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Behavioral avoidance mediates the relationship between anxiety and depressive symptoms among social anxiety disorder patients☆

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Abstract

This study investigated the relationship between social anxiety, depressive symptoms, and behavioral avoidance among adult patients with Social Anxiety Disorder (SAD). Epidemiological literature shows SAD is the most common comorbid disorder associated with Major Depressive Disorder (MDD), though the relationship between these disorders has not been investigated. In most cases, SAD onset precedes MDD, suggesting symptoms associated with SAD might lead to depression in some people. The present study addressed this question by investigating the mediational role of behavioral avoidance in this clinical phenomenon, using self-report data from treatment-seeking socially anxious adults. Mediational analyses were performed on a baseline sample of 190 individuals and on temporal data from a subset of this group. Results revealed behavioral avoidance mediated this relationship, and supported the importance of addressing such avoidance in the therapeutic setting, via exposure and other methods, as a possible means of preventing depressive symptom onset in socially anxious individuals.

Keywords: Social anxiety disorder; Depression; Behavioral avoidance

The lifetime prevalence of Social Anxiety Disorder (SAD) in Western societies is quite high, ranging from 7% to 13% (Furmark, 2002). In fact, SAD is the most common anxiety disorder in the U.S. and the third most common psychiatric disorder, exceeded only by alcohol dependence and Major Depressive Disorder (MDD; Kessler et al., 1994). SAD is a disabling condition; compared to people without psychiatric morbidity, adults with SAD report lower employment rates, lower income, and lower socio-economic status (Patel, Knapp, Henderson, & Baldwin, 2002).

1. SAD and depression

SAD is also the most common comorbid anxiety disorder with MDD, with estimates of SAD ranging from 15% to 37% of depressed patients (Belzer & Schneier, 2004; Fava et al., 2000; Kessler et al., 1994). Comorbid SAD and MDD has been associated with an earlier onset of MDD, more depressive episodes, longer duration of episodes, a two-fold increased risk of alcohol dependence, and an increased risk of suicide attempts leading to hospitalization (Dalrymple & Zimmerman, 2007; Nelson et al., 2000; Schneier, Johnson, Hornig, Liebowitz, & Weissman, 1992; Stein et al., 2001). Comorbid MDD and SAD are also

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associated with greater functional impairment, number of disability days, and number of annual mental health visits (Belzer & Schneier, 2004). According to Essau, Condradt, and Petermann (1999), approximately 25–31% of adolescents and young adults with SAD have a comorbid depressive disorder. Additionally, the onset of SAD preceded the onset of MDD in approximately 70% of comorbid cases in the National Comorbidity Study (NCS) and in the Epidemiological Catchment Area (ECA) study (Kessler, Stang, & Wittchen, 1999; Schneier et al., 1992).

Despite high rates of comorbidity, most socially anxious individuals with depression are excluded from treatment outcome studies (Huppert, Franklin, Foa, & Davidson, 2003), which may limit generalizability of findings. The rationale is that these participants' depressive symptoms would confound interventions designed to treat social anxiety. Therefore, although the epidemiology of these comorbid disorders has been elucidated, this population remains relatively ignored. Some data show reductions in social anxiety symptoms mediating depressive symptoms, but more precise details of this mechanism are unknown. For instance, Moscovitch, Hofmann, Suvak, and In-Albon (2005) demonstrated that reductions in social anxiety fully mediated reductions in depressive symptoms among a sample of 66 socially anxious adults enrolled in weekly cognitive–behavioral group therapy. According to their results, reductions in social anxiety mediated 91% of the improvements in depression over time. However, their study failed to provide evidence as to how reductions in social anxiety lead to reductions in depressive symptoms. Specifically, they did not elucidate which dimensions of SAD in particular were related to depressive symptom reduction.

Lastly, theoretical explanations for the relationship between SAD and depression are scarce, and there are few empirical data addressing this common comorbidity beyond descriptive epidemiological studies. In particular, it is poorly understood why a large proportion, but by no means all, of those with SAD exhibit comorbid depression.

2. Possible explanations for the relationship between SAD and depression

A common biochemical pathogenesis may be shared between SAD and depression. For instance, some research into shared biological substrates between anxiety and depression has suggested mediation by serotonergic pathways due to their effects on the amygdala, the locus ceruleus, and the raphe nuclei (Pohl, Wolkow, & Clary, 1998). From a cognitive–behavioral perspective, SAD and MDD could derive from shared negative cognitive processes. For instance, distorted cognitions associated with depression (Beck & Rush, 1978), such as a fear of being negatively evaluated by others, could extend to social domains. However, this would not account for why only a subset of individuals with SAD exhibit comorbid depression. In addition, the causal status of negative cognitions with respect to psychopathology is controversial. For example, such cognitions may be concomitants, rather than causes, of psychopathology. In the present investigation, we suggest that behavioral avoidance present in some socially anxious individuals may cause depressive symptoms.

3. Behavioral avoidance as a potential mediator

The primary symptom of SAD, as defined by the current edition of the *Diagnostic and Statistical Manual of Mental Disorders – IV Text Revision* (*DSM-IV-TR*; American Psychiatric Association, 2000), is a marked and persistent fear of one or more social situations. Another significant criterion of SAD is that social situations are avoided or endured with marked distress. Having criteria specifying avoidance *or* endurance of the feared situation distinguishes SAD from other Axis I diagnoses, including most anxiety disorders. To meet criteria for SAD, an adult must experience clinically significant distress or interference due to the disorder. This dichotomy implies that all people with SAD experience subjective fear, distress, and some functional impairment, but that not everyone with SAD necessarily avoids anxiety-provoking situations. Indeed, willingness to confront anxiety-provoking social situations varies among socially anxious individuals. Some socially anxious adults avoid as many social situations as possible, and are more likely to be unemployed, work out of their home, and have few friends or social contacts (Beidel & Turner, 2007). According to a recent meta-analysis of coping strategies and their effects on distress, Littleton, Horsley, John, and Nelson (2007) found avoidance-focused coping strategies are significantly correlated with increased psychological distress. Additionally, higher levels of social anxiety are associated with less assertive behavior, more conflict avoidance, and greater interpersonal dependency (Davila & Beck, 2002).

In a study of patients in a psychiatric facility which forbade friends or family to maintain regular contact, Overholser (1990) found that recently admitted psychiatric inpatients high in emotional reliance