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Public speaking avoidance as a treatment moderator for social anxiety disorder

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ABSTRACT

Background and objectives: Cognitive behavioral therapy (CBT) and acceptance and commitment therapy (ACT) have both garnered empirical support for the effective treatment of social anxiety disorder. However, not every patient benefits equally from either treatment. Identifying moderators of treatment outcome can help to better understand which treatment is best suited for a particular patient.
Methods: Forty-nine individuals who met criteria for social anxiety disorder were assessed as part of a randomized controlled trial comparing 12 weeks of CBT and ACT. Pre-treatment avoidance of social situations (measured via a public speaking task and clinician rating) was investigated as a moderator of post-treatment, 6-month follow-up, and 12-month follow-up social anxiety symptoms, stress reactivity, and quality of life.
Results: Public speaking avoidance was found to be a robust moderator of outcome measures, with more avoidant individuals generally benefitting more from CBT than ACT by 12-month follow-up. In contrast, clinician-rated social avoidance was not found to be a significant moderator of any outcome measure.
Limitations: Results were found only at 12-month follow-up. More comprehensive measures of avoidance would be useful for the field moving forward.
Conclusions: Findings inform personalized medicine, suggesting that social avoidance measured behaviorally via a public speaking task may be a more robust factor in treatment prescription compared to clinician-rated social avoidance.

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1. Introduction

Cognitive behavioral therapy (CBT) is a well-established treatment for social anxiety disorder (Butler, Chapman, Forman, & Beck, 2006; Hofmann & Smits, 2008). Recently, acceptance and commitment therapy (ACT), a third-wave behavioral therapy, has garnered support as another effective treatment for social anxiety (Bluett, Homan, Morrison, Levin, & Twohig, 2014; Swain, Hancock, Hainsworth, & Bowman, 2013) with comparable treatment outcomes to CBT (Craske, Niles, Burklund, Wolitzky-Taylor, Vilardaga, Arch et al., 2014). Clinically significant response rates of individual patients following these interventions are around 50–55%, ranging from 43% to 70% (for a review see Loerinc, Meuret, Twohig, Rosenfield, Bluett, & Craske.et al., 2015; Craske et al., 2014; Leichsenring, Salzer, Beutel, Herpertz, Hiller, Hoyer.et al., 2014; Lincoln, Rief, Hahlweg, Frank, Von Witzleben, Schroeder.et al., 2005). Identifying treatment moderators may be a key to improving response rates, as they clarify for whom and under which circumstances treatments have different effects. Knowledge of such moderators can help clinicians better match patients with existing treatments from which they are likely to glean the greatest benefit (Kraemer, Wilson, Fairburn, & Agras, 2002).

Unfortunately, though several predictors of treatment outcome have been identified, little research exists on treatment moderators. This is likely due to the fact that the majority of prior studies on social anxiety disorder do not compare two active treatments, which is required for assessing treatment moderators. To our knowledge, only a few papers have reported moderators of

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psychological treatments for individuals with social anxiety disorder. The findings are detailed below.

In a previously published article on the current sample, individuals with social anxiety disorder who were rated as high in experiential avoidance (i.e., self-reported unwillingness to accept negative emotions) measured by the Acceptance and Action Questionnaire reported greater symptom reduction at 12-month follow-up in CBT than ACT (Craske et al., 2014). The same pattern of moderation was found in a separate study with a mixed anxiety sample (Wolitzky-Taylor, Arch, Rosenfield, & Craske, 2012). We speculated that individuals with high experiential avoidance benefit more from CBT in the long-term because they are motivated to practice skills (e.g., exposures) designed to decrease avoidance of anxious thoughts, feelings, and sensations. Compared to CBT, ACT emphasizes acceptance rather than reducing uncomfortable internal experiences. Conversely, in the same mixed anxiety sample, individuals with high behavioral avoidance of negative physical sensations (i.e., unwillingness to continue a hyperventilation task) were more likely to benefit from ACT than CBT (Davies, Niles, Pittig, Arch, & Craske, 2015). However, this study did not examine moderators separately by diagnosis and thus it is possible that this finding was driven by patients with anxiety primarily related to bodily sensations (e.g., those with panic disorder and health anxiety), which is a common but not essential or primary component of social anxiety disorder.

A measure of avoidance that is more specific to social anxiety disorder would be avoidance of social situations. Behavioral measures of social avoidance including public speaking tasks are ecologically valid and easily implemented in research, but rarely used in clinical assessments (Beidel, Turner, Jacob, & Cooley, 1989; Hofmann, Newman, Ehlers, & Roth, 1995; Levin, Saoud, Strauman, Gorman, Fyer, Crawford et al., 1993; Moscovitch, Suvak, & Hofmann, 2010). Instead, clinicians typically make judgments of behavioral avoidance based on patient self-report. However, anxious patients' estimates of their avoidance can be at odds with their actual behavior (Rachman & Lopatka, 1986; Taylor & Rachman, 1994). To our knowledge there is no previous study evaluating behavioral measures of social avoidance as moderators of treatment outcome for social anxiety disorder.

Theoretically, experiential and behavioral avoidance are two separate parts of anxiety. Whereas experiential avoidance is centered on avoidance of internal experiences such as thoughts, feelings, and physical sensation, behavioral avoidance is centered on avoidance of external experiences such as social events, public speaking, and meetings. It would seem likely that individuals who are avoidant of feared internal experiences would also be avoidant of feared external experiences. Moreover, both experiential avoidance and behavioral avoidance are indicators of poor emotion regulation (Craske, Street, & Barlow, 1989; Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). From a deficit correction model, it is likely that those who show deficits in emotion regulation would benefit from a treatment that is targeting said deficit (e.g., CBT) compared to a treatment that is not targeting emotion regulation (e.g., ACT).

Given prior evidence that individuals who report high levels of experiential avoidance (indicator of poor emotion regulation) respond more positively to CBT than ACT, we hypothesized that those with the most overt social avoidance (another indicator of poor emotion regulation), would similarly respond more positively to CBT than ACT. To evaluate the effects of in vivo versus clinician-rated social avoidance, we analyzed avoidance via a public speaking task and clinician rating prior to treatment. To isolate the effect of social avoidance above social fear, we analyzed public speaking avoidance, clinician-rated social avoidance, public speaking fear, and clinician-rated social fear as moderators of all outcomes.

2. Materials and methods

2.1. Participants

Forty-nine individuals who met diagnostic criteria for principal or co-principal generalized social anxiety disorder as diagnosed using the Anxiety Disorders Interview Schedule IV (Brown, Di Nardo, & Barlow, 1994; see Craske et al., 2014; for more details) were included in the current analyses. Fifty-two participants completed treatment but follow-up behavioral and self-report data were missing for 3 individuals. A clinician severity rating of 4 or higher on the ADIS-IV indicated clinical severity and served as the cutoff for study eligibility. Individuals were a subset of a larger sample that included randomization to a waitlist condition (Craske et al., 2014). Because moderator analyses examine differential response to two active treatments and not differential response to active treatment versus control, we did not include participants assigned to the waitlist in these analyses. Demographics for the current subsample are in Table 1. There were no significant group differences on any demographic or diagnostic variable at baseline.

Exclusion criteria included active suicidal ideation, pregnancy, substance abuse or dependence within the last 6 months, bipolar disorder, psychosis, or certain medical diseases. Additional exclusion criteria (i.e., left handedness, metal implants, claustrophobia) were included due to a neuroimaging component. Individuals were permitted to receive concurrent psychotherapy or psychotropic medication if they were stabilized on benozodiazepines and beta blockers for a minimum of 1 month; on SSRIs, SNRIs, heterocylics, and MAO inhibitors for a minimum of 3 months; and on non-anxiety related psychotherapy for a minimum of 6 months prior to study entrance. Individuals were recruited through online and newspaper advertisements as well as community flyers and

Table 1
Demographic and clinical characteristics of sample.

Characteristic	CBT (total = 28)	ACT (total = 24)
Gender (Female)	12	10
Reported Ethnicity		
Caucasian/European American	14	14
Hispanic/Latino/Mexican	5	4
Asian-American/Pacific Islander	7	4
Other	2	2
Age, in years	$M = 28.18$ $SD = 6.54$ Range: 18-43	$M = 28.78$ $SD = 6.05$ Range: 19-41
Education, in years	$M = 15.57$ $SD = 1.93$ Range: 12-18	$M = 15.33$ $SD = 1.86$ Range: 12-19
Marital status		
Married/Cohabiting	4	1
Single	23	21
Other	1	2
Children (1+)	2	1
Currently on psychotropic medication	5	7
Comorbid anxiety disorder	10	11
Comorbid depressive disorder	7	7
Social anxiety disorder CSR	$M = 5.61$ $SD = 0.74$ Range: 4-7	$M = 5.58$ $SD = 1.02$ Range: 4-7
Refused to do the public speaking task	2	3
LSAS-Fear	$M = 44.12$ $SD = 8.21$ Range: 28-62	$M = 45.30$ $SD = 9.96$ Range: 29-62
LSAS-Avoidance	$M = 38.01$ $SD = 7.49$ Range: 20-54	$M = 40.96$ $SD = 13.71$ Range: 14-66

CBT = cognitive behavioral therapy; ACT = acceptance and commitment therapy; CSR = clinician severity rating; LSAS = Liebowitz Social Anxiety Scale.