5-2014

Does the Way Exposure Exercises are Presented Matter? Comparing Fear Reduction Versus Fear Toleration Models

Ellen J. Bluett
Utah State University

DOES THE WAY EXPOSURE EXERCISES ARE PRESENTED MATTER? COMPARING FEAR REDUCTION VERSUS FEAR TOLERATION MODELS

by

Ellen J. Bluett

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

Approved:

Michael Twohig, Ph.D. Major Professor	M. Scott DeBerard, Ph.D. Committee Member
Timothy Shahan, Ph.D. Committee Member	Mark R. McLellan, Ph.D. Vice President for Research and Dean of the School of Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

2014

ABSTRACT

Does the Way Exposure Exercises Are Presented Matter? Comparing Fear Reduction Versus Fear Toleration Models

by

Ellen J. Bluett, Master of Science

Utah State University, 2014

Major Professor: Michael Twohig, Ph.D.
Department: Psychology

Exposure therapy is considered to be a first line treatment for a variety of anxiety disorders as supported by several review studies. Despite the efficacy of exposure therapy, there is no clear understanding of how it works. The present study examined how framing exposure exercises impacted outcomes in socially anxious individuals. We conducted a brief two-session exposure-based intervention, including experiential exercises from each therapeutic rationale, with homework assigned between sessions. We were specifically interested in the efficacy of four brief skills interventions: (a) fear reduction, (b) psychological flexibility, (c) values rationale, and (d) control for reducing public speaking anxiety from first to second exposure session. By combining participants at Utah State University and the University of Colorado Boulder, 81 individuals were randomized to participate in the study. Consistent with our prediction, individuals receiving an active intervention improved to a greater extent on major outcome measures (LSAS-SR) and (PRCA-24) compared to the control group. No significant differences

were found between active interventions. Results showed no significant group differences in SUDs change at session 1 or session 2. Additionally, at session 1 those who received an active intervention displayed more within-session exposure engagement than individuals in the control condition. Importantly, there was no difference in between-session exposure engagement (number of exposures attempted) between groups. Overall, the results from this study suggest that there may not be one right way to implement exposure. Furthermore, there may be an overarching mechanism by which exposure works.

(145 pages)

PUBLIC ABSTRACT

Does the Way Exposure Exercises Are Presented Matter? Comparing Fear Reduction Versus Fear Toleration Models

by

Ellen J. Bluett, Master of Science

Utah State University, 2014

Exposure therapy is considered to be a first line treatment for a variety of anxiety disorders as supported by several review studies. However, there is no clear understanding of how it works. The present study examined how framing exposure exercises impacted outcomes in socially anxious individuals. We conducted a brief two-session exposure-based intervention, including experiential exercises from each therapeutic rationale, with homework assigned between sessions. We were specifically interested in the efficacy of four brief skills interventions: (a) fear reduction, (b) psychological flexibility, (c) values rationale, and (d) control for reducing public speaking anxiety from first to second exposure session. By combining participants at Utah State University and the University of Colorado Boulder, 81 individuals were randomized to participate in the study. Consistent with our prediction, individuals receiving an active intervention improved to a greater extent on major outcome measures of social anxiety compared to the control group. No significant differences were found between active interventions. Results showed no significant group differences in SUDs change at session 1 or session 2. Additionally, at session 1 those who received an active intervention displayed more within-session exposure engagement than individuals in the control condition. Importantly, there was no difference in between-session exposure engagement (number of exposures attempted) between groups. Overall, the results from this study suggest that there may not be one right way to implement exposure. Furthermore, there may be an overarching mechanism by which exposure works.

ACKNOWLEDGMENTS

I would like to thank my advisor, Dr. Michael Twohig, for providing continuous support and guidance with this thesis. I would also like to thank my colleague, Lauren Landy, and Dr. Joanna Arch for their efforts in collaboration on this project. In addition, I would like to sincerely thank my research assistant, Eric Richardson, for playing such a fundamental role in completing this project. I would also like to acknowledge my lab mates for providing continued support in graduate school. I would also like to thank my committee members for their dedication and assistance in completing this study. Finally, I would like to thank my family for their continuous optimism and support throughout my time in graduate school.

Ellen J. Bluett

CONTENTS

Page

LIST OF TABLES

CHAPTER I

STATEMENT OF THE PROBLEM

Exposure therapy is considered to be a first line treatment for a variety of anxiety disorders as supported by several review studies (e.g., Norton & Price, 2007; Olatunji, Cisler, & Deacon, 2010). Despite the efficacy of exposure therapy, there is no clear understanding of how it works. In addition, the desired outcomes for exposure remain undetermined.

Exposure therapy is generally defined as a procedure where an individual is exposed to stimulus that evokes a strong emotional response. During exposure, an individual maintains contact with the feared stimulus until the fear response is elevated, and continues in that situation until fear begins to decline. Only after the decline is the session terminated. Several techniques for exposure therapy exist including *in vivo exposure,* imaginal exposure, introceptive exposure, and more recently virtual reality exposure (Barlow, Raffa, & Cohen, 2002; Meyerbröker & Emmelkamp, 2010; Telch et al., 2004; Wolitzky-Taylor, Horowitz, Powers, & Telch, 2008).

Over the years, a number of models have developed explaining how exposure works. Of the earliest models of exposure, systematic desensitization, based on classical conditioning, was purported to work by exposing an individual to a feared stimulus while maintaining a physiological state of relaxation that would inhibit fear learning (conditioned inhibition; Wolpe, 1958). Following Wolpe's work, another model emerged known as the emotional processing theory which incorporates two central ideas: (a) the existing fear structure must be activated, and (b) new information incompatible with the

existing fear structure is introduced (Foa & Kozak, 1986; Lang, 1977, 1979). From this model, emotional processing is purported to work through habituation to fear during and between exposure sessions (Foa & Kozak, 1986). At a similar time, cognitive therapy defined exposure as a process of exposing an individual to their maladaptive or dysfunctional cognitions through language and behavioral tasks (Abramowitz, Deacon, & Whiteside, 2011), with the mediator in this approach being cognitive change. Exposure can be understood through basic animal models as extinction of the conditioned feared stimulus by altering the existing fear structure (CS means US) with new learning (CS means no US) known as inhibitory learning (e.g., Bouton, 1993). Craske and colleagues (2008) have furthered this conceptualization to clinical issues, proposing that the toleration of fear may be more critical to elicit change in exposure therapy than the reduction of fear. Thus, a recent debate has emerged as to *how* exposure therapy works (Craske et al., 2008) and how to best implement the procedure. As a result, additional research is needed to determine whether the treatment of anxiety disorders should aim to enhance fear and anxiety *toleration* rather than *elimination* of fear and anxiety, and the best techniques to do so (Arch & Craske, 2011).

Toleration may encourage the acceptance of unwanted experiences and consequently the broadening of behaviors in the presence of an aversive stimulus. Acceptance and Commitment Therapy (ACT) is a behaviorally based therapy that aims to increase behavioral flexibility in response to anxiety provoking stimuli by fostering acceptance of internal experiences (Hayes, Strosahl, & Wilson, 1999; Twohig et al., 2010). P*sychological flexibility* is defined as the ability to maintain contact with the present moment and simultaneously change or persist in behaviors consistent with ones'

core values (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

The context by which individuals are exposed to feared stimuli may be more important than the act of exposure itself. Thus, exposure from this framework promotes the toleration of fear rather than the reduction of fear per se. Exposure therapy from an ACT model aims to increase psychological flexibility by targeting six core subprocesses. *Personal Values*, a core subprocess of ACT, serve to motivate engagement in exposure by allowing the individual to make greater contact with meaningful aspects of one's life that were previously inhibited as a result of behavioral avoidance. That is, exposure is presented in contexts in which an individual makes contact with fear more frequently in order to achieve a long-term purpose (personally identified values; e.g., Hayes, 2007).

The purpose of the present study was to extend previous research to determine how exposure works by implementing a brief two-session behavioral intervention for public speaking fear. Exposure was introduced from four different models: (a) fear reduction, (b) psychological flexibility, (c) values rationale, (d) and an experimental control condition. We aimed to (a) examine whether the framing of exposure variably effects treatment outcome for public speaking fear following an exposure task, and (b) examine the mechanisms underlying exposure therapy for anxiety disorders as they relate to fear reduction and or fear toleration. The primary dependent variable for this study was self-reported social anxiety, specifically the fear of public speaking. The primary independent variables were the model by which exposure was presented.

CHAPTER II

REVIEW OF THE LITERATURE

What Is Exposure Therapy?

Often referred to as the gold standard of treatment, exposure therapy has been shown to be an efficacious method of treatment for a variety of anxiety disorders (e.g., Barlow et al., 2002; Norton & Price, 2007; Olatunji et al., 2010). A recent meta-analysis conducted by Olantunji and colleagues concluded that cognitive behavioral therapy (CBT), specifically those with an exposure component were effective in treating anxiety disorders. However, the existing variability in the implementation of exposure has made understanding how it works difficult. Furthermore, based on multiple models of change, the desired outcomes of exposure therapy remain unclear.

To our knowledge, only four review studies have comprehensively examined the efficacy of exposure therapy for anxiety disorders. An earlier meta-analysis conducted by Butler, Chapman, Forman, and Beck (2006) examined the long-term efficacy of CBT in treating a host of anxiety disorders including generalized anxiety disorders (GAD), panic, social phobia, and obsessive compulsive disorder (OCD). Results from this meta-analysis concluded that CBT was a highly efficacious treatment for anxiety. The generalization of these findings may be limited considering only 16 studies were included in this review. Another review examined 27 randomized controlled trials of CBT for anxiety. While CBT was found to be more efficacious than controls, the authors note that “there is considerable room for improvement” (Hofmann & Smits, 2008). A larger review of 108 studies found cognitive therapy, exposure therapy, a combination of cognitive and

exposure therapy, and a combination with relaxation training to be efficacious treatments across the anxiety disorders (Norton & Price, 2007). A more recent review including 26 studies and 1,981 participants specifically examined whether CBT is more effective than other therapies such as psychodynamic and interpersonal (Tolin, 2010). Results showed that CBT was more effective at post treatment as well as at 6 –month and one year follow ups than other therapies. Moreover, the findings were more robust for those with anxiety and depression than other disorders, concluding that CBT should be the first line treatment for these disorders. Of note, the meta-analysis did not examine variants of CBT (i.e., exposure therapy vs. exposure therapy with cognitive restructuring; Tolin, 2010). In conclusion, research to date has determined that exposure based treatments are effective for anxiety disorders. However, the process by which it works has yet to be clearly defined.

The foundation of exposure therapy involves helping a client contact a stimulus that elicits a target emotional response (i.e., anxious arousal). The client will stay in the context of the emotionally arousing stimulus while their emotional response becomes elevated. Finally, the client leaves the context of the stimulus once the emotional response has decreased. As with other types of therapy, there are several ways to implement exposure therapy, which are discussed in this document. Importantly, each technique maintains the core principle of exposing oneself to the feared stimulus with the intent of creating a strong emotional response.

One widely used exposure technique, *in vivo* exposure, has arguably been the most effective technique of exposure therapy (Barlow et al., 2002; Telch et al., 2004). *In vivo* exposure is conducted by exposing the client directly with the feared stimulus

(Wolitzky-Taylor et al., 2008). Exposure can also be conducted with private events, such as thoughts or beliefs, which is known as introceptive exposure (Barlow et al., 2002). Imaginal exposure requires the client to imagine a confrontation with the feared stimulus, a technique that is often used with stimulus that cannot be recreated, such as a traumatic event or a feared outcome such as going to hell (Wolitzky-Taylor et al., 2008). More recently, virtual reality exposure, described as a "natural extension of systematic exposure" has been used to treat anxiety disorders (Meyerbröker & Emmelkamp, 2010, p. 933).

How Does Exposure Work?

While the literature has shown the procedure of exposure to be efficacious for anxiety, the process by which it works remains unclear. Recently a debate has emerged as to *how* exposure therapy works (Craske et al., 2008). Specifically, the debate focuses on the mechanisms that elicit change within exposure therapy (more appropriately called processes of change). In order to understand the processes of change in exposure therapy, one must understand the lineage from which it was developed. It has long been determined that earlier laboratory studies by theorists such as Pavlov built the foundation for understanding extinction of feared stimuli (Abrawmowitz et al., 2011).

Laboratory studies examining the basic principles of learning and fear conditioning set the groundwork for behavior therapy (Rachman, 1997). The earliest direct link between a laboratory model of fear conditioning and anxiety disorders was demonstrated in the infamous Little Albert study conducted by Watson and Reyner (1920). To follow, Mary Cover Jones conducted several studies examining the reversal of

previously acquired fears (Jones, 1924; Rachman, 1997). From advancements in the laboratory, Joseph Wolpe was able to directly apply classical conditioning models to exposure therapy. Wolpe's exposure model, systematic desensitization, was purported to work by exposing an individual to a feared stimulus while maintaining a physiological state of relaxation that would inhibit fear learning (conditioned inhibition; Rachman, 1997; Wolpe, 1958). Building upon Wolpe's work on fear conditioning, the process of change underlying exposure has been understood from the perspective of the emotional processing theory by Foa and Kozak (1986), in which pathological fear structures are modified. The emotional processing theory is defined as the process by which the emotional response decreases, where new competing information is introduced into the existing fear structure (Rachman, 1980). The theory incorporates two central ideas: (a) the existing fear structure must be activated, and (b) new information incompatible with the existing fear structure is introduced (Foa & Kozak, 1986; Lang, 1977, 1979). According to this theory, three indicators demonstrate the occurrence of emotional processing. The first indication is the activation of the fear structure, which involves exposing an individual to a feared situation that elicits both heightened arousal and anxiety (Abramowitz et al., 2011). A second indicator of emotional processing is the decrease of fear within the exposure session, known as within-session habituation. The final indication of achieved emotional processing is the decrease in initial reactions to the feared stimulus, known as between-session habituation (Foa & Kozak, 1986). While this theory has been moderately supported in the literature, other models for understanding how exposure works remain.

At a similar point in time, another perspective emerged to further the understanding of how exposure therapy works. Cognitive therapy, developed primarily by Beck (1967), attributed the maintenance of psychological disorders to negative cognitions. From this perspective, those suffering from anxiety disorders have irrational thoughts in the context of anxiety-inducing situations, which subsequently influence one's actions (e.g., Beck, 1976). In addition, by attending to irrational thoughts an individual is exposed to harmful information processing. In a systematic way, cognitive therapy aims to determine dysfunctional beliefs, recognize the role they have on ones' affect, obtain evidence that the beliefs are dysfunctional, and finally replace the faulty cognitions with more functional or adaptive ones. Therefore, exposure therapy from a cognitive model serves to disprove maladaptive cognitions by challenging them verbally as well as with behavioral exercises (Abramowitz et al., 2011). In conclusion, the cognitive model of exposure postulates that identifying maladaptive thoughts and challenging their meaning will allow for new informational processing to occur (Rachman, 1997).

Exposure therapy can further be understood from the context of basic animal learning models. That is, the process by which emotional response decreases may be conceptualized as extinction of the conditioned feared stimulus. In fear conditioning the CS (conditioned stimulus) is paired with the US (unconditioned stimulus). During exposure therapy the CS is presented in the absence of the US. Therefore, the existing fear structure (CS means US) alters with new learning (CS means no US). However, the reduced response to the CS after extinction does not indicate unlearning, and the original CS-US pairing is still intact (Bouton, 1988, 1993). Instead, a new learning known as

inhibitory learning has occurred. That is, the CS now holds two meanings: the original excitatory pathway (CS means US) and the inhibitory pathway (CS means no US; Bouton, 1993). Furthermore, extinction that occurs during exposure does not destroy the original CS-US association, and response to the original US may occur in various contexts (Hermans, Craske, Mineka, & Lovibond, 2006). Therefore, fear expressed post-treatment is determined by the occurrence and strength of inhibitory learning and is independent of fear expression during exposure (Craske et al., 2008; Myers & Davis, 2007). Finally, the inhibitory learning displayed at posttest is determined by the context in which it is tested (Myers & Davis, 2007). In conclusion, the work that occurs during acquisition and extinction of fear within a laboratory setting can serve as a model for understanding exposure therapy in anxiety disorders (Hermans et al., 2006).

Yet another model suggests that exposure therapy may be seen as a context for creating new inhibitory associations that will increase fear toleration. Specifically, participants are forming new associations that fear stimuli are not dangerous (Arch & Craske, 2011). Anxiety disorders are thought to be caused by an individual's attempts to avoid internal experiences of anxiety and fear rather than the anxiety or fear itself (Forsyth, Eifert, & Barrios, 2006). Therefore, as suggested by Arch and Craske, anxiety disorder treatments should aim to enhance fear and anxiety *toleration* rather than *elimination* of fear and anxiety. To this end, treatments should aim to create more durable inhibitory learning. Craske and colleagues (2008) proposed the idea of mismatch expectancy, that is, the violation of the expectation that the conditioned stimulus will predict the unconditioned stimulus. Thus, to create more durable inhibitory learning, the goal during exposure exercises should be experiencing the fear in the absence of the

expected outcome so that one can learn not to be afraid of the fear itself (Craske et al., 2008). In the past decade, and in line with the aforementioned model, alternative methods to implement exposure therapy have emerged. In contrast to earlier models, these so-called "third wave" therapies focus on acceptance and mindfulness of unwanted inner experiences rather than changing them directly (Hayes, 2004; Linehan, 1993; Segal, Williams, & Teasdale, 2002). Exposure from this model aims to decrease experiential avoidance, that is, the attempt to avoid or alter uncomfortable internal experiences (Hayes et al., 2006). Alternatively, exposure is presented as a means to increase ones' ability to openly experience distressing thoughts and feelings. Therefore, exposure is purported to work by allowing an individual to learn new ways to interact with feared stimulus rather than change the meaning or frequency by which they occur. Finally, exposure from an acceptance model aims to improve an individuals' functioning rather than target symptom reduction per se (Herbert, Rheingold, & Goldstein, 2002).

Desired Outcomes for Exposure Therapy

In recent decades, the reduction of fear has been assumed to be the mechanism by which change occurs in exposure therapy. Fear reduction is often measured by both between-session habituation and within-session habituation (Foa & Kozak, 1986). Another way to understand what is occurring in exposure exercises has been presented by Craske and colleagues (2008), who proposed that the toleration of fear may be a more important mechanism by which change occurs. According to the previously mentioned principles of inhibitory learning, a new secondary learning develops in the context of treatment—the CS- means no US without destroying the original association between the

CS and US (Bouton, 1993). Therefore to determine the efficacy of exposure therapy, post treatment fear levels may be the best indicator of change, despite the level of fear present during exposure therapy (Craske et al., 2008). Supporting this concept, several studies examined fear reduction in participants with excessive fear of spiders, heights, or public speaking. Fear reduction was measured by heart rate and/or skin conductance. Results showed that despite the absence of fear reduction, participants improved on measures of self-reported fear following exposure therapy (Lang & Craske, 2000; Rowe & Craske, 1998; Tsao & Craske, 2000). Yet another study examined the importance of fear reduction as predictive of outcomes after an exposure task in acrophobia. Results showed that the reduction of fear during the exposure task had no relation to outcome, and between-session habituation of fear was only predictive from baseline to end of session but did not remain at post-treatment (Baker, Mystkowski, Culver, Yi, & Craske, 2010). Hermans and colleagues (2006) found that regardless of levels of fear displayed during exposure, fear returned when exposed to the feared stimulus in contexts different than that during treatment. This study showed that both time and context are important to the notion of inhibitory learning and the original CS-US is not erased. Similarly, a study conducted by Dibbets, Havermans, and Arntz (2008) found that an extinguished expectancy to an aversive event would not maintain given a shift in context (*renewal),* further demonstrating the occurrence of inhibitory learning. Given these findings, it is clear that fear toleration directly complements the goal of inhibitory learning by creating new learning that the feared stimuli are not dangerous (Arch & Craske, 2011). In conclusion, the amount of fear expression during exposure is not indicative of post-treatment levels of fear.

Rationales for the Treatment of Anxiety

Currently the most agreed upon model for exposure is through the promotion of toleration. Despite this agreement, very few exposure therapies are working from this model, possibly because toleration is a difficult concept to teach. One way of promoting toleration is through acceptance (e.g., Meuret, Twohig, Hayes, Rosenfield, & Craske, 2012). Acceptance of unwanted internal experiences is an alternative approach to controlling and managing one's anxiety. Through acceptance of unwanted experiences one is able to broaden their behaviors in the context of an aversive stimulus. Therefore, deemphasizing the importance of the amount of fear and anxiety experienced alters individuals' relationships and reactions to fear and anxiety. In the past decade many treatments have been developed with the principles of acceptance and toleration. Treanor (2011) suggested that newer "third wave" treatments for psychotherapy are potentially the most effective in forming non-threatening associations. One such therapy, acceptance and commitment therapy (ACT) is a mindfulness and acceptance based therapy that is comparable to a more traditional behavioral exposure therapy (Hayes et al., 1999). ACT is an exposure-based therapy that aims to increase flexibility in response to anxiety provoking stimuli (Twohig et al., 2010). From the ACT model the flexibility to respond to anxiety is achieved through a construct known as *psychological flexibility*. Psychological flexibility is the ability to effectively change or persist in behaviors by maintaining contact with the present moment in order to live by ones' core values (Hayes et al., 2006). From this theoretical model engaging in the present moment with the flexibility to experience anxiety ultimately creates an opportunity for new associations

with the anxiety provoking stimuli to occur, thus creating more robust learning. Furthermore, nonthreatening associations are achieved through several processes that include accepting the anxious feelings as they arise, accepting thoughts as just thoughts, and through committed action to continue in goal directive behaviors (Hayes et al., 1999).

Framing of Exposure Therapy

The context by which we expose participants to the feared stimuli may be more important than the act of exposure itself. Many anxiety disorder patients are resistant to engage in exposure based treatments. Despite the breadth of literature showing efficacy of exposure therapy, research indicates that only a small portion of people with anxiety disorders have been treated with exposure therapy (7-21%; Goisman, Warshaw, & Keller, 1999; Marcks, Weisberg, & Keller, 2009). One possible explanation for the low number of individuals treated with exposure therapy is the way in which exposure is initially presented and understood by those seeking treatment. Typically, exposure is explained as a treatment that leads to both cognitive and emotional change resulting in reduction of fear (Barlow et al., 2002). On the contrary, clients may not be willing to experience the necessary anxiety to result in fear reduction. Therefore, researchers take the necessary steps to enhance acceptability of exposure therapy (Harned, Dimeff, Woodcock, & Skutch, 2011). One such step is implementing exposure from an acceptance framework. It is thought that exposure from an acceptance framework that focuses on willingness to experience anxiety rather than decrease anxiety may at least increase ones' openness to engage in treatment (Eifert & Heffner, 2003). Therefore, continued engagement with one's fear will allow for inhibitory associations to be obtained.

Psychological Flexibility

As previously written, psychological flexibility is a major construct of ACT and is defined as the ability to effectively change or persist in behaviors in order to live by ones' core values. Additionally, psychological flexibility is indicative of being in contact with the present moment (Hayes et al., 2006). Within ACT, psychological flexibility is accomplished through six core sub-processes. The subprocesses consist of (a) *acceptance*: the willingness to experience one's inner feelings without trying to regulate or change them, (b) *defusion*: the recognition of thoughts as a continuous process of just thoughts instead of letting them dictate behavior, (c) *self as context*: recognizing oneself as the context in which inner experiences occur, independent of the content of the experiences, (d) *committed action*: behavioral changes in a valued direction, (d) *values:* chosen "qualities of living" (Twohig, 2009, p. 25), and (6) *contact with the present moment*: the ability to experience inner and outer events without judgment (Hayes, Strosahl, & Wilson, 2012). Further, the goal of psychological flexibility is not to control negative thoughts or feelings or the frequency by which they occur. Alternatively, psychological flexibility aims to encourage one to experience thoughts and feelings fully in order to achieve one's personal values (Dalrymple & Herbert, 2007; Herbert et al., 2002). In addition, ACT is not primarily focused on symptom reduction but instead focused on functional living. Therefore, exposure therapy from an ACT model may promote the toleration of fear through the aforementioned techniques and subsequently allow people to live the lives they desire, without necessarily affecting their level of anxiety or related inner experiences.

Values Rationale

Another meaningful way to present exposure that is also consistent with fear toleration is through aligning it with things that are meaningful and important to an individual, or values. In this study we have chosen to examine a traditional extinction model, an acceptance and tolerance model based on ACT, a control, and a condition that promotes values. Several studies have examined the effects of addressing personal values during exposure. One study randomized 85 participants to a values affirmation condition versus a control condition while completing the Trier Social Stress Task. Results showed that those who affirmed their personal values during an exposure displayed less stress than those who were in the control condition. Of note, there was no difference between heart rate levels, indicating that both groups were equally engaged in the exposure task (Creswell et al., 2005). Yet another study found that individuals who completed a self-affirmation of personal values task prior to receiving information on a threatening health message experienced less defensive processing of information compared to nonaffirmed individuals (Harris & Napper, 2005). Results from these studies support the notion that personal values are useful in decreasing one's stress as well as eliminating harmful information processing during an exposure.

A host of studies have examined the utility of the independent use of the components of ACT (i.e., Levitt, Brown, Orsillo, & Barlow, 2004; Masuda, Hayes, Sackett, & Twohig, 2004). Specifically, this study aims to examine exposure delivered from a personal values perspective. The values component of the ACT model was chosen in order to observe whether a model that aims to increase engagement in exposure

activities differentially affects fear toleration or fear reduction in comparison to other models. Within the ACT treatment model personal values have been defined as "consciously undertaken actions aimed at achieving purposes that are deeply important to one's sense of selfhood. Values dignify and clarify our life course by putting pain in a proper context: it's now about something that matters to us, which we want with our entire selves" (Hayes et al., 2006, p. 3). From this perspective clients may engage in exposure that may elicit fear more frequently in order to achieve a long term purpose (personally identified values). Values allow the client the choice to engage in certain behaviors that are inherently reinforcing rather than their alternatives (Hayes et al., 2012). The inherent reinforcement experienced with choosing values driven behaviors may boost both the frequency and duration of interacting with painful experiences. Therefore, a client may persist in goal directed actions more fully despite aversive feelings they may experience during exposure, potentially providing more opportunities for learning to occur. To our knowledge no component studies of ACT have examined if exposure from a values rationale is an effective model for exposure therapy.

Why Test This Model on Social Anxiety/Public Speaking?

For feasibility purposes we aim to examine the effects of different approaches to framing behavioral exposure exercise in a laboratory setting by recruiting socially anxious individuals from the undergraduate population at Utah State University (USU) and the University of Colorado at Boulder (UCB). Social anxiety disorder (SAD) is the fourth most common psychopathology in the US with a lifetime prevalence of 12.1% (Kessler et al., 2005). Specifically, public speaking seems to be of significant prevalence

in college-aged students. A study assessing specific phobias in 813 college students found that 31% indicated a fear of public speaking (Seim & Spates, 2010). Furthermore, Hofmann, Shulz, Meuret, Moscovitch, and Suvak (2006) have found that public speaking is the most commonly feared social situation that can reasonably be conjured up in a group. In addition, treatment that targets public speaking fear can be generalized to other contexts that result in social anxiety (Newman, Hofmann, Trabert, Roth, & Taylor, 1994).

Purpose and Predictions

The purpose of the present study was to extend previous research to determine how exposure worked by implementing a brief behavioral intervention for public speaking anxiety from a fear reduction, psychological flexibility, and values rationale. We sought to investigate the way in which framing exposure therapy from different theoretical approaches affected both treatment outcome and the mechanisms by which change occurs. Specifically, we sought to determine whether the rationale of an exposure exercise lead to a reduction in social anxiety. In addition we sought to examine whether intervention/theoretically specific measures changed outcomes according to rationale received. Exposure therapy is an effective treatment for anxiety disorders; however, there is no clear understanding as to how it works. By understanding how treatment works we will be able to tailor interventions more specifically to individuals. Finally, understanding processes of change during exposure allows therapists to identify which indicators to expect during treatment in order to achieve successful outcomes. The primary dependent variable for this study was self-reported fear of public speaking collected at the beginning of the first session and at the end of the second session. The primary independent variable

was type of exposure rationale: (a) fear reduction, (b) psychological flexibility, (c) values, and (d) control group. The primary process variables were self-reported fear as measured by subjective units of distress (SUDS) measured before, during, and after exposure sessions. The primary research questions of this study were as follows.

1. What is the efficacy of four brief skills interventions: (a) fear reduction, (b) psychological flexibility, (c) values rationale, and (d) a control (exposure only) for reducing main clinical outcomes of this study, primarily public speaking anxiety from first to second exposure session?
2. How do these interventions differ on a process of change level? Specifically,
    i. Is toleration of fear more prevalent than the reduction of fear?
    ii. Do the processes differ based on type of exposure rationale received?
3. Do individuals who complete more exposure tasks and for a longer duration between sessions have lower levels of social anxiety at the end of the second exposure task?

CHAPTER III

METHODS

Participants

Participants were socially anxious male and female undergraduate students recruited from USU and UC Boulder. Participants were eligible to participate in the research study if they met criteria based on response to an online screener of Liebowitz Social Anxiety Scale-Self Report (LSAS-SR; Baker, Heinrichs, Kim, & Hofmann, 2002; Liebowitz, 1987) with a score of 55 or above. Eligibility criteria included: (a) present fear of a public speaking, (b) fluency in English, (c) age 18-65 years, and (d) experiencing distress or anxiety when in a social or performance situation. Exclusion criteria included the following: (a) scores below the cut off on the LSAS-SR, (b) English not their primary first language, and (c) any detectable disability that would interfere with the study.

At USU, 236 participants completed the online screener, LSAS-SR, through SONA. Of these individuals, 102 met criteria for the study. Fifty-one attended the first session. At UCB, 52 participants completed the online screener, LSAS-SR, through the undergraduate research pool. Of these individuals, 48 met criteria for the study. Thirty individuals attended the first session. Combining participants at USU and the UCB, 81 individuals were randomized to participate in the study. Finally, 77 participants completed both session 1 and 2 of the study. The four participants who did not complete session 2, failed to attend their second scheduled appointment. Follow-up emails were sent to these participants, without a response.

Procedure

Recruitment

For this study we recruited socially anxious undergraduates at USU and UCB primarily through SONA and the undergraduate research pool at USU and UCB, respectively. In addition, announcements were made in undergraduate psychology courses at USU, flyers were distributed, and advertisements were placed in the school newspapers. The advertisements and announcements targeted those who "suffer from significant fears in a performance setting: specifically public speaking." Participants responded to recruitment efforts by signing up to participate through SONA. Participants were required to answer a brief online questionnaire determining eligibility for the study (see Appendix A). The brief online questionnaire consisted of questions acquired from the *Liebowitz Social Anxiety Scale-self report* (Liebowitz, 1987). Eligible participants had the option to provide their email addresses if they were interested in further participating in the two-part brief behavioral intervention for social anxiety. Individuals who provided their emails were contacted via email offering timeslots to participate. Participants received compensation for the study either through course credit, if enrolled in school, or $10 per hour for 3 hours, if a nonstudent participant.

Design

A randomized controlled skills intervention was used for this study. The purpose of the study was to examine and compare the efficacy of three rationales and an exposure only control for social anxiety with a specific fear of public speaking. The rationales included: (a) a psychological flexibility framework for exposure, (b) a fear reduction

rationale for exposure, (c) a values only rationale, and (d) exposure-only control rationale.

Upon entering the research laboratory, participants were (a) informed of the purpose of the research, (b) randomized to one of four conditions, (c) rated their fear of public speaking situations, (d) received a brief skills intervention for anxiety of public speaking, which was experiential and didactic in nature, (e) completed a public speaking exposure challenge, (f) monitored skills usage in a natural environment, (g) completed exposure tasks between sessions, and (h) participated in a second public speaking exposure challenge 1 week later.

Session 1

Before arriving for the first session, participants were required to fill out an online screener assessing scores on a social phobia measure. If the LSAS-SR indicated that an individual was high on social phobia, earning a score of 55 or above, that participant received an automated email assuring eligibility. Interested participants signed up to participate online through SONA, the USU research study pool. Upon arrival, participants were provided with informed consent. Next, participants received a general description of each phase of the study as follows: complete a self-report assessment of their social phobia, receive a brief skills intervention if in an active condition, complete an exposure task to public speaking, assessment of how they feel after their exposure, and finally, distribution of a homework worksheet and scheduling of a second session. After receiving a description of the study, individuals were given the option to participate, if agreed they were given a pretreatment assessment packet. The preassessment packet

included a short battery of self-reports assessing for social phobia and fear of public speaking (see Appendix A). Following the completion of the self-report measures participants were randomized to one of the four conditions (fear reduction, psychological flexibility, values, or control) based off a standardized computer program.

Presentation of Rationales

Following randomization, participants met directly with a trained research assistant to provide a brief 45 to 50 minute intervention. The overall purpose of the brief intervention was to present an understanding of social anxiety, the role and impact of avoidance from a condition specific perspective, and to provide a rationale for implementing skills during an exposure task. A minimal instruction control condition was included in efforts to compare an active intervention + exposure to exposure only. Participants randomized to an active condition (psychological flexibility, fear reduction, or values) were informed that they would receive a brief intervention, by a trained researcher, to learn about social anxiety and skills to use during a brief public speaking challenge and *in vivo* situations where they feel anxious. The research assistant orally presented the framework as to why exposure works. To ensure standardization, each skills intervention protocol was scripted and organized in a similar manner, including a brief description of anxiety, an explanation of exposure and why it works, and an experiential exercise to further their understanding of the rationale. The number and type of examples provided for each rationale were equivalent and each protocol was matched in length (see Appendix B for rationales). Participants were instructed to ask questions during the intervention to assure understanding of the skills being taught. The

psychological flexibility protocol was derived from the ACT protocol (Hayes et al., 1999). The main message of the skills intervention was that participants should try to be accepting of the anxiety that occurs in aversive situations (see Appendix B). The fear reduction protocol encouraged participants to focus on staying in the context of the feared stimuli until they notice their anxiety reducing, specifically incorporating strategies derived from procedures used by Abramowitz and colleagues (Abramowitz et al., 2011). Finally, the values intervention encouraged individuals to focus on things that are meaningful for the individual to engage with in order to participate in activities that are important to them, as adapted from the ACT protocol (Hayes et al., 1999). Rationales included an experiential exercise in order to promote learning and reinforce skills that were being taught didactically. The exposure only control group was intended to be a waitlist control. Those randomized to the control condition completed the assessment forms, engage in the exposure task and then given the option to re-enroll and receive the skills from another condition.

Public Speaking Challenge (Standardized Exposure Task)

Following procedures used in a well-tested paradigm by Hofmann and colleagues, a standardized speech task was utilized as the in-session exposure task (Hofmann, Heering, Sawyer, & Asnaani, 2009). A trained USU/UCB psychology graduate student or undergraduate research assistant entered the experimental room once the brief intervention was complete. At this time, participants were informed that they would practice the skills taught during the intervention in an exposure task, an impromptu 10-minute speech. Participants were provided with three controversial speech topics (e.g.,

opinion on animal research, abortion, gay marriage), which were randomly counter-balanced so that a different set of speech topics was provided at session 2. Participants were instructed to speak about one, two, or all three of the topics in any order. Next, participants were instructed "You will have 5 minutes to prepare for the speech, while I am not in the room. After 5 minutes I will bring the camera into the room and you will have 10 minutes to give your speech." The researcher left the room and allowed the participant to prepare for the speech task. Upon entering the room, participants were instructed, "Please stand in front of the camera, try as best you can to speak for the entire 10 minutes in order to practice the skills you have just learned, you may however stop at any point during the 10 minutes by taking a seat." To elevate the participants' anxiety they were told that members of the research team were going to review their tapes to determine the quality of their speech. Prior to turning on the camera, the researcher collected a preexposure SUDs ratings on a 1-10 scale.

Participants delivered their speech into the camera with no audience. After 10 minutes, the experimenter stopped the speech, if they had not taken a seat. The recorder was turned off and then the participant was given a post exposure SUDs rating form. Finally, the participant received a brief postexposure assessment packet (see Appendix C).

Challenge Assessment

Following the exposure challenge participants were assessed on how well they implemented the skills introduced in the rationales. Participants were asked to complete a worksheet assessing (a) how much they used the skills taught in the intervention, (b) how

helpful they found them to be, (c) willingness to participate in the challenge again, and (d) level of anxiety experienced during the challenge. Questions for skills used, helpfulness, and willingness were assessed on a Likert scale of 0-10, 0 being low for amount of skills used, helpfulness of the intervention and willingness to return to the task and 10 being high on skills used, helpfulness, and willingness.

Willingness to Engage

After completion of the session one of the exposure challenge, participants were asked to confirm their designated time for session 2, which was to occur at the same time the following week. Participants who did not return for their second session were counted as a "dropout."

Homework Assignment

Before participants were dismissed from the session, participants received an exposure-based homework task to complete over the next 7 days. Participants were asked to practice exposure to social situations in their own life. Specifically, participants were asked to engage in social situations they tended to avoid or to engage in social interactions in which they have previously become anxious. They were encouraged to deliberately engage in these activities in order to practice the skills acquired during the brief intervention. Examples were provided (e.g., talking to a stranger in line, speaking up in class); however, participants were encouraged to select situations that were personally salient. The researcher asked the participant if he or she could think of a personal situation, while also providing examples from the information gathered during session.

Participants received a homework packet to fill out over the next 7 days. The

homework packet included an information sheet reiterating the main points of the session (condition dependent). Participants were encouraged to record the exposure situation practiced, the frequency and duration in which the homework was conducted, as well as, pre-, peak, and post-SUDs. Additionally, the homework assessed for how well participants used the skills learned in session, *in vivo*. Participants were instructed to return the homework packet at the beginning of the second session. See Appendix C for measures.

Session 2

Participants returned the following week for a second public speaking exposure challenge. The session began with participants completing the same baseline assessments as in session 1. The researcher then collected the homework assessment sheet and asked the participant about his/her overall experience with the exercise. At this time the researcher validated the participants' learning experience and the use of skills taught at session 1.

Next the researcher explained to the participants that they would be completing the same exposure challenge as the first session. The researcher asked the participants what they remembered the most from the first session and used this information to reinforce the rationale. Following this brief review, participants were provided with the same instructions as session 1 to complete the speech task. Participants were required to give another speech from a list of three new topics (either List A or List B). As before, preexposure SUDs ratings were collected right before the speech. After completing the second exposure task, participants filled out the same postexposure questionnaires as

session 1 including another SUDS rating. Upon conclusion, participants were thanked for their time and awarded research credits for their participation. Individuals who displayed a low level of functioning due to their social anxiety or expressed interest in receiving psychotherapy were offered referrals. Two individuals at USU received referrals. Finally, individuals in the exposure only control condition were given the opportunity to be re-randomized to receive the full brief skills intervention and complete the public speaking challenge once again. No participants in the control condition agreed to re-randomization.

Measures

Diagnostic Measures

Background information. This measure included preliminary questions about the sex, age, marital status, education, and ethnicity/race of the participants.

Liebowitz Social Anxiety Scale-self report. The LSAS-SR (Baker et al., 2002; Liebowitz, 1987) measures both the fear and avoidance of 13 social performances and 11 interactions for a total of 24 items. Both fear and avoidance items are rated on a 0-4 point scale with zero being (no fear/never avoid) to 4 being (severe fear/usually avoid). The LSAS-SR has been found to be internally consistent (α between .95; Baker et al., 2002), with good test-retest reliability (r = .83 over a 12-week period). Furthermore, the LSAS-SR has strong convergent and discriminant validity. The LSAS-SR has also been shown to be sensitive to change (Baker et al., 2002).

Outcome Measures

Social Interaction Anxiety Scale (SIAS). The SIAS (Mattick & Clarke, 1998) is

a 20-item measure that assesses anxiety on a 0 (*not at all characteristic or true of me*) to 4-point scale (*extremely characteristic or true of me*). The SAIS measures both the affective and behavioral reactions, as well as the cognitive reactions an individual might experience in a social interaction. The measure is scored by summing the 20 items, after reversing the three positively worded items. Scores range from 0 to 80, higher scores indicate greater anxiety in social interactions. The SIAS has shown good test-retest reliability with a score of .92 over a 4-week period, as well as good internal consistency with a Cronbach's alpha of .93 (Mattick & Clark, 1998).

Personal Report of Communication Apprehension (PRCA-24). The PRCA-24 (McCroskey, 1982) is a modified version of the original PRCA that consisted of 25-items. The PRCA-24 is a 24-item assessment that measures communication apprehension in four contexts including: group discussions, meetings, interpersonal conversations, and public speaking. Each context consists of 6 items rated on a 5-point Likert scale ranging from "*strongly agree*" to "*strongly disagree.*" The PRCA-24 has been found to have high internal consistency, content validity, and criterion validity (McCroskey, Beatty, Kearney, & Plax, 1985). According to a factor analysis conducted by Levine and McCroskey (1990) each communication context to be acts as a distinct dimension therefore in this study we will examine the context of public speaking.

Self-Statements During Public Speaking (SPSS). The SPSS (Hofmann & DiBartolo, 2000) is a 10-item measure assessing individuals' cognitions in a public speaking situation. The SPSS is divided into two subscales that are five items each: Positive Self-Statements (SSPS-P) and Negative Self-Statements (SSPS-N). Items are rated on a 0-5 point scale with 0 being (*do not agree at all*) to 5 being (*agree extremely*).

Both subscales have shown to have good internal consistency as well as good test-retest reliability, convergent validity, discriminant validity (Hofmann & DiBartolo, 2000; Hofmann, Moscovitch, Kim, & Taylor, 2004)

Fear of Negative Evaluation Scale (FNE). The FNES (Watson & Friend, 1969) is a 30-item true/false self-report measure that measures fear of negative social evaluation. The measure has demonstrated good internal consistency and construct validity, as well as high reliability (Watson & Friend, 1969).

Between-session homework exercise. At the end of the first session participants were given assignments to complete public-speaking exposures between sessions. Participants were asked to rate daily how many exposures they completed and how difficult they found this process to be. Additionally, participants were asked to monitor the duration for which the exposure tasks.

Process of Change Measures

Social Anxiety-Acceptance and Action Questionnaire (SA-AAQ). The SA-AAQ (MacKenzie & Kocovski, 2010) is a 19-item measure that was adapted from the original AAQ 16 item questionnaire that measures psychological flexibility created by Bond and colleagues (2011). The measure was modified to assess situations related to social anxiety. Items are rated on a 7-point Likert-scale ranging from "*never true*" to "*always true.*" The SA-AAQ was found to have high internal consistency with a Cronbach's alpha of .94. In addition the SA-AAQ was found to have good convergent and divergent validity (MacKenzie & Kocovski, 2010).

Probability/Cost Questionnaire (PCQ). The PCQ (Foa, Franklin, Perry, &

Herbert, 1996) is a 40-item measure that assesses the perceived probability and costs of events on a 9-point Likert-scale 0 *("not at all likely," "bad"*) to 8 ("*extremely likelym""bad*"). The measure consists of 20 hypothetical negative nonsocial events and 20 negative social events. In addition half of the items focus on performance. The measure is scored by summing the 20 items, after reversing the three positively worded items. The PCQ has shown good test-retest reliability with a score of .92 over a 4-week period. The PCQ showed good internal consistency on the four PCQ subscales with a Cronbach's alpha ranging from 0.85-0.97 (Foa et al., 1996).

Subjective Units of Distress Ratings (SUDs). The SUDs (Wolpe & Lazarus, 1966) are self-rated levels of anxiety ranging from 0 (*complete relaxation*) to 100 (*maximum distress*; Wolpe, 1958; Wolpe & Lazarus, 1996). SUDs were recorded at the start of the exposure task, and at the conclusion of the exposure task. In addition SUDs ratings were collected open arrival to maintain a baseline rating.

Bull's Eye Values Survey (BEVS). The BEVS (Lundgren, Luoma, Dahl, Strosahl, & Melin, 2012) is a self-report measure that assesses valued living, requiring participant to rank important personal values and discrepancies between values and behaviors. The measure includes a list of four domains of valued living (leisure, personal growth/health, relationships, work/education). Participants are required to write in their specific values for each domain. Next, participants mark on a bulls-eye illustration and X for how close or far they are from living according to their value, from "my life is just as I want it to be" to "my life is far from how I want it to be." Participants are asked to identify obstacles to values living and rate how much these obstacles interfere on a Likert scale from 1 (doesn't prevent me at all) to 7 (prevents me completely). Finally,

participants are asked to write at least one value-directed action to practice for each domain. The BEVS has shown to have significant 1-month test-retest correlations $r = .70$ for composite values (attainment score, $r = .90$ for persistence with barriers score; Lundgren et al., 2012).

Treatment Acceptability Measures

Treatment Evaluation Inventory-Short Form (TEI-SF). The acceptability of this intervention for public speaking was measured with the TEI-SF (Kelley, Heffer, Gresham, & Elliott, 1989). The TEI-SF is a 9-item questionnaire that measures treatment acceptability. Each item is rated on a 5-point Likert scale with higher scores indicating greater acceptability of the treatment. The TEI-SF has shown to be internally consistent ($\alpha = .85$) as well as a reliable factor structure (Kelly et al., 1989).

Personal Reactions to the Rationales (PRR). The PRR (Addis & Carpenter, 1999) is a 5-item measure assessing the extent to which the client finds the rationale received to be useful. Each item is rated on a 7-point liker scale from 1("not at all") to 7 ("extremely"). An example of an item is "If you experienced anxiety and went to see a therapist, how helpful do you think this strategy would be for you?" The questions in this measure were adapted from Addis and Carpenter changing the wording from "depression" to "anxiety." This measure has been utilized in intervention research (e.g., Twohig, Hayes, & Masuda, 2006).

Treatment Credibility Questionnaire (TCQ). The TCQ (Devilly, & Borkovec, 2000) is a 6-item measure assessing clients' treatment expectancies and rationale credibility. Each item is rated on a 9-point Likert scale from 0 ("Not at all") to 8 ("Very

much"). An example is "How much do you believe this **treatment approach** will help you?" and "How much do you believe this **therapist/ group leader** will help you?" Two factors are included in this scale: credibility and expectancy. This measure has been shown to have good internal consistency for both factors (Chronbach's alpha = .079 expectancy factor and .081 credibility factor). Additionally, the measure has shown significant one week test-retest reliability for both factors (expectancy, r = .82 and credibility r = .75).

Data Collection and Storage

The preliminary screening questionnaire was collected on a secure online data collection site. The primary screening measure (LSS-R) was collected prior to the intervention. A self-report inventory was administered at the beginning of session one prior to receiving the brief intervention. The data were collected using paper and pencil prior to the skills intervention and exposure task. The self-report assessment included primary diagnostic and process of change measures before the first skills intervention & public speaking challenge. SUDs were collected before and after completing the public speaking challenge. Participants recorded the frequency and duration of homework completion between sessions 1 and 2. The homework data were collected at the beginning of session 2. A self-report inventory was administered at the beginning of session two prior to completing the exposure task. In addition, SUDs were collected before and after completing the exposure task (see Appendix A). All identifying information for the participants was kept separate from their study data.

CHAPTER IV

RESULTS

Data Analytic Strategy

The analyses conducted for this research study were performed using SPSS Version 21. Analyses included data from participants who completed at least Session 1 of the study. Of the sample, 98.4 % completed both session 1 and session 2 of the study. If a specific measure had less than 20% of the items missing, a mean score and total score was computed for that measure using data points that were present.

Tests of Normality and Outliers

Tests of normality were conducted on all variables. Outliers, defined as values more than 3 standard deviations above or below the mean, were handled with the Winsorized statistical approach (Dixon & Tukey, 1968). This approach allows for outliers, defined as more than three standard deviations from the mean, to be replaced with the next-nonoutlier data point. There were only three outliers in the data and this procedure was performed on all three.

Statistical Approach on Main Analysis

To examine group differences on the main outcome measures, a series of linear regressions were conducted. Given the complexity of comparing each group, a priori contrast coding was used within each linear regression. Specifically, three sets of contrast codes were utilized in these analyses. The following sets of contrast codes were analyzed separately. Set 1: (a) control versus all three actives, (b) values versus both psychological

flexibility and fear reduction together (to test a single intervention component values to the full-package interventions), and (c) psychological flexibility versus fear reduction. Set 2: (a) the control group to all three active groups together (fear reduction, psychological flexibility, and values), (b) fear reduction versus both ACT conditions (psychological flexibility and fear reduction), and (c) values versus psychological flexibility. The final set of contrast codes included Set 3: (a) control versus all three actives, (b) psychological flexibility versus values and fear reduction together (not theoretically relevant but needed for contrast codes to function as a set (Judd, McClelland, & Ryan, 2009); and (c) values versus fear reduction. in efforts to minimize Type I errors only a subset of contrast codes were examined. Those examined include: the control versus all three active intervention groups contrast from Set 1 and the three pairwise active-group comparisons: values versus psychological flexibility, values versus fear reduction, and psychological flexibility versus fear reduction. All corresponding data are reported in the following sections and tables.

Randomization Assurance and Site Differences

Demographics

Participants were randomized to one of four conditions utilizing an online random number generation program. To examine site differences in demographic characteristics between USU and the UCB, independent sample *t* tests and chi-squares tests were conducted. The results are presented in Table 1. As shown in this table, there appeared to be no statistical difference in age, gender, marital status, or education between sites. There was a significant difference in racial/ethnic identity in that USU had a larger

Table 1

Demographic Characteristics: Utah State University (USU) and University of Colorado Boulder (UCB)

	Total (n = 81)				UCB (n = 30)				USU (n = 51)					
Characteristic	*n*	%	*M*	*SD*	*n*	%	*M*	*SD*	*n*	%	*M*	*SD*	*t* or χ^2	*p*
Gender													.03	.86
Male	26	32.1			10	33.3			16	31.4				
Female	55	67.9			20	66.7			35	68.6				
Age (in years)			20.53	4.87			19.90	1.90			20.90	5.96	-.89	.38
Highest education:													13.44**	.02
Some high school	1	1.2			1	3.3			0	0.0				
HS diploma/GED	9	11.1			1	3.3			8	15.7				
Some college	61	75.3			22	75.3			39	76.5				
2 year college	5	16.7			1	3.3			4	7.8				
Bachelor's	2	2.5			2	6.7			0	0.0				
Relationship status													5.45	.25
Single	37	45.7			15	50.0			22	21.6				
Married	5	6.2			1	3.3			4	7.8				
Partnered	22	27.2			11	36.7			11	21.6				
Dating	15	33.5			3	10.0			12	23.5				
Race/ethnicity													12.12*	.02
Caucasian	71	87.7			23	76.7			48	94.1				
Hispanic/Latino	2	3.3			1	3.3			1	2.0				
Asian or Pacific Islander	6	7.4			6	20.0			0	0.0				

(*table continues*)

	Total (n = 81)				UCB (n = 30)				USU (n = 51)					
Characteristic	*n*	%	*M*	*SD*	*n*	%	*M*	*SD*	*n*	%	*M*	*SD*	*t* or χ^2	*p*
Native American	1	1.2			0	0.0			1	2.0				
Biracial	1	1.2			0	0.0			1	2.0				
Religious affiliation													33.87	.002
Christianity	48	59.3			5	16.7			43	84.3				
Other	33	40.7			25	83.3			8	15.7				
Student status													0.76	.69
Full-time	48	59.3			17	56.7			31	60.8				
Part-time	18	35.3			6	20.0			12	23.5				
Other	13	25.5			5	16.7			8	15.7				

Note. The χ^2 value for reported race/ethnicity includes only the comparison between Caucasian and all other racial/ethnic groups due to small *n*'s.
*$p < .05$
**$p < .001$

Caucasian demographic than UCB ($\chi^2 = 12.12$, $p = .02$). Further, there was a significant difference in religious affiliation by site, more participants at USU affiliated with Christianity ($\chi^2 = 33.87$, $p < .001$) than UCB. A final significant site difference was revealed on highest education level attained to date. ($\chi^2 = 13.44$, $p = .01$) with more individuals at UCB reporting higher levels of education to. No adjustments were made to these data because differences on these participant characteristics are not central to the research question. Specifically, to our knowledge, there is no evidence of differential responding to the treatment based on these variables.

Clinical Outcomes

Table 2 summarizes the means, standard deviations, and *p* values for both baseline measures and change scores for the primary outcome variables**.** A series of independent samples *t* tests were conducted to compare site differences on main clinical outcome measures at baseline Session 1. Results showed site differences on select variables. Participants at UCB had higher mean scores at session 1 baseline on the Social Interaction Anxiety Scale ($t = 2.53$, $p = .03$) as well as the Fear of Negative Evaluation Scale ($t = 1.98$, $p = .052$). Additionally, results indicated that individuals at USU had significantly higher mean scores on the Social Anxiety-Acceptance and Action Questionnaire at session 1 baseline ($t = -3.16$, $p = .002$) than individuals at UCB. Finally, independent samples t-tests were conducted to evaluate site differences on change scores (session 1 to session 2) on the main clinical outcomes, results indicated no significant differences between sites. Because an analog population was used for this study, no adjustments to these data were made.

Table 2

Comparison of Preintervention Assessments and Assessment Change Scores from Baseline Session 1 to Baseline Session 2 (Change S1-S2)

	UCB (*n*s = 21-30)		USU (*n*s = 40-51)			
Measure	Mean	*SD*	Mean	*SD*	*t* value	*p*
Liebowitz Social Anxiety Scale						
Baseline S1	87.20	20.36	80.32	18.35	1.57	0.12
Change S1-S2	7.08	16.89	5.82	13.77	0.35	-.73
Social Interaction Anxiety Scale						
Baseline S1	46.86	8.14	42.12	9.53	2.53*	0.03
Change S1-S2	3.80	8.88	3.81	6.73	0.01	1.00
Fear of Negative Evaluation Scale						
Baseline S1	21.96	4.20	20.01	4.28	1.98	.052
Change S1-S2	0.28	4.35	1.18	4.00	0.88	0.38
Personal Report of Communication Apprehension						
Baseline S1	16.47	3.36	17.20	2.44	-1.13	0.26
Change S1-S2	0.46	2.49	0.59	2.32	0.23	0.82
Self-Statements During Public Speaking: Positive Subscale						
Baseline S1	9.17	4.20	9.98	3.38	-0.94	0.35
Change S1-S2	-1.12	3.62	1.05	2.65	-0.09	0.93
Self-Statements During Public Speaking: Negative Subscale						
Baseline S1	9.10	4.08	8.73	2.91	0.48	0.66
Change S1-S2	0.52	2.73	1.44	2.71	-1.37	0.18
Probability and Cost Questionnaire-Probability Subscale						
Baseline S1	88.24	26.77	81.33	21.97	1.24	0.22
Change S1-S2	5.40	19.43	2.43	17.99	0.65	0.52
Bulls Eye Values Questionnaire						
Baseline S1	14.12	3.62	14.96	3.71	-0.91	0.37
Change S1-S2	0.24	3.08	0.76	3.33	-1.14	0.26
Social Anxiety Acceptance and Action Questionnaire						
Baseline S1	69.78	16.80	82.05	16.64	-3.16**	.002
Change S1-S2	-4.99	13.13	0.88	10.00	-1.49	0.14

*$p<.05$
**$p<.01$

Primary Outcome Variables

Research Question 1a asked "What is the efficacy of three brief skills interventions: (a) fear reduction, (b) psychological flexibility, and (c) values rationale, compared to (d) an exposure only control for reducing public speaking anxiety from first to second exposure session?"

Linear regression analyses were conducted in SPSS to examine group differences on the main social anxiety measures including: the significant difference between all three active conditions compared to the control at session 2. Each outcome measure was analyzed separately including; Leibowitz Social Anxiety Scale (LSAS-SR), Social Interaction Anxiety Scale (SIAS), Personal Report of Communication Apprehension (PRCA-24), and Self-Statements during Public Speaking (SPSS). To complete the analyses the outcome measure of focus at session 2 was entered as the dependent variable. Next, to control for baseline social anxiety ratings, session 1 of the same measure was placed in the first block. Finally, a set of three contrast coded group comparisons was placed in the second block. This step was repeated independently for each set of contrast codes. As mentioned in the statistical approach section, only contrast codes of interest were reported, that is, all three active interventions vs. control and group-wise comparisons. Included in Table 3 are group means and standard deviations of the primary outcome measures, as well as coding for group differences.

Consistent with our prediction, results showed that individuals receiving the psychological flexibility rationale, fear rationale and values rationale demonstrated similar reductions in self-reported social anxiety scores. There was, however, a

Table 3

Group Differences in Clinical Outcome Variables (UCB and USU Combined)

	Control (*n*s = 19-21)		Fear reduction (*n*s = 17-21)		Psych flex (*n*s = 19-21)		Values (*n*s = 13-18)	
Measure	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Social Anxiety Symptoms								
Liebowitz Social Anxiety Scale								
Session 1	84.67	20.06	85.48	22.34	81.52	18.27	79.28	16.37
Session 2	84.05	20.05[a]	79.44	24.67[b]	71.53	16.31[b]	66.56	18.39[b]
Social Interaction Anxiety Scale								
Session 1	44.71	8.07	44.86	10.54	44.50	8.46	40.89	10.06
Session 2	43.19	10.04	41.17	11.86	37.64	9.55	38.06	10.33
Fear of Negative Evaluation Scale								
Session 1	21.27	3.95	20.38	4.66	20.57	4.47	20.84	3.97
Session 2	22.82	4.52	19.74	5.62	20.66	5.29	23.32	2.61
Personal Report of Communication Apprehension								
Session 1	17.10	1.41	17.00	3.30	16.57	2.68	17.20	3.30
Session 2	17.38	1.60[a]	15.92	3.35[b]	16.21	5.05[b]	16.38	3.50[b]
Self-Statements During Public Speaking: Positive Subscale								
Session 1	9.05	3.53	9.40	3.88	9.52	3.82	10.94	3.52
Session 2	9.24	3.86[a]	10.42	5.05[b]	11.79	2.92[b]	11.38	2.55
Self-Statements During Public Speaking: Negative Subscale								
Session 1	9.43	2.84	8.80	3.12	8.62	3.80	8.56	3.81
Session 2	8.52	3.71	7.61	4.23	7.37	3.08	7.19	3.78

(*table continues*)

	Control (*n*s = 19-21)		Fear reduction (*n*s = 17-21)		Psych flex (*n*s = 19-21)		Values (*n*s = 13-18)	
Measure	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Intervention-Specific Outcome Measures								
Probability and Cost Questionnaire- Probability Subscale								
Session 1	88.33	21.90	85.00	24.88	82.35	26.80	79.07	22.62
Session 2	91.43	22.48[a]	74.22	24.00[b]	76.12	28.88[b]	73.94	24.42[b]
Bulls Eye Values Questionnaire								
Session 1	14.42	3.10	14.61	3.96	14.16	4.16	14.47	3.72
Session 2	13.61	4.15	13.82	4.80	16.44	4.77	16.23	4.57
Social Anxiety-Acceptance and Action Questionnaire								
Session 1	79.95	17.56	77.31	17.26	76.48	20.30	76.43	16.07
Session 2	81.62	19.25	80.29	18.61	78.47	18.07	77.63	15.96

Note. ab, cd = groups that differ significantly from one another at the level of $p < .05$.

significant difference between all three active conditions together compared to the control. For the Leibowitz Social Anxiety Scale results showed a significant improvement at session 2 for those in one of the active conditions b = -2.23, $t(73)$ = -2.50, p = .015. For the Social Interaction Anxiety Scale results showed a trending but non-significant difference at session 2 in all three active conditions compared to control b = .833, $t(73)$ = -1.78, p = .080. On the Personal Report of Communication Apprehension all three active conditions together improved significantly more at session 2 than the control group b = -.30, $t(73)$ = -2.12, p = .037. Finally, results at session 2 on the Self-Statements During Public Speaking-Positive Subscale indicated more positive self-statements in the three active conditions together compared to the control b = .36, $t(73)$ = 2.02, p = .047. However, there were no significant differences in negative self-statements during public speaking.

Research Question 1b asked, **"**Do the groups differ in Intervention Specific Outcome Measures?**"**

Linear regressions analyses were conducted in SPSS to examine group differences on the intervention specific outcome measures including the Probability Cost Questionnaire-Probability Subscale, Bulls Eye Values Questionnaire, and the Social Anxiety Acceptance and Action Questionnaire. Table 3 displays means and standard deviations. As predicted, the active interventions showed significantly greater improvements than the control group on the Probability Cost-Questionnaire-Probability Subscale b = -2.75, $t(71)$ = -2.46, p = .02. However, active group pairwise comparisons did not differ among themselves ps > .53. The active interventions groups trended toward significant improvement on the BEVS compared to the control condition b = .430, $t(61)$ =

1.92, p = .06. Finally, contrary to predictions there was no significant difference on the SA-AAQ between the active conditions and the control or group-wise comparisons ps > .59.

Process of Change Outcomes

In order to examine the pattern of fear reduction versus fear toleration, several analyses were conducted using baseline, preexposure, and post exposure subjective units of distress (SUDs). Baseline, preexposure, and postexposure SUDs were collected at the time of session 1 and one week later at session 2. Table 4 summarizes the SUDS means and standard deviations by rationale group. We were specifically interested in how these brief interventions differed on a process level. The following analysis examined whether fear reduction (as measure by SUDs change scores) differed by group and time.

Research Question 2a asked: Are there group differences by time for preexposure SUDs? Are there group differences by time in postexposure SUDs?

Using a Repeated Measures ANOVA, 2 (time: pre-SUDs session 1, pre-SUDs session 2) x 4 (group), we examined group differences on preexposure fear at session 1 and session 2. Results showed that preexposure SUDs session 1 to session 2 was not significantly different by group $F(3, 70) = 1.031$, $p = .384$, partial $\eta^2 = .042$. Another repeated measure ANOVA was conducted in order to detect group differences by session on postexposure SUDs. Results showed that postexposure SUDs was significantly different by group, $F(3,70) = 3.60$ $p = .018$, $\eta^2 = .134$. Specifically, there was a significant difference between the control group and fear reduction, Mean difference = 1.89 $SE = .604$, $p = .013$, $CI(.301, 3.48)$.

Table 4

SUDs Means and Standard Deviations from Session 1 to Session 2

	Fear reduction		Psychological flexibility		Values		Control	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Session 1	*N* = 21		*N* = 21		*N* = 17		*N* = 21	
SUDs baseline	4.71	2.26	5.76	2.04	5.11	1.96	4.90	1.79
SUDs pre	7.09	1.70	7.42	2.29	7.94	1.47	7.76	1.44
SUDs post	4.61	2.87	6.11	2.38	6.00	1.83	6.80	2.35
Session 2	*N* = 18		*N* = 19		*N* = 16		*N* = 21	
SUDs baseline	3.61	2.17	4.21	1.84	3.56	.83	4.28	1.67
SUDs pre	5.83	2.14	5.26	1.85	5.68	1.35	6.43	1.53
SUDs post	3.50	2.47	3.52	1.22	4.62	1.54	5.14	1.90

Research Question 2b asked: Are there group differences in fear reduction (SUDs change scores) at session 1? Are there group differences in fear reduction (SUDs change scores) at session 2?

Table 5 includes SUDs mean change scores at session 1 and session 2. A change score was calculated at session 1 (SUDs preexposure – SUDs postexposure) and session 2 (SUDs pre- exposure - SUDs postexposure). Next, using the calculated change scores we examined group differences on pre- to postexposure fear reduction at session 1 and pre- to postexposure fear reduction at session 2. The overall mean change score in SUDs ratings from session 1 to session 2 when controlling for baseline SUDs was $M = 1.66$ $SD = .214$, CI (1.232, 2.087).

Using a one-way ANOVA, we examined group differences on self-reported fear reduction at session 1. Means and Standard deviations are presented in Table 5. Overall,

Table 5

SUDs Change Scores Mean and Standard Deviations from Pre- to Postexposure at Session 1 and 2

	Fear reduction		Psychological flexibility		Values		Control	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Session 1	*N* = 21		*N* = 21		*N* = 17		*N* = 21	
SUDs change score	2.47	2.84	1.31	2.12	1.94	2.16	0.95	2.03
Session 2	*N* = 18		*N* = 19		*N* = 16		*N* = 21	
SUDs change score	2.33	2.16	1.74	1.72	1.06	2.41	1.28	1.58

no significant group difference existed in SUDs change at session 1. Results showed a non-significant main effect for group $F(3, 76) = 1.76$, $p = .62$, partial $\eta^2 = .065$; Cohen's $d = .59$. When examining post-hoc pairwise comparisons results showed a significant difference in SUDs change scores at session 1 between the fear reduction and control group Mean difference = -1.52, $SE = .716$, $p = .037$, CI (-2.950, -.097). Furthermore the fear reduction and psychological flexibility group conditions appeared to have trending significant differences (see Table 5).

Next, a one-way ANOVA was conducted to examine group differences on self-reported fear reduction at session 2. Means and Standard deviations are presented in Table 5. Overall, there was no significant group difference in SUDs change at session 2. Results showed a non-significant main effect for group $F(3, 70) = 1.44$, $p = .238$, partial $\eta^2 = .058$. Cohen's $d = .48$; The difference between control group and fear reduction was no longer significant, but was approaching significance at session 2, Mean difference = -1.05, $SE = .632$, p = .102, CI(-2.31, .213). Furthermore, the fear reduction and values

conditions appeared to have trending significant differences see Table 5.

Secondary Outcomes

Research Question 3 asks: "Do groups differ on degree of exposure engagement?"

Table 6 includes means and standard deviations for time during in-session exposure at session 1 and session 2. Linear regression analyses were conducted to compare group differences on in-session exposure engagement as measured by minutes. For the analyses a full set of 3 contrast coded group comparisons was entered as the independent variable. As before, each analysis was repeated for each of the 3 groups of contrast codes.

Research Question 3a asks: **"**Do groups differ on the time of engagement during the in-session exposure task?"

As predicted, individuals who received the active intervention gave significantly longer speeches at session 1 than individuals in the control condition $b = .37$, $t(75) = 2.12$, $p = .038$. However, at session 2 speech time did not significantly differ between active conditions, ps $< .12$. In addition, in-session speech length was recoded into a dichotomous variable such that 0 = individuals who terminated their speech before 10 minutes and 1 = individuals whose speech went for the full 10 minutes (before stopped by the experimenter). Regression analyses were utilized to compare group differences in speech time at session 1 and session 2, using the dichotomous variable. At session 2, more individuals in the values condition spoke for the entire 10 minutes compared to those in the fear reduction condition $b = -0.91$, S.E. = 0.45, odds ratio = 0.40, CI: 0.17

Table 6

Group Differences in Speeches and Homework (UCB and USU Combined)

	Control (*n*s = 17-21)		Fear reduction (*n*s = 16-20)		Psych flex (*n*s = 17-20)		Values (*n*s = 15-17)	
Measure	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
In-session speech length								
Session 1	5.44	2.84[a]	6.24	2.64[b]	6.87	2.80[b]	7.65	2.40[b]
Session 2	6.03	2.75	6.18	2.62	6.74	2.72	7.73	2.64
Completed 10-minute speech (# of participants)								
Session 1	3/20		3/20		6/19		7/17	
Session 2	5/20		2/18		5/19		7/16	
Homework variables								
Number of exposures	5.33	2.52	6.13	3.48	5.89	2.70	4.93	3.10
Mean preexposure SUDS (0 to 100)	57.93	5.85	67.98	13.07[c]	55.02	19.11[d]	60.31	22.04
Mean postexposure SUDS (0 to 100)	38.95	20.29	41.83	36.31[c]	20.71	12.10[d]	37.26	24.82
Mean exposure willingness (0 to 10)	5.69	1.27	5.95	1.75	5.22	1.60	5.30	2.35

Note. ab, cd = groups that differ significantly from one another at the level of $p < .05$.

-0.98, $p = .04$. However, when the analysis controlled for session 1 speech time this result was non-significant. The remaining group-wise comparisons including the control were nonsignificant, $ps > .25$

Research Question 3b asked: "Are there group differences on homework compliance as measured by the amount of between session exposures (homework) completed?"

Table 6 summarizes all between-session homework variables including: number of exposures completed, mean scores of self-reported willingness to engage in exposures, and mean SUDs pre-, peak, and postexposure exercise. Of those who completed homework ($N = 67$), the sample as a whole was fairly engaged in between-session exposures ($M = 5.58$, $SD = 2.92$). Interestingly there was no significant group difference in homework compliance (as measured by number of exposures completed). To compare group differences on level of self-reported fear (SUDs) during between-session exposures, linear regressions, as described previously, were utilized. Of note, only individuals who completed at least 1 between-session exposure were included in the analyses. Results showed that individuals in the fear reduction group reported significantly higher mean pre-SUDs during between-session exposures than individuals in the psychological flexibility group; $b = 6.48$, $t(65) = 2.14$, $p = .04$; as well as mean postexposure SUDs, when controlling for preexposure SUDs ; $b = 9.09$, $t(65) = 2.06$, $p = .04$. Self-reported fear during homework did not significantly differ between the other active interventions or control group, $ps < .09$.

CHAPTER V

DISCUSSION

The present study examined how framing exposure exercises impacted outcomes in socially anxious individuals. We conducted a brief two-session exposure-based intervention, including experiential exercises from each therapeutic rationale, with homework assigned between sessions. We were specifically interested in the efficacy of three brief skills interventions: (a) fear reduction, (b) psychological flexibility, (c) values rationale, and (d) exposure only control for reducing public speaking anxiety from first to second exposure session. Additionally, we were interested in examining the purported processes of change in exposure, and how framing exposure therapy might differentially affect this process. Finally, we were interested in examining exposure engagement, both within and between sessions.

Summary of Primary Outcomes

Our primary prediction was that individuals receiving an active intervention would display similar improvements on clinical outcome measures and to a greater extent than individuals in the control condition. The primary outcome variables were measures of social anxiety including the Leibowitz Social Anxiety Scale, Social Interaction Anxiety Scale, Personal Report of Communication Apprehension and Self-Statements During Public Speaking. Consistent with our prediction, individuals receiving an active intervention improved to a greater extent on major outcome measures compared to the control group. Specifically, there were significant reductions on our main social anxiety

measure (LSAS-SR) and public speaking specific outcomes (PRCA-24). Additionally, those who received an active intervention increased positive self-talk during the public speaking (SPSS) challenge more than individuals in the control group. However, there were no-significant differences on negative self-talk on the same measure. This result is inconsistent with a previous study in which a full-length exposure based treatment was implemented to treat a clinical SAD population (Hoffman & DiBartolo, 2000). In this study the SPSS changed on the negative self-statements subscale during public speaking but not on the positive self-statement subscale. One possible explanation is that all three conditions emphasized approaching public speaking in a more adaptive way, leading to more positive thoughts.

Intervention specific outcome measures were examined between the active conditions and the control group. Consistent with our prediction, those in an active intervention condition showed greater improvements on the Probability and Cost Questionnaire compared to the control group. However, there was no difference between active conditions on this measure. The PCQ is a measure that is theoretically consistent with a cognitive model for exposure, such that exposure serves to challenge maladaptive cognitions, by negating thoughts on both harm and valence about the feared stimuli (Abramowitz et al., 2011). Results showed no significant differences between the active intervention groups and the control on ACT-theorized outcomes. Notably, there was no difference on the SA-AAQ between the active interventions and the control. These findings are surprising, given that the SA-AAQ is a measure of psychological flexibility, the primary process by which change occurs in ACT. Perhaps a brief 45- to 50-minute intervention was an insufficient amount of time to change the complex process of

psychological inflexibility (Forman et al., 2012). Another possible explanation is that the SA-AAQ was an inadequate measure of psychological flexibility, however this is unlikely, in view of studies that demonstrate good internal consistency and divergent and convergent validity (MacKenzie & Kocovski, 2010). In addition, results showed trending but non-significant differences between the active interventions and the control group on a measure of personal values, the BEVs. In contrast to our expectations, the values condition did not increase significantly more on this measure than the other conditions. It is possible that engaging in a difficult task might have been equally effective in increasing ones' behaviors that are in line with personal values.

Summary of Process of Change Outcomes

Given the current debate in the literature, we were interested in examining whether theoretically distinct approaches to exposure therapy would result in distinguishable patterns of fear reduction. SUDS were collected before the speech exposure challenge and directly after in order to detect change in fear. Results showed no significant group differences in SUDs change at session 1. However, post-hoc comparisons showed a significant difference in SUDs change scores between the fear reduction and control group. These findings were nonsignificant at session 2. Results showed trending but non-significant differences between the fear reduction group and psychological flexibility at session 1. Finally there were trending but non-significant differences between the fear reduction and values conditions at session 2.

Summary of Secondary Outcomes

In addition to our primary outcomes, we were interested in whether those in the active intervention groups would be more engaged in exposure both within and between-sessions compared to the control group. To measure in-session engagement, individuals were timed during their in-session exposure challenges. Results showed that at session 1 those who received an active intervention delivered significantly longer speeches than individuals in the control condition. However, there was no significant difference in speech length at session 2. Between-session exposure engagement was measured through a homework assessment tracking form. Importantly, there was no difference in homework engagement (number of exposures attempted) between groups.

Empirical Implications

Consistent with the literature, results from the present study suggest that a brief exposure intervention is efficacious in treating a socially anxious population. As several review studies have shown, exposure is a first line treatment for anxiety (e.g., Norton & Price, 2007; Olatunji et al., 2010). The lack of between-group differences on social anxiety measures suggests that approaching the feared stimulus may be the common denominator necessary for successful treatment outcomes. As basic science suggests, pairing the CS with no US facilitates new learning (e.g., Bouton, 1993). This new learning may generalize to other feared stimuli resulting in a reduction of anxiety and an increased quality of life. As suggested by England and colleagues (2012) exposure-based interventions are in and of themselves powerful interventions, regardless of the context in

which they are delivered.

Results from this study are consistent with a study similar in design and population. England and colleagues (2012) conducted a study in which socially anxious individuals were randomized to receive an acceptance-based rationale or a habituation-based rationale for exposure. Participants received 6 weekly, 2-hour sessions. Participants in both conditions showed similar improvements on self-reported public speaking anxiety, concluding that framing of exposure may not be the only determining factor in treatment outcome (England et al., 2012). These findings are consistent with a study treating 19 individuals with SAD with 12, 1-hour weekly sessions of ACT plus exposure and *in vivo* homework. While the goal of ACT is not anxiety reduction *per se*, results showed significant improvements from pre- to follow-up on social anxiety measures (e.g., LSAS) with average effects sizes of 1.29 (Dalrymple & Herbert, 2007). These results are comparable to studies implementing CBT for SAD. Results from these studies argue that framing of exposure from an acceptance-based approach is effective and comparable, but not superior to a fear reduction model.

Yet another explanation for a lack of between-group differences on clinical outcome measures was the similarity in components of each rationale delivered. After all, rationales were matched in time, content, and experiential exercises. Perhaps, psycho-education on social anxiety was enough to raise awareness of avoidant behaviors and the utility in confronting feared situations. An alternative explanation is that the values and psychological flexibility rationales are not theoretically distinct. The values only rationale appeared sufficient in motivating participants to engage in exposure. A viable explanation is that orienting an individual to meaningful areas of his or her life may promote

engagement in difficult activities despite experiencing discomfort. For example, studies have shown that ranking ones' personal values has been successful in changing behavior and increasing receptivity to health promoting information (Sherman, Nelson, & Steele, 2000). Furthermore, the psychological flexibility rationale targeted acceptance of unwanted experiences while simultaneously inquiring about what is meaningful in ones' life. Psychological flexibility might be such a broad construct that it included values and behavior change techniques, thus making it too similar to the other conditions in this study.

Processes of Change

Findings from this study add to the growing debate over the necessary processes of change in exposure therapy. Results indicate that fear reduction was present in all conditions. We may only speculate that different patterns of fear reduction are occurring between groups. Historically, the literature has supported fear reduction as the purported mechanism of change in exposure therapy. Recently, studies have shown that fear reduction does not result in better treatment outcomes (e.g., Baker et al., 2010) which is consistent with a model of fear toleration (Craske et al., 2008). In the present study, fear patterns appeared to reduce across all conditions suggesting that an overarching mechanism may exist in exposure therapy. An overarching mechanism may be explained by the concept of "mismatch expectancies" that is, the absence of the US in the presence of the CS negates ones' assumption that the CS predicts the US (Craske et al., 2008). As previously discussed, a study comparing an acceptance based approach versus a habituation approach to exposure showed that self-reported anxiety (SUDs) reduced in

both conditions from pre- to posttreatment $F(1, 43) = 6.28$, $p < .001$), concluding the mechanisms of change might be more alike than different across conditions (England et al., 2012). Overall, the results from this study suggest that an acceptance-based approach, values approach, and a fear reduction approach result in similar patterns of fear reduction. The lack of significant between-group differences may be a result of a small sample size. Alternatively, an overarching mechanism by which exposure works may exist despite the specific rationale for exposure.

Homework Engagement

Overall, our sample appeared to be compliant with assigned homework assignment, each group reported engaging in in nearly 6 exposures between session 1 and session 2. These results are similar to homework compliance ratings in a brief exposure intervention for SAD, such that 22 of 23 individuals were rated as compliant with homework tasks at follow-up (Hindo & González-Prendes, 2011). Similar to findings in this study, there were no significant differences in homework engagement between individuals who received an acceptance-based approach to exposure compared to a habituation approach (England et al., 2012). One feasible explanation is that the majority of the sample received course credit for their participation. Therefore, participants may have been motivated to engage in the homework assignment, despite treatment condition, in order to assure full credit for participation.

Interestingly, individuals in the fear reduction condition reported higher anxiety (SUDs) before and after engaging in between-session exposures. One implication for this finding is that individuals in the fear reduction condition were paying attention to their

anxiety while engaging in exposure exercises, which is consistent with the rationale received. Those in the psychological flexibility or values conditions may have been less focused on their level of fear and instead focused on approaching things they previously avoided in the service of ones' values. One caveat to consider is variation in exposures attempted *in vivo*. While the homework assessment sheet attempted to verify participants' experience, there was no standardized way of assessing exposure difficulty. It is possible that individuals in the fear reduction group engaged in more difficult exposures, in effort to achieve symptom reduction, which might explain the differences in SUDs.

Clinical Implications

Results from this study have several encouraging clinical implications. First and foremost, the relative success of all three active conditions compared to the exposure only control, suggest that the therapeutic approach, or framing to exposure can differ, while resulting in similar outcomes. These findings contribute to the open-ended debate on whether or not ACT is a sufficient treatment for anxiety disorders in comparison to CBT. Results from this study corroborate with recent findings on the efficacy of ACT versus CBT for the treatment of anxiety (e.g., Arch et al., 2012). The overall success of the active interventions suggests that both psychological flexibility and values are reasonable and effective approaches to exposure-based interventions. In conclusion, there might not be *one* right way to provide exposure therapy, as long as the foundational principles of CS-no US are present. These findings are encouraging to practitioners working from an Evidenced Based Practice model, such that clinicians would be sound in using an exposure technique (evidenced-based), their clinical expertise (world-view in

approaching exposure), and the clients' preference, with regards to treating SAD.

SUDs have traditionally been used as an indicator of when to start and stop exposure. Furthermore, clinicians often use SUDs ratings to determine whether the client is appropriately engaged in the exposure exercise, as well as a directive for how to proceed with an exposure. Interestingly, results from this study suggest that the level of fear present during the exposure may not be the best indicator of client engagement, presence of learning, or treatment gains. An alternative approach would be to use the clients "willingness" to experience unwanted internal experiences in the process of exposure to a feared stimulus. Additionally, during exposure, a therapist may use values as a directive for approaching feared stimulus. Regardless of the approach to exposure, this study suggests that SUDs as an anchor for the implementation of exposure might not be related the clients learning experience or outcomes.

Limitations and Future Directions

There are several limitations to this study to consider. First, the study had a small sample size, thus underpowered to detect significant between group differences. Second, we did not implement a semi-structured clinical interview. Therefore results from this study cannot directly generalize to a clinical SAD population. However, mean scores on the main outcome measure of social anxiety (LSAS-SR) suggest that our population was within the range of those in a clinical SAD population. It is hard to differentiate between treatment seekers and non-treatment seekers, given that participants were receiving course credit. Additionally, the sample was very homogenous, adding to the complications of this study for generalization. It is likely that participation rates and

engagement would vary if a non-student population was utilized in this study.

Several intervention specific limitations are of consideration. Follow-up data was not consistently collected following session 2. Many individuals did not respond to the follow-up questionnaire email, while others were selective with the measures they filled out. Given the inconsistency in data collection we were unable to analyze this data. Therefore, we are unclear on the duration of positive intervention effects, or if group differences arose at follow-up. Another limitation to consider is the brevity of the intervention. This short intervention is well below what is considered the norm for treating social anxiety with exposure (e.g., Heimberg, 2002). However, despite the brevity of the intervention, the statistically significant differences between the active conditions and the control condition suggest that the intervention was an effective intervention. Finally, the topics chosen for the speech task were not empirically supported as controversial or anxiety provoking.

After examining the results of this study several recommendations are suggested. First, the sample was homogenous (primarily Caucasian, educated individuals). To generalize these findings future research should strive to incorporate a more diverse sample. Second, the sample size was small for a four-group design, making it difficult to detect group differences in the active conditions; therefore, a larger sample is suggested. Because the intervention was brief in nature, it is important to assess the success of the intervention at follow-up, thus future studies should be certain to complete a follow-up assessment. Additionally, SUDs ratings were the primary variable used to measure fear reduction or fear toleration, additional measures should be employed to further investigate the process of change in exposure therapy.

REFERENCES

Abramowitz, J. S., Deacon, B. J., & Whiteside, S. P. H. (2011). *Exposure therapy for anxiety: Principles and practice*. New York, NY: Guilford.

Addis, M. E., & Carpenter, K. M. (1999). Why, why, why?: Reason-giving and rumination as predictors of response activation- and insight-oriented treatment rationales. *Journal of Clinical Psychology, 55,* 881-894.

Arch, J. J., & Craske, M. G. (2011). Addressing relapse in cognitive behavioral therapy for panic disorder: Methods for optimizing long-term treatment outcomes. *Cognitive and Behavioral Practice*, *18*, 306-315. doi:10.1016/j.cbpra.2010.05.006

Arch, J. J., Eifert, G. H., Davies, C., Vilardaga, J. C. P., Rose, R. D., & Craske, M. G. (2012). Randomized clinical trial of cognitive behavioral therapy (CBT) versus acceptance and commitment therapy (ACT) for mixed anxiety disorders. *Journal of Consulting and Clinical Psychology*, *80*, 750-765.

Baker, A., Mystkowski, J., Culver, N., Yi, R., & Craske, M. G. (2010). Does habituation matter? Emotional processing theory and exposure therapy for acrophobia. *Behaviour Research & Therapy*, *48*, 1139-1143.

Baker, S. L., Heinrichs, N., Kim, H.-J., & Hofmann, S. G. (2002). The Liebowitz social anxiety scale as a self-report instrument: A preliminary psychometric analysis. *Behaviour Research & Therapy*, *40*, 701-715. doi:10.1016/S0005-7967(01)00060-2

Barlow, D. H., Raffa, S. D., & Cohen, E. M. (2002). Psychosocial treatments for panic disorders, phobias, and generalized anxiety disorder. In P. E. Nathan & J. M. Gorman (Eds.), *A guide to treatments that work* (2nd ed., pp. 301-335). New York, NY: Oxford University Press.

Beck, A. T. (1967). *Depression*. New York, NY: Hoeber-Harper.

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. Oxford, England: International Universities Press.

Bouton, M. E. (1988). Context and ambiguity in the extinction of emotional learning: Implications for exposure therapy. *Behaviour Research & Therapy, 26,* 137-149.

Bouton, M. E. (1993). Context, time, and memory retrieval in the interference paradigms of Pavlovian learning. *Psychological Bulletin*, *114*(1), 80-99. doi:10.1037/0033-2909.114.1.80

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire–II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy*, *42*, 676-688.

Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review, 26*(1), 17-31.

Craske, M. G., Kircanski, K., Zelikowsky, M., Mystkowski, J., Chowdhury, N., & Baker, A. (2008). Optimizing inhibitory learning during exposure therapy. *Behaviour Research & Therapy, 46*(1), 5-27.

Creswell, J. D., Welch, W. T., Taylor, S. E., Sherman, D. K., Gruenewald, T. L., & Mann, T. (2005). Affirmation of personal values buffers neuroendocrine and psychological stress responses. *Psychological Science, 16*, 846-851.

Dalrymple, K. L., & Herbert, J. D. (2007). Acceptance and commitment therapy for generalized social anxiety disorder. *Behavior Modification*, *31*, 543-568. doi:10.1177/0145445507302037

Devilly, G. J., & Borkovec, T. D. (2000). Psychometric properties of the credibility/ expectancy questionnaire. *Journal of Behavior Therapy & Experimental Psychiatry*, *31*(2), 73-86.

Dibbets, P., Havermans, R., & Arntz, A. (2008). All we need is a cue to remember: The effect of an extinction cue on renewal. *Behaviour Research & Therapy, 46*, 1070-1077. ISSN 0005-7967, 10.1016/j.brat.2008.05.007.

Dixon, W. J., & Tukey, J. W. (1968). Approximate behavior of the distribution of Winsorized t (Trimming/Winsorization 2). *Technometrics*, *10*(1), 83-98.

Eifert, G. H., & Heffner, M. (2003). The effects of acceptance versus control contexts on avoidance of panic-related symptoms. *Journal of Behavior Therapy & Experimental Psychiatry*, *34*, 293-312. doi:10.1016/j.jbtep.2003.11.001

England, E. L., Herbert, J. D., Forman, E. M., Rabin, S. J., Juarascio, A., & Goldstein, S. P. (2012). Acceptance-based exposure therapy for public speaking anxiety. *Journal of Contextual Behavioral Science, 1*(1-2)*,* 66-72.

Foa, E. B., Franklin, M. E., Perry, K. J., & Herbert, J. D. (1996). Cognitive biases in generalized social phobia. *Journal of Abnormal Psychology*, *105*, 433-439. doi:10.1037/0021-843X.105.3.433

Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin, 99*(1), 20-35.

Forman, E. M., Shaw, J. A., Goetter, E. M., Herbert, J. D., Park, J. A., & Yuen, E. K. (2012). Long-term follow-up of a randomized controlled trial comparing acceptance and commitment therapy and standard cognitive behavior therapy for anxiety and depression. *Behavior Therapy*, *43*, 801-811.

Forsyth, J. P., Eifert, G. H., & Barrios, V. (2006). Fear conditioning in an emotion regulation context: A fresh perspective on the origins of anxiety disorders. In M. G. Craske, D. Hermans, & D. Vansteenwegen (Eds.), *Fear and learning: From basic processes to clinical implications* (pp. 133-153). Washington, DC: American Psychological Association.

Goisman, R. M., Warshaw, M. G., & Keller, M. B. (1999). Psychosocial treatment prescriptions for generalized anxiety disorder, panic disorder, and social phobia, 1991-1996. *American Journal of Psychiatry, 156,* 1819-1821.

Harris, P. R., & Napper, L. (2005). Self-affirmation and the biased processing of threatening health-risk information. *Personality & Social Psychology Bulletin*, *31*, 1250-1263. doi:10.1177/0146167205274694

Harned, M. S., Dimeff, L. A., Woodcock, E. A., & Skutch, J. M. (2011). Overcoming barriers to disseminating exposure therapies for anxiety disorders: A pilot randomized controlled trial of training methods. *Journal of Anxiety Disorders*, *25*, 155-163. doi:10.1016/j.janxdis.2010.08.015

Hayes, S. C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy, 35*, 639-665.

Hayes, S. C. (2007). Hello darkness: Discovering our values by confronting our fears. *Psychotherapy Networker, 31*(5), 46-52.

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour Research & Therapy, 44*(1), 1-25.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York, NY: Guilford.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy: The process and practice of mindful change* (2nd ed.). New York, NY: Guilford.

Heimberg, R. G. (2002). Cognitive-behavioral therapy for social anxiety disorder: current status and future directions. *Biological Psychiatry, 51*(1), 101-108.

Herbert, J. D., Rheingold, A. A., & Goldstein, S. G. (2002). Brief cognitive behavioral group therapy for social anxiety disorder. *Cognitive & Behavioral Practice, 9,* 1-8.

Hermans, D., Craske, M. G., Mineka, S., & Lovibond, P. F. (2006). Extinction in human fear conditioning. *Biological Psychiatry*, *60*, 361-368.

Hindo, C. S., & González-Prendes, A. (2011). One-session exposure treatment for social anxiety with specific fear of public speaking. *Research on Social Work Practice, 21*, 528-538. doi:10.1177/1049731510393984

Hofmann, S. G., & DiBartolo, P. M. (2000). An instrument to assess self-statements during public speaking: Scale development and preliminary psychometric properties. *Behavior Therapy, 31,* 499-515.

Hofmann, S. G., Heering, S., Sawyer, A. T., & Asnaani, A. (2009). How to handle anxiety: The effects of reappraisal, acceptance, and suppression strategies on anxious arousal. *Behaviour Research & Therapy*, *47*, 389-394.

Hofmann, S. G., Moscovitch, D. A., Kim, H. J., & Taylor, A. N. (2004). Changes in self-perception during treatment of social phobia. *Journal of Consulting & Clinical Psychology, 72,* 588-596.

Hofmann, S. G., Schulz, S. M., Meuret, A. E., Moscovitch, D. A., & Suvak, M. (2006). Sudden gains during therapy of social phobia. *Journal of Consulting & Clinical Psychology*, *74*, 687-697. doi:10.1037/0022-006X.74.4.687

Hofmann, S. G., & Smits, J. A. J. (2008). Cognitive-behavioral therapy for adult anxiety disorders: A meta-analysis of randomized placebo-controlled trials. *Journal of Clinical Psychiatry*, *69*, 621-632. doi:10.4088/JCP.v69n0415

Jones, M. C. (1924). Elimination of children's fears. *Journal of Experimental Psychology, 7,* 382-397.

Judd, C., McClelland, G., & Ryan, C. S. (2009). *Data analysis: A model comparison approach* (2nd ed.). New York, NY: Routledge.

Kelley, M. L., Heffer, R. W., Gresham, F. M., & Elliott, S. N. (1989). Development of a modified Treatment Evaluation Inventory. *Journal of Psychopathology & Behavioral Assessment, 11,* 235-247.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry*, *62*, 593-602. doi:10.1001/archpsyc.62.6.593

Lang, P. J. (1977). Imagery in therapy: An information processing analysis of fear. *Behavior Therapy*, *8*, 862-886. doi:10.1016/S0005-7894(77)80157-3

Lang, P. J. (1979). A bio-informational theory of emotional imagery. *Psychophysiology*, *16*, 495-512. doi:10.1111/j.1469-8986.1979.tb01511.x

Lang, A. J., & Craske, M. G. (2000). Manipulations of exposure-based therapy to reduce return of fear: A replication. *Behaviour Research & Therapy*, 38(1), 1-12.

Levine, T. R., & McCroskey, J. C. (1990). Measuring trait communication apprehension: A test of rival measurement models of the PRCA-24. *Communication Monographs, 57,* 62-72.

Levitt, J. T., Brown, T. A., Orsillo, S. M., & Barlow, D. H. (2004). The effects of acceptance versus suppression of emotion on subjective and psychophysiological response to carbon dioxide challenge in patients with panic disorder. *Behavior Therapy*, *35*, 747-766. doi:10.1016/S0005-7894(04)80018-2

Liebowitz, M. R. (1987). Social phobia. *Modern Problems in Pharmacopsychiatry, 22,* 141-173.

Linehan, M. M. (1993). *Cognitive behavioral treatment for borderline personality disorder.* New York, NY: Guilford.

Lundgren, T., Luoma, J. B., Dahl, J., Strosahl, K., & Melin, L. (2012). The Bull's-Eye values survey: A psychometric evaluation. *Cognitive & Behavioral Practice*, *19*, 518-526.

MacKenzie, M. B., & Kocovski, N. L. (2010). Self-reported acceptance of social anxiety symptoms: Development and validation of the Social Anxiety Acceptance and Action Questionnaire. *International Journal of Behavioral Consultation & Therapy, 6*, 214-232.

Marcks, B. A., Weisberg, R. B., & Keller, M. B. (2009). Psychiatric treatment received by primary care patients with panic disorder with and without agoraphobia. *Psychiatric Services*, *60*, 823-830. doi:10.1176/appi.ps.60.6.823

Masuda, A., Hayes, S. C., Sackett, C. F., & Twohig, M. P. (2004). Cognitive defusion and self-relevant negative thoughts: Examining the impact of a ninety-year-old technique. *Behaviour Research & Therapy*, *42*, 477-485.

Mattick, R. P., & Clarke, J. C. (1998). Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. *Behaviour Research & Therapy*, *36*, 455-470. doi:10.1016/S0005-7967(97)10031-6

McCroskey, J. C. (1982). *An introduction to rhetorical communication* (4th ed.). Englewood Cliffs, NJ: Prentice Hall.

McCroskey, J. C, Beatty, M. J., Kearney, P., & Plax, T. G. (1985). The content validity of the PRCA-24 as a measure of communication apprehension across communication contexts. *Communication Quarterly, 33,* 165-173.

Meyerbröker, K., & Emmelkamp, P. M. G. (2010). Virtual reality exposure therapy in anxiety disorders: A systematic review of process-and-outcome studies. *Depression & Anxiety*, *27*, 933-944. doi:10.1002/da.20734

Meuret, A. E., Twohig, M. P., Hayes, S. C., Rosenfield, D., & Craske, M. G. (2012). Brief acceptance and commitment therapy and exposure for panic disorder: A pilot study. *Cognitive & Behavioral Practice, 19,* 606-618.

Myers, K. M., & Davis, M. M. (2007). Mechanisms of fear extinction. *Molecular Psychiatry, 12,* 120-150.

Newman, M. G., Hofmann, S. G., Trabert, W., Roth, W. T., & Taylor, C. (1994). Does behavioral treatment of social phobia lead to cognitive changes? *Behavior Therapy*, *25*, 503-517. doi:10.1016/S0005-7894(05)80160-1

Norton, P. J., & Price, E. C. (2007). A meta-analytic review of adult cognitive-behavioral treatment outcome across the anxiety disorders. *The Journal of Nervous & Mental Disease*, *195*, 521-531.

Olatunji, B. O., Cisler, J. M., & Deacon, B. J. (2010). Efficacy of cognitive behavioral therapy for anxiety disorders: A review of meta-analytic findings. *Psychiatric Clinics of North America, 33,* 557-577. doi:10.1016/j.psc.2010.04.002

Rachman, S. (1980). Emotional processing. *Behaviour Research & Therapy*, 18(1), 51-60.

Rachman, S. (1997). The evolution of cognitive behaviour therapy. In D. M. Clark & C. G. Fairburn (Eds.). *Science and practice of cognitive behaviour therapy* (pp. 3-26). New York, NY: Oxford.

Rowe, M. K., & Craske, M. G. (1998). Effects of an expanding-spaced vs massed exposure schedule on fear reduction and return of fear. *Behaviour Research & Therapy, 36,* 701-717.

Rowe, M. K., & Craske, M. G. (1998). Effects of varied-stimulus exposure training on fear reduction and return of fear. *Behaviour Research & Therapy*, 36, 719-734.

Segal, Z. V, Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-based cognitive therapy for depression.* New York, NY: Guilford.

Seim, R. W., & Spates, C. R. (2010). The prevalence and comorbidity of specific phobias in college students and their interest in receiving treatment. *Journal of College Student Psychotherapy*, *24*(1), 49-58. doi:10.1080/87568220903400302

Sherman, D. A., Nelson, L. D., & Steele, C. M. (2000). Do messages about health risks threaten the self? Increasing the acceptance of threatening health messages via self-affirmation. *Personality & Social Psychology Bulletin*, *26*, 1046-1058.

Telch, M. J., Valentiner, D. P., Ilai, D., Young, P. R., Powers, M. B., & Smits, J. J. (2004). Fear activation and distraction during the emotional processing of claustrophobic fear. *Journal of Behavior Therapy & Experimental Psychiatry, 35,* 219-232.

Tolin, D. F. (2010). Is cognitive-behavioral therapy more effective than other therapies?: A meta-analytic review. *Clinical Psychology Review*, *30*, 710-720. doi:10.1016/j.cpr.2010.05.003

Treanor, M. (2011). The potential impact of mindfulness on exposure and extinction learning in anxiety disorders. *Clinical Psychology Review*, *31*, 617-625. doi:10.1016/j.cpr.2011.02.003

Tsao, J. I., & Craske, M. G. (2000). Timing of treatment and return of fear: Effects of massed, uniform-, and expanding-spaced exposure schedules. *Behavior Therapy, 31,* 479-497.

Twohig, M. P. (2009). The application of acceptance and commitment therapy to obsessive-compulsive disorder. *Cognitive & Behavioral Practice, 16*(1), 18-28. doi:10.1016/j.cbpra.2008.02.008

Twohig, M. P., Hayes, S. C., & Masuda, A. (2006). Increasing willingness to experience obsessions: Acceptance and commitment therapy as a treatment for obsessive-compulsive disorder. *Behavior Therapy*, *37*(1), 3-13.

Twohig, M. P., Hayes, S. C., Plumb, J. C., Pruitt, L. D., Collins, A. B., Hazlett-Stevens, H., & Woidneck, M. R. (2010). A randomized clinical trial of acceptance and commitment therapy versus progressive relaxation training for obsessive-compulsive disorder. *Journal of Consulting & Clinical Psychology, 78,* 705-716. doi:10.1037/a0020508

Watson, D., & Friend, R. (1969). Measurement of social-evaluative anxiety. *Journal of Consulting & Clinical Psychology, 33,* 448-457. doi: 10.137/h0027806

Watson, J. B., & Rayner, P. (1920). Conditioned emotional responses. *Journal of Experimental Psychology, 3,* 1-14.

Wolitzky-Taylor, K. B., Horowitz, J. D., Powers, M. B., & Telch, M. J. (2008). Psychological approaches in the treatment of specific phobias: A meta-analysis. *Clinical Psychology Review*, *28*, 1021-1037. doi:10.1016/j.cpr.2008.02.007

Wolpe, J. (1958). *Psychotherapy by reciprocal inhibition.* Stanford, CA: Stanford University Press.

Wolpe, J., & Lazarus, A. A. (1966). *Behavior therapy techniques*. New York, NY: Pergamon.

APPENDICES

Appendix A

Procedure and Data Collection Schedule

Table A1

Brief Skills Intervention for Public Speaking Anxiety

Session	Intervention components	Content
1	Informed consent	• Agreement to participate in 2 session 1.5 hour intervention for public speaking anxiety
	Self- report assessment	• Liebowitz Social Anxiety Scale-Self Report • Demographic Information • Social Interaction Anxiety Scale • Personal Report of Communication apprehension- public speaking subscale • Self-statements during public speaking • Fear of Negative Evaluation Scale • SA-AAQ (Social Anxiety- Acceptance and Action Questionnaire) • Probability and Cost Questionnaire
	Brief intervention	• Introduction to Exposure • Rationale behind Exposure • Skills activity (ie: worksheet) • Check of skill acquisition after training (before speech task)
	Exposure	• Complete Public Speaking Challenge • Collect SUDs at baseline • Collect SUDs During Exposure • Collect SUDs at End of Exposure
	Postexposure measures	• Check of skill application (after speech task) • Assess for willingness to engage in 2nd Session—How willing are you to attend session 2? (on visual Likert scale from 1-10) • Treatment Evaluation Inventory • Personal Reactions to the Rationales
	Homework handout	• Instructions for Homework • Handout Tracking Sheet
2		
	Self- report assessment	• Liebowitz Social Anxiety Scale-Self Report • Demographic Information • Social Interaction Anxiety Scale • Personal Report of Communication apprehension- pubic speaking subscale • Self-statements during public speaking • Fear of Negative Evaluation Scale • SA-AAQ (Social Anxiety- Acceptance and Action Questionnaire) • Probability and Cost Questionnaire
	Homework collection	• Collect Participants Homework Sheet • Scored for • Number and Duration homework assignments completed
	Exposure	• Complete Public Speaking Challenge • Collect SUDs at baseline • Collect SUDs During Exposure • Collect SUDs at End of Exposure
	Postexposure measures	• Check of skill application (after speech task) • Treatment Credibility • Perception of intervention as useful approach

Appendix B

Exposure Rationales

Fear Reduction: Session 1

Presenting Exposure Therapy & Fear Reduction: Part I (45 min)

In the first session, the primary goals are 1) Develop a good rapport with the patient; 2) present exposure therapy to the client; 3) collect information about the client's social phobia symptoms and history; 4) present a description of the rationale to the client; 5) teach the client a skill to use 6) complete exposure task 7) explain homework

Introduction (5 min)

- Introduce yourself to the patient
- Welcome and thank you for participating.
- Ask if there are any questions about the consent form. Reiterate the voluntary nature of study and confidentiality.

Briefly build a rapport with the client

- Explain that you'll be doing a few different things today, first filling out a questionnaire packet, and then I'll come back in and we'll discuss some things and do some exercises, I'll let you know as we go along.

Baseline Questionnaire Packet (~30 mins)

- So, this study is about social anxiety so I'll be talking to you about that. I'll be using this manual that we use with everyone so if I'm looking at it at times that's why. Some of the things will apply to you and some won't…we'll be talking about the experience of social anxiety in general and also see if you can relate to what I'm talking about/get your experiences related to that. Sound good? Do you have any questions before we start?

Psychoeducation about Social Anxiety (5 min)

Social Anxiety

- "It's really common for people to feel uncomfortable in social situations. In fact, most people feel some form of anxiety in some social situations at one point or another, So you are not alone if you feel some discomfort in social situations too. If being uncomfortable in social situations becomes a big and influential part of your life though, or even just interferes with doing things that you might want to do, then it's important to try to figure out what's going on. So, I'm going to talk to you about the nature of social anxiety. Please let me know at any point if you

have any questions or if anything I'm saying confuses you."

- So, social anxiety is an interesting fear, because it is a fear of social situations that we are all constantly confronted with in our life, but they can still be really difficult for us to deal with.

- "Just think about how often we interact with people every day. Social situations can make us anxious because we have many ideas about the goals we want to achieve in the social situations that are just really high – too high in many cases- or we have racing thoughts or worries about what others are thinking about us.

- "People might experience this anxiety by focusing your attention inwardly on aspects about yourself you don't like in social situations, thinking things like "I am such an idiot" (any other examples)

- "Some people might notice more bodily sensations like racing heart, dry mouth, sweaty palms, or blushing. It's also common to feel like everybody else around you can see and sense that you're anxious, even though it's actually a really private experience, but that's something that a lot of people experience. "

- So, can you relate to any of these things?

    - Ask for more detail

    - If they only say thoughts or bodily sensations, ask about the other too

- "*Inquire about **bodily sensations** that disturb the patient, such as tachycardia, pains, swallowing.*

  External Cues. Specifically elicit information about objects or situations which are sources of high anxiety or discomfort **(examples)**

  Internal Cues. Inquire about thoughts, images or impulses that provoke anxiety **(examples)**

- Validate their experience- those things are really common, yeah I've heard that a lot, etc. etc.

Background Information on Anxiety (5 min)

In this part of the session you will discuss how Anxiety can occur and maintain

Provide this information:

- Okay, so now that I know a little bit more about your particular experience I'm

going to talk to you about social anxiety in general. Sound good?

- So, people who suffer from anxiety tend to experience negative thoughts and feelings when they are in situations that are associated with anxiety. They often fear being in the situations that trigger this anxiety, and often attempt to escape those situations and the feelings that go with them by avoiding the situations, or by turning to soothing self-talk or having a supportive person close by. Or other management or control strategies or escape strategies, using alcohol, etc.

Ask the client of to describe something they avoid or for an example of soothing self-talk

- But, unfortunately, trying to avoid or escape feeling anxious can create its own problems. Avoiding or escaping anxiety-provoking situations actually leaves us feeling *more* anxious rather than less anxious about the situations we're avoiding because we never really have the chance to realize that we can successfully face our fears and learn that in reality, they are much less realistic or less likely to come true than we thought.

- "And another important point is that avoiding or escaping anxiety doesn't actually work to decrease our anxiety over the long term – actually, it often increases our level of anxiety over time because we never learn that our anxiety will go down on its own.

- **Have you ever experienced that, where your anxiety about something has gotten worse over time or become harder to deal with the more you avoided it?**

- **Validate their response.** Then say "yeah, a lot of people don't even realize this process because in the short term it feels relieving right- of course we want to escape those feelings and then we get the immediate sense of relief…but actually over time we never learn that we actually can handle those situations, so it gets harder and harder to do."

Cognitive contributions to anxiety:

So, a lot of the time when we're really anxious, like let's say when we have to give a presentation in class, we often think thoughts like, "Everyone can tell how nervous I am. I'm going to forget everything and look like an idiot. I'm never going to get through this," etc., or think that everyone can see our mistakes and is judging us. (helpful here to give examples that either you have thought or know someone who says these things- feels more realistic).

But in reality, these thoughts are usually incorrect and they don't actually come true.

- We often hold mistaken beliefs like this, and the anxiety that those thoughts give us often cause us to feel even more anxious and avoid a lot of potentially

threatening situations altogether.

- Totally understandable

-GIVE THEM "NEGATIVE CYCLE" WORKSHEET AND WALK THROUGH IT WITH THEM- explain that this is why we target thoughts.
If the patient wants to know why they have Social anxiety, explain that there are several theories about the origin of anxiety, but that it is impossible to know for sure how and why it develops in individuals. It is probably a combination of many environmental and biological factors.

Fear Extinction Rationale for Treatment (10 min)

In this part of the session you will explain Fear Extinction & Estimating Probability and Costs of Social Situations

Say

- So I've gone over some of the things that go on when we experience social anxiety, and things that tend to make it worse. Our negative thoughts can lead us to avoid situations that make us anxious. Because of that, we might never give ourselves the chance to learn that our fear can decrease even (and actually, especially) if we stay in the situations that make us anxious. Like I said, when we avoid those difficult situations, our anxiety actually ends up getting worse. "
    - I also talked about how anxious thoughts and avoidance of anxiety-provoking situations can actually end up maintaining anxiety over the long term; even though avoidance might seem relieving in the short-term, in the long run you actually become more anxious by doing that. By avoiding things you're afraid of, you never have the opportunity to learn that fears rarely come true, and that your anxiety **will** decrease eventually if you remain in the avoided situation."

Discuss Probability with the Client:

- *So, also,* as we mentioned before we often have negative thoughts that can lead us to avoid situations. These negative believes can often be related to how often a social situation may turn out negative. It is likely that you believe negative social events are more likely to occur than they actually do. It also is possible that you believe that people will be negatively evaluating you in social situations?"

Ask the Client

- What types of things are you afraid will happen to you if you engage in a feared situation? How often do you think they will occur?

After they have mentioned what they fear and how often ask them:

- How often does this actually occur?

Discuss Cost with the Client

- "Also it is possible that you have beliefs about the potential outcome of a social situations. You may think that you will actually be rejected by your peers or judged by those who are around you. You may believe that you are in danger of behaving in an unacceptable way and that your actions will have consequences such as loss in status, feelings of worthlessness, and rejection. A lot of the time we think that the negative costs of a situation will actually be a lot worse than they end up being. Can you relate to this at all?

- What types of things are you afraid will happen to you if you engage in a feared situation?

After they have mentioned what they fear ask them:

- Has that ever actually happened?

Ask

- What do you think the possibility is, realistically, that they would happen in the future?

Experiential Exercise Fear Extinction (5-10 mins)

- Explain the idea that it can be helpful to learn to realize that situations usually don't turn out to be as bad as we think they'll be- that the things we think we'll happen usually don't, and even if they do, they usually don't feel quite as bad as our imagination thought they would.

- There are two concepts related to this that can be helpful to think about, one is

Probablity:

Emphasize the importance of overestimating the likelihood that at social situation will result in negative outcomes.

A related one is Cost

- Cost:

Emphasize that you can learn by practicing public speaking that the embarrassment or negative evaluation you may experience **is not as horrific or as unbearable** as you

previously thought it would be.

- Okay, so I'm going to ask you to fill out this worksheet to think a little more about these ideas.

- Explain and walk them through **ODDS WORKSHEET.** Give examples, and explain that the purpose is for us to understand that we often have this one negative thought that sticks out and it's really hard for us to consider other thoughts, but it actually could be helpful to think about other alternatives that might be true so that we realize in those moments that that one big negative thought, even though it's super uncomfortable, might not be the most or only true one.

- Tell them to fill out first part and then let you know when they're done (stay in the room as they fill this worksheet out) with that part and then walk them through the pie part.

- Look at what they wrote and point out good examples, validate that they get it or correct it if it's not right.

Tell patients it is important that they understand this explanation. Ask if they have any questions, or if you can clarify anything for them.

Exposure Rationale: Fear Extinction(5 min)

You will now explain that you are going to ask them to do an exposure task:

Give the following description of exposure.

- Okay so, today, in order to help you on the path to reducing your anxiety, we will use an approach called exposure. This is a commonly used and effective technique for helping people gradually face feared situations and learn to overcome their fears.

Explain how we will do this:

- The way we will work on these skills is by asking you to put yourself in a social situation that is similar to some of the situations you might find yourself in during daily life, such as in class, and to remain in the situation for as long as you can, preferably until your anxiety decreases.

- So, the task will be a speech, you'll give it into a camera and I won't be in the room but the speech will be recorded and later evaluated. Basically, I'll give you 5 minutes to mentally prepare and then I'll come back in the room and tell you when to start the speech. I'll give you the topics in a second, but first I just want

to tell you why we're having you do this.
(At this point, they will look anxious and unhappy and say things like "omg," "this sounds terrible," "are you serious," "I hate speeches more than anything," etc.)

- *You can say:* So, yeah, this is something that makes *everyone* feel anxious and awkward and it's really hard for most people- no one likes speeches- but that's exactly why we're having you do this, because practicing things that definitely make you anxious can help you learn how to deal with the anxiety so that it decreases. The speech specifically might or might not apply to your life (*you'll know by now if they've talked about public speaking)* but it's supposed to get you to practice in general doing something that's really uncomfortable so that you can learn how to overcome it.

- So, it's important to keep in mind that anxiety does not actually stay at high levels forever; through a process called habituation, your feelings of anxiety will actually decrease as you repeatedly enter these situations as long as you remain in them.

- It's kind of like when you get into a really cold pool and after being in for a while, it starts to feel warmer-and that's not because the water gets warmer, but because you get used to it. If you got out too soon, or wore a wetsuit to avoid the cold, you would never get used to the temperature.

- Similarly, when you confront situations that trigger your anxiety, and remain there instead of using avoidance, eventually you're anxiety will subside. Over time, these situations will provoke less and less anxiety and you won't need to avoid them because you won't feel as anxious.

- So, like we talked about before, fear is an easily triggered emotion experienced by many many people, but when people avoid exposure to what they're afraid of, they can't ever learn that the trigger isn't actually dangerous. Basically, exposure helps to re-wire our fear structures, involving anxiety-related thoughts, feelings, and behaviors, so that those connections between certain situations and fear responses weaken over time.

- By doing this, you can learn what you're afraid of are much less likely to happen than you believe, or are not as bad as you thought, and you can learn how to feel safe in situations where you previously felt afraid.

- Exposure is not about getting rid of anxiety- it's about correcting mistakes and errors in thinking that generate even more anxiety and keep us locked in the cycle of anxiety instead of learning to overcome it.

- When you go into the situation, keep these things in mind and use the skills we

taught you (like from the Odds worksheet) to change your negative thoughts to more realistic ones when you are giving the speech- remember that the threat is actually not as dangerous or likely to happen as it seems and that by changing your thoughts to be more realistic, you can change the reaction your body and mind have to the situation.

So, does that make sense?

- *Now explain specifics of speech task*
    - Hand them the speech task paper.
    - Say: there are 3 speech tasks, we ask that you try to cover all 3 but it's up to you. The speech will last 10 minutes, we also ask that you try to talk for the full 10 minutes but again it's up to you. Just keep in mind that the reason we're having you do this is to learn that it won't be as bad as you think, and that your fear will go down, so if you stay in the situation as long as possible you're more likely to benefit from it and actually learn that your fear will go down and you can stay in situations like this. So, you'll have 5 minutes now to prepare, I'll leave the room and then I'll be back in."
    - *If they ask if they can write on the paper, say yes but that they can't use it during the speech.*
    - *Come in 5 mins later. As you are setting up the camera, have them fill out the pre-speech SUDS. Then remind them of the directions and tell them they can start when you leave the room, they don't need to watch the time because you'll stop them after 10 minutes but if they choose to stop earlier they can just stop and then let you know they're done.*
    - **Immediately** when you go back into the room, hand them the post-speech SUDS.
    - Then, take the papers away (so they're not staring at the speech task sheet) and tell them they can just relax for a few minutes, go to the bathroom if they want, and that now they'll just be filling out some more questionnaires and that's it.
    - Come back in 5 mins, ask if they're okay ("are you good?" works) and give them post-speech questionnaire packet.
    - After, tell them they're done, give them credits, and explain homework.

Elicit and carefully answer any questions patients may have about the exposure

Homework Explanation (5 min)

- Explain "homework"

Patients should have the following 2 forms by the end of the first session: "Homework ".

- Patients should complete self-monitoring of exposure forms each day and bring them to the next session

    - Physically show them the homework, explain that we're having them keep in mind the things we talked about and practiced today and practice with things that are really hard for them to do that they normally wouldn't push themselves to do. Read some examples, particularly ones that you think might apply to them because of their personal experience, and tell them that they can think of whatever they want. Tell them to try to do it as many times as they can but they don't have to fill up the whole worksheet- that's just there in case- it's up to them.

    - Ask if they have questions, if they can think of things to do, and that they can email you if they have questions as they go along.

Fear Reduction: Session 2

Primary goals of the second session include 1) collecting homework; 2) review the model of and the rationale for treatment; 3) complete a second exposure task 4) evaluate how helpful the intervention was for the client

Baseline Questionnaire Packet (~30 mins)

-take out demographic questionnaire, don't need that

Homework Collection (5 min)

Start the session by going over the homework worksheet with the client.

Ask them how it was for them, what kinds of things they did, if it got easier to do, etc.

Validate the things they did and how they learned that things got easier to do, if that's the case!

Review Rationale for Treatment (10 min)

Say the following:

"In this session, I am going to ask you to engage in another exposure activity like last time. However, before we get to that, I want to review with you the basic ideas behind our exposure exercise and the skills we discussed last time."

Ask if the patient can remember the negative beliefs you discussed last time"

Ask the client to describe why exposure works from the rationale you gave at the first session:

"I want to first get an idea of what you took out of last session- what were the main points you remember from what we talked about?"

- Reinforce, and then elaborate and give a very brief re-description of the basics of what we talked about.

So, now I'd like you to keep those things in mind and we're going to have you do a speech just like last time. It will be the same setup but different speech topics. *Re-state speech description.*

Debriefing After Last Exposure Task (5 min)

- Okay, you're done! Thank, look forward to seeing you next week, etc.

Psychological Flexibility: Session 1

Presenting Exposure Therapy & Psychological Flexibility: Part I (45 min)

In the first session, the primary goals are 1) Develop a good rapport with the patient; 2) present exposure therapy to the client; 3) collect very basic information about the client's social phobia symptoms and history; 4) present a description of the intervention rationale to the client; 5) teach the client a skill to use 6) complete exposure task 7) explain homework

Introduction (5 min)

- Introduce yourself to the patient
- Welcome and thank you for participating.
- Give consent form and ask if there are any questions about the consent form

Questionnaires

- Explain questionnaire packet
- Ensure confidentiality and ask for honest responses
- Let them know to ask you if they are confused

After Baseline Questionnaires

Briefly build a rapport with the client

Using the "Background Form" form (take information about the following: age, past and present marital/relationship status, children, living arrangement (e.g., alone, with family, roommate), and work situation to briefly talk to the client.

Psychoeducation about Social Anxiety (5 min)

Social Anxiety

- "It's really common for people to feel uncomfortable in social situations. In fact, most people feel some form of anxiety in some social situations at one point or another, So you are not alone if you feel some discomfort in social situations too. If being uncomfortable in social situations becomes a big and influential part of your life though, then it's important to try to figure out what's going on. So, I'm

going to talk to you about the nature of social anxiety. Does that sound good? Please let me know at any point if you have any questions or if anything I'm saying confuses you."

- So, social anxiety is an interesting fear, because it is a fear of social situations that we are all constantly confronted with in our life, but can still be really difficult for us to deal with.

- "Just think about how often we interact with people every day. Social situations can make us anxious because we have many ideas about the goals we want to achieve in the social situations that are just really high – too high in many cases- or we have racing thoughts or worries about what others are thinking about us.

- "You may experience this anxiety by focusing your attention inwardly on aspects about yourself you don't like in social situations, thinking things like "I am such an idiot"

- "You may notice your bodily sensations like racing heart, dry mouth, and sweaty palms. You may also feel like everybody else around you can see and sense that you're anxious, even though it's actually a really private experience."

*Inquire about **bodily sensations** that disturb the patient, such as tachycardia, pains, swallowing, feelings in the stomach, blushing,*

External Cues. Specifically elicit information about objects or situations which are sources of high anxiety or discomfort **(examples)**

Can you think of places or certain situations where your anxiety shows up? Like standing in a line? Being on a bus? Talking to a stranger… Now can you give me some examples and tell me a little bit about what your experience is like.

Internal Cues. Inquire about thoughts, images or impulses that provoke anxiety **(examples)**

- "A lot of people also feel that their skills are inadequate to deal with situation, for example you might believe that you are naturally a bad speaker. We're here to help you learn some skills to help you more effectively live with these feelings of anxiety"

Background Information on Anxiety (5 min)

In this part of the session you will discuss how Anxiety can occur and maintain

Provide this information:

So, let's start off with some basic background information.

- "People suffering from anxiety tend to experience feeling afraid and having anxious thoughts and feelings as a bad thing that needs to be managed, avoided, or controlled as much as possible."

- "People often fear being in situations that trigger their anxiety, and often attempt to escape, avoid, or get out of those situations… or use other strategies to manage or control anxiety like using soothing self-talk (like, saying "everything will be fine") or refusing to go out unless a supportive person is close by."

Ask the client of to describe something they avoid or ways that they try to control their anxiety

AFFIRM THEIR EXPERIENCE

Then, say:

- I completely understand why you avoid/ minimize/ escape X social situations – that's our natural tendency when we're uncomfortable or anxious. So it makes complete sense that you escape/ avoid/ minimize when you're socially uncomfortable. Can you see any down sides to escaping/ avoiding/ minimizing participation in X situation? What might those be?

- If participant resists, you can AFFIRM again then say, "of course, I would probably do the same thing if I were you. I guess I'm wondering – Is this response completely satisfying to you and meeting your long-term life goals?

- If they say yes or it's fine, then you can say "I assume you're here because some of your life goals, or something in your life isn't being met, so can you tell me a little bit about what that is for you?"

- Yeah exactly, so that's the unfortunate thing, is that trying to avoid or escape feeling anxious can actually create its own problems. Avoiding or getting out of anxiety-provoking situations prevents us from doing things we care about or that help us reach our life goals, like giving presentations in front of people, talking to people in authority, or forming new friendships."

- ***Can you relate to or see that in your life? Affirm answer***

- "And another important point is that avoiding or escaping anxiety doesn't actually work to decrease our anxiety over the long term – actually, it often increases our level of anxiety over time because we never learn how to interact with our anxiety in ways that work for us.

- Have you ever experienced that, where your anxiety about something has gotten worse over time or become harder to deal with the more you avoided it?

- Yeah, and another thing is that our relationship to our thought processes often becomes more and more reinforced over time if we don't learn a different way of handling it. So, when we're feeling a lot of anxiety, like when we have to give a presentation in class, we often think things like, "Everyone can tell how nervous I am. I'm going to forget everything and look like an idiot. I'm never going to get through this," etc., and we let these thoughts really push us around- when really, they're just thoughts and thoughts don't have to hold power over us.

- "Actually, the more we buy into believing our anxious thoughts, the more power they gain over us, and the more anxious we feel."

- Have you noticed that happening to you?

Ask the client to give an example of a thought that really "pushes them around."

Then Say

- "So, if we can learn to recognize that anxious thoughts are just thoughts, no more, and do not necessarily have power over what we do in our life, we become freer to do what we want even while we are experiencing anxiety. Would that be something you're interested in?" how does that sound?

- "Everyone in the world experiences fear and anxiety- they're natural- and although they can feel scary when they show up (or something like that), how much they interfere is really dependent on how much power we give them….Fear and anxiety gain power when we treat them like they're dangerous things and we're unwilling to experience them, and spend time and effort to struggling with anxiety at the expense of other valued life activities and life goals."

If the patient wants to know why they have Social anxiety, explain that there are several theories about the origin of anxiety, but that it is impossible to know for sure how and why it develops in individuals. It is probably a combination of many environmental and biological factors.

Psychological Flexibility Rationale for Treatment (10 min)

In this part of the session you will explain Psychological Flexibility

Say

- "So now I'd like you to think about how this applies to your life. What has happened to your level of anxiety over time? How much effort have you put into controlling it?

Pause

"Do you feel like you have control over your anxiety? Or do you feel like your anxiety has more control over how you are feeling?

Pause

- "Yeah, anxiety presents as a really scary thing, but what if anxiety does not actually have the power to control your life? It is just a bunch a thoughts, feelings, and sensations that we allow to push us around."

Prompt assessment of allowing thoughts and feelings to be there:

Ask

- "What if you could find a way to just see fear or anxiety as a thought or a feeling, allow it to occur as just a thought or a feeling, and find a way to continue on with things in life that you want to do? What if anxiety does not need to change or go away before you change your life? Would that be easier than spending so much of our time trying to get rid of it?"

Experiential Exercise Psychological Flexibility (10 min)

Ask patients to do Passengers on a Bus Metaphor

Adapted from ACT for Anxiety, pg 197, as adapted from Hayes 1999):

Say

- "So now we're going to prepare for practicing moving forward in our life while experiencing anxiety. We actually want to practice doing anxiety-provoking social situations in a new way, so that you can get really good at doing things that are important to you, even if anxiety shows up. Why do you think this might this be worth doing for you?"

- "Before we start, let's see how it feels to interact with your thoughts and feelings in this new way that we suggested. To help explain what we mean, we'll use a metaphor- I know that it's going to sound silly at first but just bear with me, it actually really helped me understand the concepts."

Ask the client to Listen to your explanation:

- Imagine yourself as the driver of a bus called "My Life." Along your chosen route, you pick up some really unattractive and unruly passengers who keep trying to intimidate you as to try to drive along your route. They are loud, insulting, aggressive, and won't give up trying to get your attention- they tell you

that they'll continue to bother you no matter how much you want them to shut up. They keep trying to redirect your route, and threaten that bad things will happen to you if you don't pay attention to them.

- Finally, you just can't take it anymore, so you decide to get up and try to silence them. They feel like they have so much power over you that you just have to respond. You get into a struggle with them, trying to negotiate, get them to "go away." And then you realize something- you are not actually driving your bus in the direction that meant to anymore-you've driven off course trying to calm those crazy passengers! And trying to shut them up didn't even work. But, if you'd decided to continue on the original route you chose without letting the bullying passengers take you over, you would have stayed on course and ended up where you wanted to be.

Explain how this is parallel to the mind with thoughts

-Then ask "Does that make sense?" and clarify any confusion

Ask the Client

- "Can you think about how this applies to you when you feel anxious? What are some of the thoughts and feelings (unruly passengers) that you often let steer you in a different direction from where you'd like to go?"

Pause and then Explain:

- "This is the similar process that happens when we struggle with our anxiety. When we engage in a struggle with our anxious thoughts, really taking them literally and giving them attention, we give them an amount of power over us that can steer us off course."

Have them complete the exercise: Remember to go slowly, they are probably not familiar with this type of exercise

- "Now I'll invite you to do this brief exercise with me to better understand the ideas I'm talking about. So, whenever you're ready, you can close your eyes.

Take a couple deep breaths and rest there for a moment. Now I would like you to imagine that you're lying in a field, maybe with grass or flowers or anything that you want to picture. Just picture yourself lying there and imagine you can see the blue sky above you. In the sky, clouds of all shapes and sizes are gently floating by.

(give a min or so to let this image settle in)

- Now I would like you to imagine that each thought or feeling is attached to a cloud. It can rest on the cloud as a word or image or the cloud itself can take on

the image of your thought. The key here is to take each thought as it occurs and attach it to a cloud and let it gently float by, no matter what type of thought it is. If you find you lose the image, that's totally fine. When you notice this has happened, just, without judgment, gently bring yourself back to the image of lying on your back, watching each cloud float by, and attach the thought that took you away from this image. I'm going to be quiet for a few minutes and let you practice this, just noticing each thought as it passes, and placing it in a floating cloud.

- (*Give a few mins)*

- Remember, if you get lost in thoughts and are no longer viewing them, just gently bring yourself back to the exercise- it's fine if that happens, and any type of thoughts you're having is fine, just notice them.

- *After 1 more min*- Okay, whenever you're ready you can slowly bring your awareness back to the room and open your eyes.

- So, what was that like for you? Have you done something like this before? *Process experience with them*

It's really important for you to understand all the concepts we've just gone over, so I just want to see if you have any questions or anything that needs to be clarified or anything.

Exposure Rationale: Psychological Flexibility (5 min)

You will now explain that you are going to ask them to do an exposure task:

Give the following description of exposure

- "Okay, so, now we'll move on to applying some of the concepts we've been talking about. Today, in order to help you on the path to living a life in which anxiety does not get in the way of what you want to do, we will use an approach called exposure. This is a commonly used and effective technique for helping people gradually face feared situations and practice opening up to emotional experiences and not letting their fears get in the way of what they want to do in life. In other words, exposure involves helping you to practice doing things that are connected to what you value most in life, but you avoid because of their association with anxiety."

- "By practicing doing things that are connected to your core values, you can realize that it's acceptable to experience anxiety in order to live a full and valued life. An example of a core value could be something like friendship. By allowing ourselves to experience anxiety and other uncomfortable emotions that arise when we meet new potential friends instead of avoiding them, we develop a

willingness to experience unwanted thoughts and feelings for what they are – just thoughts and feelings. This allows us to relate to our thoughts in a new way, so that they have much less influence over us."

- By letting go of the battle with our anxiety and opening up more to feelings, thoughts, and sensations instead of trying to push them away, we will learn that we can live with them, be more present and move forward in life."

- Does this make sense? How does this sound to you? What questions do you have?

Explain how we will do this:

- So, the way we will practice these skills is by asking you to put yourself in a social situation that is similar to some of the situations you might find yourself in during daily life, such as in class, and ask you to engage with the situation as fully as possible.

- We encourage you to commit to allowing yourself to experience anxiety or any other feelings that might arise while choosing to continue doing what you need to do to realize your goals in the situation. When you do this repeatedly, you will learn that you have the freedom and capacity to do what you want in the future, like, initiate a conversation with a stranger, or whatever applies to you, while making room for whatever anxiety and self-judgments might come up. Just treat the anxiety or judgments with as much kindness as you can muster, like, "oh, there's that old passenger again! I've seen him before. Hello, old friend! I can make room for you" (or something like that).

- Overall, we are doing this so that practice developing the ability to take on a social situation that makes you feel awkward and anxious with awareness, openness, and focus and to take effective action, guided by your values.

- Does this make sense? How does this sound to you? What questions do you have?

- Explain exercise:

    - So, what we will be asking you to do is to give a speech into this camera. I'll leave the room, and you will stand over here (show them) and deliver your speech into the camera. It will be recorded and later evaluated by a panel of judges. You'll have 5 minutes beforehand to mentally prepare, and then I will come in and let you know that you can begin your speech. There will be 3 speech topics, and we will give you 10 minutes for the speech. You can talk about any or all of the topics you want, but we ask that you try to talk about as many as possible and to fill up the whole 10

minutes. If you need to stop before then, you can hold up this sign (show them note card that says "stop") and then leave the room. Otherwise, I'll come in and let you know when the 10 minutes are up.

- Do you have any questions before we start?

Elicit and carefully answer any questions patients may have about the exposure

If they ask what to do during the exposure exercise, tell them they can try to watch their thoughts and hang out with them like they did in the exercise- it's okay if they feel anxious, but to try to keep going anyway in order to reach the goal.

Homework Explanation (5 min)

- Explain "homework"

Patients should have the following form by the end of the first session: "Homework ".

- Patients should complete self-monitoring of exposure forms each day and bring them to the next session.
- Try to do as much as possible
- Have them read the review of concepts sheet before they do their exposures and to think about what we talked about during the session

Psychological Flexibility: Session 2

Primary goals of the second session include 1) collecting homework; 2) review the model of and the rationale for treatment; 3) complete a second exposure task 4) evaluate how helpful the intervention was for the client

Homework Collection (5 min)

Start the session by going over the homework worksheet with the client. Read descriptions of exposure and ask them how each experience went. Ask questions that will help you assess the accurate monitoring of time spent on exposures. Write comments in the space provided on Homework Sheet.

Review Rationale for Treatment (10 min)

Say the following:

"In today's session, I am going to ask you to engage in another exposure activity. But, before we get to that, I want to review with you the basic ideas behind our exposure exercise and the skills we discussed last time."

Ask if the patient can remember the passengers on the bus and accepting thoughts and feelings that you discussed last time"

Ask the client to describe why exposure works from the rationale you gave at the first session:

"Do you remember the explanation I gave you last time about how the treatment works? Would you mind giving me a quick summary of the main points you remember?

Give the following description:

Debriefing After Last Exposure Task (5 min)

-Thank you so much, we know this is difficult and we really appreciate it.

-Ask how they are feeling, talk about it, and make sure they are okay.

-Ask for feedback- what they thought about it.

Was the homework helpful? Did they understand the point of the exercises and the rationales, etc.

-Do you they have any additional questions, suggestions, etc.

-Referrals!

Values: Session 1

Presenting Exposure Therapy & Values: Part I (45 min)

In the first session, the primary goals are 1) Develop a good rapport with the patient; 2) present exposure therapy to the client; 3) collect information about the client's social phobia symptoms and history; 4) present a description of the rationale to the client; 5) teach the client a skill to use 6) complete exposure task 7) explain homework

Introduction (5 min)

- Introduce yourself to the patient
- Welcome and thank you for participating.
- Ask if there are any questions about the consent form

Briefly build a rapport with the client

Using the "Background Form" form (take information about the following: age, past and present marital/relationship status, children, living arrangement (e.g., alone, with family, roommate), and work situation to briefly talk to the client.

Psychoeducation about Social Anxiety (5 min)

Social Anxiety

- "It's really common for people to feel uncomfortable in social situations. In fact, most people feel some form of anxiety in some social situations at one point or another, So you are not alone if you feel some discomfort in social situations too. If being uncomfortable in social situations becomes a big and influential part of your life though, then it's important to try to figure out what's going on. So, I'm going to talk to you about the nature of social anxiety. Does that sound good? Please let me know at any point if you have any questions or if anything I'm saying confuses you."
- So, social anxiety is an interesting fear, because it is a fear of social situations that we are all constantly confronted with in our life, but can still be really difficult for us to deal with.
- "Just think about how often we interact with people every day. Social situations can make us anxious because we have many ideas about the goals we want to achieve in the social situations that are just really high – too high in many cases- or we have racing thoughts or worries about what others are thinking about us.

- "You may experience this anxiety by focusing your attention inwardly on aspects about yourself you don't like in social situations, thinking things like "I am such an idiot"

- "You may notice your bodily sensations like racing heart, dry mouth, and sweaty palms. You may also feel like everybody else around you can see and sense that you're anxious, even though it's actually a really private experience."

*Inquire about **bodily sensations** that disturb the patient, such as tachycardia, pains, swallowing.*

External Cues. Specifically elicit information about objects or situations which are sources of high anxiety or discomfort **(examples)**

Internal Cues. Inquire about thoughts, images or impulses that provoke anxiety **(examples)**

- "Finally you may feel that your social skills are inadequate to deal with situation, for example you might believe that you are naturally a bad speaker. We're here to help you with these feelings of anxiety"

Background Information on Anxiety (5 min)

In this part of the session you will discuss how Anxiety can occur and maintain

Provide this information:

So, let's start off with some basic background information.

- "People suffering from anxiety tend to experience fearful feelings and anxious thoughts as bad emotional events that need to be managed, controlled, or avoided as much as possible."

- "People often fear being in situations that trigger their anxiety, and often attempt to escape, avoid, or get out of those situations… or use other strategies to manage or control anxiety like using soothing self-talk (like, saying "everything will be fine") or refusing to go out unless a supportive person is close by."

- ***Ask the client of to describe something they avoid or ways that they try to control their anxiety***

- ***AFFIRM THEIR EXPERIENCE***

- ***Then, say:***

- I completely understand why you avoid/ minimize/ escape X social situations –

that's our natural tendency when we're uncomfortable or anxious. So it makes complete sense that you escape/ avoid/ minimize when you're socially uncomfortable. But let's take a moment to reflect on that. Can you see any down sides to escaping/ avoiding/ minimizing participation in X situation? What might those be?

- If participant resists, you can AFFIRM again then say, "of course, I would probably do the same thing if I were you. I guess I'm wondering – Is this response completely satisfying to you and meeting your long-term life goals?

- If they say yes or it's fine, then you can say "I assume you're here because some of your life goals, or something in your life isn't being met, so can you tell me a little bit about what that is for you?"

- Yeah exactly, so that's the unfortunate thing, is that trying to avoid or escape feeling anxious can actually create its own problems. Avoiding or getting out of anxiety-provoking situations prevents us from doing things we care about or that help us reach our life goals, like giving presentations in front of people, talking to people in authority, or forming new friendships."

- ***Can you relate to or see that in your life? Affirm answer***

- "And another important point is that avoiding or escaping anxiety doesn't actually work to decrease our anxiety over the long term – actually, it often increases our level of anxiety over time because we never learn how to interact with our anxiety in ways that work for us.

- Have you ever experienced that, where your anxiety about something has gotten worse over time or become harder to deal with the more you avoided it?

Reflect on the process of ineffectiveness of avoidance and their experience with it

- Also, the process of trying to avoid or battle with our emotions takes away from our ability to instead use that energy to follow our chosen life directions. We all have things that give us a sense of purpose and influence the steps that we take in our lives. Unfortunately, our avoidance responses to anxious thoughts, feelings, and situations often prevent us from fully following a path full of meaningful or important life experiences."

Ask the client how much energy they expend when trying to battle these emotions, and how they would rather spend that energy

Then say, "So if we can learn to hold on what we value in social situations and keep that at the center of our minds when we experience anxiety, we become freer to pursue our values even when anxiety shows up.

- "Everyone in the world experiences fear and anxiety- they're natural- and although they can feel scary when they show up (or something like that), how much they interfere is really dependent on how much power we give them.…Fear and anxiety gain power when we spend time and effort to struggling with them at the expense of pursuing other valued life activities and life goals."

If the patient wants to know why they have Social anxiety, explain that there are several theories about the origin of anxiety, but that it is impossible to know for sure how and why it develops in individuals. It is probably a combination of many environmental and biological factors.

Values Rationale for Treatment (10 min)

In this part of the session you will explain Values

Say

- *"*So, basically, we tend to avoid situations and feelings that cause anxiety, but in the process of doing so, we lose the opportunity to do a lot of the things that would really enrich our lives."

- "Responding to anxiety by avoiding feared situations can serve as obstacles to valued living."

Ask the Client to List 3 ways in which your unwillingness to experience anxiety has interfered with your ability to do things that are meaningful to you.

Prompt interpersonal values assessment:

Say

- "Okay, so we've talked about how avoidance can interfere with doing things that feel worthwhile, so let's talk about what it really means to live a life in line with what you personally value. Everyone has a sense of things that are most meaningful to them deep down."

Ask the client

- "What do you feel motivates you the most in your life?

- "Is there something that comes to mind as to what you would ideally like your life to be about, if it were guided by what has meaning to you?

Say

- "For example, people value a wide variety of things- they could be connections

with other people, dedication to family or friends, helping others, living a spiritual life, creative self-expression, development of intimate relationships, a quest for knowledge, pursuit of meaningful work, gaining material comfort, making contributions to a scientific field, or lots of others"

Ask

- "So what are some things you value the most in your life?
- "If it's seeming kind of difficult to pinpoint what you really value, you might want to start by figuring out which areas of your life cause you to feel the most intensely, even feelings of pain, because this often shows you what you really care about.
    - So, for example, if someone often suffers from feelings of social rejection, this would indicate that an important value to them is social involvement and a sense of belonging. Or, if someone's really bothered by not having a clear vision for what kind of career they really want, it might be because they feel it's important to contribute to the world in some way."
- "So, let's imagine that your anxiety wasn't something that could interfere with your social relationships (at work, school, with friends, performing, etc.). If this were the case, what kinds of meaningful actions would you engage in?"

Experiential Exercise Values (5-10 mins)

Ask patients to fill out the Bulls Eye Worksheet

- Incorporate BULLSEYE Worksheet

Tell patients it is important that they understand this explanation. Ask if they have any questions, or if you can clarify anything for them.

- Briefly reflect on their responses to the worksheet and make sure they understood/interpreted correctly…clarify if not.

Exposure Rationale: Values (5 min)

You will now explain that you are going to ask them to do an exposure task:

Give the following description of exposure

- "Today, in order to help you on the path to living a life in which anxiety does get in the way of anything you want to do, we will use an approach called **exposure.**

This is a commonly used and effective technique for helping people gradually face feared situations and practice not letting their fears get in the way of what they want to do in life. So basically, exposure therapy involves helping you to practice doing things that are connected to what you value most in life, but you avoid because of their association with anxiety.

- "By practicing doing things that are connected to your core values, you can realize that it's acceptable to experience anxiety in order to live a full and valued life."

- "You will also see that you can focus your energy on things that are meaningful to you, *even if* you experience anxious thoughts and feelings in the process. We will work on overcoming your barriers to living in a way that matches up with your values by having you engage in activities that you usually avoid because they produce too much anxiety."

- Does this make sense? How does this sound to you? Do you have any questions?

Explain how we will do this:

- "So, the way we will work on these skills is by asking you to put yourself in a social situation that is similar to some of the situations you might find yourself in during daily life, such as in class, and ask you to engage with the situation as fully as possible."

- "We encourage you to commit to allowing yourself to experience anxiety or any other feelings that might come up while choosing to continue doing what you need to do in the situation. When you do this repeatedly, you will gain the rewards that come with doing things that are important to you, like maybe something like initiating a conversation with a stranger, even if anxiety arises."

- "You will learn that you actually can engage in valued activities that you previously avoided because they were associated with anxiety, and you can still follow a path that is really meaningful to you.

- Basically, overall, we are doing this so that you become really skilled at doing things that make you anxious, in order to move forward in living in ways that are meaningful to you.- so that you develop the ability to take on social situations that make you feel awkward and anxious with openness and focus to take effective action, guided by your values.

- Does this make sense? How does this sound to you? What questions do you have?

Elicit and carefully answer any questions patients may have about the exposure

- Explain exercise:
    - So, what we will be asking you to do is to give a speech into this camera. I'll leave the room, and you will stand over here (show them) and deliver your speech into the camera. It will be recorded and later evaluated by a panel of judges. You'll have 5 minutes beforehand to mentally prepare, and then I will come in and let you know that you can begin your speech. There will be 3 speech topics, and we will give you 10 minutes for the speech. You can talk about any or all of the topics you want, but we ask that you try to talk about as many as possible and to fill up the whole 10 minutes. If you need to stop before then, you can hold up this sign (show them note card that says "stop") and then leave the room. Otherwise, I'll come in and let you know when the 10 minutes are up.
    - Is that all okay? Do you have any questions before we start?

After the speech

- Okay, now I'll let you just relax here for a few minutes, feel free to use the restroom or whatever you need, and I'll be back in a few minutes and you'll just be filling out a few more questionnaires. (give them 5 mins)

Homework Explanation (5 min)

- Explain "homework"
- Tell them that the first page has a basic overview of what we discussed today, just because we covered a lot, and we encourage you to read it before you complete your practice exposure exercises.
- When explaining homework, use the wording of values to reinforce why they should practice these skills

Patients should have the following 2 forms by the end of the first session: "Bullseye", "Homework ".

- Patients should complete self-monitoring of exposure forms each day and bring them to the next session.

Values: Session 2

Primary goals of the second session include 1) collecting homework; 2) review the model of and the rationale for treatment; 3) complete a second exposure task 4) evaluate how helpful the intervention was for the client

Homework Collection (5 min)

Start the session by going over the homework worksheet with the client. Read descriptions of exposure and ask them how each experience went. Ask questions that will help you assess the accurate monitoring of time spent on exposures. Write comments in the space provided on Homework Sheet.

Review Rationale for Treatment (10 min)

Say the following:

"In this session, I am going to ask you to engage in another exposure activity. However, before we get to that, I want to review with you the basic ideas behind our exposure exercise and the skills we discussed last time."

Ask if the patient can remember the values you discussed last time"

Ask the client to describe why exposure works from the rationale you gave at the first session:

"Can you recall the explanation I gave you last time about how the treatment works?"

Give the following description:

Debriefing After Last Exposure Task (5 min)

-Thank you so much, we know this is difficult and we really appreciate it.

-Ask how they are feeling, talk about it, and make sure they are okay.

-Ask for feedback- what they thought about it.

Was the homework helpful? Did they understand the point of the exercises and the rationales, etc.

-Do you they have any additional questions, suggestions, etc.

-Referrals!

Appendix C

Measures

SPEECH TOPICS

Speech Task A

Your speech topics are:

Your view on **abortion**

Your view on **live animal research**

Your view on **the death penalty**

Speech Task B

Your speech topics are:

Your view on **prayer in public schools**

Your view on **doctor-assisted suicide in terminally ill patients**

Your view on **gay marriage**

Practice Public Speaking Task

Participant ID:

Your speech topics are:

You will have 10 minutes for your speech. You can talk about whichever topics you want to, but it is best to try to cover all of them and to fill up as much of the allotted time as possible.

Date:

Session #

1. How much did you use the skills taught earlier during the speech?

0 1 2 3 4

(Not at all) (A little) (Some) (A lot)

Please answer the following questions as honestly as possible, with 1 being the least and 10 being the most.

3. Willingness:

Rate how willing you would be to do the exercise again.

1 2 3 4 5 6 7 8 9 10

4. Distress:

Rate how distressing these experiences were for you today.

1 2 3 4 5 6 7 8 9 10

5. Anxiety Before Reading your Exposure:

Rate what your anxiety level was before the speech.

1 2 3 4 5 6 7 8 9 10

6. Anxiety During Exposure:

Rate what your HIGHEST anxiety level was during the speech.

1 2 3 4 5 6 7 8 9 10

7. Anxiety After Reading your Speech:

Rate what your anxiety level was after the speech.

1 2 3 4 5 6 7 8 9 10

SUDs

Baseline

How anxious do you feel at this moment?

1= Not at all 10= Extremely

Please circle one number

1----2----3----4----5----6----7----8----9----10

Participant ID:
Date:
Session #

SUDs PRE Task

How anxious do you feel at this moment?

1= Not at all 10= Extremely

Please circle one number

1----2----3----4----5----6----7----8----9----10

Participant ID:
Date:
Session #

SUDs POST Task

How anxious do you feel at this moment?

1= Not at all 10= Extremely

Please circle one number

1----2----3----4----5----6----7----8----9----10

DEMOGRAPHICS

1. Birthdate: _____

2. Current age: _____

3. Gender: _____

4. Marital Status (circle one)
Single
Married
Divorced
Widowed
Other: _____

5. Do you have any children? (circle one) Yes No
If so, how many? (circle one) 1 2 3 4+

6. What is your ethnic/ racial identity? (please circle)
African American
Caucasian
Hispanic/ Latino
Asian or Pacific Islander
Native American
Biracial: _____ (please indicate)
Other: _____ (please indicate)

7. What is your religious affiliation, if any? _____

8. Current relationship status (circle one)
Partnered: ongoing, committed relationship but not married
Dating: casual, uncommitted relationship(s)
Single Married
Divorced / separated Other: _____

9. What is your highest education level so far? (circle one)
Some high school
High school diploma/ GED
Some college
2 year college degree
Bachelor's degree
Graduate degree: _____ (indicate which)
Other: _____

10. What is your mother's highest education level? (circle one)
Some high school
High school diploma/ GED
Some college
2 year college degree
Bachelor's degree
Graduate degree: _____ (indicate which)
Other: _____

11. What is your father's highest education level? (circle one)
Some high school
High school diploma/ GED
Some college
2 year college degree
Bachelor's degree
Graduate degree: _____ (indicate which)
Other: _____

12. What is your current employment status? (circle one)
Employed full-time (includes self-employment)
Student full-time
Student part-time
Employed part-time
Disability
Other: _____

13. If you are employed, what is your current job? _____

Leibowitz Social Anxiety Scale

INSTRUCTIONS: This measure assesses the way that social phobia plays a role in your life across a variety of situations. Read each situation carefully and answer two questions about that situation. The first question asks how anxious or fearful you feel in the situation. The second question asks how often you avoid the situation. If you come across a situation that you ordinarily do not experience, we ask that you imagine "what if you were faced with that situation," and then, rate the degree to which you would fear this hypothetical situation and how often you would tend to avoid it. Please base your ratings on the way that the situations have affected you **IN THE LAST WEEK**. Please complete the following scale with the most suitable answer.

		Fear or Anxiety 0 = None 1 = Mild 2 = Moderate 3 = Severe	Avoidance 0 = Never (0%) 1 = Occasionally (1-33%) 2 = Often (33-67%) 3 = Usually (67-100%)
1.	Telephoning in public (P)		
2.	Participating in small groups (P)		
3.	Eating in public places (P)		
4.	Drinking with others in public places (P)		
5.	Talking to people in authority (S)		
6.	Acting, performing or giving a talk in front of an audience (P)		
7.	Going to a party (S)		
8.	Working while being observed (P)		
9.	Writing while being observed (P)		
10.	Calling someone you don't know very well (S)		
11.	Talking with people you don't know very well (S)		
12.	Meeting strangers (S)		
13.	Urinating n a public bathroom (P)		
14.	Entering a room when others are already seated (P)		
15.	Being the center of attention (S)		
16.	Speaking up at a meeting (P)		
17.	Taking a test (P)		
18.	Expressing a disagreement or disapproval to people you don't know very well (S)		
19.	Looking at people you don't know very well in the eyes (S)		
20.	Giving a report to a group (P)		
21.	Trying to pick up someone (P)		
22.	Returning goods to a store (S)		
23.	Giving a party (S)		
24.	Resisting a high pressure salesperson (S)		
25.	Reading a passage from a book in front of an audience		
26.	Acting, performing or giving a talk in front of a video camera (no audience)		
27.	Reading a passage from a book in front of a video camera (no audience)		

Personal Report Communication Apprehension

DIRECTIONS: This instrument is composed of 6 statements concerning your feelings about public speaking. Please indicate the degree to which each statement applies to you by marking whether you (1) strongly disagree, (2) disagree, (3) are undecided, (4) agree, or (5) strongly agree. Work quickly; record your first impression.

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1.	I have no fear of giving a speech.	0	1	2	3	4
2.	Certain parts of my body feel very tense and rigid while I am giving a speech.	0	1	2	3	4
3.	I feel relaxed while giving a speech.	0	1	2	3	4
4.	My thoughts become confused and jumbled when I am giving a speech.	0	1	2	3	4
5.	I face the prospect of giving a speech with confidence.	0	1	2	3	4
6.	When giving a speech, I get so nervous I forget facts I really know.	0	1	2	3	4

Fear of Negative Evaluation

For the following statements, please answer each in terms of whether it is true or false for you. Circle T for true or F for false.

T F 1. I rarely worry about seeming foolish to others.
T F 2. I worry about what people will think of me even when I know it doesn't make any difference.
T F 3. I become tense and jittery if I know someone is sizing me up.
T F 4. I am unconcerned even if I know people are forming an unfavorable impression of me.
T F 5. I feel very upset when I commit some social error.
T F 6. The opinions that important people have of me cause me little concern.
T F 7. I am often afraid that I may look ridiculous or make a fool of myself.
T F 8. I react very little when other people disapprove of me.
T F 9. I am frequently afraid of other people noticing my shortcomings.
T F 10. The disapproval of others would have little effect on me.
T F 11. If someone is evaluation me I tend to expect the worst.
T F 12. I rarely worry about what kind of impression I am making on someone.
T F 13. I am afraid that others will not approve of me.
T F 14. I am afraid that people will find fault with me.
T F 15. Other people's opinions of me do not bother me.
T F 16. I am not necessarily upset if I do not please someone.
T F 17. When I am talking to someone, I worry about what they may be thinking about me.
T F 18. I feel that you can't help making social errors sometimes, so why worry about it.
T F 19. I am usually worried about what kind of impression I make.
T F 20. I worry a lot about what my superiors think of me.
T F 21. If I know someone is judging me, it has little effect on me.
T F 22. I worry that others will think I am not worthwhile.
T F 23. I worry very little about what others may think of me.
T F 24. Sometimes I think I am too concerned with what other people think of me.
T F 25. I often worry that I will say or do the wrong things.
T F 26. I am often indifferent to the opinions others have of me.
T F 27. I am usually confident that others will have a favorable impression of me.
T F 28. I often worry that people who are important to me won't think very much of me.
T F 29. I brood about the opinions my friends have about me.
T F 30. I become tense and jittery if I know I am being judged by my superiors.

Personal Report Confidence as Speaker

Instructions: This instrument is composed of 12 items regarding your feelings of confidence as a speaker. Decide whether "true" or "false" most represents your feelings associated with public speaking. Work quickly and don't spend too much time on any one question; we want your first impression.

T F 1. My hands tremble when I try to handle objects on the platform

T F 2. I am in constant fear of forgetting my speech

T F 3. While preparing a speech I am in a constant state of anxiety

T F 4. My thoughts become confused and jumbled when I speak before an audience

T F 5. Although I talk fluently with friends I am at a loss for words on the platform

T F 6. The faces of my audience are blurred when I look at them

T F 7. I feel disgusted with myself after trying to address a group of people

T F 8. I perspire and tremble just before getting up to speak

T F 9. My posture feels strained and unnatural

T F 10.I am fearful and tense all the while I am speaking before a group of people

T F 11. It is difficult for me to search my mind calmly for the right words to express my thoughts

T F 12.1 am terrified at the thought of speaking before a group of people

Self-statements during public speaking

Please imagine what you have typically felt and thought to yourself during any kind of public speaking situations. Imagining these situations, how much do you agree with the statements given below.

Please rate the degree of your agreement on a scale between 0 (if you do not agree at all) to 5 (if you agree extremely with the statement).

		Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
1.	What do I have to lose; it's worth a try	1	1	2	3	4
2.	I'm a loser	1	1	2	3	4
3.	This is an awkward situation but I can handle it	0	1	2	3	4
4.	A failure in this situation would be more proof of my incapacity	0	1	2	3	4
5.	Even if things don't go well, it's no catastrophe	0	1	2	3	4
6.	I can handle everything	0	1	2	3	4
7.	What I say will probably sound stupid	1	1	2	3	4
8.	I'll probably "bomb out" anyway	1	1	2	3	4
9.	Instead of worrying I could concentrate on what I want to say	0	1	2	3	4

Social Interaction Anxiety Scale

For each question, please circle a number to indicate the degree to which you feel the statement is characteristic or true of you. The rating scale is as follows:
0=Not at all characteristic or true of me
1=Slightly characteristic or true of me
2=Moderately characteristic or true of me
3=Very characteristic or true of me
4=Extremely characteristic or true of me

		Not at all	Slightly	Moderately	Very	Extremely
1.	I get nervous if I have to speak with someone in authority (teacher, boss, etc.)	0	1	2	3	4
2.	I have difficulty making eye-contact with others.	0	1	2	3	4
3.	I become tense if I have to talk about myself or my feelings.	0	1	2	3	4
4.	I find difficulty mixing comfortably with the people I work with.	0	1	2	3	4
5.	I find it easy to make friends of my own age.	0	1	2	3	4
6.	I tense-up if I meet an acquaintance on the street.	0	1	2	3	4
7.	When mixing socially, I am uncomfortable.	0	1	2	3	4
8.	I feel tense if I am alone with just one person.	0	1	2	3	4
9.	I am at ease meeting people at parties, etc.	0	1	2	3	4
10.	I have difficulty talking with other people.	0	1	2	3	4

		Not at all	**Slightly**	**Moderately**	**Very**	**Extremely**
11.	I worry about expressing myself in case I appear awkward.	0	1	2	3	4
		Not at all	Slightly	Moderately	Very	Extremely
12.	I find it difficult to disagree with another's point of view.	0	1	2	3	4
13.	I have difficulty talking to an attractive person of the opposite sex.	0	1	2	3	4
14.	I find myself worrying that I won't know what to say in social situations.	0	1	2	3	4
15.	I am nervous mixing with people I don't know well.	0	1	2	3	4
16.	I feel I'll say something embarrassing when talking.	0	1	2	3	4
17.	When mixing in a group, I find myself worrying I will be ignored.	0	1	2	3	4
18.	I am tense mixing in a group.	0	1	2	3	4
19.	I am unsure whether to greet someone I know only slightly.	0	1	2	3	4
20.	I find it easy to think of things to talk about.	0	1	2	3	4

Homework: All groups

Homework

Please practice the skills you learned today on your own during the next week by engaging in social situations that are challenging for you **and that you do not normally push yourself to do**. Please try to complete at least one exercise in each of the 3 categories, and try to practice **as many times** throughout the week as possible. You do not have to fill all the spots, just try to practice as much as you can. **Be creative** – you do not have to stick to the examples provided, just use them as a guideline and try to practice a variety of situations that make you anxious.

Instructions

Before you complete each practice exercise, please refresh the concepts by reading the first sheet of this packet.

1 .Please record each of the public speaking situations that you do each day for the next week- please record as soon as possible after completing the exercise.
2. Please pay close attention to your thoughts and feelings while you are doing this task.
4. Use the recording form to fill in your Anxiety levels on a scale from 0-100 **before**, **during**, and **after** the exposure.
5. Use the recording form to report how willing you are to complete the task on a scale from (1-10) **before**, **after**, and **during** the exposure.
6. Record the amount of time you were in the situation.
7. After your last practice exercise, fill out the questions at the end of the worksheet.

It is important for you to be as honest and accurate as possible when completing this worksheet, even if you did not complete as much as you had intended.

3 Example Types of Social Situations:

1. **Initiate a social interaction with someone you know but are shy around**; for example, invite an acquaintance to a group activity or call a friend or family member who you often feel intimidated to call.
2. **Speak up in a meeting or classroom environment**; if you do not have any classes or meetings this week, try to speak up in any group setting you might be in; take part in a group activity that you normally avoid; assert yourself in a public situation
3. **Initiate a conversation with a stranger;** even if brief, for example, a cashier, someone in line at the store, someone in your office or school environment, etc.

Recording Sheet

PRACTICE 1

1. **Day/Time**
2. **What was the situation/what did you do?**

_____

_____

_____

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 2

1. **Day/Time**
2. **What was the situation/what did you do?**

_____

_____

_____

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 3

1. **Day/Time**
2. **What was the situation/what did you do?**

_____

_____

_____

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 4

1. **Day/Time**
2. **What was the situation/what did you do?**

_____

_____

_____

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 5

1. **Day/Time**
2. **What was the situation/what did you do?**

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 6

1. **Day/Time**
2. **What was the situation/what did you do?**

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 7

1. **Day/Time**
2. **What was the situation/what did you do?**

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 8

1. **Day/Time**
2. **What was the situation/what did you do?**

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 9

3. **Day/Time**
4. **What was the situation/what did you do?**

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 10

3. **Day/Time**
4. **What was the situation/what did you do?**

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 11

3. **Day/Time**
4. **What was the situation/what did you do?**

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

PRACTICE 12

3. **Day/Time**
4. **What was the situation/what did you do?**

Pre Anxiety (0-100)	Peak Anxiety (0-100)	Post Anxiety (0-100)	Willingness (0-10)	Time (minutes)

SUMMARY OF CONCEPTS DISCUSSED IN SESSION 1

Background

- It is totally normal and actually a very common human tendency to fear social situations.
- When we fear social situations, we often tend to try to escape these uncomfortable situations by either avoiding them or things like having a close friend nearby.
- Unfortunately, trying to avoid or escape anxiety actually leaves us *more* anxious, and starts a cycle of more anxiety and more avoidance. This is because we never learn that we can successfully remain in situations even when we feel anxious.
- Although it may feel relieving in the short term to escape situations that make us feel anxious, in the long term, it actually makes us more anxious.
- If we remain in a situation and allow our anxiety to peak, it will eventually go back down on its own.
- We can learn to place ourselves in situations that are not dangerous but frighten us or make us feel awkward, nervous, or anxious in order to see that our fear will go down over time. When we do this repeatedly, we have the ability to extinguish the fear response.

This approach to dealing with anxiety

- Practicing exposing ourselves to challenging situations is a commonly used and very effective technique for helping people to gradually face situations they fear in order to decrease their level of anxiety so it doesn't interfere with their life.
- It can help us to practice doing things that we really want to do, but we avoid because they make us feel too anxious.
- You will learn that you can still do the things you want to, even if they make you anxious now, because as you practice, your fear will decrease.
- You will learn how to overcome your fear and anxiety so that you feel stronger in situations that used to make you a lot more anxious.
- When you repeatedly practice being in social situations that make you uncomfortable, you will learn the rewards that come from ultimately feeling less anxious in situations that you want to engage in.
- The purpose is for you to become really skilled at taking on social situations that make you feel awkward or anxious, learning that your fear will decrease over time and that you can overcome your anxiety.

Summary Sheet Attached to Homework: Psychological Flexibility

SUMMARY OF CONCEPTS DISCUSSED IN SESSION 1

Background

- It is totally normal and actually a very common human tendency to fear social situations.
- When we fear social situations, we often tend to try to escape these uncomfortable situations by either avoiding them or things like having a close friend nearby.
- Unfortunately, trying to avoid or escape anxiety actually leaves us *more* anxious, and starts a cycle of more anxiety and more avoidance. This is because we never learn that we can successfully remain in situations even when we feel anxious.
- Also, when we spend a lot of our focus and energy struggle against our feelings of anxiety, it takes away from our ability to continue doing things that are meaningful to use in our lives.
- A lot of these difficulties stem from trying to fight and struggle with and resist anxious thoughts and feelings, rather than opening up to them and letting them hang out without bothering us as much.
- We can learn to interact with our thoughts (see *passengers on a bus* exercise) and feelings in a way that gives them less power and allows us to move forward in our lives toward what is important to us, even if we do feel anxiety in the process. Anxiety does not have to get in the way of us doing what we want to.
- Some things to think about:
    - What if we could find a way to see anxiety as a combination of thoughts and feelings, and find a way to continue on in life despite those feelings?
    - What if anxiety doesn't have to go away or change in order for you to change your life?

This approach to dealing with anxiety

- Practicing exposing ourselves to challenging situations is a commonly used and very effective technique for helping people to gradually face situations they fear and not let their fears get in the way of what they want in life.
- It can help us to practice doing things that we really want to do, but we avoid because they make us feel anxious.
- You will learn that you can still focus your energy on things that are important for you to do or accomplish, even if you experience anxiety in the process.
- You will learn how to live with your challenging thoughts and feelings rather than constantly having to fight and struggle with them. You will learn how to open up to and experience these feelings without them taking you over or controlling your behaviors.

- When you repeatedly practice being in social situations that make you uncomfortable, you will learn the rewards that come from doing things that matter

in your life (for example, forming new friendships) even if anxious feelings and thoughts arise.

- The purpose is for you to become really skilled at taking on social situations that make you feel awkward or anxious, with openness to the experience and focus, in order to move forward and pursue the things that you want in your life.

Summary Sheet Attached to Homework: Values

SUMMARY OF CONCEPTS DISCUSSED IN SESSION 1

Background

- It is totally normal and actually a very common human tendency to fear social situations.
- When we fear social situations, we often tend to try to escape these uncomfortable situations by either avoiding them or things like having a close friend nearby.
- Unfortunately, trying to avoid or escape anxiety actually leaves us *more* anxious, and starts a cycle of more anxiety and more avoidance. This is because we never learn that we can successfully remain in situations even when we feel anxious.
- Also, when we spend a lot of our focus and energy struggle against our feelings of anxiety, it takes away from our ability to continue doing things that are meaningful to use in our lives.
- A lot of these difficulties stem from spending time and energy struggling against and resisting our anxious thoughts and feelings instead of opening up to them in order to spend that energy leading us toward our values.
- We can learn to connect more deeply with our values (reflect on *Bulls Eye* worksheet) in a way that gives us more purpose and allows us to move forward in our lives toward what is important to us, even if we do feel anxiety in the process. Anxiety does not have to get in the way of us doing what we want to.
- Some things to think about:
    - What if we could find a way to open up to our anxious feeling and allow them to come up, and find a way to continue on in life despite those feelings?
    - What if anxiety doesn't have to go away or change in order for you to change your life?

This approach to dealing with anxiety

- Practicing exposing ourselves to challenging situations is a commonly used and very effective technique for helping people to gradually face situations they fear and not let their fears get in the way of what they want in life.
- It can help us to practice doing things that we really want to do, but we avoid because they make us feel anxious.
- You will learn that you can still focus your energy on things that are important for you to do or accomplish, even if you experience anxiety in the process.
- You will learn that you can still focus your energy on things that are important for you to do or accomplish, even if you experience anxiety in the process.

- When you repeatedly practice being in social situations that make you uncomfortable, you will learn the rewards that come from doing things that matter in your life (for example, forming new friendships) even if anxious feelings and

thoughts arise.

- The purpose is for you to become really skilled at taking on social situations that make you feel awkward or anxious, with openness to the experience and focus, in order to move forward and pursue the things that you want in your life.

Treatment Evaluation Inventory-Short Form

Satisfaction Survey

Please complete the items listed below by placing a checkmark on the line next to each question that best indicates how you feel about the strategy. Please read the items over carefully because a checkmark accidentally placed on one space rather that another may not represent the meaning you intended.

1. I found this strategy to be an acceptable way of dealing with my behavior.

_____	_____	_____	_____	_____
strongly disagree	disagree	neutral	agree	strongly agree

2. I would be willing to use this procedure if I had to change my behavior.

_____	_____	_____	_____	_____
strongly disagree	disagree	neutral	agree	strongly agree

3 . I like the procedures used in this strategy.

_____	_____	_____	_____	_____
strongly disagree	disagree	neutral	agree	strongly agree

4. I believe this strategy is likely to be effective.

_____	_____	_____	_____	_____
strongly disagree	disagree	neutral	agree	strongly agree

5. I experienced discomfort as a result of the strategy.

_____	_____	_____	_____	_____
strongly disagree	disagree	neutral	agree	strongly agree

6. I believe this strategy is likely to result in permanent improvement.

_____	_____	_____	_____	_____
strongly disagree	disagree	neutral	agree	strongly agree

7. I believe it would be acceptable to use this strategy with individuals who cannot choose strategies for themselves.

_____	_____	_____	_____	_____
strongly disagree	disagree	neutral	agree	strongly agree

8. Overall, I have a positive reaction to this strategy.

_____	_____	_____	_____	_____
strongly disagree	disagree	neutral	agree	strongly

Feelings About This Intervention: TC

Please write the number next to each question that matches your view of this treatment so far. These words describe how helpful (or not) you believe the treatment will be:

Not At All		A little bit		Somewhat		Mostly		Very Much
0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**

1 How helpful does this type of treatment seem to you for people with anxiety? _____

2 How much do you believe this **treatment approach** will help you? _____

3 How much do you believe this **therapist/ group leader** will help you? _____

4 How confident would you be in recommending this treatment program to a friend who is overly anxious? _____

5 How successful do you feel this treatment would be in helping you with other problems involving anxiety, like headaches, insomnia, etc? _____

6 How much do you believe this treatment will help you lead the life you want to live? _____

Personal Reactions to the Rationales

1 = “Not at all” , 7 = “Extremely”

If you experienced anxiety and went to see a therapist, how helpful do you think this strategy would be for you? 1 2 3 4 5 6 7

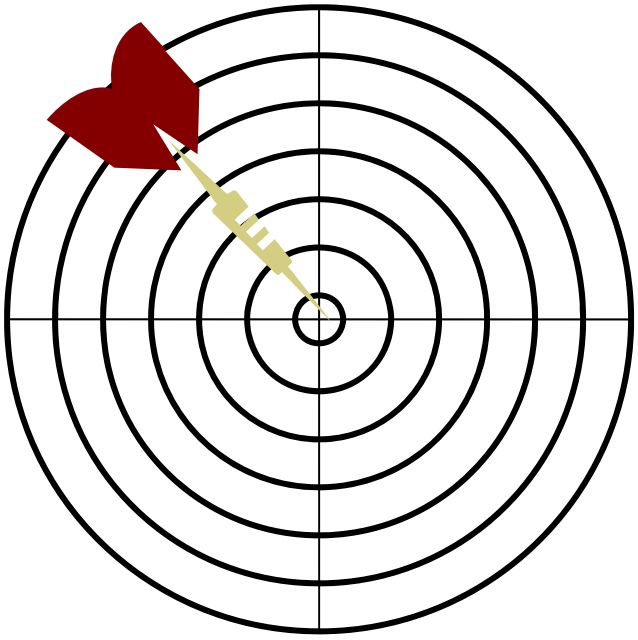
To what extent do you think that this strategy would help you to understand the causes of your anxiety? 1 2 3 4 5 6 7

To what extent do you think that this strategy would help you learn effective ways to cope with your anxiety?
1 2 3 4 5 6 7

If you were to seek help for anxiety, how likely would you be to choose this type of strategy?
1 2 3 4 5 6 7

If you were to try this type of strategy, how effective would it be in helping you with your anxiety?
1 2 3 4 5 6 7

Bull´s Eye



Age:_____

Sex: (Circle): Woman Man

Civil status: (Circle) Married Living together Girl/-Boyfriend Single

Children: (yes or no) _____ If yes how many:_____

Occupation:_____

Bull's-Eye

The Bull's Eye dartboard on page 3 is divided into four areas of living that are important in people's lives: work/education, leisure, relationships and personal growth/health.

1) Work/Education refers to your career aims, your values about improving your education and knowledge, and generally feeling of use to those close to you or to your community (i.e., volunteering, overseeing your household, etc.)

2) Leisure refers to how you play in your life, how you enjoy yourself, your hobbies or other activities that you spend your free time doing (i.e., gardening, sewing, coaching a children's soccer team, fishing, playing sports);

3) Relationships refers to intimacy in your life, relationships with your children, your family of origin, your friends and social contacts in the community;

4) Personal growth/health refers to your spiritual life, either in organized religion or personal expressions of spirituality, exercise, nutrition, and addressing health risk factors like drinking, drug use, smoking, weight;

In this exercise, you will be asked to look more closely at your personal values in each of these areas and write them out. Then, you will evaluate how close you are to living your life in keeping with your values. You will also take a closer look at the barriers or obstacles in your life that stand between you and the kind of life you want to live. Don't rush through this; just take your time.

Part 1. Identify Your Values

Start by describing your *values* within each of the four values areas. Think about each area in terms of your dreams, like you had the possibility to get your wishes completely fulfilled. What are the qualities that you would like to get out of each area and what are your expectations from these areas of your life? Your value should not be a specific goal but instead reflect a way you would like to live your life over time. For example, getting married might be a goal you have in life, but it just reflects your value of being an affectionate, honest and loving partner. To accompany your son to a baseball game might be a goal; to be an involved and interested parent might be the value. **Note!** Write your value for each area on the lines provided below. It is ***your*** personal values that are important in this exercise.

Work/education: _____

_____

*Leisu*re: _____

_____

Relationships: _____

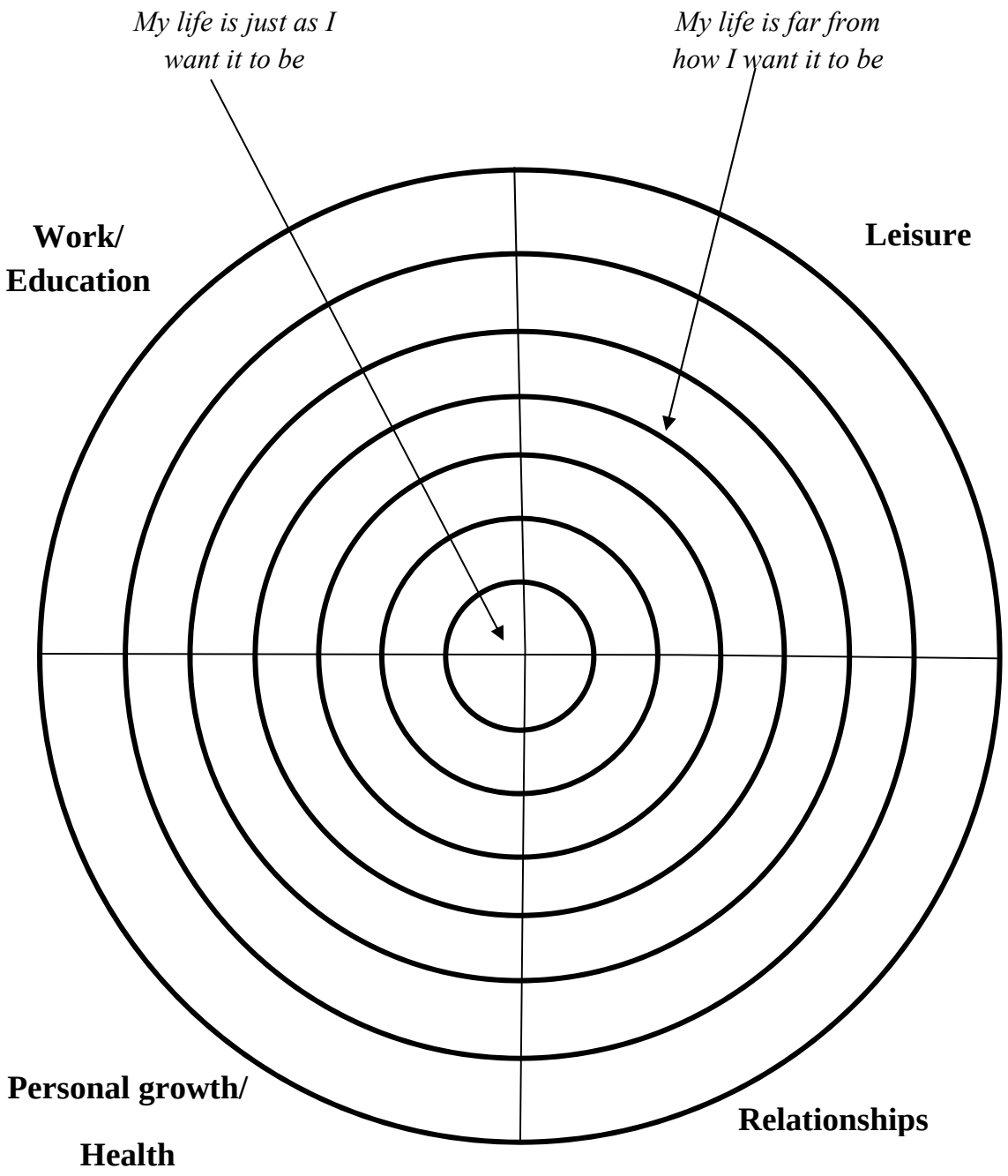
_____

Personal growth/health: _____

_____

Now, look again at the values you have written above. Think of your value as "Bull's Eye" (the middle of the dart board). Bull's Eye is exactly how you want your life to be, a direct hit, where you are living your life in a way that is consistent with your value. Now, make an X on the dart board in each area that best represents where you stand today. An X in Bull's Eye means that you are living completely in keeping with your value for that area of living. An X far from Bulls Eye means that your life is way off the mark in terms of how you are living your life.

Since there are four areas of valued living, you should mark **four Xs** on the dart board. **Note!** Use the dart board on this page before you go to Part 2 of this exercise.


My life is just as I want it to be
My life is far from how I want it to be
Work/ Education
Leisure
Personal growth/ Health
Relationships

Part 2: Identify Your Obstacles

Now write down what stands between you and living your current life as you want to, from what you have written in your areas of value. When you think of the life you want to live and the values that you would like to put in play, what gets in the way of you living that kind of life? Describe any obstacle (s) on the lines below.

_____

_____

_____

_____

Now estimate to what extent the obstacle (s) you just described can prevent you from living your life in a way that is in keeping with your values. Circle one number below that best describes how powerful this obstacle (s) is in your life.

1 2 3 4 5 6 7

Doesn't prevent me at all Prevents me completely

Part 3. My Valued Action Plan

Think about actions you can take in your daily life that would tell you that you are zeroing in on the bulls-eye in each important area of your life. These actions could be small steps toward a particular goal or they could just be actions that reflect what you want to be about as a person. Usually, taking a valued step includes being willing to encounter the obstacle (s) you identified earlier and to take the action anyway. ***Try to identify at least one value based action you are willing to take in each of the four areas listed below.***

Work/education: _____

_____

*Leisu*re: _____

_____

Relationships: _____

_____

Personal growth/health: _____

_____

Changing Your Odds: _____

Negative thought: _____

How many times has it happened? _____

Reasons why I continue to worry about it: _____

1. Avoidance behavior _____

2. Mistaken belief that past evidence does not apply__

3. Mistaken belief that luck or my extra-cautious behaviors have prevented it from happening_____

4. Mistaken belief that what I most worried about has come true _____

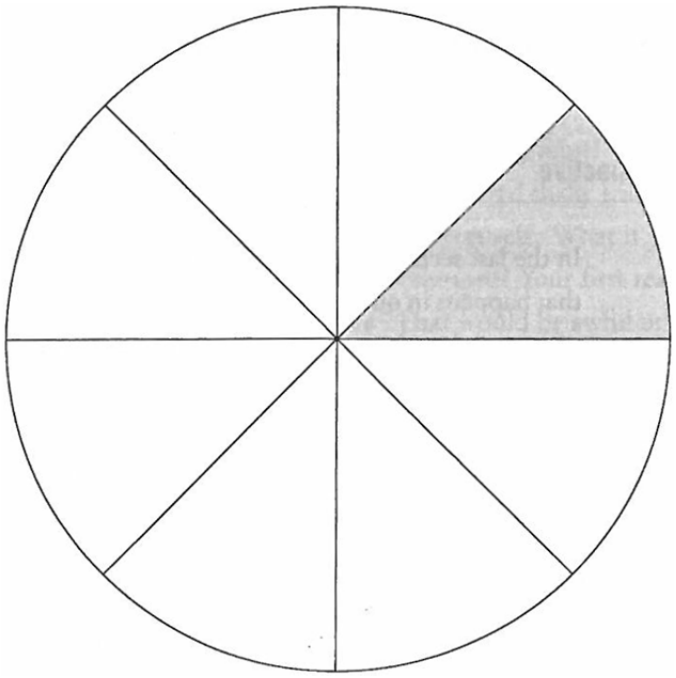
5. Mistaken belief that dangers increase with intensity of *anxiety* or physical symptoms _____

What is the evidence?_____

_____

What are the real odds? (0-100) _____

What are different thoughts? *(Fill in the pie chart, including your anxious thoughts as the shaded piece of the pie):*



SA-AAQ

Please respond to the following items focusing on social anxiety. Social anxiety is the type of anxiety that is experienced when you are in situations where you may be observed, judged or evaluated by others. People vary in the amount of social anxiety they experience, but most people experience at least some social anxiety in at least a few situations. Common situations that provoke social anxiety include giving a presentation or speech, attending a job interview, going to a party, meeting new people, and going on a blind date. Please think about the anxiety you may experience when you are in these types of situations while you answer the questions below on the following 7-point scale.

Never True	Very Seldom True	Seldom True	Sometimes True	Frequently True	Almost Always True	Always True
1	2	3	4	5	6	7

1.	Despite feeling socially anxious at times, I am in control of my life.	1	2	3	4	5	6	7
2.	If I am anxious in a social situation, I can still remain in it.	1	2	3	4	5	6	7
3.	There are not many activities that I stop doing when I am feeling socially anxious.	1	2	3	4	5	6	7
4.	I get on with my life even when I feel socially anxious.	1	2	3	4	5	6	7
5.	Being socially anxious makes it difficult for me to live a life that I value.	1	2	3	4	5	6	7
6.	I would gladly sacrifice important things in my life to be able to stop being socially anxious.	1	2	3	4	5	6	7
7.	I care too much about whether or not I feel anxious in social situations.	1	2	3	4	5	6	7
8.	I worry about not being able to control social anxiety.	1	2	3	4	5	6	7
9.	I can move toward important goals, even when I am feeling socially anxious.	1	2	3	4	5	6	7
10.	My social anxiety must decrease before I can take important steps in my life.	1	2	3	4	5	6	7
11.	My social anxiety does not interfere with the way I want to live.	1	2	3	4	5	6	7
12.	I find myself going around and around in circles thinking about my social anxiety.	1	2	3	4	5	6	7
13.	It seems like I'm fighting with myself about my social anxiety.	1	2	3	4	5	6	7
14.	I have thoughts about social anxiety that I get caught up in.	1	2	3	4	5	6	7

15. I tell myself that I shouldn't have certain thoughts about social anxiety.	1	2	3	4	5	6	7
16. I criticize myself for having irrational or inappropriate social anxiety.	1	2	3	4	5	6	7
17. I believe that having socially anxious thoughts is abnormal or bad and I shouldn't think that way.	1	2	3	4	5	6	7
18. I make judgments about whether my thoughts about my social anxiety are good or bad.	1	2	3	4	5	6	7
19. I disapprove of myself when I feel socially anxious.	1	2	3	4	5	6	7