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# Acceptance-based exposure therapy for public speaking anxiety ☆

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ABSTRACT

Public speaking anxiety (PSA), diagnosed at clinical levels as social anxiety disorder, nongeneralized type, is associated with significant distress and impairment in a substantial portion of the population (Aderka et al., 2012). Empirically supported behavioral treatments for PSA generally include in vivo and/or simulated exposure, usually presented with some form of rationale or context (e.g., habituation). Newer acceptance-based therapies frame exposure as an opportunity to increase one's willingness to experience anxiety, while engaging in valued behaviors. The present study examined the acceptability, feasibility, and preliminary effectiveness of acceptance-based exposure treatment for PSA compared to standard habituation-based exposure in a clinical population. Treatment was delivered in a group format over 6 weekly sessions. Participants receiving acceptance-based exposure (ABE) were significantly more likely than those receiving habituation-based exposure (HAB) to achieve diagnostic remission by 6-week follow-up. Those in the ABE condition rated this intervention equally acceptable and credible compared to participants receiving the habituation-based approach, and improvement on other outcome measures was comparable across conditions. Participants in both groups demonstrated significant and equivalent improvement on measures of public-speaking-related cognitions, confidence, and social skills. Baseline levels of mindful awareness moderated change in public-speaking-related cognitions across conditions, and baseline defusion moderated change in state anxiety for the ABE condition only.



## 1. Introduction

Prevalence estimates for public speaking anxiety (PSA) range from 20% (Pollard & Henderson, 1988) to 85% (Motley, 1995) of the general population. A national survey study reported public speaking as the most common lifetime social fear, reported by approximately 21% of the sample (Ruscio, Brown, Sareen, Stein, & Kessler, 2008). At clinically significant levels, PSA is diagnosed as social anxiety disorder (SAD), non-generalized type (American Psychiatric Association, 2000); 5.9% of individuals will be diagnosed as non-generalized type (Furmark, Tillfors, Statin, Ekselius, & Fredrikson, 2000). PSA occurs in approximately 70.3% of SAD patients and in 6.5% as an isolated fear (Knappe et al., 2011). PSA is associated with lower incomes, higher rates of unemployment, and reduced likelihood of postsecondary education compared to the general population; samples also tend to report significant distress or interference with work, education, or social life as a result of substantial public speaking fears (Aderka et al., 2012).

Given that most people with generalized SAD experience PSA, the SAD literature informs the treatment of PSA as a non-generalized SAD subtype. Current evidence-based, non-pharmacologic treatments for SAD/PSA highlight exposure to anxiety-provoking speaking contexts as the central component of treatment. Meta-analyses of studies examining treatments for SAD have found large pre-to-post-treatment effect sizes for exposure (Acarturk, Cuijpers, van Straten, & de Graaf, 2009; Edwards, 2011; Feske & Chambless, 1995; Gould, Buckminster, Pollack, Otto, & Yap, 1997; Taylor, 1996). Such exposure is typically conducted by means of both simulated role-playing and in vivo exercises (Heimberg & Becker, 2002; Herbert & Cardaciotto, 2005).

Although much can be learned about the treatment of PSA from general SAD research, sufficient differences exist between generalized and non-generalized SAD to justify studying PSA separately. Compared with generalized SAD, those with PSA alone tend to have later age of onset, less avoidance, higher rates of recovery, lower rates of comorbidity, less impairment, and are more likely to receive treatment (Ruscio et al., 2008). On speech tasks, those with PSA alone demonstrate a sharper initial heart rate increase and faster return to baseline heart rate compared

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with generalized SAD individuals (e.g., Hofmann, Newman, Ehlers, & Roth, 1995). A meta-analysis focusing specifically on PSA treatments found that exposure (without other treatment components) improved pre-to-post-treatment scores on self-report measures (Allen, Hunter, & Donohue, 1989). Other PSA-specific studies have found that exposure produces improvements on observer/clinician ratings of speaking behavior (Ayres et al., 1993; Hofmann, 2006; Newman, Hofmann, Trabert, Roth, & Taylor, 1994). Although exposure appears to be an effective treatment for PSA as well as generalized SAD, researching and treating these groups separately allows for more homogenous therapy groups and thus maximizes opportunities for appropriate treatment (e.g., relevant exposure exercises).

There is preliminary evidence that the way in which exposure is framed can affect treatment outcome. Southworth and Kirsch (1988) found that agoraphobic individuals participating in exposure exercises improved more on behavioral measures when told that the exposure was for the purpose of treatment (high expectancy) versus assessment (low expectancy). In clinical practice, exposure is always presented in the context of some rationale, usually either a habituation model of anxiety reduction (e.g., Salkovskis, Clark, Hackmann, Wells, & Gelder, 1999) or a cognitive modification model (e.g., Hope, Heimberg, & Bruch, 1995). Research comparing the relative efficacy of the habituation and cognitive restructuring rationales (presented in equivalent detail and length) has been inconclusive (Salkovskis, Hackmann, Wells, Gelder, & Clark, 2007).

In models of cognitive behavior therapy that stress psychological acceptance, such as Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999), exposure is typically used as a tool for increasing one's willingness to experience anxiety while simultaneously pursuing behavioral goals derived from core life values, rather than as a means of reducing anxiety per se (Orsillo, Roemer, Block-Lerner, LeJeune, & Herbert, 2004). Acceptance of distressing anxiety-related thoughts and feelings is accomplished in part by fostering a nonjudgmental "observer" perspective with regard to these experiences, a concept referred to as "defusion" in the ACT model (Hayes et al., 1999).

Published research on ACT for social anxiety is limited but promising. Dalrymple and Herbert (2007) found that ACT-based exposure treatment produced significant improvement in symptoms and quality of life, as well as in measures of ACT theoretical processes, in a clinical sample ($N=19$) with generalized SAD. In an uncontrolled pilot study, Ossman, Wilson, Storaasli, and McNeill (2006) reported similar results for a 10-session ACT-based exposure group treatment for SAD. Kocovski, Fleming, and Rector (2009) conducted an open trial of Mindfulness and Acceptance-Based Group Therapy (MAGT) for SAD. They reported reductions in social anxiety, depression, and rumination, and concomitant increases in mindfulness and acceptance.

However, very little published research to date has investigated the efficacy of ACT specifically for PSA. Block and Wulfert (2000) semi-randomly assigned undergraduates ($N=11$) with PSA (based on self-report measures) to four weekly sessions of group ACT, group cognitive therapy, or waitlist control. Both active treatment conditions made significant use of exposure exercises, framed within their respective treatment contexts. Measures of anxiety tended to decrease, whereas willingness ratings increased, in both active treatment conditions relative to placebo; however, the small sample size precluded statistical analyses, especially of possible between-conditions differences. In an extension of this study incorporating a larger sample of undergraduates ($N=39$) and 6 weeks of treatment, only the ACT participants, and not the cognitive therapy group, significantly increased their speech length (i.e., decreased behavioral avoidance) relative to waitlist control, although both active treatment groups showed decreased anxiety and increased willingness (Block, 2003).

There have been no published studies of acceptance-based exposure treatment in a clinical population with PSA. Therefore, the current study aimed to examine the feasibility, acceptability, and preliminary efficacy of an acceptance-based exposure treatment, compared to a standard habituation-based exposure treatment, for clinically significant PSA. It was hypothesized that participants in the acceptance-based condition would find the intervention highly acceptable, and that it would be found feasible by study therapists. Given promising results thus far for acceptance-based treatment approaches for anxiety, including PSA (e.g., Block, 2003), we further predicted that the acceptance-based group would experience a greater reduction in anxiety and behavioral avoidance compared to the habituation-based group. A secondary aim was to investigate possible moderating effects of baseline defusion and mindfulness on the effects of acceptance- and habituation-based exposure treatment, in order to identify potential characteristics that may facilitate or hinder response to these treatments.

## 2. Methods

### 2.1. Participants

Participants were 45 adults (36 females) with PSA meeting DSM-IV-TR criteria for nongeneralized SAD, based on a standard structured clinical interview. Participants were recruited from the Greater Philadelphia area through flyers posted throughout the community, online advertisements (e.g., Craigslist, FaceBook), email notices sent to local public speaking groups (i.e., Toastmasters), and announcements on the research lab's website. Additional recruitment efforts within the Drexel University community included several University-wide email announcements and notices in University bulletins.

Exclusion criteria included pervasive developmental disability, acute suicide potential, generalized SAD, psychotic disorders, and current substance dependence. Other comorbid Axis I diagnoses were acceptable only if clearly secondary to PSA. The majority of the sample was white (64.4%) and most were University students (75.6%). Mean age was 31.93 years (SD=10.55; range=19–63), and 46.7% were single (46.7% married/living with partner, 4.4% divorced, 2.2% declined to answer).

### 2.2. Measures

#### 2.2.1. Outcome measures

*Structured Clinical Interview for DSM-IV Axis I Disorders* (*SCID*). The SCID (First, Spitzer, Gibbon, & Williams, 1996) is an extensively utilized structured diagnostic interview based on DSM-IV criteria. Estimates of interrater reliability range from moderate to high for most Axis I disorders (e.g., Williams et al., 1992; Zanarini & Frankenburg, 2001).

*Personal Report of Confidence as a Speaker* (*PRCS*)—*Short Form*. The PRCS-Short Form (Hook, Smith, & Valentiner, 2008) is a 12-item self-report measure of confidence in public speaking situations, with good internal consistency reliability, construct validity, and convergent validity with other public speaking measures. Cronbach's Alpha for the current study was .41.

*Self-Statements During Public Speaking* (*SSPS*). The SSPS (Hofmann & DiBartolo, 2000) is a 10-item, bi-dimensional self-report measure of positive (SSPS-P) and negative (SSPS-N) public-speaking-related cognitions. Across clinical and nonclinical samples, both subscales have shown good internal consistency, test–retest reliability, and