and Erford (2015). Osman et al. (2002) examined the BAI with an adolescent population (age 14–18) specifically and found similar psychometric properties. Evidence of validity of the BAI is

indicated by robust external validity scores with 33 other discrete anxiety-related inventories (Bardhoshi et al., 2015). Internal consistency of the BAI for the current study is .867.

Apparatus

The Doxy.me software platform was used to provide synchronous web delivery of the SFBT for mild to moderate anxiety. Doxy.me allows for synchronous video and audio communication, as well as the ability to share documents and conduct screenshares. In addition, it is HIPAA compliant for the delivery of health-related information online. Research participants were instructed to use a computer or any mobile device that was compatible with this system.

Data was collected using a web-based survey hosted on Qualtrics. Qualtrics is a software program developed in 2005 and licensed through Oregon State University.

Data Analysis

A repeated-measures ANOVA was used to address Research Questions 1 and 2, due to the repeated testing using the BAI as well as the two groups of participants. Only those BAIs that were 90% or more complete were used in the analysis ($N = 39$). Missing data on the BAI were addressed using best practices in psychometric scales and using the mean of the remaining completed items (Siddiqui, 2015). Scores on the BAI were plotted for each participant group for each session and differences between groups were evaluated using $p < .05$. To evaluate whether there were differences in the two clinicians providing therapy, a repeated-measures, mixed ANOVA was run. For Research Question 3, the CCAPS raw scores for the two qualifying subscales (Generalized Anxiety and Social Anxiety) were computed, and t tests were run to compare scores in online delivery to those in in-person delivery. Finally, the RCIs (Jacobson & Truax, 1991) on the same subscales of the CCAPs were counted, and a chi square was used to

determine how well the observed distribution of data fit with the expected distribution if the variables were independent.

Results

SPSS Version 25.0 was used for data analysis. The goal of determining the effect of SFBT measured over three time points was realized using a within-subjects, repeated-measures ANOVA. The means and standard deviations are presented in Table 1. Results of the repeated-measures ANOVA showed that BAI scores in posttest and follow-up were significantly lower than those in pretest, indicating that SFBT was effective for the treatment of mild to moderate anxiety in college students, $F(1, 33) = 13.556, p = .001, \eta_p^2 = .001$ (see Table 2). The goal of determining the effect of SFBT over three measurement points for the two groups (online and in-person) was realized by conducting a repeated-measures ANOVA. This analysis was performed to compare scores on the BAI at pretest, posttest, and 3 weeks' follow-up in the experimental group (online) compared to the treatment-as-usual group (in-person). The means and standard deviations are presented in Table 1. The results showed a lack of statistical significance in the difference on BAI scores between the two delivery systems, $F(1, 33) = .313, p = .580, \eta_p^2 = .009$ (see Table 2 and Figure 1). Significance at the three time periods was pre-test ($p = .640$), post-test ($p = .979$) and follow-up ($p = .484$). Therefore, there was no statistically significant difference in delivery method at any time point. Mauchley's test of sphericity was significant, so the Greenhouse-Geiser was used, $F(1, 33) = .260, p = .667$. The effect size for an ANOVA with this sample size was medium, $f = .25$.

Table 1

Descriptive Statistics for Beck Anxiety Inventory at Three Time Points

	Method of Delivery	<i>M</i>	<i>SD</i>	<i>n</i>
BAI pre	In-person	17.14	10.47	21

BAI post	Online	15.64	6.49	14
	Total	16.54	9.01	35
	In-person	8.52	6.48	21
BAI follow-up	Online	8.71	6.27	14
	Total	8.6	6.31	35
	In-person	9.38	9.10	21
	Online	7.28	7.21	14
	Total	8.54	8.35	35

Table 2

Repeated-Measures ANOVA: Difference Scores on Beck Anxiety Inventory for Two Delivery Methods at Three Time Points

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η_p^2
Within Subjects	3, 99	1091.26	1091.26	13.556	.001*	.001
Between subjects	1, 33	32.46	32.46	0.313	.580	.009

* $p < .01$.

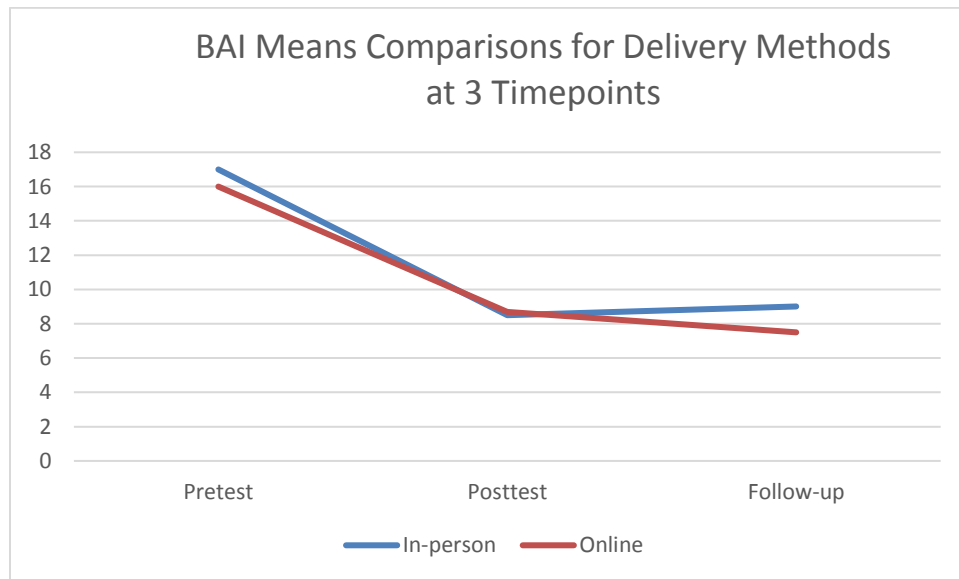


Figure 1. Beck Anxiety Inventory means at pretest, posttest, and follow-up.

Given that this is a non-inferiority study, the conventional method in clinical trials of answering the question of “equivalent” treatment was used. The null hypothesis that treatment-as-usual (in-person) would be superior to the experimental treatment (online) in terms of effectiveness (BAI) would be rejected if, and only if, the upper limit of the confidence interval

(because lower scores are better with the BAI) divided by the mean of the treatment-as-usual group were less than .2 (Chen, Kianifard, & Dhar, 2006). For the mean on the BAI at post-treatment (third session), this value was .03. For the mean at follow-up (3 weeks following treatment), this value was .03. Therefore, the null could be rejected, and there was statistical evidence for non-inferiority for online counseling compared to treatment-as-usual (in-person) in terms of results on the BAI.

A repeated-measures mixed ANOVA was run to examine the three measurement points for the two independent variable groups (online and in-person), also considering the impact of the two clinicians. There was no statistically significant difference effect for the two clinicians or the two delivery systems, $F(2, 30) = 1.387, p = .265$, and $\eta_p^2 = .32$. Mauchley's test of sphericity was significant, so the Greenhouse-Geiser was used, $F(2, 30) = 1.587, p = .219$. The effect size for the ANOVA with this size sample was medium, $f = .25$.

The CCAPS was used as an additional indicator of effectiveness. It was given twice, at pretest (CCAPS-62) and at follow-up (CCAPS-34). A t test comparison of means was run for scores from pretest to follow-up for the two groups (online and in-person) to determine if SFBT was an effective treatment for mild to moderate anxiety in the participants. The change scores were evaluated for the Generalized Anxiety subscale separately from the Social Anxiety subscale because the CCAPS provides no overall anxiety score, and participants could qualify for the study based on either or both scores. The independent-samples Welch's t test showed that there was not a significant difference in change scores on the Social Anxiety subscale for in-person ($M = -4.312, SD = 4.14$) versus online delivery ($M = -2.666, SD = 3.80$), $t(27) = -1.161, p = .291$. Another independent Welch's t test showed that there also was not a significant difference in

change scores on the Generalized Anxiety subscale for in-person ($M = -7.29$, $SD = 6.71$) versus online delivery ($M = -6.38$, $SD = 4.79$), $t(39) = -.222$, $p = .640$.

Jacobson and Truax (1991) developed the concept of *clinically significant change* to define effectiveness across treatments. This led to the RCI, which is used in the CCAPS to indicate to the counselor the clinical change in a client over time. The RCI for the two qualifying subscales for this study, Generalized Anxiety and Social Anxiety, were computed and a chi-square goodness of fit test was run to determine how well the distribution of RCIs in the online counseling group fit with the distribution of RCIs in the treatment-as-usual (in-person) group. There was no significant deviation from hypothesized values, $\chi^2(1) = .702$, $p = .402$.

Discussion and Implications

This study was a non-inferiority study looking at the effectiveness of SFBT for mild to moderate anxiety in undergraduate students and comparing that effectiveness between two delivery methods (online and in-person) using the BAI and the CCAPS. The results support the non-inferiority of the experimental, or online delivery system, as well as the overall success of using SFBT for mild to moderate anxiety in this population.

The use of two measures to evaluate anxiety symptomology, the BAI and the CCAPS, added to the strength of the results. The BAI focuses largely on physical sensations related to anxiety, while the CCAPS covers additional behavioral indicators. Mean BAI scores declined by 50% between first and third session. For online participants, scores on the BAI continued to decline, that is fewer anxiety symptoms for up to 3 weeks after treatment had ended. In-person participants had a slight increase in anxiety symptoms, although the mean still remained 46% below pretest scores. This slight increase in follow-up scores for in-person participants may suggest that discontinuing counseling has a different impact on clients who were in an office

compared to those meeting online. A randomized controlled study with a larger sample could clarify this effect, as well as qualitative studies looking at clients' reactions to the termination of therapy. Examining termination differences for the two delivery methods and comparing them for various client issues may inform future treatment as well.

On the CCAPS-34, we looked at two aspects of the subscale scores for Generalized Anxiety and Social Anxiety. The Welch t tests showed no significance for the difference in these scores. The chi-square test of the RCIs looked at whether there were more RCIs with the in-person participants than with the online participants. There was no relationship, again supporting the hypothesis that both delivery methods were equivalent.

Though the overall number of participants was on the smaller side ($N = 49$), the random assignment to delivery method as well as the repeated testing of measures added to the strength of this study. This seems to indicate that, at least in the emerging adult population, clients can benefit from online counseling, even if they did not necessarily select that delivery method. Because many of the concerns about online delivery arise from feelings of comfort in both the client and the counselor, this gives hope for this new approach, at least in a population like college-aged students. Findings from the present study support the use of SFBT for emerging adults in a college setting with mild to moderate anxiety. Findings also support the equivalency of using in-person or online delivery methods for this therapy.

Limitations and Recommendations

There are limitations to this study. Although there was random assignment of participants, the overall sample size was small ($N = 49$). The low number of participants made the determination of effect size using t tests difficult. In addition, the participants were all students at one private, Catholic university in the Northeast of the United States, and they were

not diverse in terms of race, ethnicity, gender identity, or sexual orientation. This makes it challenging to make larger generalizations to students nationally (or internationally) and to those from more diverse backgrounds. Future studies could conduct this kind of evaluation of delivery methods at large universities in different parts of the United States in order to provide more detail about the non-inferiority aspect of online counseling. Also, in a less privileged populations, access to high-speed Internet and laptops would make this study more challenging. Furthermore, a more rigid protocol for screening would allow for ease of replication.

Another recommendation would be to conduct a qualitative study that could evaluate student reactions to the new delivery method. This study took a quantitative approach to evaluating effectiveness, but more information about students and counselors' attitudes toward the new delivery system would be useful going forward. In addition, although a 3-week follow-up was conducted, it would be interesting to follow the participants at the 3- or 6-month point to evaluate whether the early benefits of a brief approach would continue after treatment ended. Also, it may be useful to examine if there is difference in treatment effect depending on the number of sessions of SFBT, such as 3 sessions compared to 6 sessions.

Additionally, given that this was a "real world" counseling center setting rather than a laboratory, there are real-world variations in counseling styles and other details regarding protocol that were difficult to control. For instance, with some online participants, the feedback sheet was e-mailed to them after the session ended; with others, a break was taken, with the both client and counselor remaining online and then reviewing the feedback together. In addition, some sessions were significantly shorter than others, depending on the counselor and style of delivery. A laboratory setting result would be helpful in order to control for some of these factors, and results could be combined with these to get a more complete picture.

Non-inferiority studies are more challenging and are typically undertaken with clinical medical trials to determine if one treatment is “as good as” the standard treatment. That being said, the statistical analysis suggested for these studies was used in this evaluation. Increasing the number of participants and diversifying the population of participants would improve the generalizability of these non-inferiority results.

We further recommend that researchers compare the effectiveness of SFBT in treating other mental health issues (e.g., depression) in online counseling settings for the emerging adult population. Finally, a longer follow-up period would provide more data on whether treatment gains can be maintained over a 6-month or year-long period.

Conclusion

A non-inferiority study was conducted to examine whether SFBT was an effective theoretical approach to treat mild to moderate anxiety in undergraduate college students and to examine the equivalency of treatment-as-usual (in-person counseling) compared with a newer delivery system (online counseling). The results demonstrate that SFBT showed significant effectiveness for use in this setting with anxiety treatment and that online counseling provided a platform for the effective delivery of this modality. Due to the lack of studies using SFBT with college students as well as the small number of randomized controlled trials to evaluate online counseling, this study fills a gap in the literature on this population.

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CHAPTER 3: THERAPEUTIC WORKING ALLIANCE: A COMPARISON OF ONLINE AND
IN-PERSON COUNSELING USING SOLUTION-FOCUSED BRIEF THERAPY FOR
COLLEGE STUDENTS WITH ANXIETY

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Abstract

We compared the therapeutic working alliance in online, synchronous video delivery of counseling with that in in-person delivery (treatment-as-usual). Participants were 49 undergraduate college students with anxiety between the ages of 18 and 22, and Solution-Focused Brief Therapy was the treatment protocol. The Working Alliance Inventory was used for this comparison. The results indicated that there was no statistically significant difference in working alliance for online delivery compared to in-person. Non-inferiority statistical analysis confirmed the equivalency of these two delivery methods in terms of therapeutic working alliance.

Keywords: therapeutic working alliance, online counseling, telemental health, solution-focused brief therapy, college counseling

Therapeutic Working Alliance: A Comparison of Online and In-Person Counseling Using Solution-Focused Brief Therapy for College Students With Anxiety

A positive working relationship between therapist and client, or the *therapeutic working alliance* (TWA), is one of the most important factors in successful psychotherapeutic treatment (Bachelor & Horvath, 1999). Hubble, Duncan, and Miller (1999) reported that the therapeutic relationship contributes to about 30% of the total effect of treatment, regardless of the theoretical orientation of the clinician. In fact, many psychotherapy researchers are shifting their focus from various theoretical strategies to focusing on the process aspect of change (Wampold, 2001), and the TWA is a critical part of this process.

Horvath and Symonds (1991) first conducted a meta-analysis of 20 distinct data sets, where they reported that the TWA based on clients' assessments was most predictive of outcome. The therapists' ratings of the TWA were less predictive of outcome. Flückiger, Del Re, Wampold, Symonds, and Horvath (2011) conducted another meta-analysis to examine how the TWA was impacted by research design, type of treatment, and how allegiance to treatment protocol was assessed. They found that "the alliance-outcome correlation is present across a variety of treatments and study designs, suggesting that the alliance is a critical therapeutic element in psychotherapy" (Flückiger et al., 2011, p. 15).

When considering online counseling, many clinicians continue to have concerns about the impact of technology on the TWA (Wray & Rees, 2003), even when using videoconferencing. One of the earliest studies of the TWA using videoconferencing was in 1997 (Ghosh, McLaren, & Watson, 1997). This was a single case study of a transgender client who sought therapy online in order to receive gender confirmation surgery. The client did report feeling mildly to moderately self-conscious about sharing sensitive information over the Internet,

one of the concerns about the use of technology in counseling. However, the overall scores on the Working Alliance Inventory (WAI; Horvath & Greenberg, 1986) were similar to in-person clients. Though promising, the interpretation of the findings of this study was limited due to the case study design.

Jerome and Zaylor (2000) conducted a review of the practical differences between videoconferencing delivery of therapy and in-person therapy. They identified several differences, including the distance between client and therapist created by videoconferencing, as well as a slower rate of communication. The authors stressed that more research was needed to fully evaluate this strategy; thus, some studies began to look at clinician attitudes. Rees and Stone (2005) confirmed an earlier study (Wray & Rees, 2003) which indicated a concern among psychologists for the effect of videoconferencing on the TWA. The study focused on psychologists' perception of their clients' sense of warmth and empathy in treatment. The researchers indicated that possible limitations of the study were the lack of experience using videoconferencing among the psychologist participants as well as the impact of negative expectations on their perceptions. Finally, an exploratory study in Canada addressed the factors that predicted frequency of the use of telemental health, as well as other issues (Simms, Gibson, & O'Donnell, 2011). Clinicians who had been in the field longer and had more training on the use of technology were more likely to use this modality with some frequency, suggesting that the therapist's comfort with the medium may be a significant issue.

More research focused on outcomes is needed to address concerns about the TWA in the delivery of therapy through videoconferencing. Knaevelsrud and Maercker (2006) conducted an experimental design study ($N = 48$) that examined the TWA and outcome comparisons between the treatment modalities. They used the WAI for evaluation of the alliance, as well as the Impact

of Events Scale for trauma, Symptom Checklist-90, and Brief Symptom Inventory for depression and anxiety. They demonstrated that the TWA in online relationships was stronger than in conventional therapy relationships. However, the quality of the TWA in online counseling did not seem to correlate with therapeutic outcome. The researchers hypothesized multiple reasons for this discrepancy; for example, there was a restricted range of responses on the WAI, which might have contributed to the lack of effect. Additionally, there were some questions about whether the TWA needed to be measured differently depending on the particular therapy. They hypothesized that in Internet-based therapy, the relationship might be less of a factor due to access to structured psychoeducational treatment information separate from the therapist.

Another experimental design study addressed the outcome of online treatment for posttraumatic stress disorder (PTSD), with a focus on symptomology, treatment satisfaction, and the TWA. The researchers provided 3-month follow-up data on the chosen measures (Klein et al., 2010). This online treatment protocol for PTSD appeared to be effective, considering that 69.2% of participants ($n = 16$) no longer met the criteria for PTSD immediately post-treatment and 77% no longer met criteria 3 months post-treatment. In addition, 69% of participants reported satisfaction with treatment, and 87.5% rated the TWA highly based on the Traumatic Antecedents Questionnaire. However, the small number of participants was a limitation.

Finally, Preschl, Maercker, and Wagner (2011) at the University of Zurich conducted a randomized controlled study ($N = 53$) looking at cognitive-behavioral therapy for depression delivered online (with direct therapist communication) and in-person. The online and in-person participants had similar scores on the WAI, with the exception of therapists' ratings for the Task subscale, which were significantly higher for the online group. Similar to Knaevelsrud and Maercker (2006), the TWA was not as impactful on symptom reduction in the online group.

However, treatment outcome was similar. The researchers postulated that the TWA might be an “additional indirect measure of outcome rather than a predictor of treatment outcome” (Knaevelsrud & Maercker, 2006, p. 8). These studies suggest that there may be a different relationship of the TWA to outcome when conducting therapy over the Internet. Additional studies will help to further clarify this issue.

Solution-Focused Brief Therapy

Clinicians have expressed concern about the TWA between therapist and client using solution-focused brief therapy (SFBT), due to the focus on client tasks and goals over the therapeutic relationship (Nylund & Corsiglia, 1994). To address this, Wattersten, Lichtenberg, and Mallinckrodt (2005) compared SFBT sessions at a university-based counseling center with archival data from clients engaged in Brief Interpersonal Therapy (BIT). Twenty-six therapist–client dyads were included in the SFBT sample. Clients completing SFBT were 73% women and 89% Caucasian, while clients in the BIT group were 79% women and 87% Caucasian. The researchers used the WAI, the Brief Symptom Checklist (DeRogatis, 1993), and the Counseling Center Follow-up Questionnaire (Gelso & Johnson, 1983). This study found that the relationship between the TWA and treatment outcome was not correlated significantly when using SFBT. In contrast, BIT ratings were correlated. The researchers suggested that in SFBT, the counseling relationship may be a means to an end rather than the end in itself (Wattersten, Lichtenberg, & Mallinckrodt, 2005).

A qualitative study of an exploratory nature examined the TWA and outcomes in solution-focused marital therapy (Odell, Butler, & Dielman, 2005). They used grounded theory and content analysis to understand the relevant themes to the clients. The researchers hypothesized that the clients’ views of the TWA would align with the SFBT approach, given that

SFBT presupposes that the clients are the experts on their own treatment. Forty-two couples met the inclusion criteria for the study, and eight were willing to participate. In-person interviews were conducted and recorded. This study showed that client expectations of the therapist had a strong influence on the TWA. If expectations were not met, many clients, even if it was one member of a couple, disengaged from SFBT. These researchers and others (Lambert, Shapiro, & Bergin, 1986) concurred that the client's perception of the TWA might be more related to outcome than the actual SFBT therapeutic techniques used (e.g., miracle question and scaling questions). However, the qualitative nature of this study precludes generalization of the findings to the larger population.

Although the literature listed above on the TWA using SFBT and videoconferencing provides some useful information, there are significant gaps. There have been few randomized controlled trials comparing the TWA online and in-person, and none have looked at anxiety treatment specifically. In addition, although emerging adults may have greater comfort with online delivery of services (Hanley, 2012), few randomized controlled studies using online treatment with college students have been conducted. Additionally, the TWA and SFBT have not been explored in an online environment or using randomized, controlled methods. Information in this area will inform decisions both about the use of online counseling as well as SFBT for anxiety in college students.

Purpose

The purpose of this study was to conduct a randomized, controlled experiment to provide data on the TWA using SFBT in college students with anxiety, and to compare an online delivery system with treatment as usual (in-person). Given that clinicians are hesitant about providing brief counseling in an online delivery system due to TWA concerns, we hope the

present research will provide information that can address these concerns. This study was designed to address the following research questions:

1. Is the TWA (as measured by the client version of the WAI) using online counseling comparable to the TWA with in-person counseling after the initial session when using SFBT to treat emerging adults at college with mild to moderate anxiety?

H₄: The TWA scores reported by clients using the two delivery methods will not differ significantly, as determined by this non-inferiority study.

2. Is the TWA (as measured by the client version of the WAI) using online counseling comparable to the TWA using in-person counseling after the third session when using SFBT to treat emerging adults at college with mild to moderate anxiety?

H₅: The TWA scores reported by clients using the two delivery methods will not differ significantly, as determined by this non-inferiority study.

Method

Participants

Participants were recruited from the undergraduate student population at a private, Catholic university in the Northeast. There were 52 participants recruited, and, due to self-attrition, 49 remained in the study. In terms of demographics, four participants identified as male, 48 as female. Although this percentage of male students seems low (8%), ACHA (2018) data shows a similar percentage of men (9%) nationally identify as having anxiety. There were five participants who identified as African American, two as Asian American, four as Latinx, and 41 as White. In terms of previous counseling, 25 indicated they had previous counseling while 27 had not. Finally, there were 20 first-year students, 11 sophomores, 12 juniors, and nine seniors. Participants' ages ranged from 18-22 ($M = 19.29$, $SD = 1.2$).

The majority of participants were recruited by counselors conducting screenings in the university counseling center. To avoid influencing decisions to participate, the first author and the other clinician in the center who delivered research protocol did not participate in the screenings. Additional participants were recruited by flyers that were distributed in residence halls, high-traffic areas on campus, and through global e-mails to undergraduates (see Appendix A). Finally, professors were informed about the study and the availability of SFBT for students with anxiety symptoms. All participants were in the emerging adult age range, from 18 to 22 and were offered a \$30 Amazon gift card for completing the study.

Participants were included in the study based on scores on the Counseling Center Assessment of Psychological Symptoms (CCAPS-62; Locke et al., 2009). For generalized anxiety, the range of scores for inclusion was between 40 and 90 and for social anxiety between 50 and 95. These inclusion numbers were based on cutoff scores for mild anxiety and cutoffs for more extreme clinical anxiety (Locke et al., 2009). If scores were below the minimal cutoff score, this indicated very little anxiety, while the highest scores indicated a severity that required further assessment. There were several other exclusion criteria. Students who scored in the clinical range on the substance use subscale (above an 80) were not eligible for the study because of the possible need for more substance-specific treatment. These students were referred to the alcohol/drug counselor for further evaluation. Finally, on the depression subscale, there are questions about suicidality. If a student answered the question “I have thoughts of ending my life” with *very much like me* or *extremely like me*, he/she was not eligible for the study, but instead was immediately seen for further suicide risk assessment and possible treatment. Although no students began taking psychotropic medication during the course of the study, students who already were taking medications were included in the study. They still needed to

score in the appropriate range on the generalized anxiety and/or social anxiety subscale to qualify.

Treatment

Participants engaged in three SFBT counseling sessions post-screening. Based on reports generated by the university counseling center's electronic records system, the average number of sessions attended for this counseling center is three; therefore, this protocol represented average attendance at this site. Furthermore, SFBT is most effective in the three- to five-session range (Beyebach et al., 2000).

At the end of each session, participants received a feedback sheet in accordance with SFBT protocol (see Appendix E). If the student was randomly assigned to in-person sessions, he/she sat in the waiting room for a "break" at the end of the session. The counselor indicated on the form her observations of the client that week as well as assignments based on the client's goals. If the student was randomly assigned to online sessions, the same feedback form was completed. If time remained in the online session, the counselor and client would take a 5-minute "break" while remaining on Doxy.me. The counselor reviewed the form online with the client through synchronous video and then e-mailed a copy immediately following the session. If time was short, the feedback form was e-mailed to the client after Doxy.me was closed.

The first author and another licensed clinical social worker from the counseling center implemented the treatment protocol (see Appendix B). Both clinicians have an expertise in college counseling work, having been at this counseling center for over 20 years. The first author took the course to become board certified in telemental health (BC-TMH) as this process began. In preparation for delivery of the SFBT protocol, the second author, who had training in SFBT and experience using it, provided a 2-day intensive training in the Fall 2016. In addition,

the second author continued to provide supervision on the treatment protocol. Before the research project began, sample online sessions were recorded by the counselors as part of training feedback, and the textbook *Interviewing for Solutions* (4th ed.; DeJong & Berg, 2013) was used as an instructional text. Supervision continued throughout the period of the study, November 2017 to December 2018.

Procedure

The study was approved by the participating institution's IRB (see Appendix G). If a student expressed interest in the study, either by responding to one of the recruitment flyers or by entering the counseling center for an appointment, he or she was given an appointment for an in-person screening, as is the procedure for all students. Students completed all intake forms through the Titanium system, which includes the CCAPS-62. Titanium Schedule is a college counseling electronic medical record program used by numerous college and university counseling centers around the world. This symptom checklist was used by the screening counselor to determine initial eligibility. Then, the screener's brief clinical interview allowed for final determination of eligibility. Screening counselors did not begin the therapeutic relationship at this point. Although there was no specific protocol for determination of inclusion other than the range of anxiety scores, screeners would suggest the study to anyone in that range unless there was a specific clinical determination of the need for another treatment strategy. If the student met research inclusion criteria, the screener described the study and reviewed the written informed consent (see Appendix C). All students who qualified for the study were offered a \$30 Amazon gift card upon completion. Those students who were not interested or who did not qualify went to the administrative assistant for a follow-up appointment in accordance with the counseling center's established procedures. These initial screening appointments were

conducted similarly, whether the student was randomly assigned to an online or in-person counseling group.

The screening counselor handled the review and signing of the informed consent with the participant. The student then was directed to the administrative assistant's desk to schedule future appointments and receive a randomized assignment. The administrative assistant had each participant fill out the following information on demographics: gender identity, age, race/ethnicity, year at university, whether they had ever had counseling before (Appendix F). The administrative assistant then used a six-sided die to assign them to the online or in-person counseling group (1–3 = in-person, 4–6 = online). She then scheduled the participant with one of the participating counselors based on a general balance of sessions between counselors. In addition, each participant was given an identification (ID) number for anonymity. The administrative assistant explained to participants how to use this number when filling out any surveys or forms related to the study. Those who were in the in-person group had an ID starting with 1 ($n = 29$), and those in the online group with 2 ($n = 23$). The administrative assistant was the only person to have access to the names that matched the ID numbers, and she maintained this file in a confidential Excel document. Participants were instructed to consult with this staff member if they ever forgot their assigned ID number before they filled out any online questionnaires.

All online participants were given instruction on (a) how to access the Doxy.me account, (b) use of audio and video components with the device they were using, and (c) how to upload documents. The administrative assistant of the counseling center provided these participants an appointment card with these instructions on it. The online participants then were given a technology check appointment. This provided participants and their counselors to test the online

program before they had their first session together. The goal was for smooth communication through technology, and efforts were made to ensure all components were operating optimally before beginning SFBT.

Because the university is a wireless campus, participants had no difficulty finding quiet, confidential places on campus for online sessions with their counselor. For those who lived in non-university, local housing, they were instructed on using their own wireless networks for connection to the web. The HIPAA-secure aspect of Doxy.me was crucial in the selection of this software, and its security features were explained to online participants. The counselor reviewed the procedures for continuing the session if there were a technology failure (i.e., phone contact). In addition, emergency procedures were reviewed with the participants at the technology check appointment per the American Counseling Association (2014) *Code of Ethics* for distance counseling. An online informed consent form separate from the main informed consent was reviewed and signed by the participant during this technology check (see Appendix D).

The client version of the WAI was given after the first SFBT session and after the third and final SFBT session in both delivery systems. If the participant was online, a link to the WAI through Qualtrics was sent at the end of Session 1 and Session 3. If the student was an in-person client, he or she saw the administrative assistant after first and third appointments to fill out the WAI on an iPad through Qualtrics. Students used only their ID numbers when filling out these inventories. At no time did the counselors have access to identifying information on responses to the WAI. The informed consent document explained to participants that the counselors would not access or review the data collected in Qualtrics while the research was still ongoing. Data were only reviewed by the researcher upon completion of the research project, with research IDs serving as the only identifying information.

For treatment fidelity, all sessions were audio-recorded, whether in-person or through Doxy.me. The online recordings were done through an external recording device since Doxy.me does not allow for internal recording. Treatment fidelity was assessed by the second author, and another counselor who participated in the initial SFBT training together with the two counselors who delivered the treatment. All first sessions were reviewed for treatment fidelity as well as 10 randomly selected subsequent sessions. Fidelity checklists were developed for each session to establish SFBT fidelity (see Appendix B).

Demographic questions were asked for each participant after informed consent was provided. The demographic information collected was gender identity, year in school, ethnicity, and previous counseling experience.

Measures

Counseling Center Assessment of Psychological Symptoms-62. The CCAPS-62 (Locke et al., 2009) is a psychological symptom checklist designed for use with college students. The eight subscales are: (a) Depression, (b) Generalized Anxiety, (c) Social Anxiety, (d) Academic Distress, (e) Eating Concerns, (f) Family Distress, (g) Hostility, and (h) Substance Use. The initial iteration of the scale was released in June 2009, and an update was released in 2012. The subscales have a minimum factor loading of .32 for each item (Tabachnick & Fidell, 1996) and an item total correlation of .30 or above (Nunnally, 1978). The CCAPS-62 is commonly completed at the first intake appointment in college counseling centers while the shorter version, the CCAPS-34, is used for regular assessments of treatment efficacy (Locke et al., 2011). The total time to complete the longer version is 7 to 10 minutes.

The test-retest reliability for the Generalized Anxiety subscale was .782 after 1 week and .842 for a 2-week period. The internal consistencies of the subscales were high, with all being

above .80. Locke et al. (2011) looked at reliabilities among diverse student populations and found a reliability index greater than .75.

McAleavey et al. (2012) found good convergent validity when comparing the CCAPS-62 to established psychological symptom checklists used by clinicians. The correlation results of .692 and .643 (Generalized Anxiety) and .747 and .733 (Social Anxiety) were found for the anxiety subscales used in McAleavey et al.'s study.

Working Alliance Inventory. The WAI (Horvath & Greenberg, 1986) was constructed using the three central factors in Bordin's (1979) theory of alliance: goal, task, and bond. This is a 36-item questionnaire anchored to a 7-point Likert scale (1 = *never* to 7 = *always*). Eaton, Abeles & Gutfreund (1988) showed that the TWA can be established within the first three sessions, and most research on the TWA recommends having these measures completed after the third session. This makes the WAI ideal for this study using SFBT.

Kokotovic and Tracey (1990) found subscale reliability on the client version to range from .88 to .91. Cook and Doyle (2002) found that reliability coefficients "were slightly lower, with a composite alpha of 0.86 and subscale scores of 0.59, 0.70, and 0.76 for tasks, bonds, and goals respectively" (p. 99). Construct validity has been evidenced based on high correlations between the WAI and other working alliance instruments (Tichenor & Hill, 1989). In addition, Horvath and Greenberg (1986) reported high internal consistency on the client form (.93) and construct validity on the client form. The reliability coefficient of the WAI for this study was .617.

Apparatus

Doxy.me is videoconferencing telemedicine software that is HIPAA-secure and provides the clinician with a business associates' agreement. It is marketed for use with patient care in

telemedicine and telemental health fields. It is accessible on computers, tablets, and mobile phones. In this study, we used the synchronous video and audio functions of Doxy.me to deliver SFBT for mild to moderate anxiety. The software allows clinician to create a waiting room, with check-in capabilities for clients, as well as screenshare capability between therapist and client.

Survey data was collected on Qualtrics, an online research tool that was used for participants to complete the WAI after the first and third session of treatment. Qualtrics is licensed by Oregon State University.

Data Analysis

SPSS Version 25.0 was used for data analysis. A total of 52 participants completed the WAI after first session, and 49 participants completed it after the third session. All 49 had completed more than 90% of the WAI, and missing data were addressed by using the mean of completed items for that participant per best practices with psychometric scales (Siddiqui, 2015). Outliers were assessed through evaluations of z scores: less than -2.68 or greater than +2.68 were considered outliers (Khan Academy, 2017). Two Welch's t tests were conducted to compare score means for Session 1 and Session 3.

Results

Group differences were examined between the two groups of participants: SFBT in-person (treatment-as-usual) versus online. After the first session, the in-person group ($n = 27$) had a mean score of 224.63 ($SD = 22.29$). By comparison, the online group ($n = 21$) had a mean score of 227.14 ($SD = 15.10$). After the third session, the in-person group ($n = 27$) had a mean score of 236.96 ($SD = 10.37$) and the online group ($n = 20$) had a mean score of 237.45 ($SD = 10.01$). To test the hypothesis that there would be no difference in WAI scores between the online and in-person groups after the first and third session, an independent samples Welch's t

test was conducted. This test performs better for unequal variances and offers the same result as Levene's test for equal variances. The results of the Welch's t test were as follows: first session, $F(1) = .196, p = .660$; third session, $F(1) = .026, p = .872$. Therefore, the independent samples Welch's t test showed that the WAI score was not statistically significantly different between in-person and online delivery method at the first or third session.

The conventional method in clinical trials of answering the question of "equivalent" treatment was used, given the non-inferiority design of this study. The null hypothesis that treatment-as-usual (in-person) would be superior to the experimental treatment (online) would be rejected if, and only if, the lower limit of the confidence interval (because higher scores are better on the WAI) divided by the mean of the independent variable group were greater than -0.2 (Chen, Kianifard, & Dhar, 2006). For Session 1, this score was -0.06. Therefore, the null hypothesis can be rejected, indicating that online counseling was not inferior to in-person counseling in terms of WAI. For Session 3, this score was -0.03, again indicating non-inferiority.

Discussion and Implications

The purpose of this study was to explore the impact of SFBT on TWA in online versus in-person counseling for college students with mild to moderate anxiety. Concerns about TWA are a central roadblock to counselors using an online delivery method for their counseling, and if there were a statistically significant difference in the ability to form a working alliance when counseling is delivered online versus in-person, the scores for both sessions should be lower for online clients. Results of the present study showed that there was no statistically significant difference in TWA for the online delivery method compared to treatment-as-usual (in-person) for

either session, as measured by the WAI. This supports the original hypotheses, as well as previous research in this area (Knaevelsrud & Maercker, 2006).

Given that this was a non-inferiority designed study, showing that the difference in the two delivery methods on the WAI was not statistically significant does not necessarily indicate the two treatment delivery methods are equivalent. However, Blackwelder's (1982) non-inferiority statistical analysis showed that, for this small clinical trial, online counseling was equivalent to in-person counseling in terms of the WAI.

The experimental design of this study in which participants were assigned to online counseling at random indicates that clients did not need to choose online counseling in order for the TWA to be established. In fact, some of the students expressed disappointment to the administrative assistant at being assigned to one of the delivery methods instead of the other. However, findings in this study indicate that these participants felt that the goal, task, and bond (Bordin, 1979) had been established equivalently between the two delivery methods.

In addition, the results indicate that brief therapy using solution-focused techniques allows for a working alliance to develop, even in one to three sessions. The means of the two WAIs were only slightly different between Session 1 and Session 3, which reinforces the idea that SFBT practitioners espouse that one session can be enough for the client to feel empowered by this strengths-based approach (DeJong & Berg, 2013).

Limitations and Recommendations

Despite the findings, it is important to acknowledge the limitations of this study. The sample size was small, and therefore generalizability is limited. The participants were students at one university in the northeastern United States, and therefore they are not necessarily representative of national or international students. Further studies at other universities should

be conducted. Also, a more rigid protocol for screening participants would allow for ease of replicability. Additionally, given that this was a “real world” counseling center setting rather than a laboratory, there were real-world variations in counseling styles and other details regarding protocol that were difficult to control. For instance, with some online participants, the feedback sheet was e-mailed to them after the session ended; for others, a break was taken, with both client and counselor remaining online and then reviewing the feedback together. In addition, some sessions were significantly shorter than others, depending on the counselor and style of delivery. A laboratory setting result would be helpful in order to control for some of these factors, and results could be combined with these to get a more complete picture. Finally, the number of participants made it difficult to get a medium effect size using the *t* test.

Non-inferiority studies are more challenging and are typically undertaken with clinical medical trials to determine if one treatment is “as good as” the standard treatment. That being said, the statistical analysis suggested for these studies was used in this evaluation. Increasing the numbers of participants and diversifying the population of participants would improve the generalizability of these non-inferiority results.

Additional research could compare the therapist’s rating of the WAI with the client’s rating when random assignment to the delivery method is employed. As described in some of the previous research on therapist-rated WAI in online counseling, this comparison would elucidate the impact of therapist perception of alliance on the client’s sense of connection when technology is being used. Also, given previous research indicating a lack of correlation between the TWA and outcome when using online counseling, the use of an inventory like the WAI, which was designed for in-person counseling interactions, comes into question. Does online, Internet-based therapy require an inventory designed to assess the unique ways that clients

connect through technology? Perhaps the balance of goal, task, bond developed by Bordin (1979) is affected by an online intervention.

Conclusion

This non-inferiority study examined the differences in the TWA using the WAI in online versus in-person SFBT for undergraduate college students with mild to moderate anxiety. The findings indicated that online counseling was not inferior to—and indeed equivalent to—treatment-as-usual (in-person) when it comes to TWA. These findings are strengthened by the fact that participants were randomly assigned to delivery method and did not choose the method with which they felt more comfortable. Because the TWA is often the greatest concern for counselors in providing counseling online, this study strengthens the online counseling literature for this population.

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CHAPTER 4: GENERAL CONCLUSIONS

This chapter summarizes the two-part dissertation research study which assessed the effectiveness, equivalency, and impact on the TWA of online versus in-person counseling using SFBT for mild to moderate anxiety in college students. The sample consisted of 49 participants who were all college students ranging in age from 18 to 22 ($M = 19.29$, $SD = 1.2$), who participated in SFBT treatment and were randomly assigned to online or in-person delivery. The effectiveness of SFBT for the treatment of mild to moderate anxiety was assessed using BAI (Beck, 1988) scores at three time points: pretest, posttest (after final session), and follow-up (3 weeks post-intervention). Two repeated-measures ANOVAs were conducted as part of the analysis. In addition, the CCAPS was used to evaluate the effectiveness across two time points: pretest and follow-up (3 weeks post-treatment). RCIs were used to compare clinical change across the two delivery methods. Finally, the TWA was evaluated using the WAI, which was given after the first session and third sessions, and t tests were conducted to compare the means of the two delivery methods. Non-inferiority analyses were conducted on BAI and WAI results.

Summary of Manuscript I

This portion of the study was a non-inferiority study in which students were randomly assigned to an online or in-person delivery method. BAI scores over three time points allowed for evaluation of the effectiveness of SFBT for anxiety and comparison of the effectiveness of the delivery methods. An ANOVA was conducted, and results indicated that participants made clinically significant changes during treatment, whether via online or in-person counseling. Non-inferiority trial analyses were used to support the equivalency of effectiveness for the delivery methods. Improvement continued post-treatment during follow-up, although there was a slight,

but not significant, increase in symptoms on the BAI at follow-up for those who had received in-person therapy.

The CCAPS was a second source of information on effectiveness. Every participant had received the CCAPS-64 as part of the intake at the counseling center and qualified for the study based on scores on the Generalized Anxiety and Social Anxiety subscales. The CCAPS-34, which is used to show clinical change in college counseling settings, was given at 3 weeks follow-up. These results were evaluated using the RCI, an index for clinical change, showing a similar effect on the BAI: clinical change on the two anxiety subscales was not statistically different for the experimental delivery method (online) compared to treatment-as-usual (in-person).

Both of these results are encouraging for the future of online counseling for college students with mild to moderate levels of anxiety, especially given the strength of random assignment of participants. If SFBT can be delivered so that its effectiveness for mild to moderate anxiety is similar with the two delivery methods, the concerns about online therapy are lessened. The most dramatic decrease in BAI scores was seen from pretest to posttest in both groups, with both ending treatment after 3 weeks with a similar BAI score (see Figure 1). It should be noted that the in-person participants had a higher anxiety score at the start, so their change slope was slightly steeper. However, this was not a statistically significant difference.

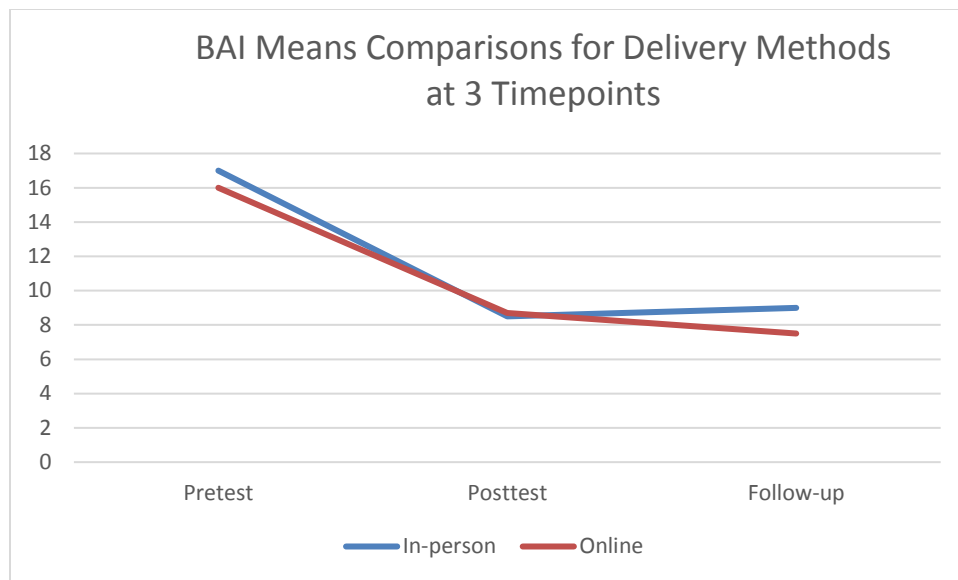


Figure 1. Beck Anxiety Inventory means at pretest, posttest, and follow-up.

The other interesting result was the follow-up differences in delivery methods. As mentioned above, both groups had similar means after the final session of treatment. During the 3-week follow-up period, the in-person participants had a slight increase in symptom scores while scores for online participants continued to decline. One possibility is that the in-person participants were more affected by the discontinuation of treatment (not meeting with someone in the office) than those who were already at a distance from their provider. However, this was not a statistically significant difference in WAI, and therefore, these authors do not want to overstate its importance. In terms of the CCAPS, the RCIs were determined by comparing pretest to follow-up scores. This showed that, although there was slight difference in BAI means at follow-up, the RCIs were not significantly different for the two groups over this time period.

Summary of Manuscript II

The goal of this study was to address one of the greatest concerns in online counseling delivery: whether the TWA between counselor and client is comparable to that in in-person counseling. The WAI was administered after the first session and third (final) session to offer

comparisons between the two groups. Means from each time period were compared using Welch's *t* tests. Results indicated that the TWA was not significantly different between the two delivery methods. Given the strength of using random assignment for participants, this indicates that, even if participants would not have chosen to receive counseling online, they experienced a similar connection with their counselor as those who were meeting in-person, as evaluated by the WAI. There was only a slight difference in means between first and third sessions for both groups, indicating that the TWA was established fairly quickly and maintained. This could have also been affected by the SFBT protocol, which emphasizes the importance of the first session in brief therapy.

Limitations

There are several limitations to this two-part study. First of all, a non-inferiority study can be challenging and, although appropriate analyses were conducted for this particular design, a larger trial would likely provide more robust statistical findings (Blackwelder, 1982). These studies are used when evaluating a difference in medical or pharmacological treatment and therefore require more assurance of equivalency than simply indicating that there was no statistically significant difference in outcome. In addition, a larger sample size is required to adequately compute effect sizes with *t* tests.

Although the randomization of participants helped to strengthen the findings, the sample size was nonetheless small ($N=49$). The fact that two clinicians with different training backgrounds provided the treatment is another important factor, especially when it comes to the TWA. Although the mixed-method ANOVA showed no significant difference in effectiveness between clinicians, different providers likely have different effects on the TWA. Also, the

sample did not represent diversity in ethnicity, race, or gender. A larger, more diverse participant population is needed to generalize results.

Implications and Recommendations

Notwithstanding the limitations, these studies add to the growing literature surrounding the effectiveness of online counseling, both from a treatment delivery perspective and from a TWA perspective. Given that the TWA is one of the greatest indicators of treatment success (Bachelor & Horvath, 1999), these similarities in scores have even greater importance. This study corroborates findings in the literature that support the connection between the TWA and treatment outcome, given the improvement on both BAI and CCAPS scores, while WAI scores remained similar in both delivery methods. Also, SFBT provided a brief approach to the most common clinical issue at college counseling centers, mild to moderate anxiety. As the improvements evidenced here indicate, a brief intervention focused on a constructivist approach like SFBT to empower students by helping them to create their own solutions provides an alternative to more intensive, psychodynamic approaches.

Given that this study was conducted in the real-world setting of a functioning counseling center, it also reinforces the idea of incorporating a brief therapy method with online delivery options for students. Both studies indicate the success of this process, even when students were not selecting their preferred delivery method. In addition, the dramatic increase in online programs at universities, both on the undergraduate and graduate level, require an innovative, effective strategy for providing basic counseling services to these students who are often paying a similar fee per credit to on-campus students.

This study supports the empirical evidence reviews of randomized controlled trials demonstrating the effectiveness of telemental health interventions (Bashshur, Shannon,

Bashshur, & Yellowlees, 2016). There continues to be concern that providing mental health interventions through an online delivery system is not supported by the research (e.g., Cohen & Kerr, 1999; Carlbring et al., 2011; Titov et al., 2010); however, given the diversity of mental health issues, settings, types of online counseling, and level of client comfort with technology, this will be an ongoing exploration. In the setting of a college counseling center, the issues of comfort with technology are minimal, given that the current emerging adult population has never lived at a time when communication was non-technologically based. More studies are needed to evaluate the types of presenting issues that show the most improvement using this delivery method, as well as the attributes of clients who seem to benefit the most. Other common college counseling issues of depression, mood disorders, and relationship or family distress would be areas to explore. In addition, given the variety of possible technologies (i.e., phone, chat, e-mail, synchronous video, apps, etc.), research needs to examine the delivery systems that work best for specific issues with specific types of clients. Similar to the personalization of breast cancer treatment to address individual genetic markers, mental health delivery and treatment approaches could be tailored to the specific needs of individual clients. This requires more funding and more randomized controlled trials to generate strong empirical evidence for different treatment options.

Given the plethora of self-directed apps available, from mindfulness training to sleep aids, further evaluation of the benefit of these technological “self-help” aids needs to be conducted as well. Simply directing students to available apps does not seem to constitute an answer, as most research shows that contact with a counselor or para-professional who is tracking progress creates more adherence to these strategies (Benton et al., 2016). Perhaps it is similar to reading self-help books, whereby intrinsic motivation based on locus of control is

necessary before the intervention begins in order to see significant change (Cavanagh, Strauss, Forder, & Jones, 2014). However, if there is a way to increase the capability of young people to access and fully incorporate change from a technological source that requires less counselor time, this may be a remedy for some of the emotional well-being issues on college campuses.

Finally, the clinicians in this study did not go into the study with SFBT training or even fully confident that college students would react well to this treatment strategy. However, this study indicated how well a focus on solutions rather than problems could work for emerging adults. Much of the college counseling literature focuses on how to improve resiliency in this age group, as well as the dependency issues that arise from so-called “helicopter parenting” (Arnett, 2015). Both clinicians reported anecdotally that students were enthusiastic about the approach and felt more capable of dealing with difficulties in the future. Certainly, the effectiveness results indicate that it was helpful in reducing anxiety symptoms. This study suggests that further training for college counselors in brief, strengths-based approaches is warranted.

The success of SFBT with emerging adults leads to the following question: Has the college counseling world made assumptions about the capability of emerging adults to handle life issues simply based on their tendency to access services at a higher rate than previous generations? As Ben Locke indicated at a symposium on college mental health in Connecticut (Megan, 2017), “Demand for services is increasing in counseling services for many reasons, but primarily because we asked for it.” Students seem to be following the direction of years of mental health outreach, which encouraged accessing services and seeking help. This does not necessarily mean that students are less capable. Further, when they are met with a strengths-

based, solution-focused approach to counseling, they may eagerly accept the responsibility and the independence it generates.

Conclusion

This two-part study provides support for the use of SFBT to treat college students with mild to moderate anxiety. It also provides preliminary evidence for the non-inferiority of online counseling (compared to in-person counseling or treatment-as-usual) as a delivery method for this approach. The strengths of this study include the use of randomized assignment as well as multiple inventories to collect data on outcome and the TWA.

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APPENDICES

A close-up photograph of a young woman with a distressed expression, biting her fingernails. Her eyes are wide and looking upwards, and her mouth is open with her teeth clenched against her fingers. The background is a plain, light-colored wall.

Participate in a
research study
call # below.

**PARTICIPATE IN A
RESEARCH STUDY
& RECEIVE A \$30
AMAZON GIFT
CARD!!**

[illegible]

APPENDIX B: TREATMENT FIDELITY CHECKLIST

Counselor: _____

Session: _____

Rater: _____

Date of Rating: _____

Form of Counseling: SFBT

TREATMENT FIDELITY CHECKLIST—SESSION 1

Instructions: While reviewing the session, mark the counselor behaviors listed below that you observe as present.

#	The counselor...	Present (=1)	Not Present (=0)
1	...clarified the role by explaining the nature and structure of SFBT.		
2	...took a brief history of problem and listen for exceptions.		
3	...asked miracle question.		
4	...engaged in miracle dialogue with “what else,” instead questions, and changes in themselves, others or relationships.		
4	...began building solutions by amplifying exceptions.		
5	...asked scaling questions around progress, small changes, and confidence.		
6	...gave feedback through compliments, bridge, and task after short break.		

Counselor: _____
 Session: _____
 Rater: _____
 Date of Rating: _____
 Form of Counseling: SFBT

TREATMENT FIDELITY CHECKLIST—FOLLOW-UP SESSIONS

Instructions: While reviewing the session, mark the counselor behaviors listed below that you observe as present.

#	The counselor...	Present (=1)	Not Present (=0)
1	...elicited with what's better/what's different since last session.		
2	...amplify change in thoughts, feelings, and/or behaviors of individuals/others/relationships and ask scaling questions based on these.		
3	...reflect on change by asking questions about the process of making those changes.		
4	...scaling on confidence in change, what would be happening differently if you move on the scale.		
4	...re-evaluate goals if necessary.		
5	...gave client end-of-session feedback after break (compliments, bridge, task).		

APPENDIX C: MAIN INFORMED CONSENT

PROJECT TITLE: A Comparison of Online and In-person Counseling Using Solution-focused Brief Therapy for College Students with Anxiety

PRINCIPAL INVESTIGATOR: Kok-Mun Ng, Ph.D., Oregon State University, Department of Counseling

STUDENT RESEARCHER: Jocelyn Novella, M.A., Doctoral Candidate at Oregon State University

RESEARCH ASSISTANTS: Will Miller, M.S., Doctoral Candidate at Oregon State University and Janice Kessler, LCSW, Sacred Heart University.

VERSION DATE: October 15, 2017

WHAT IS THE PURPOSE OF THIS FORM?

The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participation in this research, and to record the consent of those who say YES. Please read the form carefully and ask the study team member(s) questions about anything that is not clear.

WHY IS THIS RESEARCH STUDY BEING DONE?

The purpose of this study is to collect data on using solution-focused brief therapy to treat college students with anxiety. We will be comparing treatment through Internet-supported videoconferencing to treatment in-person. Also, we will be looking at any differences in the therapeutic working alliance as experienced by counseling clients between the two delivery systems. This study is being conducted for the completion of a dissertation toward a doctoral degree in counseling at Oregon State University.

WHY AM I BEING INVITED TO TAKE PART IN THIS STUDY?

This study is examining the effectiveness of treatment models for anxiety experienced by college students. You are being invited to participate since you are an undergraduate student at Sacred Heart University. Also, you have expressed interest in receiving counseling services to help with your anxiety.

WHAT IS THE CRITERIA FOR INCLUSION IN THIS STUDY:

You are included in the criteria for this study because you have scored within a clinically significant range for anxiety on the CCAPS-62 which you filled out before your screening session at Sacred Heart University Counseling Center. In addition, you are an undergraduate student at Sacred Heart.

WHAT IS THE CRITERIA FOR EXCLUSION FROM THIS STUDY:

If there are indications that more intensive counseling may be required, your screening counselor may decide to refer you for that treatment first. This would include being at high risk for self-harm. Finally, if substance abuse issues are indicated, you will be referred to the alcohol/other drug counselor for an assessment before participating in this study.

WHAT WILL HAPPEN IF I TAKE PART IN THIS RESEARCH STUDY?

If you decide to participate, you will be part of a randomized, controlled trial. You will need to attend a **MINIMUM OF THREE**, weekly, 45-minute sessions after your initial screening with your assigned counselor. The two counselors are Jocelyn Novella, Director of Counseling and Janice Kessler, Alcohol/Other Drug Counselor. Jocelyn is a Licensed Professional Counselor (LPC) in the state of Connecticut and a Nationally Certified Counselor (NCC). This research is part of her dissertation toward her doctoral degree in Counseling. Janice Kessler is a Licensed Clinical Social Worker (LCSW) and has been in the field of college counseling for over 20 years.

If you choose to participate in this study, you are agreeing to being randomly assigned to receiving your counseling services either in-person or through Internet-supported videoconferencing on the computer. In addition, you will be randomly assigned to one of the two counselors listed above. This random assignment is necessary for the integrity of the research. Both delivery methods will use Solution-Focused Brief Therapy (SFBT) as the treatment protocol.

Individuals assigned to receive counseling services via the Internet will receive detailed instruction on how to access the videoconferencing “room,” and there will be no costs for this access. Once you have completed the study, you may continue to receive counseling at Sacred Heart University’s Counseling Center if you feel you need it. See information below about your ability to WITHDRAW from the study at any time.

In terms of paperwork, you will be asked to complete the usual Counseling Center paperwork, including the Counseling Center Assessment of Psychological Symptoms-62 (CCAPS-62) on our electronic medical record system, Titanium. In addition, you will be asked to complete electronic version of the Beck’s Anxiety Inventory (BAI) before your first session (post-screening) and after your third session. Also, you will complete the electronic version of the Working Alliance Inventory (WAI) after the first and third session and the CCAPS-34 (follow-up to initial paperwork) after the third session. Finally, we will contact you electronically 3 weeks after completion of your third session to complete the BAI as a follow-up. In order to ensure your confidentiality, you will be assigned an I.D. # by the office manager when you first enter the study. This will be used for completion of all research instruments (the BAI and the WAI) through Qualtrics. Your counselor who is assigned to provide you with the three counseling sessions will not have access to your responses to these research instruments before the completion of the three (3) required sessions. If you forget your I.D. #, you may contact Cheryl Carlson at 203-371-7955 or carlsonc@sacredheart.edu who can give you that information. There will be a paper demographic questionnaire filled out with your initial BAI. This will not have your name listed; only your assigned I.D.# described above.

Recordings: Audiotape recordings will be made of ALL first sessions and randomly selected follow-up sessions for the purpose of fidelity assessment. These recordings are necessary for maintaining the integrity of the study. If you do not wish to be recorded, you should not participate in this study. These recordings will be kept in password protected electronic storage until the study is completed (December 2018) at which time they will be deleted. The recordings will only be viewed by members of the research team listed above.

RISKS AND BENEFITS

RISKS: There are few known risks in this study. The videoconferencing software being used is compliant with the Health Insurance Portability and Accountability Act (HIPAA), and therefore conforms to high, healthcare standards for confidentiality. Some sessions will be taped for supervision, but these tapes will only be viewed by the members of the research committee listed above. These tapes will then be destroyed once the study is completed. We anticipate completing the study by December 2018. As with any research, there is some possibility that you may be subject to risks that have not yet been identified.

BENEFITS: We do not know if you will benefit from being in this study. However, the main possible benefit is that you will receive a short-term treatment for anxiety that has demonstrated efficacy (SFBT) in previous research. In addition, the data collected from this research may help to support the use of online counseling leading to greater access to mental health services for college students.

COSTS AND PAYMENTS

There is no cost for participation in the survey or any counseling available through this study. There will be an electronic \$30 Amazon gift card given to participants at the completion of the study. This will be explained to you at the beginning of the study, and each participant who completes the three sessions after screening and follow-up paperwork will receive an identical gift card amount. You will not receive a gift card if you do not complete the three sessions.

NEW INFORMATION

If the researchers find new information during this study that would reasonably change your decision about participating, they will share that information with you.

CONFIDENTIALITY

All counseling sessions at Sacred Heart University's Counseling Center, both in-person and through Internet-supported videoconferencing, are confidential. Any limitations to confidentiality are based on federal and Connecticut state laws and include: (1) if the client represents a risk to self or others; (2) if the client reports a current case of child abuse or elder abuse; (3) if a court orders that these counselors disclose their records; or (4) if a client signs a release of information form.

All records including informed consent forms will be maintained on the Counseling Center electronic medical record system called Titanium. Titanium records are maintained on a separate, confidential server within Sacred Heart's IT Department. This system is used nationally in college counseling centers and is considered the optimal electronic medical record (EMR) for counseling centers. As stated above, some sessions will be audio-recorded for supervision and fidelity assessment. However, these will be stored in password protected electronic storage and held in the strictest confidence within the research team and destroyed at the completion of the study.

As mentioned above, the videoconferencing sessions will be held through a HIPAA-compliant software program called Doxy.me, which insures the highest standard of encrypting for confidentiality. No recording will be done through Doxy.me.

WITHDRAWAL PRIVILEGE

It is fine for you to refuse to participate in this study. Even if you agree to participate now, you are free to say NO later, and withdraw from the study at any time. Your decision to withdraw will not affect your ability to receive future counseling from the Sacred Heart University Counseling Center or any of the counselors participating in this study. The researchers have the right to withdraw your participation in this study, at any time, if they observe potential problems with your continued participation.

VOLUNTARY CONSENT

Participation in this study is entirely voluntary. You have the right to withdraw from the study at any time or refuse to participate in the first place. By signing below, you are telling the researcher that you agree to participate in this study. You will receive a copy of this agreement for your records.

WHOM DO I CONTACT IF I HAVE QUESTIONS?

If you have any questions or concerns about the research protocol or other details, you can contact Jocelyn Novella, MA, LPC at novellaj@sacredheart.edu or 203-371-7955. Jocelyn's office is located on the 2nd floor in the Wellness Center at Sacred Heart University.

If at any time you have any questions about your rights as a participant or feel pressured for any reason, you can contact the Sacred Heart University IRB Chair, Dr. June-Ann Greeley, at greeleyj@sacredheart.edu.

CONSENT STATEMENT

If you sign below, you are stating several things. You are saying that you have read this entire form and are agreeing to participate in this research. You are also indicating that you understand the risks and benefits described above. The researchers should have answered any questions that you have about the study.

Subject's Printed Name & Signature

Date

Witness Printed Name & Signature

DateINVESTIGATOR'S STATEMENT

I certify that I have explained to this subject the nature and purpose of this research, including the risks and benefits involved. I have described the rights and protections afforded to human subjects and have done nothing to pressure, coerce, or falsely entice this subject into participating. I am aware of my obligations under the state and federal law and promise compliance. I have answered the subject's questions and have encouraged him/her to ask further questions at any time during this research. I have witnessed the above signature on this consent form.

Investigator's Printed Name and Signature

Date

APPENDIX D: ONLINE INFORMED CONSENT

SACRED HEART UNIVERSITY
Consent for Counseling through Online Synchronous Videoconferencing

WHAT YOU CAN EXPECT FROM ONLINE TREATMENT

- Online counseling includes the practice of psychotherapy delivery, consultation, treatment, transfer of data and education using interactive audio, video, or data communications.
- To participate in online counseling, you will need a high-speed Internet connection, a computer or laptop, speakers or headphones and a camera.
- Cell phone and email contacts are not considered confidential. Thus phone and email contacts will be limited and brief.
- Online counseling may not be appropriate if you are experiencing a crisis or having suicidal or homicidal intent. If a life-threatening crisis does occur, you must agree to contact Public Safety or Residential Life staff after-hours 203-371-7911 or the Counseling Center at 203-371-7955 during the day.
- Counselors will only provide counseling in the states in which they are licensed.
- If your counselor believes you would be better served by another form of psychotherapeutic services (e.g., in-person services), you will be seen at the Counseling Center for those services. You will no longer be a study participant at this point, but this will in no way affect your ability to receive counseling at the Counseling Center.
- Despite reasonable efforts on the part of your counselor, there are some risks and consequences associated with online counseling, including but not limited to the possibility that transmission of your counseling session could be disrupted or distorted by technical failures, or be interrupted by unauthorized persons. The Counseling Center is using a software called Doxy.me that is compliant with the Health Insurance Portability and Accountability Act (HIPAA) in order to limit these risks.
- In the event that technology failure interrupts your counseling session and cannot be remedied quickly, the following procedure will take place:
 - Your counselor will call you on the cell phone you provided at intake.
 - Due to confidentiality concerns over the phone, you and your counselor will briefly establish closure to the discussion at hand and establish another time to meet through videoconferencing. If you or your counselor feel the need to continue the session immediately, you will be seen in a face-to-face session. At this point, you will no longer be a participant in the research study.

COMPLETING FORMS REMOTELY & TELEPHONE/EMERGENCY PROCEDURES

- Online counseling clients are asked to complete some inventories online through Qualtrics software. The link to these forms will be sent through email. The client will only be identified with the I.D. # given to them when they entered the study; the counselors will not know how individual clients are answering these questionnaires. If you have questions while filling out these forms, call 203-371-7955 and speak to the Office Administrator, Cheryl Carlson.
- If you need immediate assistance or an urgent appointment, call the Counseling Center at 203-371-7955 and speak to Cheryl Carlson. If your counselor is concerned about you

during or after an online session, they reserve the right to: 1) call you on your cell phone; 2) contact Residential Life to have you brought to the Counseling Center for a check-in; 3) contact Public Safety to bring the participant to the Counseling Center for an evaluation.

MAINTENANCE OF RECORDS

- Initial forms will be completed in the Counseling Center via a secure computer terminal. All information is stored in the Titanium Software system which has a separate server for privacy.
- All records are stored with strict attention to security as required by the legal and ethical standards pertaining to the work of licensed professional counselors and licensed clinical social workers.
- Relevant information from records will be forwarded to appropriate outside professionals when the client signs the proper release of information form.
- Records are maintained for 7 years following the last counseling session in the file and then are destroyed.
- All external recordings of online sessions will be destroyed by the completion of the study, at the latest December 2018.

Your signature below indicates that you have read and understand this Consent form for online counseling with Sacred Heart University's Counseling Center, including our privacy practices, and that you consent to treatment using online counseling delivery.

Client Signature: _____ Date: _____

Printed Name: _____ ID#: _____

APPENDIX E: SFBT FEEDBACK FORM



TODAY'S FEEDBACK
SOLUTION-FOCUSED SESSION

What I Noticed:

Task(s) for the Week:

JOCELYN NOVELLA, MA, LPC
JANICE KESSLER, MSW, LCSW

WELLNESS CENTER-COUNSELING
203-371-7955

APPENDIX F: DEMOGRAPHICS QUESTIONNAIRE

Gender Identity: Man ____ Woman ____ Transgender ____ Queer ____ Self-identify ____

Age _____

Race/Ethnicity:

African-American/Black _____

American Indian/Alaskan Native _____

Asian American/Asian _____

Hispanic/Latino/a _____

Native Hawaiian or Pacific Islander _____

Multi-Racial _____

White _____

Self-identify _____

Year at Sacred Heart:

Freshman _____ Sophomore _____ Junior _____ Senior _____

Ever had previous counseling:

Yes _____ No _____

APPENDIX G: IRB APPROVAL

Institutional Review Board (IRB) Authorization Agreement

Name of Institution or Organization Providing IRB Review (IRB of Record): Sacred Heart University

IRB Registration: 00010712

Federalwide Assurance (FWA) #: 00024754

Name of Institution Relying on the Designated IRB: Oregon State University (OSU)

IRB Registration #: 00000122

Federalwide Assurance (FWA) #, if any: 00003920

The Officials signing below agree that Oregon State University may rely on the designated IRB for review and continuing oversight of the human subjects research described below: *(check one)*

☐ This agreement applies to all human subjects research covered by Oregon State University's FWA.

☒ This agreement is limited to the following specific protocol(s):

Name of Research Project: A Comparison of Online and In-person Counseling Using Solution-focused Brief Therapy for College Students with Anxiety

Name of Principal Investigator at IRB of Record: Kok-Mun Ng

Name of Principal Investigator at Oregon State University: Jocelyn Novella

Sponsor or Funding Agency: None Sponsor's Award Number, if any: N/A

☐ Other *(describe)*: _____

The review performed by the IRB of Record will meet the human subject protection requirements of their OHRP-approved FWA. The IRB of Record will follow its own written procedures for reporting findings and actions to the relying institution. Relevant minutes of IRB meetings will be made available to the relying institution upon request.

The relying institution is responsible for managing Conflicts of Interest (COI) associated with their affiliated researchers. The PI at the relying institution is responsible for disclosing identified conflicts to the PI at the IRB of Record Sacred Heart University. The PI at the IRB of Record is then responsible for further disclosing those conflicts to their IRB.

OSU is not a covered entity. In the event that the IRB of Record is a covered entity, they are responsible for ensuring that the approved protocol is HIPAA compliant.

The PI at the relying institution is required to notify the PI at the IRB of Record within 2 days of becoming aware of any unanticipated problems. The PI at the IRB of Record is required to notify their IRB within the timeframe articulated in the policy at that institution.

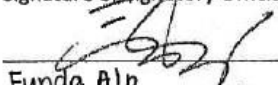
The IRB of Record Sacred Heart University must be the institution reviewing and approving this study. This agreement cannot be fully executed if the IRB of Record has or will rely on another institution for review of this study.

This document will be kept on file by both parties and provided to OHRP upon request.

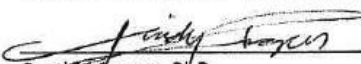
IRB of Record Contact: Funda Alp, Executive Director, Office of Sponsored Programs; Secretary, IRB

Oregon State University Contact: Lisa Leventhal, IRB Administrator, Office of Research Integrity, (541) 737-8008; IRB@oregonstate.edu

Signature of Signatory Official (IRB of Record):

 Date: November 8, 2017
Funda Alp
Sacred Heart University
Executive Director and Secretary of the IRB

Signature of Signatory Official (Relying Institution):

 Date: 11.15.17
Cynthia Sagers, PhD
Oregon State University
Vice President for Research & Institutional Official
A312 Kerr Administration Building
Corvallis, OR 97331-2140

Novella, Jocelyn K.

From: Greeley, Prof. June-Ann T.
Sent: Thursday, October 26, 2017 4:12 PM
To: Novella, Jocelyn K.
Cc: Alp, Feride Funda
Subject: FW: Revised IRB application 170906C
Attachments: 170906C Revised.pdf

Dear applicant,
Thank you for your submission to the IRB and thank you for your patience in this process. Based on the revised document now submitted (see attached) and in accord with the IRB reviewers, the IRB is pleased to approve your application and we wish you great success in your research project.

All the best,
June-Ann Greeley, PhD
Chair, IRB

June-Ann Greeley, PhD
Associate Professor
Department of Theology and Religious Studies
Office: HC 132
Sacred Heart University
5151 Park Avenue
Fairfield, CT 06825

203-371-7713 (office) // 203-371-7730 (department)
greeleyj@sacredheart.edu

Wonder rather than doubt is the root of all knowledge.
- Abraham Joshua Heschel

From: Alp, Feride Funda
Sent: Monday, October 16, 2017 9:48 AM
To: Novella, Jocelyn K.
Cc: Greeley, Prof. June-Ann T.
Subject: Re: Revised IRB application 170906C

Thanks Jocelyn.

June-Ann, I've attached the revised application here, with the IRB number appended.

Thanks,
Funda

.....
Funda Alp '91
Executive Director
Office of Sponsored Programs
Sacred Heart University
5151 Park Avenue
Fairfield, CT 06825