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Acceptance and commitment therapy for the treatment of information processing biases associated with social anxiety disorder

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ACCEPTANCE AND COMMITMENT THERAPY FOR THE TREATMENT OF INFORMATION PROCESSING BIASES ASSOCIATED WITH SOCIAL ANXIETY DISORDER

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DEDICATION

This dissertation is dedicated to my family and friends, who have helped keep me focused and grounded throughout the dissertation process – and have provided me with much needed breaks in the midst of often exhausting work! This dissertation is also dedicated to my various mentors for their much appreciated guidance and support, not only with this dissertation but in many other ways, both personal and professional.

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ABSTRACT

The present research is a critical analysis of the psychology literature on Acceptance and Commitment Therapy (ACT) as a treatment for individuals with Social Anxiety Disorder (SAD). The primary purpose of this study is to provide a comprehensive overview of the existing body of literature in the application of ACT for anxiety disorders generally, and for SAD more specifically, in order to examine the potential utility of ACT as a treatment for SAD. This includes critical analysis and synthesis of major themes in the literature pertinent to this area of inquiry. Furthermore, the study explores the connection between the individual Core Processes of ACT and information processing biases found in individuals with SAD, as a means to further understand and map out the potential therapeutic benefits with this particular population. This project additionally provides recommendations for future areas of study on the topic of ACT as an intervention for SAD.

Chapter 1: Introductory Literature Review

Purpose of the Study

The purpose of this dissertation was to provide a critical review of the literature on Acceptance and Commitment Therapy (ACT) and Social Anxiety Disorder (SAD) in order to understand how ACT might be applied as a treatment for SAD. Specifically, this project examined the Six Core Processes of ACT and elaborated upon how these processes might be applied to SAD. The rationale for this project was based on the potential to meaningfully expand upon the limited amount of information currently available on the use of ACT to treat socially anxious individuals and the potential for identifying individual components of ACT that may provide benefits above and beyond that of current empirically supported treatments for social anxiety. This dissertation provides an understanding of how ACT might be tailored for use with this clinical population.

Social Anxiety Disorder

According to the Diagnostic and Statistical Manual for Mental Disorders-5 (DSM-5), SAD, or Social Phobia, is characterized by a marked and persistent fear of social situations (e.g. meeting unfamiliar people or giving speeches) in which the potential for scrutiny exists. Socially anxious individuals fear that they will behave in a way or show anxiety symptoms that will result in negative evaluation by others (American Psychiatric Association [APA], 2013). Exposure to such situations almost always induces immediate anxiety. Socially anxious adolescents and adults recognize that this fear is disproportionate; however, anxiety-provoking social or performance situations are typically avoided or endured with great trepidation. Substantial anticipatory anxiety may often appear well in advance of upcoming social or performance situations. Socially anxious individuals may anticipate embarrassment and fear that others will

evaluate them as weak, stupid, anxious, or crazy in social or performance situations. Persons with social anxiety usually experience physical symptoms of anxiety such as sweating, palpitations, muscle tension, tremors, blushing, gastrointestinal discomfort, and confusion. In extreme situations, these symptoms may meet the criteria for a panic attack. A vicious cycle or self-fulfilling prophecy may transpire, in which anticipatory anxiety results in fearful cognitions and anxiety symptoms in the social situations, leading to perceived or actual poor performance, further perpetuating embarrassment and heightening anticipatory anxiety about social situations. Although some amount of apprehension in certain social or performance situations is common in most individuals, for a formal diagnosis of SAD to be made, symptoms must significantly interfere with an individual's daily routine, occupational functioning, social activities or relationships, or cause significant distress (APA, 2013). Clinical presentation of social anxiety may show cultural variations based on social demands. For example, in Korea and Japan, variations include fear of making others uncomfortable in social situations, as opposed to being embarrassed oneself (APA, 2013). The Japanese construct of *taijin kyofusho* refers to a syndrome characterized by an excessive sensitivity to interpersonal interactions, leading to fears of eye contact, blushing, self-perceived ugliness, or of offending others by one's body odor (Ono et al., 2001).

The estimated 12-month prevalence of SAD for the United States is approximately 7% (Kessler et al., 2005; Kessler, Petukhova, Sampson, Zaslavsky, & Wittchen , 2012; Ruscio et al., 2008). Higher rates of social anxiety disorder are generally found in females than in males in the general population (Fehm, Pelissolo, Furmark, & Wittchen, 2005), with women more likely than men to have a lifetime diagnosis (Weinstock, 1999). Onset of the disorder may be slow and insidious, or it may follow a humiliating or stressful experience, such as having been bullied

(Rapee & Spence, 2004). In the majority (e.g., 75%) of individuals, the age of SAD onset is estimated to be between 8 and 15 years of age (Kessler et al., 2005). In the community, about 30% of individuals with SAD experience symptom remission within 1 year, and approximately 50% experience remission within a few years. For approximately 60% of individuals without a specific treatment for SAD, the course lasts several years or longer (APA, 2013). In fact, left untreated, the disorder typically follows a chronic and unremitting course, resulting in significant impairments in social and vocational functioning (Davidson, Hughes, George, & Blazer, 1993; Schneier et al., 1994; Stein & Kean, 2000; Stein, Torgrud, & Walker, 2000; Steinert, Hofmann, Leichsenring, & Kruse, 2013; Wittchen, Fuetsch, Sonntag, Müller, & Liebowitz, 2000). Social anxiety is often associated with excessive submissiveness, lower levels of assertiveness, inadequate eye contact, or overly rigid body postures. Individuals with SAD may be less self-disclosing and less open in conversations, may live at home longer, commonly self-medicate with substances (APA, 2013), and are often single, unmarried, or divorced and without children (Fehm et al., 2005).

In DSM-5, a *performance only* specifier is used to denote individuals whose social anxiety is restricted to performance situations (e.g., related to one's professional life). This type of SAD is sometimes referred to in literature as non-generalized SAD (NGSAD; Ha, Lim, Shin & Oh, 2011). Individuals who do not receive this DSM-5 specifier would presumably qualify for what used to be termed the *generalized* specifier in previous versions of the DSM (e.g., see DSM-IV-TR, APA, 2000), which refers to fears of most social situations such as attending parties or initiating or maintaining conversations. There is evidence to suggest that persons with generalized SAD (GSAD) have a higher level of impairment compared to persons with NGSAD (Kessler, Stein, & Berglund, 1998; Stein & Kean, 2000; Stein et al., 2000; Wittchen, Stein, &

Kessler, 1999). In addition, individuals with GSAD tend to have an earlier age of onset; a higher number of interactional fears; greater comorbidity with alcoholism and atypical depression; and greater dysfunction in work, school, interpersonal relationships, and other daily activities as compared to individuals with NGSAD (Mannuzza et al., 1995; Stein & Kean, 2000). Research findings are somewhat mixed regarding treatment outcomes for the generalized subtype with some studies finding less treatment responsiveness (Brown, Heimberg, & Juster, 1995), others finding greater treatment responsiveness (Marom, Gilboa-Schechtman, Aderka, Weizman, & Hermesh, 2009), and still others finding no significant differences between the two groups (Stein, Stein, Goodwin, Kumar, & Hunter, 2001). With respect to pharmacological treatments, individuals with generalized SAD are more likely to require daily dosing rather than as-needed dosing; the latter is more common in NGSAD, in which medication may be used to manage specific anxiety-provoking situations (Antai-Otong, 2008).

It has been suggested that the significant overlap between GSAD and Avoidant Personality Disorder (AVPD) reflects redundancy in the DSM system, and there is limited empirical support for maintaining both diagnoses as clinically separate (Heimberg, Holt, Schneier, Spitzer, & Liebowitz, 1993; Herbert, Hope, & Bellack, 1992; Hofmann, Heinrichs & Moscovitch, 2004; van Velzen, Emmelkamp, & Scholing, 2000; Widiger, 1992). However, others such as Millon (1996) argue that despite the overlap, these disorders are distinct, asserting that social anxiety is but one of many fears of the individual with AVPD, and that difficulty in forming close relationships is characteristic of AVPD but not of SAD.

Review of literature on treatments for Social Anxiety Disorder

Psychopharmacologic treatments. As the focus of the present proposal is the psychotherapeutic treatment of SAD, it is beyond the scope of this literature review to provide an

extensive review of the numerous pharmacologic treatments for SAD. A recent review of 7 meta-analyses and over 50 placebo-controlled studies examining pharmacological treatments for SAD found that selective serotonin reuptake inhibitors (SSRIs) and the serotonin norepinephrine reuptake inhibitor (SNRI) venlafaxine should be considered the first-line pharmacological treatment for most patients, due to their efficacy in treating both SAD and commonly co-morbid disorders (e.g., other anxiety disorders and major depressive disorder [MDD]), safety, and tolerability (Blanco, Bragdon, Schneier, & Liebowitz, 2013). Paroxetine, sertraline, extended-release fluvoxamine, and extended-release venlafaxine are the only pharmaceutical treatments that are currently FDA-approved for SAD. Studies have also demonstrated the efficacy of the irreversible monoamine oxidase inhibitor (MAOI) phenelzine in functional and symptomatic improvements in SAD (Blanco, Heimberg, et al., 2010; Gelernter et al., 1991; Guastella et al., 2008; Heimberg et al., 1998), but safety concerns related to dietary restrictions led to the development of reversible inhibitors of MAOI-A (RIMAs; Blanco et al., 2013). However, RIMAs are not currently available in the United States, and appear to be less effective than their predecessors (Blanco et al., 2013). For example, studies of the reversible MAOI moclobemide have produced varied results and suggest moderate efficacy and higher tolerability than phenelzine (though it may also be less efficacious than the latter; Versiani et al., 1992). In double-blind studies, the benzodiazepines clonazepam and bromazepam have been found to be superior to placebo and may be useful on an as-needed basis for performance anxiety (Blanco et al., 2013). However, the use of benzodiazepines can result in undesirable side effects such as sedation, potential for abuse, and difficulties with discontinuation (Fink et al., 2009).

The literature on the efficacy of pharmacological versus psychological approaches to the treatment of SAD appears to be limited, however the body of previous research suggests some

relevant findings. A meta-analysis of 24 controlled trials examining either pharmacological or cognitive-behavioral treatments for SAD indicated that both were similarly superior to control conditions (Gould, Buckminister, Pollack, Otto, & Yap, 1997). Additionally, two direct comparisons of fluoxetine versus psychotherapy did not indicate superiority of medication as compared to psychotherapy (Clark et al., 2003; Davidson, Foa, et al., 2004; Davidson, Yaryura-Tobias, et al., 2004), and some studies suggest fluoxetine might be less efficacious in the treatment of SAD than other SSRIs (Blanco et al., 2013). Nevertheless, findings from two randomized trials comparing CBT to phenelzine (Blanco, Heimberg, et al., 2010; Blanco, Okuda, et al., 2010; Heimberg et al., 1998) and a meta-analysis (Federoff & Taylor, 2001) of treatment of SAD indicate medication may be superior to psychotherapeutic treatment of SAD at least in the acute phase of the treatment.

Fedoroff and Taylor (2001) noted that because most pharmacotherapy studies in this area did not provide follow-up data, they were not able to compare medication and CBT in their analysis in terms of their relative abilities to *maintain* treatment gains past post-treatment assessment (Heimberg, Salzman, Holt, & Blendell, 1993; Liebowitz et al., 1999). The authors noted that while medication based treatments appeared to be somewhat more effective than cognitive-behavioral approaches in the short-term (Fedoroff & Taylor, 2001), additional research comparing these two approaches over the long-term may yield further support to the hypothesis that CBT is a more effective treatment over time (Rodebaugh, Holaway, & Heimberg, 2004).

Nevertheless, Fink and colleagues (2009) assert that based on current knowledge, psychotherapeutic treatment cannot entirely replace psychopharmacologic approaches in the treatment of SAD. Additionally, recent work has suggested that CBT and phenelzine treatment combined may be superior to either treatment individually (Blanco, Heimberg, et al., 2010;

Blanco, Okuda, et al., 2010). The available evidence suggests that CBT may result in a lower rate of relapse of SAD, and it is possible that treatment programs combining the use of psychotropic medications and psychological interventions may reduce the high relapse rate found for most favored medication treatments for SAD (Rodebaugh et al., 2004).

Psychotherapeutic treatments. A number of different psychotherapeutic interventions have been used in the treatment of SAD. Although the focus of the current dissertation is on ACT, some of these other treatments will be briefly discussed.

Psychodynamic psychotherapy. From a psychodynamic approach (Greenson, 1982 as cited in Bögels, Wijts, Oort, & Sallerts, 2014), symptoms of social anxiety arise from instrapsychic conflicts, reflecting that anxiety is caused by unconscious desires and impulses, with a superego prohibiting their expression. If these unconscious wishes and impulses are elicited during a social situation, an individual experiences the situation as frightening, which then produces defensive operations. The defensive operations are exhibited in the process of transference from patients towards their therapists, as well as in day-to-day behavior. It is theorized that ego control can be improved through the analysis of these types of manifestations of such unconscious processes and gaining understanding of their origins.

Malan's (1976) psychodynamic psychotherapy (PDT) model, a short-term, focused psychoanalytic model, established a guideline to focus on two triangles. One triangle focuses on relationships with (a) parents/caregivers, (b) important others, and (c) the psychotherapist. The other triangle, called the triangle of conflict, involves (a) forbidden thoughts, emotions, and desires, which (b) are anxiety-provoking, and (c) are the reasons for development of defense mechanisms such as avoidance. In a study conducted by Bögels et al. (2014), therapists operating under a PDT framework utilized exploration, clarification, and interpretation, as well as some

supportive-expressive interventions (Luborsky, 1984). Similarly derived from Malan's model, Knijnik et al. (2009) utilized Psychodynamic Group Therapy (PGT) in conjunction for SAD with Clonazepam with patients SAD, which they justified under the conceptual premise that behaviors and symptoms of individuals with SAD are demonstrative of unconscious processes (Freud, 1953, as cited in Knijnik et al., 2009), as a defense against repressed desires, impulses, and fantasies. Thus, from a psychodynamic perspective, SAD is symptomatic of an unconscious conflict, and the aim of PGT is to aid individuals in resolving this conflict.

Gabbard's (1992, 2005) work also provides a rationale for the focus of psychodynamic therapy. According to this model, individuals with SAD experience guilt and shame due to unconscious needs to be the center of attention and eliminate social competition, doubt regarding the ability to eradicate such competition, separation anxiety as a result of an unconscious need for autonomy, and loss of a caregiver's love due to autonomy. Within this framework, internalized representations of others such as caregivers as shaming, critical, or abandoning are projected onto other people, resulting in avoidance of social situations (Jørstad-Stein & Heimberg, 2009). Lipsitz and Marshall (2001) highlight some clinical implications from psychoanalytic principles that could be pertinent for treatment of SAD, including the concepts of projection, underlying wishes and feelings, an emphasis on factors related to the early environment, and the significance of the therapeutic relationship.

Self-psychology. Per Kohut's (1971) model of self-psychology, patients with SAD may lack mirroring or appreciating introjects, and have experienced a specific impairment in the process of transmuting internalization. Hoffmann (2002, 2003) described how a fundamental aspect of SAD is a disturbed self-concept. Individuals with impairment in their self-concept

experience disturbances in self-esteem and self-perception and possess unrealistic self-devaluations or idealizations of the self.

Object relations. An object-relational approach posits that SAD is caused by the internalization of early interpersonal experiences which result in devalued self-representations and devaluing of object-representations (Leichsenring, Beutel, & Leibing, 2007). Individuals with social anxiety may be prone to perceiving others as dangerous and to overlook indicators of friendliness (Gilbert 1989, 2001).

Attachment theory. Under the framework of Bowlby's (1988) Attachment Theory, it was found that an insecure attachment was reported for many individuals with anxiety disorders. Vertue (2003), found this to be specifically the case for individuals with SAD. Social anxiety and avoidance behaviors may be the result of an insecure attachment which could then prevent a curious approach to the world. It is posited that individuals with social phobia avoid connecting with others due to the fear of abandonment or of losing the caregiver's love when approaching a state of autonomy. The significance of separation anxiety in social phobia is emphasized in Gabbard's (1992) work, and problematic attachments in individuals with SAD were confirmed empirically in a study by Eng, Heimberg, Hart, Schneier, and Liebowitz (2001).

Interpersonal psychotherapy. Klerman's (1984) Interpersonal Psychotherapy (IPT) developed out of the author's model for treatment of depression. Under this framework, it is assumed that since symptoms occur within a social context, addressing problems within an individual's interpersonal life may aid in decreasing symptoms. Due to the significant interpersonal aspects inherent in social phobia, IPT was later adapted for use in treatment of the disorder (IPT-SP; Lipsitz & Markowitz, 1997 as cited in Lipsitz & Marshall, 2001). From an IPT perspective, symptoms are connected to personality and social context but are also distinct from

these. Individuals with SAD may experience significant conflicts in relationships with significant others, or pursue treatment in the context of major life changes, such as a change in relationship status, a job change, or a move. The modified IPT-SP for social phobia typically focuses on role disputes and role transitions. Rather than emphasizing feelings regarding the therapeutic relationship or reacting to content as it is brought up by the client, the treatment targets specific problem areas in the here-and-now of the client's life (Lipsitz & Marshall, 2001). Similar to classic IPT, interventions generally are targeted toward helping the client build a social network through developing and maintaining trusting and close relationships (Stangier, Schramm, Heidenreich, Berger, & Clark, 2011). Treatment is short-term (14-sessions) and is divided into three phases: The assessment phase involves a comprehensive symptom assessment and the interpersonal inventory reviewing important past and current relationships. During the assessment phase, SAD is presented as a treatable anxiety disorder, and the patient is provided with the sick role to allay some of the psychological burden of having become impaired. This is followed by the therapist proposing a connection between social phobia and a particular interpersonal problem (role dispute, role insecurity, or role transition). The middle phase involves the therapist helping the patient express and clarify feelings, pointing out discrepancies, and discussing possibilities for change. During the termination phase, therapeutic gains are reviewed and integrated, and potential future setbacks are anticipated and prepared for (Lipsitz & Marshall, 2001; Sinai, Gur, & Lipsitz, 2012).

Mindfulness-Based Stress Reduction. Kabat-Zinn's (1990) Mindfulness-Based Stress Reduction (MBSR) is the method of mindfulness training that has undergone the most empirical examination, and has been found to decrease symptoms of anxiety, stress, and depression (Hofmann, 2010). MBSR involves mindfulness meditation, a form of mental training that has

existed for thousands of years in the East and has entered the Western health care world more recently. MBSR fosters flexible, nonjudgmental, and present-moment attentional focus (Kabat-Zinn, 1990) via a number of practices postulated to decrease the tendency to automatically react to and engage in evaluative mental states (Segal, Williams, & Teasdale, 2002).

Cognitive-behavioral therapy. Several psychosocial and psychopharmacological treatments have been developed and are currently used in the treatment of SAD. Among the most common current forms of treatment is Cognitive-Behavioral Therapy (CBT), which serves as an umbrella term for a variety of individual therapeutic components. Under this CBT umbrella, one of the more widely utilized current therapeutic interventions is exposure therapy. In exposure therapy, an individual must confront feared social situations through a process of gradual exposure to a hierarchically ordered range of situations, moving sequentially from the lowest to highest level of anxiety-provoking situations (Woo & Keatinge, 2008). Exposure treatments, which may be guided by the clinician in an imaginal format or *in vivo*, require the client to confront feared social situations repeatedly, with an underlying assumption that eventually the individual's anxiety response will diminish through the process of habituation. In the case of imaginal exposure, it is important that the core components of the individual's fear, as well as other important aspects of the individual's experience, such as physiological arousal, be included. Thus, the imagined scene needs to be tailored to the client's particular feared social situations. This might include details related to bodily sensations and emotions experienced during such events, characteristics of people present that may elicit a socially anxious response, and information related to the context of such situations. The individual is reminded to abstain from utilizing strategies to distract from or avoid experiencing anxiety, in order to experience a habituation of the anxiety response (Beidel & Turner, 1998). With respect to in vivo exposure

activities, exercises range from role-plays with the clinician in session to homework assignments involving exposure exercises in the natural environment, which serve to aid in the generalization of the effects of treatment into real world settings.

Another common intervention currently used in the treatment of SAD is cognitive restructuring. Cognitive restructuring is aimed to target inaccurate beliefs about the potential threat posed by social situations, biased processing of events that occur during social situations, and adverse predictions about the outcomes of these situations (Heimberg, 2002). This treatment involves identification of negative thoughts transpiring prior to, during, and after situations provoking anxiety, followed by an examination of the accuracy of such cognitions. Methods such as Socratic questioning or the use of behavioral experiments are employed in order to evaluate these negative thoughts, which ultimately lead to a development of rational alternative thoughts (Heimberg, 2002). Cognitive restructuring is typically used alone or in conjunction with exposure therapy in the treatment of SAD.

Acarturk, Cuijpers, van Straten, and de Graaf (2009) conducted a meta-analysis of 30 studies that examined the effects of psychological treatments for social anxiety. All studies included in the meta-analysis involved adult subjects and included control conditions. Wait-list control groups were included in 22 of the studies, in 7 studies a placebo control group was used, and a treatment-as-usual control group was used in the remaining study. Subjects were recruited from the community (16 studies), clinical settings (8 studies), or through mixed recruitment methods (6 studies), with 7 studies of university students and 23 studies of adults in general. A diagnosis of SAD was required in 21 of the studies, while the remaining 9 studies recruited subjects scoring high on self-reported social anxiety measures or utilized alternate definitions of SAD. Types of social phobia addressed included public speaking (7 studies), performance

anxiety (1 study), GSAD (4 studies), and GSAD/non-GSAD (1 study), with the remaining studies not being categorized. The studies included were approximately equally divided between individual and group treatments and the number of sessions ranged from 1 to 20. The exclusive psychological treatments included cognitive behavioral therapy (CBT; 14 conditions), cognitive therapy (4 conditions), exposure (8 conditions), social skills training (3 conditions), relaxation (2 conditions), and other forms of therapy such as the Lefkoe method and symptom prescription with and without reframing. The remaining conditions involved various combinations of some of the aforementioned treatments (Acarturk et al., 2009). The results of this meta-analysis supported the effectiveness of various kinds of psychological treatments for social anxiety in adults. Subgroup analyses gave no indication that the inclusion of exposure, cognitive restructuring, applied relaxation, or social skills training resulted in higher effect sizes. However, the authors noted that most studies utilized a combination of several of these techniques and very few examined only one of these methods. The analyses also suggested that milder cases of social anxiety were easier to treat than more severe cases, and indicated the presence of greater effect sizes in studies with waitlist control groups, as compared to those with pill-placebo or treatment-as-usual control groups.

Powers, Simarsson, and Emmelkamp's (2008) meta-analysis also helped clarify the general impact of psychological treatments for social phobia, and reviewed 32 randomized controlled trials (N = 1,479). Only 7 of the 32 studies were conducted prior to 1990. Of the 26 studies that incorporated an exposure component, 21 included at least one condition combining exposure with cognitive therapy. Other treatment conditions among the 32 studies included cognitive therapy alone, applied relaxation, systematic desensitization, and social skills training. Control conditions for the studies included waitlist (20 studies), pill-placebo (5 studies),

psychological placebo (5 studies), pill-placebo and psychological placebo (1 study), and waitlist and psychological placebo (1 study). The number of participants (*N*) in the studies ranged from 21 to 224, and number of sessions ranged from 3 to 20. Commonly used outcome measures included the Fear of Negative Evaluation Scale (FNE), Social Phobia Scale (SPS), Social Interaction Anxiety Scale (SIAS), and the Social Avoidance and Distress Scale (SADS). Results suggested that there was a clear overall advantage of the active treatments studied compared to no-treatment or placebo conditions (i.e., waitlist, psychological placebo, and pill-placebo) posttreatment. The meta-analysis also indicated no significant difference in outcome measures between combined exposure and cognitive therapy, exposure alone, or cognitive treatment alone. Similarly, outcomes for group treatments were not significantly different from individual treatments. The results support previous findings in favor of the use of the aforementioned psychological treatments for social anxiety disorder, with no significant differences with respect to format or treatment type (Powers et al., 2008).

Information processing in socially anxious individuals. Research on SAD has focused on obtaining a clearer understanding of the cognitive processes underpinning social anxiety, including the underlying psychological/cognitive mechanisms involved in the development and maintenance of the disorder (Mobini, Reynolds, & Mackintosh, 2013). Individuals with SAD have been found to have several disruptive information-processing biases that emerge when anticipating social situations, during the situations themselves, and when reflecting on the situations retrospectively (Hirsch & Clark, 2004). Several biases have been implicated in the information processing of socially phobic individuals, including biases in attention, interpretation, judgment, and memory (Clark & McManus, 2002; Heinrichs & Hofmann, 2001; Hirsch & Clark, 2004; Ledley & Heimberg, 2006). It has been suggested that this biased

information processing in SAD is primarily focused on the self as being negatively evaluated and judged by others in social situations (Stopa, 2009).

Individuals with SAD have demonstrated higher levels of self-focused attention than their non-socially anxious counterparts (Clark & Wells, 1995; Wells & Papageorgiou, 1998; Woody, Chambless, & Glass, 1997). The literature has indicated that in moments of more intense social anxiety, individuals may experience increased amounts of self-focused attention, including self-consciousness in both the private and public sense (George & Stopa, 2008; Pineles & Mineka, 2005).

In individuals with SAD, public self-focus may be associated with unhelpful interpretations of others' reactions to one's exhibited behavior, such as perceptions made regarding other people's assessment of the individual's trembling or flushing (Schultz & Heimberg, 2008). Individuals who engage in more public self-focused attentional processes may also experience self-focused imagery as well as cognitions about how they are being perceived (Schultz & Heimberg, 2008). It has been suggested that socially phobic individuals seem to demonstrate increased engagement in the *observer perspective* which is a type of public self-awareness, when experiencing heightened social anxiety (George & Stopa, 2008). Specifically, this means that through the use of negative mental imagery, socially anxious individuals experience heightened self-focus by seeing themselves as if through the vantage point of the audience, or from an observer perspective, rather than a *field perspective* though their own eyes (Clark & Wells, 1995). Studies have also indicated that compared to non-anxious individuals, who were more likely to take a field perspective, socially phobic individuals may be more prone to taking an observer perspective (Coles, Turk, Heimberg, & Fresco, 2001; Wells & Papageorgiou, 1998, 1999).

Another significant finding in the literature on SAD, is in social or performance based situations, individuals with social anxiety have demonstrated the tendency to be more vigilant to signs of threat, with research indicating that individuals with SAD are more likely than their non-socially anxious counterparts to direct attention to cues that are associated with social threat, such as social rejection words or angry faces (Bar-Haim, Lamy, Pergamin, Bakermans-Kranenburg, & van IJzendoorn, 2007; Heinrichs & Hofmann, 2001). It has been proposed that this type of biased processing could be shifting attentional resources away from processing of other more benign or positive cues (Hirsch & Mathews, 2000).

Furthermore, in social or performance based situations, individuals with social anxiety have been shown to be particularly vulnerable to interpreting objectively neutral or mildly negative social stimuli (e.g. benign behaviors or comments by others) as more negative (Hirsch & Clark, 2004; Huppert, Pasupuleti, Foa, & Mathews, 2007; Kanai, Sasagawa, Chen, Shimada, & Sakano, 2010), or as being representative of rejection or criticism (Mobini et al., 2013). This may especially be the case due to the abundance of ambiguous information in most of social situations allowing for a gamut of interpretations (Mathews & Mackintosh, 2000). Furthermore, individuals with SAD may be more prone to assessing their own behaviors as inferior to those of others (Mobini et al., 2013). Even in the case of evidence that contradicts judgmental biases, such as positive social outcomes, biased interpretations (e.g., overestimating how anxious they may have appeared in a social situation), often persist (Wallace & Alden, 1997).

Indeed, tendencies towards increased self-focused attention in individuals with SAD tends go hand-in-hand with negative evaluations or judgements of one's performance (Vassilopoulos, 2008), leading to even more negative self-attributions as compared to nonsocially anxious individuals (George & Stopa, 2008; Stangier, Heidenreich, Schermelleh-

Engel, 2006). It has also been suggested that socially phobic individuals may often have unrealistic expectations regarding their social performance, resulting in a discrepancy between their actual and ideal selves when they are unable to meet these expectations, leading to negative self-evaluations and low levels of clarity about themselves (Stopa, 2009).

The literature has also linked social anxiety to higher self-perceived social or emotional costs and higher estimations of likelihood for negative evaluations in feared social situations (Hirsch & Clark, 2004; McManus, Clark, & Hackmann, 2000; Voncken, Bögels, & de Vries, 2003). It has been suggested that such negative predictions about social outcomes lead to anticipatory anxiety about future social events. Rachman, Grüter-Andrew, and Shafran (2000) found that individuals with social anxiety have also been shown to experience a higher level of post-event rumination after negative or neutral social situations, particularly following events associated with negative self-evaluation in the context of high self-perceived social costs, due to the resulting perception of catastrophic social consequences in such situations. The authors noted that this type of processing involves intrusive and repeated recollections of the social situation, and can cause disruptions in concentration. Unfortunately, a natural result of negatively self-focused attention, problematic interpretations, and negative post-event rumination may be the development of negative autobiographical memories of events which then augment anticipatory anxiety about similar future situations (Vassilopoulos, 2008). Post-event processing among socially phobic individuals is also associated with increased future avoidance of similar social events (Rachman et al., 2000).

Indeed, socially anxious individuals also have shown a tendency to engage in subtle forms of avoidance and exhibit safety-seeking behaviors (Alden & Bieling, 1998; McManus, Sacadura, & Clark, 2008; Okajima, Kanai, Chen, & Sakano, 2009; Rachman, Radomsky, &

Shafran, 2008). Behaviors such as trying to inhibit shaking by stiffening arm muscles during a social interaction or speech may be employed to cover one's anxiety and decrease the experience of distress (Wells et al., 1995); unfortunately, such behaviors are thought to prevent integration of information contradictory with threat-related bias (Rapee & Heimberg, 1997; Sloan & Telch, 2002; Taylor & Alden, 2010).

Finally, socially anxious individuals may be more likely to experience selective retrieval of negative information regarding their public selves and prior social events, which could contribute to negative rumination about such events, priming them for increased anticipatory anxiety towards potential future social interactions (Hirsch & Clark, 2004). Furthermore, because individuals with social anxiety may be less likely to process information around them due to a heightened self-focus (Bögels & Mansell, 2004), they may find it difficult to recall information from social encounters retrospectively (Hirsch & Clark, 2004).

Clark and Wells' (1995) and Rapee and Heimberg's (1997) models help integrate many of these concepts. Clark and Wells' model posits that socially anxious individual pay selective attention to negative information about themselves, resulting in negative self-evaluations and negative predictions about the future, with regard to their performance in social situations. Anxiety symptoms are then maintained through negative self-evaluation, increased self-focused attention to internal cues indicative of anxiety, and safety behaviors. This then evokes and maintains less effective social behavior in these types of situations (Clark & Wells, 1995). Rapee and Heimberg's (1997) model of social phobia asserts that individuals with SAD not only selectively attend to internal anxiety cues, but also to external threatening cues that may indicate negative evaluation from others (e.g. facial expressions of others in social situations). This vigilance for such cues then serves as an input to negative self-focus, particularly during

formation of one's "mental self-representation," a mental representation of the self from the viewpoint of the perceived "audience." Thus, it is suggested that socially anxious individuals shift their attention between vigilant gauging of external threats (e.g. facial expressions or behaviors of others) and this mental representation of themselves as seen by others, and their internal and external cues likely feed upon one another to increase anxiety (Rapee & Heimberg, 1997). It is hypothesized that the combination of various processes create a self-perpetuating cycle, consisting of a propensity to make negative predictions regarding outcomes of social events, the resulting anticipatory anxiety towards future social events, heightened attention directed toward signs of social threat, followed by negatively skewed perceived performance as well as assessment of negative evaluation from others regarding their performance. This feedback loop is hypothesized to maintain social fear and avoidance behaviors (Clark & Wells, 1995; Rapee & Heimberg, 1997).

Problems with current leading psychosocial treatments. As the previous review has indicated, many different psychotherapy treatments have been applied to the treatment of SAD. Some interventions (e.g., psychodynamic interventions) have been the subject of less empirical support than others (e.g., cognitive-behavioral interventions [CBT]). Despite CBT interventions having generally been shown to be quite effective for the treatment of a variety of disorders, a significant number of individuals respond only to a limited degree or fail to fully respond to CBT, even when therapy is tailored extensively to the needs of a particular client's situation (McKay, Taylor, & Abramowitz, 2010). The overall shortcomings associated with CBT appear to extend to the treatment of SAD specifically, as well. Approximately one third of clients with SAD in treatment studies continue to experience significant symptoms of SAD or do not show any improvement with CBT (Heimberg, Dodge, Hope, & Kennedy, 1990; Heimberg et al.,

1998). Heimberg's (2002) review noted that while SAD treatment has been linked to increased life satisfaction, CBT for SAD is "not yet able to get [socially anxious individuals] all the way home" (p. 105) as reflected in lower scores on quality of life measures for SAD study participants compared to normative group means. Examining quality of life outcomes is particularly important given the substantial impact that SAD has on general functioning and quality of life (Stein & Kean, 2000).

The literature on treatment resistant SAD identifies several factors that may be associated with poorer treatment response, including the presence of AVPD, comorbid depression and alcohol use, low treatment expectations, homework non-compliance, and avoidance of the experience of social anxiety (Brozovich & Heimberg, 2011; Rosenberg, Ledley & Heimberg, 2010). Additional less widely researched variables that may be inversely correlated with treatment response, include anger, overvalued or rigid ideation, ambivalence towards change, comorbid substance abuse, history of trauma, and severity of socially traumatic events related to onset or exacerbation of SAD (Rosenberg et al., 2010). Thus, despite the existence of efficacious treatments for SAD, the literature provides support for the idea that there is substantial room for growth in current commonly utilized interventions for the disorder.

Efficacy of Acceptance and Commitment Therapy

A potentially promising treatment to apply for SAD is Acceptance and Commitment Therapy (ACT). This so-called third-wave therapy will be described in detail in Chapter 3, but it has been used as a treatment with a variety of populations and diagnoses, including but not limited to psychosis, panic disorder, chronic pain, agoraphobia, depression, substance abuse, and obsessive-compulsive disorder (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Among the

newer CBT approaches, ACT has been one of the most actively researched (Forman, Herbert, Moitra, Yeomans, & Geller, 2007).

The body of literature evaluating the efficacy of ACT is still growing, but initial analyses indicate promising results. The results of a meta-analysis of 18 studies examining a wide range of emotional/behavioral difficulties (e.g. smoking, weight control, depression, anxiety, math anxiety, psychosis) demonstrated that ACT outperformed control conditions (waiting list, psychological placebo, and treatment as usual) after treatment and at follow-up across target problems and outcome domains, such as depressive symptoms, pain intensity, general subjective distress, and impairment/disability. The authors additionally noted that while no significant differences between ACT and established treatments were found, this did not indicate a relative weakness, as there is often no significant difference found among established treatments in general (Powers, Zum Vörde Sive Vörding, & Emmelkamp, 2009). Similarly, a review article of empirical evidence related to ACT supported the efficacy of the ACT model (Ruiz, 2010). In particular, correlational studies indicate that experiential avoidance was found to be associated with a variety of psychological disorders and concerns, such as anxiety and depression (Boelen & Reijntjes, 2008; Forsyth, Parker, & Finlay, 2003) and chronic pain (Kratz, Davis, & Zautra, 2007; McCracken & Vowles, 2007), and was a mediator between social anxiety and posttraumatic stress in quality of life (Kashdan, Morina, & Priebe, 2009), internalized homophobia and PTSD symptoms in sexual assault survivors in same-sex assaults (Gold, Dickstein, Marx, & Lexington, 2009; Gold, Marx, & Lexington, 2007), childhood psychological abuse and current mental health symptoms (Reddy, Pickett, & Orcutt, 2006) and maladaptive perfectionism and worry (Santanello & Gardner, 2007), and moderated the relationship between automatic alcohol motivation and hazardous drinking (Ostafin & Marlatt, 2008), to name just a

few. The review suggested that ACT is efficacious as a treatment for a wide range of psychological difficulties, such as social phobia, depression, obsessive-compulsive disorder, generalized anxiety disorder, trichotillomania, addictive behaviors, and borderline personality disorder. The author further suggested that this form of therapy is working through its proposed processes of change, namely reduction of experiential avoidance and cognitive defusion (Ruiz, 2010); these ACT concepts will be reviewed at length in Chapter 3. These ACT change mechanisms were frequently measured using the Acceptance and Action Questionnaire (AAQ; Hayes, Strosahl, et al., 2004), or the Automatic Thoughts Believability Questionnaire (ATQ-B; Hollon & Kendall, 1980), while symptoms were gauged with commonly utilized outcome measures, such as the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) or the Social Phobia and Anxiety Inventory (SPAI). Furthermore, the author noted that a considerable number of ACT studies have applied extremely short interventions demonstrating significant effects (Ruiz, 2010). Gaudiano (2009) discussed that although most ACT studies conducted to date are small pilot studies, the findings are promising. Current evidence appears "moderately strong" in support of ACT, with recent meta-analyses of ACT outcomes conducted with a variety of clinical populations indicating medium to large effect sizes. One randomized controlled effectiveness trial of individual therapy with outpatient participants (n=101) reporting anxiety, depression and adjustment difficulties, compared the impacts of ACT and cognitive therapy (CT). Participants were not limited in the number of sessions they could have; however, of those who remained in the study, the average number of sessions was approximately 15-16 for both participants receiving ACT and CT. Results indicated participants experienced equivalent, large improvements in anxiety, depression, functioning difficulties, life satisfaction, quality of life, and clinician-rated functioning. However, the authors suggested that the mechanism of actions in the

two therapies appeared to be distinct, such that changes in observing and describing one's experiences may have mediated outcomes for the CT group, whereas acceptance, acting with awareness, and experiential avoidance appeared to mediate outcomes for the ACT group (Forman et al., 2007).

Another randomized controlled trial (RCT) examined the impact of 8 treatment sessions of ACT or progressive relaxation training (PRT) without in-session exposure as treatment for individuals with obsessive compulsive disorder (OCD). All study participants (*n*=79) met criteria for OCD, with approximately half having one or more comorbidities, including other anxiety disorders, mood disorders, and substance dependence. Results showed that while quality of life improved in both conditions, ACT produced greater clinically significant changes in OCD severity at posttreatment and follow-up compared to PRT. Furthermore, treatment with ACT also resulted in greater improvement in symptoms of depression in those reporting at least mild comorbid depression prior to treatment (Twohig et al., 2010).

An RCT of an ACT-based brief group stress management intervention with social workers in Sweden (*n*=106) demonstrated clinically significant reductions in stress and burnout, as well as overall improvement in general mental health among those study participants with higher levels of stress (two-thirds of the participants) compared to wait list controls. Treatment consisted of 4 group treatments of 3 hours each, with group size ranging from 7 to 30 participants. Participants were also given homework assignments including mindfulness practice and physical exercise (Brinkborg, Michanek, Hesser, & Berglund, 2011). Other studies have indicated that ACT may also be an effective treatment for substance abuse (Hayes, Wilson, et al., 2004), trichotillomania (Woods, Wetterneck, & Flessner, 2006), psychosis (Gaudiano & Herbert,

2006), chronic pain (Veehof, Oskam, Schreurs, & Bohlmeijer, 2011), and cigarette smoking cessation (Gifford et al., 2004).

Research Topic

The present study is a critical analysis of literature relating to the application of ACT as an intervention for individuals with SAD. Literature on the application of ACT as an intervention for SAD has been divided into three topics for the present dissertation: (a) a discussion of the relevant literature pertaining to the treatment of anxiety disorders with ACT, (b) a general exploration of the application of the Six Core Processes of ACT in the conceptualization and treatment of SAD specifically, and (c) a brief discussion of what ACT might uniquely add to established methods of treatment for individuals with SAD.

Despite substantial support for the efficacy of established treatments for SAD, literature on the significant rates of non-response and treatment-refractory cases suggests considerable room for growth. Although of the body of outcome literature evaluating the use of ACT in treating SAD specifically is still growing, the continual increase in evidence for the viability of ACT as an efficacious treatment for a variety of disorders sheds an optimistic light on its potential applicability as a treatment for SAD. In addition to exploring both the overall general contribution that ACT might make as a unique intervention for SAD, as well as how ACT may address some of the specific factors found to be problematic in other psychosocial interventions for SAD, the present study also briefly outlines specific ACT techniques for anxiety disorders that may be relevant to or tailored for use with individuals with SAD. Furthermore, this study proposes future areas of study to enhance the current body of literature on this subject as a whole.

Chapter 2: Review and Analysis Procedures

Introduction

This chapter presents aspects of the research methodology, including relevant review procedures such as identification and synthesis of related literature, and analysis procedures such as integrating, assessing strengths and weaknesses, and providing clinical recommendations based upon the literature.

Review Procedures

Identification of relevant literature. Multiple elements were involved in ultimately determining literature relevant for this particular analysis. The first step in the process involved identifying where to search. Three primary search sources were used: University library catalogue holdings (including Interlibrary Loan), electronic databases (PsycINFO, PsycARTICLES, Science Direct, and PubMed), and the primary acceptance and commitment therapy website (contextualpsychology.org).

Search terms for literature included *acceptance and commitment therapy, ACT, Relational Frame Theory, acceptance, mindfulness, anxiety, social anxiety, social anxiety disorder, social phobia, cognitive behavioral therapy, cognitive-behavioral therapy, CBT, information processing, behavioral characteristics, etc.*

Literature published prior to 1990 was largely excluded as this project focused on analyzing recent material. However, some select pre-1990 materials were included if they were determined to be particularly significant pieces in the body of literature pertaining to ACT or social anxiety disorder (e.g., widely cited studies, literature considered foundational/seminal in the field).

Several distinct types of literature were included in the development of this dissertation, including both qualitative and quantitative studies. Qualitative studies are defined as processes of understanding based on unique methodological traditions of inquiry that seek to explore a human or social problem, in which the research develops a holistic and complex picture, analyzes words, and reports detailed views of the participants, while conducting the study in a natural setting (Creswell, 1997). Quantitative studies are defined as studies that examine the relationship between an independent variable and a dependent variable in a population, using either experimental (participants measured pre and post treatment) or descriptive (participants measured one time only) methods, and typically utilizing numerical data to summarize the findings (Hopkins, 2000). For the purposes of this dissertation, only English-based sources, including sources translated into English, were used.

Collection of relevant literature. Relevant literature within the scope of this project was collected through several methods: for example, books were either borrowed from university libraries or purchased from chain booksellers and articles from databases were either retrieved as hard copies from libraries or accessed electronically if available in that format, and other relevant information was obtained from accessing the primary acceptance and commitment therapy website (contextualpsychology.org).

Analysis Procedures

Basic analysis techniques. Each piece of literature was thoroughly examined multiple times, and for easy access and recognition. The author created an informal literature table for personal use, in order to aid in this organizational process. Upon completion of this process, the information was grouped into sub-categories to aid in the ultimate comprehensive evaluation and critique of the literature that formed the basis of Chapter 3.

Review of the literature and application of the six core processes to social anxiety disorder. In Chapter 3, literature on the application of ACT as a treatment for anxiety disorders generally, and SAD specifically, is explored. Major patterns or themes repeated in the literature are analyzed. Significant commonalities or differences within findings in the literature are discussed, as well as the implications of such findings. Prevalent techniques or other clinical elements typically used in working with individuals with SAD as well as in utilizing acceptance and commitment therapy generally as a treatment method are briefly explored. This section also further expands upon symptoms and information processing biases in individuals with SAD, and elaborates on their connection to principles of ACT, as was briefly done in Chapter 1. In doing so, this section of the dissertation provides a rationale for why ACT may be a useful treatment for SAD.

Discussion. Chapter 4 provides a brief summary of the overall findings and major themes in the literature on ACT as a treatment for SAD, as well as the findings of the present research with respect to potential connections between the Six Core Processes of ACT as applied to SAD. Strengths and limitations of the present dissertation are addressed here as well. Finally, further recommendations based upon the review of the literature are made. Areas requiring further investigation, as made apparent by analysis of current literature, are explored. These include those issues discussed by other authors as well as those identified uniquely by the author of the present study upon critical review of the literature as a whole.

Chapter 3: Review of the Literature and Application of the Six Core Processes to Social Anxiety Disorder

History and Theoretical Background of ACT

Acceptance and Commitment Therapy (ACT) is a so-called third wave contextually-based behavior therapy that aims to increase psychological flexibility and promote well-being through the use of a variety of therapeutic methods (Luoma, Hayes, & Walser, 2007). Along with other third generation contextual therapies, ACT emerged from more traditional behavior therapy origins. Behavior therapy (BT), developed in the 1950s, was considered to be the *first wave* of scientifically-grounded psychotherapy and utilized techniques such as operant conditioning and systematic desensitization. In the 1970s, Aaron Beck introduced cognitive therapy (CT), which later was merged with behavior therapy in the late 1980s and early 1990s into cognitive-behavioral therapy (CBT); CBT currently has the largest evidence base as a psychotherapeutic treatment (Öst, 2008). Particularly over the past two decades, new technological and theoretical developments within CBT have resulted in a third group of loosely related cognitive-behavioral models (e.g., Dialectical Behavior Therapy and Mindfulness-Based Cognitive Therapy), which borrow from or extend earlier approaches (Forman et al., 2007). However, the so-called *third wave* interventions differ from approaches developed earlier in their emphasis on changing the function of dysfunctional thoughts; specifically, there is an emphasis on changing the individual's relationship to such thoughts, rather than attempting to eliminate or alter them as is done in CBT (Cristea, Montgomery, Szamoskozi, & David, 2013). Hence, these approaches differ from traditional cognitive-behavioral methods in that they emphasize accepting distressing thoughts and emotions, rather than attempting to change them.

The conceptualization of psychopathology in ACT is informed by relational frame theory (RFT), a comprehensive contextual theory of behavioral processes that underlie cognition and language (Hayes, Barnes-Holmes, & Roche, 2001, as cited in Twohig, Masuda, Varra, & Hayes, 2005). RFT is now one of the most actively studied basic human behavior analytic theories, with over 70 empirical studies focused on its principles. RFT theorizes that at the core of human cognition and language is the learned and contextually dictated ability to arbitrarily relate events mutually and in combination, and to alter the functions of particular events based on their relations to others (Hayes et al., 2006). RFT researchers have found that relational frames begin in infancy, and are necessary for children to develop normal language. Training in relational framing can increase language acquisition and higher-order skills such as empathy and perspective taking. Some clinical disorders have been theorized to have specific framing deficits, and weakness in relational framing is associated with significant cognitive deficits (Hayes, Levin, Plumb-Vilardaga, Villatte, & Pistorello, 2011).

Hayes et al. (2011) aptly jests that when clinicians interested in ACT expose themselves to RFT, "eyes glaze over, understanding lags, or what is understood seems obvious" (p. 183). While this dissertation will focus primarily on ACT, RFT shall be discussed briefly as it forms the theoretical underpinnings of ACT. Hayes et al. (2011) explain that a primary RFT concept is that relational framing is regulated by two distinct features: (a) the relational context, which determines when and how events are related and (b) the functional context, which determines which functions will be transformed in terms of a relational network. More simply, these concepts can also be understood as the relational context determining what an individual thinks and the functional context determining the psychological impact of those thoughts. The theory posits that because relational frames are learned and are arbitrarily applicable, it is not possible to

control the relational context (thinking) so extensively to completely prevent unhelpful relations from being derived (Hayes et al., 2011). As with all learning, once relating occurs, it can be inhibited, but never entirely unlearned. For example, arbitrary cues can cause children to derive that they are not loveable, worthwhile, or as intelligent as they should be. The authors explain that once a child derives the unhelpful relation (e.g. "I am unlovable") that thought will always be present to some degree, which is why it is difficult to restructure cognitive schemas and networks permanently, completely, and efficiently (Hayes et al., 2011).

On the other hand, the functional context determines the psychological impact of relational responding, which ACT capitalizes on. To illustrate the concept of functional context, Hayes and colleagues (2011) provide the example that one can imagine tasting an orange or can notice that "orange" contains the word "range" in it. Each of these produces highly different impacts. An intervention typical of ACT that capitalizes on both the relational and functional contexts, may involve teaching a socially anxious individual to add "I am presently having the thought that…" to a predictive self-evaluation "…I will make a fool of myself," in order to bolster the individual's cognitive network, (the amount of derived relations), but in a manner that actually reduces unhelpful automatic cognitive control and negative psychological impact (functional context).

Based on RFT principles, ACT examines the ways in which language functions to maintain emotionally difficult psychological content in human beings, and the increased misery and pain that results from it (Luoma et al., 2007). According to ACT, failure to engage in the Six Core Processes of ACT (reviewed later) results in psychological inflexibility, which is conceptualized as the cause of psychopathology. ACT argues that attempting to alter painful affects and cognitions can be counterproductive, and instead suggests alternative methods that

change the distressing thoughts and feelings themselves (Hayes, 2005). Thus, as ACT proposes that resistance against one's feelings and cognitions results in suffering, the model encourages striving to change the *relationship* one has with one's internal experience, rather than the *experience* itself.

Review of the Principles of Acceptance and Commitment Therapy: Six Core Processes

i. Defusion. The ACT notion of cognitive fusion refers to "verbal dominance over behavioral regulation to the exclusion of other sources of stimulus control" (Hayes et al., 2011, p. 4). Although fusion is not hypothesized as intrinsically harmful in every circumstance, when it occurs in excess it can become so. In such cases, individuals begin to take the content of their cognitions literally, without an awareness of the process of the thinking itself (Hayes et al., 2011). Fusion means becoming caught up in one's thoughts, and letting them dominate one's behavior (Harris, 2009). For example, in a state of fusion, a thought can seem like a rule one must follow or a command that one must obey, the absolute truth, or something that is happening at the present moment even though it may in actuality have happened previously or is yet to occur.

Conversely, defusion refers to utilizing the ability to detach or separate from one's thoughts, memories, and images. Rather than becoming caught up in thoughts, defusion involves permitting them to come and go. The goal of the ACT principle of defusion is to witness the true nature of thoughts and understand that they are simply images and words. Thus, instead of responding to thoughts in terms of literality, or how accurate they are, individuals began to respond to them in terms of workability, or how helpful they are to have (Harris, 2009). In defusion, the emphasis is on mindfully observing cognitions as they occur. RFT posits that purposeful attempts to modify negative cognitive content can have a paradoxical effect and

increase its functional significance. Thus, defusion involves the development of nonliteral, non-evaluative contexts in which the emphasis is mindfully noticing thinking as it occurs (Hayes et al., 2013).

ii. Acceptance. The ACT idea of *experiential avoidance* involves the attempt to alter the intensity, frequency, or form, of private experiences such as feelings, thoughts, memories, or bodily sensations, even when doing so is unnecessary, costly, or ineffective (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). According to RFT, some feelings or other private experiences are evaluated negatively and rules are constructed in an attempt to suppress them (Hayes et al., 2013). The theory explains that although experiential avoidance serves the function of temporarily decreasing some degree of distress or discomfort, there can be long-term negative effects (Hayes et al., 2011).

iii. Contact with the present moment. ACT theorizes that individuals lose flexible contact with the present when they are mentally and emotionally elsewhere, away from their experience of distressing thoughts and feelings. The ACT principle of contacting the present moment refers to consciously engaging in and connecting with the present moment. Contact with the present moment involves being in the here-and-now and being completely conscious of one's experience, rather than being lost in one's thoughts. It requires the development of flexibility in order to pay attention to both the external environment as well as one's internal psychological world. The goal of contacting the present moment is to enrich conscious awareness of one's whole experience in the present moment, so as to enable accurate perception about what is occurring, and to be able to gather relevant information regarding whether to modify or persist in behavior. This principle involves engaging fully in whatever an individual is doing, to enhance both effectiveness as well as fulfillment (Harris, 2009).

ACT's concept of contacting the present moment supports focusing on that which is present (both in one's inner psychological world and in the outer material world) in a voluntary, flexible, and focused manner, linked to one's purpose and values. Instead of utilizing language to judge or predict internal events, language is used more as a tool to note and describe these private events (Hayes et al., 2011).

In ACT treatment, a client's ability to attend to the "here-and-now"—to his or her present-moment experience—is elicited through vocal tone, bodily postures, and so on, in a flexible and focused manner. Mindfulness and other forms of contemplative homework are often utilized to exercise an alternate mindset that is more appreciative, curious, open, and flexible, and less oriented to problem solving and being judgmental (Hayes et al., 2011). The classic mindfulness exercise of eating a raisin and experiencing it incrementally with all five senses over the course of several minutes can be used to increase contact with the present moment.

iv. Self-as-context. In this domain, the goal of ACT is to "undermine an attachment to a conceptualized self (our fused, evaluative stories about who we are) and to promote contact with a sense of self based on the 'I/here/nowness' of conscious experience" (Hayes et al., 2011, p. 186). This is referred to as *self-as-context*, as well as *observer perspective*, *transcendent sense of self*, or *noticing self* (Hayes et al., 2011).

Self-as-context refers to the ACT notion of observing one's changing thoughts, bodily sensations, roles, and feelings in a state of pure awareness. The observing self, or self-in-context, thus differs in function from the *thinking self* (Harris, 2009) in that the thinking self produces thoughts, whereas the observing self is the self that notices or observes the thoughts. Self-as-context interventions aid clients in viewing their private experiences as distinct from consciousness, that these private experiences are not necessarily threatening material; this is

believed to increase psychological flexibility and undermine excessive rule control. In ACT, self-as-context is encouraged through the use of metaphors, experiential process, and mindfulness exercises. Clients might engage in mindfulness activities where they are asked to look at difficult experiences with their eyes-closed, and to notice who is noticing, or to imagine that they are older and to write an advice letter back to the person who is currently struggling (Hayes et al., 2011).

v. Values. In ACT, values essentially refer to the idea of what individuals most deeply want in their lives. The principles of cognitive defusion, acceptance, and being present are all in the service of ultimately leading a more values-consistent life. Values "dignify these other processes and make them meaningful" (Hayes et al., 2011, p. 7). Values are defined in ACT as "chosen, verbally constructed consequences of dynamic, evolving patterns of activity for which the predominant reinforcer becomes intrinsic to the behavioral pattern itself" (Wilson & Dufrene, 2009, as cited in Hayes et al., 2011, p. 7). They are more like a guide or ongoing direction (e.g. being a loving spouse), rather than a destination (e.g. buying an expensive car). According to the principles of ACT, values based on asocial compliance, fusion, or avoidance are behaviorally unhelpful because they do not contribute to the flexibility characteristic of values associated with positive consequences (Hayes et al., 2011).

In addition, values refer to one's sought after qualities of ongoing behavior, meaning how a person wishes to act on a regular basis. Embedded in the philosophy of ACT is the notion that a vital step in the creation of a meaningful existence is the clarification of one's core values, or chosen life directions (Harris, 2009). An ACT therapist helps individuals create clarity in their values, create values based on personal choice rather than avoidance of social criticism or to obtain social approval, or to escape distressing feelings such as guilt or shame. Clarification of

one's values is done by utilizing ACT exercises and clinical tools designed to help clients seek meaning, purpose, and vitality (a term used to describe a sense of being fully alive and embracing one's present experience, regardless of how one may be feeling in this moment). Part of this clarification process involves helping clients distinguish between their actual values versus ideologies based on social compliance, avoidance, or fusion, which may be masquerading as their values. For example, the idea that "I *should* value being wealthy" or "*My father* would value me being wealthy" may be indicative of social compliance rather than one's own chosen value system. Under the ACT philosophy, following one's true values allows an individual to be in touch with a more transcendent sense of self, rather than allowing behavioral patterns to be determined by a conceptualized sense of self.

Sobczak and West (2013) noted that many of the values that individuals possess are commonly nestled within cultural mores, such as ethnicity, geographical location, and family. Woidneck, Pratt, Gundy, Nelson, and Twohig (2012) suggested that interventions such as ACT, which emphasize contextual factors such as socialization and cultural norms and the utility rather than reasonability of feelings and behaviors, might offer some benefits in treating individuals in a multiculturally sensitive manner that accounts for values, meanings, and norms of ethnocultural populations (Hayes et al., 2006). Conversely, it has been suggested by some researchers that certain therapeutic modalities, such as CBT, which are known to emphasize assertiveness, rationality, cognitive change, and personal independence may be less compatible with diverse clientele and lack some of the factors that would aid in creating a customized approach for minority populations (Hays, 2009; Horrell, 2008). Due to the fact that an individual's values are not assumed in ACT, the therapy has the capacity to potentially be used successfully with individuals with a range of worldviews and values (Woidneck et al., 2012). An ACT therapist

may focus on exploring the function of unhelpful thoughts in a curious manner, with the sole aim of assisting individuals in changing their relationship to such thoughts so that they influence their lives in a less harmful way, rather than challenging the content of the thoughts (Hayes et al., 2013). In this way, the therapist aids the client in noticing the thoughts and their functional impact, allowing for the clients themselves to assess how helpful their values are, rather than the therapist having a more heavy hand in modifying or directly challenging the client's values, which could be problematic in the case of core philosophical differences in values of the therapist and the client (whether driven by culture or not). Furthermore, clarifying the client's values in a flexible, open-ended and non-judgmental manner permits exploration of the role of familial or culturally-driven expectations that may or may not be compatible with the client's personal values. Thus, contextually-based therapies such as ACT show promise in the area of culturally sensitive approaches to values work, and may be well-designed for use with marginalized or non-dominant groups (Fuchs, Lee, Roemer, & Orsillo, 2013).

vi. Committed action. ACT ultimately seeks to undermine impulsivity, avoidant persistence, and inaction, while supporting the development of enhanced patterns of effective action aligned with chosen values. In ACT, although values provide a continuous direction to strive towards, the notion of committed action is concrete in that specific goals are that consistent with values can be developed and achieved. Short-term, intermediate, and long-term behavior change goals are typically included in ACT sessions (Hayes et al., 2011).

Committed action refers to acting in accordance with one's values, which can result in a wide range of feelings and thoughts, both painful and pleasurable. This ACT concept involves doing what it takes to be guided by one's values, even if it causes the individual some degree of discomfort or pain. Traditional behavioral principles and interventions (e.g., exposure, functional

analysis, shaping, skills training, goal setting, behavioral activation, contingency management) can be utilized to aid in the performance of committed action (Harris, 2009).

However, the goal of these ACT procedures is not specifically to reduce distress, but rather to allow individuals to practice experiencing difficult feelings without simultaneously struggling with those feelings. Stated another way, the goal of ACT is not symptom reduction, but rather to prevent symptoms from inhibiting individuals from engaging in actions consistent with their values (Hayes et al., 2011). Thus, while committed action may look quite similar to exposures typical of traditional CBT, the underlying theory informing its practice is different. While psychiatric symptom-reduction is not the focal point of ACT, the processes of ACT have been associated with significant symptom reduction (Hayes et al., 2006).

Review of the Literature on Acceptance and Commitment Therapy for the Treatment of Anxiety Disorders

Forman et al. (2007) randomly assigned 101 outpatient participants with moderate to severe levels of anxiety or depression to ACT or CT, in a randomized controlled trial examining comparative effectiveness of the two interventions. Minimal exclusion criteria were utilized in order to promote external validity. Participants in both groups experienced large and equivalent decreases in anxiety and depression, and improvements in quality of life, overall functioning, and life satisfaction. While across the two groups, improvements were found to be equivalent, the mechanisms of change appeared to be different, with outcomes in ACT being mediated by acceptance, experiential avoidance, and acting with awareness, and outcomes in CT being mediated by observing and describing one's experience. These findings suggest that despite some technical similarities between ACT and cognitive-behavioral approaches, such as in the use of exposure, these interventions may address information processing biases in individuals with

anxiety in unique ways, and that ACT may be a viable treatment for a variety of anxiety disorders, providing benefits in a number of domains.

Findings from a longer-term follow-up study, (Forman et al., 2012) which was an extension of Forman and colleagues' (2007) prior posttreatment outcome report, however, seemed less promising. While ACT and CT were similarly effective at post-treatment (as described above), by an 18-month follow-up, gains from treatment, in terms of depressive symptomatology and overall functioning, were more enduring in the CT group. Specifically, more than twice as many participants in the CT condition were in the normative range with respect to functioning levels, and one-third more CT participants than ACT participants were clinically normative with respect to depressive symptomatology. That said, given the current research topic, it is relevant to note that CT did not exhibit greater maintenance of treatment gains than ACT with respect to anxiety. One interesting speculation that the authors elaborate upon, in order to account for these differences at long-term follow-up, is that CT is more intuitive than ACT, and thus is a more straightforward intervention, enabling clients to more easily apply its principles independently after no longer receiving the guidance of a therapist. Conversely, they suggest that ACT is somewhat counterintuitive, with concepts that may go against existing social norms, making it more challenging for some individuals to continue independent use of ACT strategies without continued support from a therapist.

Arch et al. (2012), however, conducted a randomized clinical trial comparing the impact of ACT versus CBT for individuals with a DSM-IV anxiety disorder, with results related to ACT that diverged in some favorable ways from Forman et al. (2012). In this investigation, diagnoses included SAD (19.7% of the sample), panic disorder, generalized anxiety disorder, obsessive-compulsive disorder, specific phobia, and a number of comorbid diagnoses. Participants (*n*=128)

receiving either treatment received 12 weekly 1-hour therapy sessions, following detailed treatment manuals, with both treatments being matched on amount of exposure and homework. Participants were assessed at pre-treatment, post-treatment, and at 6 and 12 month follow-ups. From pre-treatment to post-treatment, individuals from both treatment conditions experienced similar improvements across all outcomes, including improvements in anxiety symptoms at post-treatment (with gains at 6-month follow-up continuing to be maintained at 12-month follow-up) and post treatment improvements in psychological flexibility and quality of life. Both the ACT and CBT conditions were also associated with significant reductions in comorbid anxiety and mood disorder symptoms, demonstrating that treatment effects generalized in both ACT and CBT conditions. Participants in the ACT condition demonstrated larger decreases in anxiety symptoms, and higher levels of psychological flexibility than in the CBT condition at 12-month follow-up, suggesting that ACT has the capacity to succeed in its direct theory-driven aim (i.e., increased psychological flexibility), while also providing indirect benefits related to symptom reduction, even after treatment has terminated. CBT participants reported higher quality of life, which is somewhat surprising, given that CBT focuses primarily on symptom reduction whereas ACT is thought to take a more holistic approach toward wellbeing. Nonetheless, the overall findings of this study suggest that ACT is a highly viable treatment for individuals with a variety of anxiety disorders, and thus may have utility in the treatment of SAD.

Brown et al. (2011) investigated the use of an acceptance-based behavior therapy (ABBT), an umbrella term referring to third wave behavioral therapies which ACT falls under, versus CT for the treatment of test anxiety, in a randomized controlled trial pilot study. Participants (*N*=16) were university students recruited from psychology courses who had scored high on a measure of test anxiety, who were enrolled in classes with at least two major

examinations. Participants were randomly assigned to a single 2-hour group session of either the ABBT or CT treatment. Substantially different effects on test performance, as measured by exam scores, were observed between the two groups. While students who had received the CT workshop actually demonstrated reduced performance, students who received ABBT showed improvements in test performance. The study also yielded (albeit nonsignificant) findings that both treatments were associated with reduced test anxiety, with greater decreases in symptoms demonstrated by the ABBT group. The authors speculated that acceptance-based techniques may be more helpful in assisting students with coping with the emotionality and worry that goes hand-in-hand with text anxiety, allowing for better performance in a perceived high risk/reward circumstance. They noted that approaching test-taking with a nonjudgmental and accepting frame of mind may potentially help free up students' cognitive resources to focus on the desired task at hand. Given that students with test anxiety may share some of the performance-related dread and fear of negative evaluation that socially anxious individuals experience in socially oriented contexts, this study lends hope to the potential for ACT to elicit similar benefits in the treatment of SAD by addressing these overlapping biases.

Davies, Niles, Pittig, Arch, and Craske (2015) conducted a randomized clinical trial that examined physiological indices of emotional dysregulation in relation to outcomes in ACT as compared to CBT for anxiety, as a means to better identify under what conditions and for whom these treatments are most effective. This study had participants (ACT, n=22; CBT, n=24) complete pre-treatment laboratory assessments, including a relaxation-induced anxiety task and hyperventilation tasks. Results of the study suggested that lower heart rate variability was an indicator of better overall outcome across both ACT and CBT conditions, but that higher levels of behavioral avoidance of hyperventilation predicted superior outcome from ACT over CBT.

The authors suggest that this study, while exploratory in nature, provides preliminary evidence that both treatments may be more helpful for persons with lower heart rate variability, but that ACT may be more impactful for those who are very behaviorally avoidant of sensations at baseline (Davies et al., 2015). Given that individuals with SAD frequently have physiological symptoms (e.g. trembling, shaking, stuttering, panic attacks) in addition to their cognitive and emotional distress, these findings suggest ACT may be able to address the physical correlates to anxiety that may be experienced in social situations. Additionally, it can be surmised that core principles such as acceptance of unpleasant thoughts, emotions, and physical sensations may have contributed to these findings.

Eifert et al. (2009) described three case studies, in examining the use of a unified treatment protocol (Eifert & Forsyth, 2005) of ACT for the treatment of anxiety disorders. The authors' article noted that this particular ACT protocol can be adapted for use with individuals with any major anxiety disorder. The protocol, which emphasizes acceptance of anxiety-related discomfort, identification of values, and engagement in values guided-actions, is divided into three phases over 12 weeks. Pretreatment and post treatment data were collected from three individuals with symptoms of various anxiety disorders, including social phobia, panic disorder and OCD. Results demonstrated significant improvements at posttreatment with respect to anxiety and distress symptoms, experiential avoidance, mindfulness and acceptance skills, and increases in quality of life, with participants reporting maintenance or improvement in functioning at a 6-month follow-up. The authors highlighted that while ACT does not aim to directly target anxiety reduction, all three clients experienced reductions in distress, as measured by nearly all distress and anxiety-related scales. Furthermore, the authors underscored that while only two of the clients showed small increases on the ACT Action scale, all three clients

experienced a sense of empowerment due to the focus on values-based living, and engaged in activities and behaviors consistent with their life goals. The last finding is particularly intriguing, as it suggests that even though these clients may have not fully reached the ultimate desired goal of participating in significant amounts of committed values-driven actions, they were still able to experience improvements in quality of life (including a subjective sense of empowerment) along with other outcomes, suggesting that a strong emphasis on values-clarification in and of itself may be associated with a variety of benefits in individuals with anxiety disorders.

In a similarly structured investigation, Codd, Twohig, Crosby, and Enno (2011) discussed three other case studies of individuals with anxiety disorders, utilizing an ACT protocol that intentionally excluded any in-session exposure exercises. This was done as a means to diminish the overlap between ACT and traditional exposure-incorporating therapies. Participants were treated in a private practice setting over a span of 9-13 sessions, with the treatment procedure reported as equivalent across all three clients. The three clients had (a) panic disorder with agoraphobia, (b) comorbid social phobia and GAD, and (c) PTSD, respectively. Following treatment, all participants demonstrated clinical improvement in the severity of their respective anxiety disorder(s) and maintained gains at follow-ups that were 8+ months after treatment terminated. Additionally, time series assessments of anxiety and avoidance behaviors, taken throughout treatment, demonstrated large reductions in avoidance but not in anxiety, indicating that the treatment changed the way that participants related to anxiety rather than modifying the anxiety itself.

This review of the literature on the use of ACT as an intervention for mixed anxiety disorders underscores the high degree of promise this form of therapy demonstrates for individuals with anxiety disorders in general, and consequently its potential utility as a treatment

for social phobia specifically. Given the demonstrated potential of ACT as a treatment for anxiety disorders, perhaps a vital next step in the literature on ACT and anxiety disorders, as articulated in depth in Arch and Craske's (2008) exploration of possible similarities and differences between ACT and CBT for anxiety disorders, may involve further investigation of mediating factors related to treatment outcomes. While the results of the aforementioned studies did not demonstrate complete homogeneity in terms of positive findings in favor of the use of ACT (e.g. with some studies having shown CBT as having outperformed ACT in certain areas), as a whole, the literature described above paints a generally promising picture indicating that individuals with a variety of anxiety disorders may experience considerable gains by receiving treatment with ACT. These gains include significant reductions in disorder-specific anxiety symptoms, comorbidities and general distress, and avoidance, as well as improvements in quality of life, overall functioning, and psychological flexibility, which theoretically may be connected with ACT processes (e.g. acceptance, committed actions aligned with values, etc.). Given that there is a high degree of overlap in the types of information processing biases, cognitive processes (e.g. ruminative thinking and worry), and propensity for behavioral avoidance (e.g. of specific situations or physical symptoms) across the various anxiety disorders, the generally favorable findings yielded from studies examining ACT as used in anxiety disorder treatment, lend credibility and hope supporting the idea that socially anxious individuals may experience significant benefits from treatment with ACT.

Review of Literature on Acceptance and Commitment Therapy for the Treatment of Social Anxiety Disorder

Research on the application of ACT specifically for the treatment of SAD, although no longer in its infancy, is still growing, with a number of studies showing a great deal of promise.

One uncontrolled trial of ACT for SAD underscores the acceptability and potential efficacy of ACT (Dalrymple & Herbert, 2007). Participants (*n*=19; mean age=31) met criteria for the generalized subtype of SAD according to DSM-IV-TR criteria (APA, 2000). Almost half of participants met criteria for at least one comorbid Axis I disorder and 59.5% met criteria for avoidant personality disorder (AVPD). Participants were randomized into a 12-week individual treatment integrating ACT and exposure therapy at a university-based anxiety clinic. Outcomes included SAD symptoms, experiential avoidance, and general quality of life. In the ACT intervention component, treatment sequentially focused on the idea of *creative hopelessness*. The latter is a series of experiential exercises that utilize metaphors to highlight the futility of individuals' past efforts to control anxiety, *willingness* to have distressing or unwanted cognitions while being exposed to difficult social situations, and mindfulness techniques to teach non-judgmental experience and appraisal of anxious thoughts and encourage cognitive defusion; participation experiences were also included that reflect the individual's values. Treatment also included traditional behavior therapy strategies such as social skills training, in-session roleplays, and in vivo exposure, which were modified to stay consistent with ACT philosophies. Patients experienced significant decreases in social anxiety, fear of negative evaluation, and experiential avoidance, as well as significant improvements in quality of life both at post-treatment and at 3-month follow-up (Dalrymple & Herbert, 2007). Dalrymple and Herbert (2007) hypothesized that ACT has the potential to serve as an alternative treatment possibility for individuals with SAD for numerous reasons, including the following: (a) Compared with traditional CBT, ACT may have the capacity to further increase quality of life and functioning due to its emphasis on values clarification in broader domains; (b) Given that individuals with anxiety disorders tend to engage in an array of avoidance strategies, they are understandably wary of engaging in exposure-based

interventions which encourage them to experience fear and target their avoidance. Thus, acceptance-based approaches that bolster willingness to experience anxiety, rather than emphasizing anxiety reduction, may increase patients' receptiveness to engage in exposure therapy in the first place (Eifert & Heffner, 2003); (c) Exposure work may be further facilitated through ACT's focus on values clarification and connecting behavior to clients' personally identified values and goals; (d) Experiential avoidance was more predictive of quality of psychological experiences and events in everyday life than the traditional CBT construct of cognitive reappraisal (Kashdan, Barrios, Forsyth, & Steger, 2006).

Ossman, Wilson, Storaasli, and McNeill (2006) conducted a different uncontrolled study (*n*=22; mean participant age=42.4), also at a university-based outpatient clinic, examining the effectiveness of a ten session (2-hours long) ACT group treatment for individuals diagnosed with either the generalized or non-generalized subtype of SAD. Participants with comorbidities were included unless they were actively dependent on substances. Mindfulness techniques were used to assist participants in heightening their nonjudgmental awareness of thoughts and feelings, and later group sessions utilized systematic exposures customized to each participant's unique frequently avoided private and overt behaviors. The objective of such exercises differed from the intent of traditional exposure techniques, in which the main goal is extinction. Rather, the goal of sessions was to help participants learn to respond flexibly to avoided content, in keeping with their personal values. Of the 12 participants who completed treatment, posttreatment and 3-month follow-up data indicated significant decreases in SAD symptom measures (although social anxiety symptoms were not a specific target of this treatment), experiential avoidance measures, and significant increases at follow-up in completers' ratings of effectiveness in living, specifically pertaining to social relationships (Ossman et al., 2006). This study provides further

support that the processes of ACT, while not intentionally designed to do so, are indirectly reducing SAD symptoms. Perhaps even more important than symptom reduction, given the purpose and philosophy underlying ACT interventions, the study demonstrates that the processes are working as hypothesized, by increasing overall effectiveness in living and interpersonal functioning, indicating that clients are potentially engaging in activities more consistent with socially-oriented values, such as social connectedness or altruism.

Dalrymple et al. (2014) pilot tested an integrated acceptance-based behavioral approach for SAD with comorbid depression, as an adjunctive treatment for patients receiving pharmacotherapy in an outpatient psychiatry practice. The authors utilized an individual 16-session treatment format protocol (Dalrymple & Herbert, 2007), combining exposure therapy for SAD with principles of behavioral activation for depression, which were integrated and delivered from an ACT framework. Treatment incorporated the use of experiential exercises, including exposure and behavioral activation, and metaphors to enhance acceptance of affective experiences and reduce behavioral and experiential avoidance patterns typical of SAD and depression. In line with the ACT model, patients were encouraged to accept difficult emotional experiences while engaging in meaningful behaviors. Not unlike the results of the aforementioned studies (Dalrymple & Herbert, 2007; Ossman et al., 2006), participants demonstrated significant improvement on measures of social anxiety and depression, quality of life, overall functioning, and the processes of behavioral activation and psychological flexibility. Effect sizes related to symptom reduction were comparable to those found in effectiveness studies utilizing a CBT approach (Dalrymple et al., 2014). The authors reflected that ACT's broader focus on addressing psychological flexibility, which is associated with a variety of psychological issues, may be especially appropriate for individuals with comorbidities or those

with chronic or severe issues, who have spent years attempting to suppress or avoid their feelings (Dalrymple et al., 2014). Moreover, in their post-treatment qualitative interview, feedback regarding the most helpful aspects of treatment included "Being able to observe myself…dealing with ruminations and stop avoiding my feelings…also in realizing that I have my identity and it is something I define and not others", "I try to live in the moment (that really stuck in my head…Being non-judgmental…Not to dwell", "more willing to do things that the anxiety held me back from", and "I stopped having…ruminations of the past" (Dalrymple et al., 2014, p. 536). Such statements seem to be directly representative of the healing impact that ACT processes such as cognitive defusion, acceptance, values clarification, contact-with-the-present-moment and practices such as mindfulness may have on the symptoms and information processing biases, quality of life, and overall functioning of individuals with SAD and comorbid depression.

Kocovski, Fleming, Hawley, Huta, and Antony (2013) conducted a randomized controlled trial comparing mindfulness and acceptance-based group therapy and traditional cognitive behavioral group therapy for SAD with respect to treatment efficacy. Participants (N=137) ranging in age from 18-62 years old were randomly assigned to CBGT (n=53), MAGT (n=53), or waitlist (n=31). Symptom severity of social anxiety was assessed at baseline, midpoint, completion, and at 3-month follow up. Other variables assessed included mindfulness, acceptance, cognitive reappraisal, rumination, depression, valued living, and group cohesion. Consistent with the authors' hypothesis, it was found that MAGT and CBGT both demonstrated clinically meaningful reductions did not significantly differ from one another in reduction of symptoms of social anxiety (both demonstrating clinically meaningful gains), and the majority of other variables assessed, and both treatment conditions were more effective than waitlist control,

with gains maintained at 3-month follow-up. The results of this study are particularly relevant, given the authors' statement that this was the first published trail comparing traditional CBT for SAD to an ACT-based treatment for SAD.

Craske et al. (2014) conducted a randomized controlled trial (*n*=87) comparing the effects of ACT versus CBT for individuals with a diagnosis of GSAD who were either stabilized on psychotropic medication or were medication-free. Participants completed ACT or CBT over the course of 12 1-hour sessions of individual therapy and were provided follow-up booster phone calls once per month for 6 months to reinforce progress. Treatment for participants receiving ACT was consistent with Eifert and Forsyth's (2005) manual on ACT for anxiety disorders. The first half of the 12-session treatment course for ACT and CBT included introduction to the various principles and strategies consistent with their respective theories, with a heavier emphasis on exposure exercises (through the lenses of their respective frameworks), during the latter half of the treatment course. Both treatments utilized imaginal, interoceptive, and in vivo behavioral exposures, with ACT exposures aimed at practicing mindfully observing, accepting, and making room for anxiety in order to gain experience in engaging in valued actions while anxious, and CBT exposures geared toward the ultimate goal of fear reduction. Overall, the authors found that both the ACT and CBT conditions were superior to wait-list controls on the majority of measures, and generally did not differ from one another. Significant improvements in quality of life were observed at a delay, occurring over the full 12-month follow-up period in both treatment conditions, suggesting that improvements in quality of life may be more gradual than changes in social anxiety symptomatology (Craske et al., 2014). Given that both ACT and CBT were structured to emphasize exposure for a similar amount of time in this study, and given the strong body of evidence highlighting the effectiveness of exposure in treating SAD, it is

possible that the comparable significant improvements in both treatments may be related to exposure. However, CBT did demonstrate superiority to ACT in treating symptoms of social anxiety in individuals with higher levels of experiential avoidance (or lower levels of psychological flexibility) at 12-month follow-up. Considering that ACT is designed to specifically target experiential avoidance and increase acceptance of difficult or distressing private events, these results are somewhat unexpected. The authors speculated that these findings may be the result of greater motivation to practice CBT skills in order to decrease negative affect, in this subgroup of participants. While it remains that the goal of ACT is not symptom reduction per se, these findings may indicate that clinicians providing ACT to socially anxious clients with higher levels of experiential avoidance may wish to consider particularly emphasizing creative hopelessness to increase acceptance of distressing feelings needed to engage in committed actions and/or further encourage the benefits of engaging in committed actions in alignment with one's values. Thus, while a variety of studies, including the present investigation, demonstrate the promise of ACT as an intervention for SAD, there is indication of room for growth in its tailoring for the needs of this population.

In a randomized controlled trial, Niles, Mesri, Burklund, Lieberman, and Craske (2013) investigated attentional bias as a moderator of outcome for SAD. Results of the study indicated that the relationship between outcome and treatment group was significantly moderated by attentional bias, with those participants who were slower to disengage from threatening stimuli (photographs of individuals with specific types of negative facial expressions) demonstrating more symptom reduction in CBT than in the ACT treatment condition (Niles et al., 2013). These results seem somewhat surprising, given that ACT involves a mindfulness component which specifically targets attentional processes. It is possible that an increase in emphasis on the

mindfulness skill building component of ACT throughout treatment, perhaps with specific instructions regarding mindfully disengaging from perceived threatening social stimuli and toward more helpful stimuli in the service of more values-driven living, may particularly bolster management of attentional processes and enhance symptom reduction for the subgroup of individuals with greater threat-vigilant attentional biases.

To this point of incorporating a stronger emphasis on mindfulness skill building, Kocovski, Fleming, and Rector (2009) conducted an open trial examining the utility of Mindfulness and Acceptance-Based Group Therapy (MAGT), which is based on principles of ACT and incorporates a heightened emphasis on mindfulness from Mindfulness-Based Cognitive Therapy (MBCT; Segal et al., 2002), as an intervention for individuals with SAD. Interventional strategies from MBCT and ACT were selected to target key attentional, behavioral, and cognitive processing biases implicated in the maintenance of SAD. Participants were recruited from an outpatient anxiety disorder clinic of a psychiatric hospital and met criteria for DSM-IV generalized SAD, and greater than half of patients endorsed past or present depression. Participants were assessed at pretreatment, midtreatment, posttreatment, and at a 3 month follow up, with measures of social anxiety, depression, mindfulness and acceptance, and rumination. Significant decreases were found in social anxiety symptoms, depression, and rumination, as well as significant elevations in measures of acceptance and mindfulness, with all improvements maintained at 3-month follow up. The authors additionally underscored the significant reductions in social anxiety that were observed by mid-treatment, which was prior to the introduction of exposure exercises (Kocovski et al., 2009), which suggests that therapeutic mechanisms other than intentional exposure-related work were resulting in improvements in symptoms. This study again highlights the possible potency of an acceptance and mindfulness-based intervention in

simultaneously addressing both social anxiety and depression. This is an important finding, given that depression is so frequently comorbid with SAD. Furthermore, the study allows for further speculation that an ACT-based treatment with an amplified mindfulness component might be of particular utility in addressing a number of the information processing biases that factor into the development and maintenance of SAD, depression, and the ruminative thinking that underlies both disorders.

However, in a recent study by Kocovski, Felming, Hawley, Ho, and Antony (2015), which utilized data on treatment completers from the earlier described research conducted by Kocovski et al. (2013), the authors bring to question how explicitly processes (such as mindfulness) may need to be targeted, in order for them to have benefit. In their study, they found that mindfulness may be a pertinent mechanism of change for both MAGT, which addresses mindfulness directly, and CBGT which they describe as promoting mindfulness indirectly: "Clinicians may find it to be intuitive that mindfulness increases during CBGT – the practice of stepping back from situations to identify and challenge automatic thoughts may contribute to subtle shifts in mindfulness which in turn may reduce social anxiety" (Kocovski et al., 2015, p. 19). Whether mindfulness is targeted explicitly or implicitly, these findings continue to add support to the growing body of research suggesting that the promotion of increased mindfulness and awareness can have substantial benefits to individuals with SAD.

Goldin, Ziv, Jazaieri, Hahn, and Gross (2013) conducted a randomized controlled trial that emphasized mindfulness meditative practice, to compare the effects of MBSR versus aerobic exercise (AE) in emotion regulation for individuals with generalized social phobia. The MBSR condition involved a 1-day meditation retreat, eight 2.5 hour classes in group format, and home practice every day. Participants received formal meditation training, Hatha yoga, and informal

practice. Participants in the AE condition were provided with 2 free months of gym memberships and were required to complete at least one group AE session and two individual AE sessions during the 8 week period. Findings of the study indicated that only MBSR resulted in a significant decrease in negative emotion in response to negative self-beliefs, when implementing an attentional emotion regulation strategy referred to as *receptive awareness* or *open monitoring*, highlighting that the implementation of certain specific mindfulness-based emotion regulation strategies may be beneficial for socially anxious individuals with negative self-judgments. The authors also note that mindfulness meditation skills taught in MBSR may positively influence core components of social phobia, such as exaggerated emotional reactivity, behavioral avoidance, and fear of social situations through development of more flexible engagement with negative self-beliefs (Goldin et al., 2013). The authors speculate that this phenomenon might be attributed to substantial training in noticing repetitive thinking and interpretive patterns combined with flexible use of meta-cognitive attention regulation (Goldin et al., 2013). This study highlights the potential benefits of mindfulness meditation training in assisting attention regulation in individuals with social anxiety. Moreover, as the ACT core process of cognitive defusion is especially similar to "receptive awareness" or "open monitoring", these findings suggest that cognitive defusion may be a particularly prominent mechanism for change facilitating more flexible and less negative interactions with negative self-evaluations in social anxiety.

Similarly, findings from other studies allow for a closer glimpse into the core processes of ACT which may be change mechanisms in the treatment of SAD. Niles et al. (2014) conducted a session-by-session analysis of data from the previously described treatment comparison study (Craske et al., 2014) of CBT and ACT for social phobia, with 50 adults

randomized to ACT (*n*=25) or CBT (*n*=25). Session-by-session changes in experiential avoidance (a theorized mediator of ACT) and negative cognitions (a theorized mediator of CBT), were assessed with the Acceptance and Action Questionnaire (AAQ; Hayes, et al., 2006) and a modified version of the Self-Statements During Public Speaking Questionnaire (SSPS; Hofmann & DiBartolo, 2000) and outcome measures assessed social anxiety, depression, and quality of life. The study found experiential avoidance decreased earlier in the treatment, significantly more so in ACT than in CBT, as might be expected, given that experiential avoidance is directly targeted by ACT during the first several sessions. As the rate of decline of experiential avoidance was faster in ACT during the first part of treatment (when the focus is on cognitive defusion), and was faster in CBT during the second part of treatment (when the emphasis is on behavioral exposures to decrease fearfulness), the authors speculated that the emphasis on cognitive defusion earlier in ACT and the behavioral exposure emphasis later in CBT may be most associated with willingness to experience distressing or uncomfortable internal experiences. Furthermore, the finding that negative cognitions declined more quickly earlier in the treatment process with ACT than with CBT was interesting, considering that the goal of ACT is not to intentionally alter distorted thinking patterns. It is speculated that this may indicate that cognitive restructuring may actually be counterproductive for decreasing negative cognitions, given its hypothesized similarity to thought suppression (Hayes, Strosahl, & Wilson, 1999), since the labelling of specific thoughts as faulty may augment intrusion of suppressed cognitions (Wegner, 1994) and that deliberate focusing of attention on the content of negative thoughts maintains the process of rumination (Eifert & Forsyth, 2005). The authors' findings support the notion that acceptance and mindfulness based cognitive strategies may be more effective in decreasing negative cognitions than cognitive restructuring. The study also found that faster reduction in

negative thoughts during the initial phases of treatment predicted overall improvement, indicating that strategies such as cognitive defusion should be emphasized early on in treatment.

In a case study (*N*=1) of a student pursuing treatment for social anxiety at a college counseling center, Brady and Whitman (2012) provide a detailed description of the use of ACT as an intervention. The student was a male in his early 20s who experienced anxiety in numerous social circumstances, reflected in thoughts (e.g. that he might "say or do something stupid" (p. 87), and physical sensations (e.g. uneasiness; increased heart rate). The student underwent treatment progressing through the Six Core Processes of ACT, which the authors described as ultimately resulting in significant changes, such as being able to "[let] go" (p. 93) of his anxiety, practicing mindfulness of his internal and external experiences in the context of a new relationship, understanding more what his wants were in life and being able to eventually take committed actions to behave in ways that were consistent with his relational values despite his fears (Brady & Whitman, 2012). Hence, above and beyond developing increased psychological flexibility in responding to anxiety, this student also was able to more clearly develop an understanding of himself and connect with his desires in life. While this particular article was a case study, and thus has several inherent limitations, the authors aptly recognized that the values exploration and clarification component of ACT may be particularly well suited for college populations, as issues related to identity and future goals tend to be central themes for students during this critical developmental stage (Brady & Whitman, 2012). As the next phase in the advancement of ACT research may involve determining which populations or subgroups are best suited for ACT treatment, the authors' speculation suggests that specific exploration into the potential relevance and benefit of values work in ACT treatment with a college population could be particularly eye-opening.

Yuen et al. (2013) explored the use of videoconferencing technology for remote delivery of acceptance based behavior therapy for individuals with SAD. Participants (*N*=24) were assessed at four points (pre-treatment, mid-treatment, post-treatment, and 3-month follow-up) and received 12 sessions of weekly therapy. Treatment followed a manualized protocol, Acceptance-Based Behavior Therapy for Social Anxiety Disorder (Herbert, Forman, & Dalrymple, 2009). Study findings indicated significant favorable changes in measures of social anxiety and depression symptoms, quality of life, experiential avoidance, and disability from pre-treatment to follow-up. It is especially worthy to note that effect sizes were similar to or greater than those from previously published studies delivering CBT for SAD in person. These findings are especially promising, as remote treatment delivery may be of particular utility for individuals dealing with barriers to seeking treatment such as anxiety related to the social interactions that are inevitable when pursuing in-person treatment, as well as concerns related to stigma, or logistical issues. Thus, for socially anxious individuals who may not otherwise pursue or have access to treatment, acceptance based therapies delivered through videoconferencing technology may be an excellent option to serve their needs in a manner that may be at least as effective as leading treatments may be in-person.

In a pilot study conducted in a university setting (Block & Wulfert, 2000), participants (*N*=11) with public speaking anxiety were randomly assigned to ACT, Cognitive-Behavioral Group Treatment (CBGT; Hope & Heimberg, 1993), or a waitlist control group. Participants in the CBGT or ACT conditions received four weekly 1.5 hour long sessions of their respective treatment. In the ACT condition, participants were delivered a short introduction on the nature of public speaking anxiety, and were invited to accept the idea of the uncontrollability of their internal experiences, through the use of role-plays, experiential exercises and a number of

metaphors, and were also introduced to values-based living. As was the case in the CBGT condition, participants were urged to participate in homework and exposure exercises, but the underlying principles were to observe and accept thoughts and feelings (Block & Wulfert, 2000). CBGT (Hope & Heimberg, 1993) included cognitive restructuring, exposures to feared situations, and homework related to in vivo exposures associated with customized hierarchies. Results of the study indicated that social anxiety symptoms decreased for participants in both conditions compared to controls, and participants' willingness to participate in feared situations in both conditions increased. Willingness to experience feared situations was slightly higher in the ACT group, while reduction of public speaking anxiety symptoms was slightly better in the CBGT condition. As the authors note, such findings are consistent with conceptual underpinnings of the respective interventions. While the study did not extend beyond a 3-month follow up, the authors also surmised that participants in the ACT condition may continue to experience symptom reduction with the passage of time, due to their increased willingness to engage in feared behaviors. The findings provide support that ACT may provide benefits to individuals struggling with a specific performance-based form of social anxiety, in addition to the more general types of social anxiety described in a number of other studies. Furthermore, due to overall similarities in the impact of CBT and ACT for SAD in the short-term, this study, like many others, points to the need for investigations with longer-term follow up data in order to shed more light on the relative benefits of ACT as an emergent alternative treatment for SAD compared to existing empirically supported treatments, in the long-run.

The rapidly growing body of research supporting the use of ACT as a treatment for anxiety disorders, in concert with the many recent studies of ACT as a treatment specifically for SAD, demonstrate the potential ACT holds as an alternative treatment for SAD. The limited but

pertinent aforementioned studies of ACT used as an intervention for SAD closely mimicked the findings within the research on ACT and anxiety disorders more generally, demonstrating that ACT may result in improvements in traditionally measured outcomes, such as symptoms of social anxiety and comorbid depression, as well as more ACT-specific process-oriented outcomes, such as increased psychological flexibility and greater acceptance of previously avoided private experiences, decreased experiential avoidance, and increased willingness to engage in committed actions in line with personally defined values. Furthermore, the body of literature indicated that treatment with ACT improved quality of life and general functioning in individuals with SAD. That said, given that a number of studies cited were uncontrolled, it is important to note that more controlled studies comparing ACT + exposure to exposure alone or to another intervention + exposure would help to provide a clearer understanding of the potentially unique value added that ACT may demonstrate, above and beyond existing well-established treatments such as exposure therapy, for SAD.

Again, while the literature was not entirely consistent in terms of the favorability of ACT over more traditional therapies such as CBT (e.g. with some studies indicating greater symptom reduction in CBT compared to ACT), overall the myriad of potential benefits demonstrated in the literature on ACT for anxiety disorders, including SAD specifically, certainly merits continued exploration and further inquiry in this area. Thus, implications of the existing literature highlight the importance of examining the underlying individual processes of ACT more closely, as they may apply to SAD. While research parsing out these specific core processes of ACT as applied to SAD is still relatively sparse as compared to more robust component-research for other prominent treatments, an exploration of the rationale and aims of the Six Core Processes of

ACT and their potential to address information processing biases specific to SAD may shed some additional light on these types of preliminary investigations.

Use of the Six Core Processes of Acceptance and Commitment Therapy in the Treatment of Social Anxiety Disorder

The Six Core Processes of ACT are intimately intertwined and all work together to help promote psychological flexibility in individuals. However, in this section, the processes are examined independently, so as to more clearly distinguish how and to what extent each specific ACT process may address the problematic behaviors, emotional responses, and information processing biases implicated in the development and maintenance of SAD.

i. Defusion. For individuals with SAD in a state of cognitive fusion, a thought can seem like a rule or command that must be followed (e.g. "I must avoid eye contact"), the absolute truth (e.g. "If I say something, I will embarrass myself"), something that is happening at the present moment even though it may have actually happened in the past (e.g. mentally reliving a failed attempt at initiating a conversation at a party), or something that has not even happened yet at all (e.g. visualizing how anxious one will look when attempting to give an oral presentation in class). Fusion with these types of thoughts, images, and memories is impairing to socially anxious individuals and creates and exacerbates anxiety, negative self-judgments, and poor performance in social situations, through an unhelpful feedback loop that often leads to a negative self-fulfilling prophecy.

In the midst of such chaotic mental states, interventions that involve having to challenge the accuracy of the content of these processes, could be overwhelming. The ACT approach, however, invites socially anxious clients to examine their thoughts in terms of *workability* (i.e., how helpful they are in living a values-directed life), which may stand a greater chance of being

clear cut and straightforward for them to answer with objectivity, in contrast to engaging in a process of analysis regarding how accurate these thoughts and images actually are, which may be significantly more influenced by subjectively-biased opinions. ACT-based cognitive defusion interventions demonstrate a similar type of simplicity in their execution, and may provide socially anxious individuals with simple and clear strategies with which to target unworkable or unhelpful thoughts that interfere with their ability to live lives consistent with their values. Some defusion techniques include labeling the process of thinking (e.g. "I am having the thought…that everyone is judging me"); saying thank you to one's mind for a thought; restating words aloud until only the sound of the words remain; and using a variety of mindfulness techniques, such as those that may involve looking at thoughts go by as if they were written out on leaves going down a stream or giving thoughts a size, shape, and texture (Hayes et al., 2011).

ii. Acceptance. Another central component is related to the underlying emotions, sensations and urges that are so intimately tied to SAD. In an effort to bypass the inevitable distress experienced in feared social or performance situations, individuals with SAD frequently engage in experiential avoidance of such situations, to the detriment of their normal routine, occupational or academic functioning, or interpersonal relationships (American Psychiatric Association, 2013). Furthermore, even those socially anxious individuals who do not engage in outright avoidance of anxiety-provoking social situations often have a propensity to engage in more subtle safety-seeking behaviors that maintain the disorder. Hence, a tendency toward experiential avoidance is a significant challenge in individuals with SAD, which gets in the way of socially anxious people being able to more fully live lives in accordance with their personally chosen values. Consequently, strategies that effectively encourage the acceptance of the reality of difficult feelings, and willingness to live out one's life more fully, despite a subjective

experience of (a) feelings such as fear, anxiety, and distress; (b) urges to avoid such feelings and situations; and (c) unpleasant physiological sensations and reactions associated with the anxiety response (e.g. pounding heart, shortness of breath, trembling, shaking hands, etc.) while in feared social or performance situations, could be of prime benefit to individuals with SAD.

ACT practitioners are able to utilize a variety of tools to facilitate the practice of acceptance, such as the use of metaphors, such as asking whether the struggle switch is on or off or at the halfway point of tolerating it (Harris, 2009), and mindfulness exercises (e.g., involving breathing into the feeling or noticing "where" the feeling is, where it is most intense, etc.). Socially anxious individuals experiencing actual-ideal self-discrepancies due to the tendency to set unrealistic standards for performance in social situations, may be well suited for acceptance-focused therapeutic strategies, such as normalizing that individuals' feeling(s) reminds them that they are simply human beings with hearts who are simply experiencing a gap between what they want and what they have. Therapeutic tools such as these, including the concept of creative hopelessness, which would aid individuals in realizing the futility of trying to avoid or control their private internal events, ultimately are employed to increase clients' willingness and ability to engage in activities and behaviors that are consistent with their values in order to live a vital and fulfilling life.

iii. Contact with the present moment. In accordance with the various information processing biases, especially attentional biases, associated with SAD, socially anxious individuals commonly experience the phenomenon of losing contact with the present moment. For example, loss of contact with the here-and-now transpires when experiencing anxious anticipation regarding upcoming social interactions or performance situations. Such disconnectedness from the present moment, due to anxious rumination can easily prime people to

experience heightened levels of anxiety and can result in a problematic self-fulfilling prophecy of failing in the feared social or performance situation. Thus, the ACT concept of contacting the present moment, which involves the development of the ability to focus on both the here-and-now experience of one's inner psychological world and the outer material world in a voluntary, flexible, and focused manner, while linked to one's purpose and values, may promote prevention of this anxious priming process from transpiring. Hence, the process of intentionally gaining contact with the present moment could be of extreme utility to individuals with SAD, who may be prone to ruminating about past failed social interactions through negative post-event processing, or anticipating catastrophic outcomes to future social scenarios. Moreover, mindfulness skills are geared toward development of attentional training and would permit individuals with SAD to learn to more flexibly and intentionally shift their attention, instead of being controlled by their overwhelming attentional processing styles.

Moreover, given that information processing research has indicated that individuals with SAD experience selective attention biases, which may shift between excessive self-focus and attending to external cues for social threats, ACT exercises aimed at strengthening focused attention toward more helpful stimuli (e.g. to positive social feedback from others, one's own healthy personal social behaviors, or to one's own breathing), while immersing oneself in the here-and-now of the experience, could be of extreme benefit to socially anxious individuals. Through practicing mindfulness, socially anxious individuals can develop the ability to deliberately focus their attention away from less helpful thoughts and images, such as threatening or judgmental facial expressions (e.g. people yawning or rolling their eyes) or a negative internal dialogue, and toward elements of the external environment that may be more helpful, such as smiling or nodding faces, during anxiety-provoking social or performance situations. This would

involve learning to employ flexible contact with the present moment. Although the ACT philosophy directly contradicts the notion of intentionally attempting to control internal events such as feelings, mastery of mindfulness skills may indirectly and inadvertently empower socially anxious individuals with an increased sense of control over their attentional processes. This, in turn, may lead to a greater ability to engage in social or performance situations that would enable them to live more fulfilling lives that are more consistent with their values (which is very much in alignment with the ACT framework).

Additionally, this particular component of ACT treatment could help thwart socially anxious individuals' propensity to take the negative and judgmental "observer perspective" or audience view of themselves (e.g., failing or showing signs of anxiety in social situations) by allowing them to defuse from these thoughts and images and connect with the reality of their current situation. On that same note, ACT's mindfulness strategies can increase socially anxious people's memory for social encounters by helping them practice the skills necessary to be more mentally present in such interactions. In this way, the mindfulness practices in ACT are directly are able to target the numerous attentional, interpretational, and memory-oriented biases that hinder socially anxious individuals.

iv. Self-as-context. The distress caused by socially anxious individuals' interpretive biases, such as negative self-evaluations (e.g. "I'm making a fool of myself") or perceived negative evaluations from others (e.g. "They can tell that I'm nervous and they think I'm weird") could also be appeased significantly through learning to see the self-as-context. This ACT core process could aid clients in gaining distance and objectivity about these types of negative interpretations by reminding them that their present negative appraisals and accompanying anxiety symptoms are time-limited and transient.

The core process of self-as-context is a strong example of how ACT's emphasis on mindfulness skills (e.g., use of mindfulness meditations and exercises) might be particularly applicable for socially anxious individuals by directly addressing a number of information processing biases they are known to have. For example, a core aspect of mindfulness practice involves a non-judgmental approach, which would have particular relevance to socially anxious persons, as they are prone to hypersensitivity towards perceived negative evaluation from others and have the tendency to judge their own social performance more harshly than non-anxious individuals. Thus, as a nonjudgmental approach is a core feature of mindfulness, practicing these skills while focusing on the self-as-context would not only foster the ability of socially anxious individuals to defuse and gain distance and objectivity from their disruptive thoughts and negative self-images, but would also help them develop a more compassionate, nonjudgmental stance toward themselves.

v. Values. Values clarification may help generate the additional motivation that is necessary to empower and inspire initially cautious clients to push themselves to engage in social behaviors (e.g. joining a club, asking a question in class) despite feeling anxious, by reconnecting socially anxious individuals with tenets they wish to live by (e.g. activism, developing close friendships, knowledge) that give their lives meaning and purpose. A variety of ACT exercises and journaling processes are utilized to assist clients in identifying their values, and to more actively choose life directions in various domains, including career, spirituality, and family (Hayes et al., 2011).

vi. Committed action. In accordance with a client's clarified values, an ACT clinician may encourage an individual with SAD to engage in behaviors consistent with his/her values. For example, a client who values "altruism" might be encouraged to participate in a group beach

clean-up he was invited to, despite experiencing fear and anxiety by being in a group social setting. In this case, the client could also practice accepting the potentially negative feelings that could be generated in this situation and engaging in the behavior anyway. As is always the case with ACT, the rationale for engaging in these often feared social behaviors is not for the sake of symptom reduction, but rather as an effort to promote creation of a values-driven life. That said, reduction of SAD symptoms, while not the goal of treatment under the ACT model, has been shown to be a common indirect outcome of treatment of SAD with ACT.

Chapter 4: Discussion

Summary of Findings

The present research provided a critical analysis of psychological literature on ACT as an intervention for SAD. The primary purpose of this study was to conduct a comprehensive survey of the existing literature on the application of ACT for anxiety disorders generally, and for SAD more specifically, as a means to investigate the potential utility of ACT as a treatment for SAD. This process also included a critical analysis and synthesis of major themes in the literature relevant to this area of inquiry. Moreover, the study examined potential connections between the individual Core Processes of ACT and information processing biases found in individuals with SAD, in order to more deeply illustrate and understand the potential therapeutic benefits of ACT with socially anxious individuals.

The author's review of the literature on the application of ACT for anxiety disorders, and specifically for SAD, indicated much promise and suggests that socially anxious individuals may experience substantial benefits from treatment with ACT. While the results of the studies at times were mixed or heterogeneous with respect to findings in favor of ACT, overall the literature suggested that individuals with SAD may experience gains in a variety of domains, including improvements in ACT specific processes (e.g., increased psychological flexibility and acceptance of uncomfortable private experiences, decreased experiential avoidance, and enhanced willingness to engage in values-driven actions), and improved quality of life and overall functioning, from treatment that utilizes ACT principles. Moreover, while symptom reduction is never an explicit goal under the ACT framework, the research also demonstrated that socially anxious individuals often experienced significant reductions in disorder-specific symptoms of anxiety, general distress, and comorbid conditions such as depression.

Finally, the Six Core Processes of ACT were also highlighted, in terms of their potential applicability to the information processing biases that individuals with SAD have been shown to experience. The author explored some possible connections with each specific ACT process regarding how it may address the problematic behaviors, emotional responses, and information processing biases implicated in the development and maintenance of SAD. Upon examination, it was found that ACT may provide a range of strategies that have the capacity to directly address biases in attention, interpretation, and memory that socially anxious individuals are posited to commonly experience, with the use of mindfulness holding particular promise with this population.

The research on ACT as a treatment for SAD, while as a whole is favorable, is still growing and demonstrates some mixed or contradictory findings warranting further evaluation. One continued challenge in better understanding the degree to which ACT-specific interventions may provide value added to existing effective treatments involves the commonly used intervention of exposure, which is a well-established intervention for SAD. Given that many studies cited utilized exposure, including particularly a number of uncontrolled studies that included exposure as a component of the ACT intervention, it is difficult to distinguish the extent to which pure ACT-based processes were necessary ingredients for change. Hence, it may be premature to conclude with certainty whether ACT should be recommended as the first line of treatment for SAD above and beyond the current "gold standard" of CBT.

That said, given the burgeoning evidence of its applicability and viability for treating a variety of psychological conditions, and numerous indicators of potential as an intervention for SAD, this treatment modality appears to exhibit considerable promise as a possible alternative to traditional behavioral therapies for SAD, or may show utility as an adjunctive or supplementary

treatment to existing effective treatments for SAD. In particular, the specific emphasis on clarification of values is a unique component of ACT which has great potential to benefit clients. Individuals with SAD who have felt disconnected with their values, (both socially-oriented or otherwise), may especially experience a renewed sense of inspiration and connection to what is important to them, thereby enhancing their overall quality of life. In Heimberg and Ritter's (2008) article discussing the differences as well as the possible overlaps in ACT and CBT for anxiety disorders, the authors jest that although few CBT therapists wish to "help their clients achieve anxiety reduction so that they can sit more comfortably at home doing nothing" (Heimberg & Ritter, 2008, p. 298), that ACT's explicit targeting of living a values-consistent life is more clearly articulated. On that note, clients who appreciate a more holistic therapeutic approach, which places deliberate emphasis on values, quality of life, and overall functioning may gravitate naturally to an ACT intervention. Moreover, the values component of ACT may provide additional utility for those individuals who are in a developmental stage in which identity formation and individuation is highlighted, such as college students, due to the enhanced self-clarity that it encourages.

Furthermore, for treatment refractory cases of CBT for SAD, in which fear-reduction as the rationale for exposure may have provided insufficient motivation for clients to engage in exposure activities, ACT's combination of values-clarification and early introduction to creative hopelessness as a means to promote valued living, may aid in building motivation to engage in committed actions. On a similar note, for clients that might experience difficulties with challenging their thoughts, or may struggle with components of other existing therapeutic modalities, the idea of instead changing the relationship with their thoughts and feelings may hold greater appeal. It is also important to remember that there are a variety of situations or

conditions that may lend more naturally to acceptance-based approaches, as they may not be as intrinsically challengeable or may not involve distorted or inaccurate thinking, per se. For example, instances in which individuals with SAD may also have co-occurring chronic pain, or are experiencing grief, may lend naturally to a treatment such as ACT. Finally, for socially anxious individuals with prominent biases related to attention or have a propensity for self-judgment, the use of mindfulness that occurs frequently throughout treatment in ACT may provide a uniquely beneficial adjunct, as attentional training and self-compassion / non-judgment are fundamental features of mindfulness.

Strengths and Weaknesses of the Present Study

The present project possesses a number of strengths. First, the methodology of utilizing a critical analysis of the literature allowed for a comprehensive overview of existing scholarship on the use of ACT for anxiety disorders and SAD. This method of inquiry facilitates an understanding of current strengths and progress that has been made in the application of ACT to SAD and areas in need of further research. The study distilled the body of research in the area of ACT as applied to anxiety disorders generally and SAD specifically, into major themes that were found to repeat consistently in the literature, allowing for attention to be focused on key points to focus on (e.g. commonly found results), within this more expansive area of inquiry. Lastly, to the author's knowledge, this was the first study to intentionally parse out and separately investigate each individual core process of ACT and connect them to information processing biases and behavioral and emotional aspects of SAD.

There were three primary identifiable limitations in this research; the first being researcher limitations, the second being methodological limitations, and the third being limitations related to availability of research on the area of inquiry. This critical analysis project

is limited in its scope and depth by the bounds created by the researcher, while taking into account the researcher's level of understanding or expertise in this area.

Next, given that the present study was a critical analysis of the literature, this project did not possess the ability to utilize experimental manipulation in order to make more causal inferences between the processes of ACT and measures of outcomes in individuals with SAD (e.g. social anxiety symptoms, quality of life, experiential avoidance, etc.). Furthermore, the study did not involve acquisition of qualitative commentary (e.g. anecdotal clinical opinions of ACT therapists; feedback from clients who received ACT regarding the degree to which ACT processes helped them address attentional biases, etc.), which could provide potentially rich data.

Finally, the application of ACT as a psychosocial intervention for SAD, though past is infancy, is still a growing field of inquiry. Thus, although notable literature exists on ACT and anxiety disorders more generally, and even more when branching even further out into areas of psychological research (e.g. the application of ACT as treatment for substance use disorders, chronic pain, etc.), research investigating the use of ACT with SAD was limited, with a marked paucity of literature examining the individual core processes of ACT as they may apply to SAD. Hence, this latter area of investigation largely involved independent examination and conceptualization on the part of the researcher.

Recommendations for Future Research

Literature investigating the use of ACT as an intervention for SAD continues to advance. Nonetheless, there are a number of domains within this area of inquiry that still require further exploration. For example, additional longitudinal studies or studies with longer-term follow ups need to be conducted, in order to gain a clearer picture of the lasting power of the numerous gains socially anxious individuals have been shown to make, when receiving treatment with

ACT. Currently, only a few studies appear to have provided follow-up data that extends past 1 year post-treatment. Additionally, studies investigating specific subgroups or populations of individuals with SAD who may especially benefit from treatment with ACT is an important next step in the field. Given the fact that the current "gold standard" of treatment for social anxiety – CBT – still has been found to be ineffective with a significant number of those who receive such treatment, identifying subgroups that ACT is particularly effective with may shed light on the capacity for ACT to provide an alternative intervention to address therapeutic gaps in existing leading treatments for SAD. This could provide the potential to assist individuals who might not ordinarily benefit from other traditional treatments. On a related note, more randomized controlled trials comparing ACT with leading treatments such as CBT in the treatment of SAD are needed to clarify some mixed or contradictory findings in the existing research, and to further illustrate whether ACT should be utilized as a first line intervention for SAD or as an adjunctive or alternative treatment. Additionally, more controlled studies comparing ACT + exposure to exposure alone or to exposure with another intervention need to be conducted, to determine the utility of the processes of ACT on a variety of outcomes for SAD, when exposure is not included as an explicit component of treatment. This would provide a better sense of the utility of the processes of ACT in individuals with SAD above and beyond the benefits that the literature on exposure work has already demonstrated. Finally, given that the present research represents a preliminary exploratory examination of how the individual core processes of ACT may theoretically be able to target the information processing biases in individuals with ACT, the field would benefit from inclusion of additional experimental and qualitative research that may allow this particular niche to be understood from alternative lenses, and might provide more evidence to the more exploratory work conducted in the present dissertation.

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APPENDIX A

IRB Exemption Letter

PEPPERDINE UNIVERSITY

Graduate & Professional Schools Institutional Review Board

September 11, 2015

Tejal Shah

Protocol #: P0915D01
Project Title: Acceptance and Commitment Therapy for the Treatment of Information Processing Biases Associated with Social Anxiety Disorder
Re: Research Study Not Subject to IRB Review

Dear Ms. Shah:

Thank you for submitting your application, *Acceptance and Commitment Therapy for the Treatment of Information Processing Biases Associated with Social Anxiety Disorder,* to Pepperdine University's Graduate and Professional Schools Institutional Review Board (GPS IRB). After thorough review of your documents you have submitted, the GPS IRB has determined that your research is **not** subject to review because as you stated in your application your dissertation ***research*** study is a "critical review of the literature" and does not involve interaction with human subjects. If your dissertation research study is modified and thus involves interactions with human subjects it is at that time you will be required to submit an IRB application.

Should you have additional questions, please contact the Kevin Collins Manager of Institutional Review Board (IRB) at 310-568-2305 or via email at kevin.collins@pepperdine.edu or Dr. Bryant-Davis, Faculty Chair of GPS IRB at gpsirb@pepperdine.edu. On behalf of the GPS IRB, I wish you continued success in this scholarly pursuit.

Sincerely,

Thema Bryant-Davis, Ph.D.
Chair, Graduate and Professional Schools IRB

cc: Dr. Lee Kats, Vice Provost for Research and Strategic Initiatives
Mr. Brett Leach, Compliance Attorney
Dr. Stephanie Woo, Faculty Advisor