

*The final publication is available at Springer*  
via <http://dx.doi.org/10.1891/0889-8391.28.1.72>

Self-Focused Attention and Post-Event Processing: Relevance to  
Social Performance Anxiety and Social Interaction Anxiety

Jacob Holzman

David Valentiner

Kathleen McCraw

Northern Illinois University

*Correspondence should be directed to:*

David P. Valentiner  
Department of Psychology  
Northern Illinois University  
DeKalb, IL 60115  
Voice: (815) 753-7086  
FAX: (815) 753-8088  
E-mail: [dvalentiner@niu.edu](mailto:dvalentiner@niu.edu)

**Abstract**

This study examined the roles of self-focused attention and post-event processing in social performance anxiety and social interaction anxiety. College students ( $N = 101$ ) completed measures of social performance anxiety, social interaction anxiety, self-focused attention, post event processing, and beliefs related to social anxiety. Interoceptive self-focused attention and post-event processing predicted social performance anxiety after controlling for social interaction anxiety. The associations with social interaction anxiety were not significant after controlling for social performance anxiety. Associations between behavioral self-focused attention and social performance anxiety or social interaction anxiety were not significant after controlling for interoceptive self-focused attention. No evidence of an interaction between self-focused attention and post-event processing in the prediction of social anxiety was found. This study found no evidence that the associations of interoceptive self-focused attention and post-event processing with social performance anxiety were statistically mediated by high standards, conditional beliefs about self, and unconditional beliefs about self. These results and their theoretical implications are discussed.

Running head: SOCIAL ANXIETY, SELF-FOCUSED ATTENTION, POST-EVENT  
PROCESSING, SOCIAL PERFORMANCE ANXIETY, SOCIAL INTERACTION ANXIETY

## **Self-Focused Attention and Post-Event Processing: Relevance to Social Performance Anxiety and Social Interaction Anxiety**

Cognitive-behavioral models of social anxiety (Clark & Wells, 1995; Rapee & Heimberg, 1997) emphasize cognitive constructs, particularly self-focused attention and post-event processing. These cognitive processes are hypothesized as the mechanisms by which dysfunctional beliefs underlying social anxiety are maintained. The current study tested several ideas from these models of social anxiety.

### **Self-Focused Attention**

Clark and Wells (1995) observed that socially anxious individuals shift their attention inward during feared social situations in a process called self-focused attention. This attention includes an awareness of the self as a social object and one's personal behavior, as well as physiological symptoms, distress, and anxious cognitions. Ingram (1990) proposed that self-focused attention could maintain pathological states when it is excessive, sustained, and rigid.

The relation of self-focused attention to state anxiety during social encounters is empirically supported (see Spurr & Stopa, 2002; Schultz & Heimberg, 2008). This link between self-focused attention and state social anxiety has been found in non-experimental studies (Bögels, Alberts, & de Jong, 1996; Mansell, Clark, & Ehlers, 2003; Mor & Winquist, 2002) and experimental studies (Bögels & Lamers, 2002; Zou, Hudson, & Rapee, 2007), and in individuals meeting criteria for social anxiety disorder (Woody, 1996) as well as non-socially anxious individuals (Woody & Rodriguez, 2000). More information is needed about the role of self-focused attention and its specific dimensions, including their relationships with other cognitive factors.

Clark and Wells' (1995) model highlighted interoceptive cues, such as blushing, as the center of attentional focus for socially anxious individuals. Socially anxious individuals may become trapped in a cycle in which interoceptive cues intensify self-focused attention, and self-focused attention in turn intensifies physiological reactions. Although Clark and Wells (1995) emphasize attention toward interoceptive cues, attention directed at behaviors and appearance have been considered to be part of self-focused attention as well (Bögels, Alberts, & de Jong, 1996; Bögels & Mansell, 2004). Attention toward interoceptive cues and toward behavior appear to be closely related. However, the relative importance of interoceptive self-focused attention, and behavioral self-focused attention is unclear.

### **Post-Event Processing**

Clark and Wells (1995) proposed that after social events, socially anxious individuals meticulously and repetitively review what happened during the events. As a result, social events may be reconstructed in a manner that confirms negative beliefs underlying social anxiety. In support of this view, post-event processing and social anxiety have been found to be linked in numerous studies (e.g., Mellings & Alden, 2000; Rachman, Grüter-Andrew, & Shafran, 2000; see Brozovich & Heimberg, 2008). In addition, post-event processing has been found to be relatively stable (Laposa & Rector, 2011; Lundh & Sperling, 2002) and related to increasingly negative perceptions of social events as time progresses (Abbot & Rapee, 2004; Cody & Teachman, 2010; Dannahy & Stopa, 2007).

Clark and Wells' (1995) explanation of social anxiety persistence implies a moderating role of self-focused attention in the relationship between post-event processing and social anxiety. Self-focused attention causes cues, including interoceptive cues such as increased heart rate, to be encoded into memory during the social event. These cues are believed to be especially

salient during post-event processing, and likely increase its duration and intensity (Clark & Wells, 1995). Therefore, relatively higher levels of interoceptive self-focused attention combined with higher levels of post-event processing are expected to lead to greater confirmation of the problematic beliefs underlying social anxiety. The potentiating role of self focused attention in the relationship between post-event processing and social anxiety has not been examined. In addition, the relative importance of interoceptive self-focused attention versus behavioral self-focused attention in this process is not clear.

### **Social Performance Anxiety and Social Interaction Anxiety**

Social performance anxiety and social interaction anxiety are two dimensions of social anxiety. They are highly correlated but believed to be distinct (Carter & Wu, 2010a; Carter & Wu, 2010b; Hook, Valentiner, & Connelly, 2013). Social performance anxiety appears to entail relatively more acute anxiety reactions than social interaction anxiety (Hook & Valentiner, 2002). Thus, social performance anxiety may involve more circumscribed associative networks in memory and more discrete cognitive appraisal processes. Therefore, cognitive factors within Clark and Wells' (1995) model of social anxiety (e.g., self-focused attention, post-event processing) are likely to be especially pertinent to social performance anxiety.

### **Self-Belief Dimensions Underlying Social Anxiety**

Clark and Wells (1995) proposed that socially anxious individuals have a set of beliefs about themselves that leads to threatening interpretations of social situations. These dysfunctional beliefs are expressed as high standards (e.g., *"I must be socially competent all the time"*), conditional beliefs (e.g., *"If others see that I'm anxious, they will think that I am a loser"*), and unconditional beliefs (e.g., *"People think I am socially awkward"*). The Clark and Wells (1995) model postulates that at the onset of social encounters these dysfunctional beliefs

become triggered. After the activation of these dysfunctional beliefs, it is proposed that the social anxious individual cascades into an array of cognitive and behavioral strategies (e.g., self-focused attention) intended to reduce the possibility of a feared outcome, yet affect the manner in which socially anxious individuals interpret information from the social event. Clark and Wells (1995) predict that socially anxious individuals engage in post-event processing subsequent to social events, which may utilize cues encoded during the time of the social encounter. Beyond the information used from these encoded cues, socially anxious individuals are believed to restructure the memory of these social events to more consistent with preexisting dysfunctional beliefs, thereby maintaining social anxiety.

Partially supporting the importance of these belief dimensions in social anxiety, Turner, Johnson, Beidel, Heiser, and Lydiard (2003) identified belief dimensions underlying social anxiety that resemble high standards and unconditional beliefs. A clearer representation of the theoretical framework is offered by Wong and Moulds (2010), who developed a measure to specifically assess the three dysfunctional belief dimensions proposed by Clark and Wells (1995). Although these initial studies provide evidence that dysfunctional beliefs may be involved in social anxiety, these studies do not test the propositions that these dysfunctional beliefs are at the core of social anxiety, and that cognitive process that maintain social anxiety do so by reinforcing these belief dimensions. Further research is needed to determine the potential for these dysfunctional belief dimensions to statistically mediate the relations of self-focused attention and/or post-event processing with dimensions of social anxiety. If such evidence were found, research could advance to study the temporal relationships of self-focused attention and post-event processing with dimensions of social anxiety.

## Current Study

This study examines four issues related to cognitive models of social anxiety. First, this study examines which dimensions of self-focused attention are relevant to social anxiety: the interoceptive dimension originally suggested by Clark and Wells (1995) and/or the behavioral dimension added by other researchers (e.g., Bögels et al. 1996). Second, this study examines the importance of post-event processing in relation to social anxiety, and whether that importance is potentiated by self-focused attention. Evidence that a specific dimension of self-focused attention (i.e., interoceptive versus behavioral) potentiates post-event processing would help us better understand cognitive constructs that social anxious individuals employ during social situations. In turn, utilization of these cognitive processes may account for their likelihood to experience significant distress in the context of social situations. Although Clark and Wells (1995) implicate an interactive nature between these cognitive processes, there is a paucity of research examining this potential interaction. The current study aims to test the prediction that an interaction between self-focused attention and post-event processing significantly explains variance in the prediction of social anxiety.

Third, this study examines the specificity of these cognitive processes to social performance anxiety (versus social interaction) anxiety. Although different cognitive processes might be related to each dimension, we generally expect that the cognitive models of social anxiety are more descriptive of social performance anxiety than social interaction anxiety. The extent to which these specific cognitive processes differentiate in importance depending on social performance anxiety or social interaction anxiety has not thoroughly been examined in the extant literature. Therefore, an additional purpose of this study is to examine the specificity of explicit cognitive processes to social performance anxiety (versus social interaction anxiety).

Fourth, this study examines whether the pathways between these cognitive factors (self-focused attention dimensions and post-event processing) and dimensions of social anxiety can potentially be explained by the three belief dimensions of high standards, conditional beliefs about self, and unconditional beliefs about self. An early, preliminary step toward making a case that these belief dimensions (of high standards, conditional beliefs about self, and unconditional beliefs about self) are the pathways through which cognitive factors (self-focused attention dimensions and post-event processing) contribute to dimensions of social anxiety is to examine statistical mediation. This study includes a preliminary test of this idea.

## Method

### Participants

Participants were recruited from a pool of students enrolled in an introductory psychology course at a large Midwestern university. One-hundred-and-eighty-eight participants were recruited to complete an initial assessment. About 2 weeks later, 101 of these participants completed a second questionnaire packet that included the study questionnaires. Participants that completed the study questionnaires did not differ from those that did not on any of the measures administered at the time of the initial recruitment. The study sample had a mean age of 19.9 ( $SD = 2.4$ ), was 71.3% female, and primarily non-Hispanic (90.1%) and Caucasian (71.3%).

### Measures

**Self-Focused Attention.** The 11-item Self-Focused Attention Scale (SFA; Bögels, Alberts, & de Jong, 1996) was used to measure interoceptive self-focused attention and behavioral self-focused attention. Interoceptive self-focused attention indicates the likelihood to draw attention toward physiological arousal (e.g., whether my heart is beating). Behavioral self-focused attention indicates an attentional focus toward behavioral markers (e.g., whether I

behave appropriately). The interoceptive self-focused attention subscale contains six items, while the behavioral self-focused attention subscale contains five items. The SFA has previously been found to have good reliability and validity (Bögels, Alberts, & de Jong, 1996). Cronbach's alphas for the Interoceptive and Behavioral subscales of the SFA were .90 and .86, respectively.

**Post-Event Processing.** The 8-item Post-event Processing Questionnaire – Revised (PEPQ-R; McEvoy & Kingsep, 2006) was used to measure post-event processing. Items reflect level of engagement in repetitive thinking pertaining to social events over the past 2 weeks (e.g., “After the event was over, did you find yourself thinking about it a lot?”), using a visual analogue scale ranging from 0 “Not at All” to 100 “Totally Agree.” Higher total scores indicate higher levels of repetitive thinking. The PEPQ-R has been found to have good reliability (McEvoy & Kingsep, 2006). Cronbach's alpha for the PEPQ-R in the current study was .87.

**Dysfunctional Self-Beliefs.** The 15-item Self-Beliefs Related to Social Anxiety Scale (SBSA; Wong & Moulds, 2010) was used to measure dysfunctional self-beliefs (i.e., High Standards, Conditional Beliefs, and Unconditional Beliefs) derived from Clark and Wells' (1995) model. The three subscales have previously been found to have good reliability and validity (Wong & Moulds, 2010). Cronbach's alphas for the High Standards (4 items), Conditional Beliefs (7 items), and Unconditional Beliefs (4 items) scales of the SBSA were .83, .94, and .79, respectively.

**Social Performance Anxiety.** The 20-item Social Phobia Scale (SPS; Mattick & Clarke, 1998) was used to assess social performance anxiety. Items reflect discomfort in situations with a high likelihood of scrutinization (e.g., “I get tense when I speak in front of other people”), with responses measured using a 5-point scale ranging from “Strongly Disagree” to “Strongly Agree.”

This measure has shown good reliability and validity in past studies (Mattick & Clarke, 1998).

The SPS showed good reliability in the current sample (Cronbach's  $\alpha = .94$ ).

**Social Interaction Anxiety.** The 20-item Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998) was used to assess social interaction anxiety. Items reflect an individual's level of anxiety in response to general social interactions (e.g., "I have difficulty talking with other people"), with responses measured using a 5-point scale ranging from "Strongly Disagree" to "Strongly Agree." This measure has shown good reliability and validity in past studies (Mattick & Clarke, 1998). Following Rodebaugh, Woods and Heimberg (2007), the 3 reverse scored items were not included. The SIAS showed good reliability in the current sample (Cronbach's  $\alpha = .92$ ).

## **Procedure**

Prior to the beginning of the study, research staff visited the classes of eligible students to describe the study and inform them of their opportunity to participate. Students who attended an initial assessment session completed informed consent procedures and an initial questionnaire packet (not described or analyzed here). About two weeks later, research staff visited the classes again to advise students of their eligibility for participation an assessment session for the current study. Upon completion of the questionnaires, participants were debriefed. All participants received partial course credit for participating in the study and were given refreshments (e.g., sodas) during the assessment sessions.

## **Results**

Means, standard deviations, and intercorrelations among the study variables are presented in Table 1. As expected, all of the study variables showed significant positive intercorrelations.

### **Predicting Social Performance Anxiety**

Hypotheses regarding predicting Social Performance Anxiety were examined using a hierarchical regression. The results of this analysis are presented in Table 2. Social Performance Anxiety was entered as the dependent variable. On Step 1, Post-Event Processing, Interoceptive Self-Focused Attention, and Behavioral Self-Focused Attention were entered and made a significant contribution to the model. Post-Event Processing and Interoceptive Self-Focused Attention were significant unique predictors; Behavioral Self-Focused Attention was not. On Step 2, two interaction effects (Interoceptive Self-Focused Attention  $\times$  Post-Event Processing and Behavioral Self-Focused Attention  $\times$  Post-event Processing) were entered as predictors. Each of these two interaction effects was calculated as the product of the standardized scores of the two component variables. These interactions did not make a significant contribution to the model.

Step 3 examined the specificity of the regression model to Social Performance Anxiety (versus Social Interaction Anxiety). Social Interaction Anxiety was entered on Step 3 as a control variable and made a significant contribution to the prediction of Social Performance Anxiety after controlling for prior steps. After controlling for Social Interaction Anxiety, Post-Event Processing and Interoceptive Self-Focused Attention continued to make significant unique contributions to the prediction of Social Performance Anxiety.

### **Predicting Social Interaction Anxiety**

A similar hierarchical regression approach was used to examine hypotheses regarding predicting Social Interaction Anxiety. Social Interaction Anxiety was entered as the dependent variable. On Step 1, Post-Event Processing, Interoceptive Self-Focused Attention, and Behavioral Self-Focused Attention were entered and accounted for significant additional

variance in Social Interaction Anxiety. Post-Event Processing and Interoceptive Self-Focused Attention were significant unique predictors; Behavioral Self-Focused Attention was not. On Step 2, two interaction effects (Interoceptive Self-Focused Attention  $\times$  Post-Event Processing and Behavioral Self-Focused Attention  $\times$  Post-Event Processing) were entered and did not account for significant additional variance in Social Interaction Anxiety.

An additional step was entered to examine the specificity of the regression model to Social Interaction Anxiety (versus Social Performance Anxiety). Social Performance Anxiety was entered on Step 3 as a control variable and made a significant contribution to the prediction of Social Interaction Anxiety after controlling for prior steps. After controlling for Social Performance Anxiety, Interoceptive Self-Focused Attention and Post-Event Processing did not account for significant unique variance in the model.

### **Specificity of Belief Dimensions in Predicting Social Anxiety**

Hypotheses regarding predicting Social Performance Anxiety from Clark and Wells' (1995) specified dysfunctional belief dimensions (i.e., High Standards, Conditional Beliefs, Unconditional Beliefs) were performed by entering an additional step to the aforementioned hierarchical regression model (not presented in Table 2). Because the cognitive factors (i.e., dimensions of self-focused attention, post-event processing, and their interactions) showed specificity only to social performance anxiety (and not social interaction anxiety), these analyses are reported only for the regression with social performance anxiety as the dependent variable; these belief dimensions could not statistically mediate a specific relationship with social interaction anxiety because no such relationship was found.

Entering High Standards, Conditional Beliefs, and Unconditional Beliefs on Step 4, these variables made a significant contribution to the model predicting Social Performance Anxiety

( $\Delta R^2 = .02, p < .05$ ). Although the addition of these variables increased the amount of variance explained, no specific belief dimensions emerged as significant unique predictors of Social Performance Anxiety after controlling for the other belief dimensions, but the unique variance explained by Conditional Beliefs approached significance (i.e.,  $p = .07$ ). Post-Event Processing, Interoceptive Self-Focused Attention, and Social Interaction Anxiety continued to account for significant variance in Social Performance Anxiety (partial  $r$ 's = .25, .55, and .32, respectively, all  $p$ 's < .05). Thus, the statistical mediation found in this analysis was: (1) small in magnitude, (2) found for Post-Event Processing, (3) not found for Interoceptive Self-Focused Attention, and (4) did not implicate a specific belief pathway but appears to be related to the overlap amongst High Standards, Conditional Beliefs, and Unconditional Beliefs.

### Discussion

The results of this study provided evidence that interoceptive self-focused attention and post-event processing are specifically associated with social performance anxiety and not specifically with social interaction anxiety. Behavioral self-focused attention and the interactions between dimension of self-focused attention and post-event processing did not add significantly to the prediction of social performance anxiety. The associations of interoceptive self-focused attention and post-event processing specifically associated with social performance anxiety were not substantially statistically mediated by high standards, conditional beliefs about self, or unconditional beliefs about self. These findings highlight the importance of interoceptive self-focused attention and post-event processing in relation to the experience of social performance anxiety, but they also leave many questions unanswered.

The association between behavioral self-focused attention and social anxiety appears to be due to its covariation with interoceptive self-focused attention. Previous research emphasizing

interoceptive cues has demonstrated the positive relation between self-focused attention and social anxiety (Bögels, Alberts, & de Jong, 1996; Bögels & Mansell, 2004; and Mansell & Clark, 1999). Mellings and Alden (2000) found that socially anxious individuals reported higher recall of anxiety-related sensations during a social interaction immediately following the social interaction as well as one day later. In addition, false-feedback paradigms manipulating awareness of physiological arousal provide evidence that awareness of an increase in physiological cues can lead to negative outcomes. Wells and Papageorgiu (2001) found that perceptions of increased arousal led to greater anxiety and objectively poorer performance in comparison to perceptions of decreased arousal. Wells and Papageorgiu (2002) extended these results to subjective perceptions of performance with social anxious individuals and nonsocially anxious individuals. Wild, Clark, Ehlers, and McManus (2008) replicated the previous findings. These findings fall in line with Clark and Wells (1995) prediction that self-focused attention directed at interoceptive cues is particularly related to the maintenance of social anxiety symptomatology. The current finding supports this claim and suggests that the addition of a behavioral dimension of self-focused attention does not appear to be necessary. It may be that, in the context of an anxiety-provoking social event, interoceptive information may be so salient that other types of information, including information about one's own behavior, is not influential. This study did not examine whether other dimensions of self-focused attention, such as social skills, and other behaviors, and characteristics, might be more salient for some individuals (Moscovitch, 2009).

The current study adds to the growing body of evidence that post-event processing is related to social anxiety (Mellins & Alden, 2000; Rachman, Grüter-Andrew, & Shafran, 2000; Edwards, Rapee, & Franklin, 2003), especially in the context of performance events (Makkar &

Grisham, 2011). In addition, Clark and Wells' (1995) model implies an interaction between post-event processing and self-focused attention in explaining social anxiety persistence. However, results from this study were unable to find such an interaction. Recent research has established a causal link between self-focused attention and post-event processing (Gaydukevych & Kocovski, 2012). However, this link was established using the negative post-event processing scale of the Thoughts Questionnaire (Edwards et al., 2003). Clark and Wells (1995) postulated that post-event processing entails repetitively reviewing information from a social event which may be laden in negative content. Items on the Thoughts Questionnaire (Edwards et al., 2003) might reflect the occurrence of negative self-focused thoughts, whereas items on the measure used in the current study, the PEPQ-R, appear to reflect the repetitive, detailed nature of post-event processing. Thus, the measure used in the current study might not be sensitive to changes in the level of interoceptive self-focused attention, therefore not leading to a significant interaction of these two variables. Future research of post-event processing and social anxiety might use measures that focus on its negative content, rather than its repetitive nature.

No evidence was found that dimensions of self-focused attention and post-event processing predict social interaction anxiety after controlling for social performance anxiety. The specificity of these cognitive dimensions to social performance anxiety is consistent with the view that social performance anxiety is indicative of fear responses whereas social interaction anxiety appears to fit within a distress response (Carter & Wu, 2010a; 2010b). Thus, cognitive mechanisms in Clark and Wells' (1995) model (i.e., self-focused attention and post-event processing) may be especially suitable for explaining social performance anxiety.

The current findings do not support Clark and Wells' (1995) description of these three dysfunctional beliefs as central to social anxiety. Clark & Wells (1995) proposed that self-

focused attention and post-event processing guide information processing in ways that reinforce dysfunctional beliefs, and that the dimensions of high standards, conditional beliefs about self, and unconditional beliefs about self underlie social anxiety. Using the measure of these constructs from Wong & Moulds (2010), we found little support for this view. In past studies, high standards have been found to be activated during anticipatory processing of a social-evaluative event (Wong & Moulds, 2011b), but not during post-event processing (Wong & Moulds, 2009). Post-event processing has been found to activate unconditional beliefs (Wong & Moulds, 2009). Further research is needed to clarify these discrepancies. It is possible that the SBSA may not fully capture dysfunctional beliefs inherent to Clark and Wells' (1995) model. Alternatively, the dysfunctional beliefs outlined in Clark and Wells' (1995) might not capture critical belief dimensions. More information about the belief dimensions underlying the maintenance of social anxiety is needed.

One limitation of this study is the use cross-sectional measurement. Further research could examine the temporal sequence of change in these variables, or conduct experiments to examine whether interoceptive self-focused attention and/or post-event processing are causally related to social performance anxiety. In addition, one potential limitation of the current study is the use of an unselected, college student sample. We note that the use of a college sample raises concerns about the generalizability of the findings, particularly to clinical populations. However, the apparent dimensional (non-taxonic) nature of social anxiety (Crome, Baillie, Slade, & Ruscio, 2010) suggests that similar etiological processes are responsible for variation at the high and low ends of the social anxiety dimension (see Stopa & Clark, 2001). Although it is likely that cognitive processes inherent to social anxiety exist on a continuum, further research examining these cognitive processes in a clinical sample of individuals with social anxiety

disorder would add to the growing body of research in this domain. Overall, however, these results provide evidence that interoceptive self-focused attention and post-event processing do play unique roles specific to social performance anxiety, in ways that are thus far not fully captured by extant measures of belief dimensions believed to underlie social anxiety.

### References

- Abbot, M. J., & Rapee, R. M. (2004). Post-event rumination and negative self-appraisals in social phobia before and after treatment. *Journal of Abnormal Psychology, 113*, 1316-144. doi:10.1037/0021-843X.113.1.136
- Bögels, S. M., Alberts, M., & de Jong, P. J. (1996). Self-consciousness, self-focused attention, blushing propensity and fear of blushing. *Personality and Individual Differences, 21*, 573-581. doi:10.1016/0191-8869(96)00100-6
- Bögels, S. M., & Lamers, C. T. J. (2002). The causal role of self-awareness in blushing-anxious, socially-anxious and social phobic individuals. *Behaviour Research and Therapy, 40*, 1367-1384. doi:10.1016/S0005-7967(01)00096-1
- Bögels, S. M., & Mansell, W. (2004). Attention process in the maintenance and treatment of social phobia: Hypervigilance, avoidance and self-focused attention. *Clinical Psychology Review, 24*, 827-856. doi:10.1016/j.cpr.2004.06.005
- Brozovich, F., & Heimberg, R. G. (2008). An analysis of post-event processing in social anxiety disorder. *Clinical Psychology Review, 28*, 891-903. doi:10.1016/j.cpr.2008.01.002
- Carter, S. A., & Wu, K. D. (2010a). Relations among symptoms of social phobia subtypes, avoidant personality disorder, panic, and depression. *Behavior Therapy, 41*, 2-13. doi:10.1016/j.beth.2008.10.002
- Carter, S. A., & Wu, K. D. (2010b). Symptoms of specific and generalized phobia: An examination of discriminant validity and structural relations with mood and anxiety symptoms. *Behavior Therapy, 41*, 254-265.

- Clark, D. M., & Wells, A. (1995). A cognitive model of social anxiety. In R. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 69-93). New York: Guilford Press.
- Cody, M. W., & Teachman, B. A. (2010). Post-event processing and memory bias for performance feedback in social anxiety. *Journal of Anxiety Disorders, 24*, 468-479. doi:10.1016/j.janxdis.2010.03.003
- Crome, E., Baillie, A., Slade, T., & Ruscio, A. M. (2010). Social phobia: further evidence of dimensional structure. *Australian and New Zealand Journal of Psychiatry, 44*, 1012-1020.
- Dannahy, L., & Stopa, L. (2007). Post-event processing in social anxiety. *Behaviour Research and Therapy, 45*, 1207-1219. doi:10.1016/j.brat.2006.08.017
- Gaydukevych, D., & Kocovski, N. L. (2012). Effect of focus of attention on post-event processing in social anxiety. *Behaviour Research and Therapy, 50*, 47-55. doi:10.1016/j.brat.2011.10.010
- Hook, J. N., & Valentiner, D. P. (2002). Are specific and generalized social phobias qualitatively distinct? *Clinical Psychology: Science and Practice, 9*, 379-395. doi:10.1093/clipsy/9.4.379
- Hook, J.N., Valentiner, D.P., & Connelly, J. (2013). Performance and Interaction Anxiety: Specific Relationships with Other- and Self-Evaluation Concerns. *Anxiety, Stress, and Coping, 26*, 203-216.
- Laposa, J. M., & Rector, N. A. (2011). A prospective examination of predictors of post-event processing following videotaped exposures in group cognitive behavioral therapy for

individuals with social phobia. *Journal of Anxiety Disorders*, 25, 568-573.

doi:10.1016/j.janxdis.2011.01.004

Lundh, L.-G., & Sperling, M. (2002). Social Anxiety and the Post-Event Processing of Socially Distressing Events. *Cognitive Behaviour Therapy*, 31, 129–134.

doi:10.1080/165060702320338004

Mansell, W., & Clark, D. M. (1999). How do I appear to other? Social anxiety and processing of the observable self. *Behaviour Research and Therapy*, 37, 419-434. doi:10.1016/S0005-7967(98)00148-X

Mansell, W., Clark, D. M., & Ehlers, A. (2003). Internal versus external attention in social anxiety: An investigation using a novel paradigm. *Behaviour Research and Therapy*, 41, 555-572. doi:10.1016/S0005-7967(02)00029-3

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

McEvoy, P. M., Mahoney, A. E. J., & Moulds, M. L. (2010). Are worry, rumination, and post-event processing one and the same? Development of the repetitive thinking questionnaire. *Journal of Anxiety Disorders*, 24, 509–19. doi:10.1016/j.janxdis.2010.03.008

Mellings, T. M. B., & Alden, L. E. (2000). Cognitive processes in social anxiety: The effects of self-focus, rumination, and anticipatory processing. *Behaviour Research and Therapy*, 38, 243-257. doi:10.1016/S0005-7967(99)00040-6

Mor, N., & Winquist, J. (2002). Self-focused attention and negative affect: A meta-analysis. *Psychological Bulletin*, 128, 638-662. doi:10.1037//0033-2909.128.4.638

- Moscovitch, D. A. (2009). What is the core fear in social phobia? A new model to facilitate individualized case conceptualization and treatment. *Cognitive and Behavioral Practice, 16*(2), 123-134.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers : a journal of the Psychonomic Society, Inc, 36*, 717–31. doi:10.3758/BF03206553
- Rachman, S., Grüter-Andrew, J., & Shafran, R. (2000). Post-event processing in social anxiety. *Behaviour Research and Therapy, 38*, 611-617. doi:10.1016/S0005-7967(99)00089-3
- Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behavior Research and Therapy, 35*, 741-756. doi:10.1016/S0005-7967(97)00022-3
- Rodebaugh, T.L., Woods, C.M., & Heimberg, R.G. (2007). The reverse of social anxiety is not always the opposite: The reverse-scored items of the social interaction anxiety scale do not belong. *Behavior Therapy, 38*, 192-206.
- Spurr, J. M., & Stopa, L. (2002). Self-focused attention in social phobia and social anxiety. *Clinical Psychology Review, 22*, 947-975. doi:10.1016/S0272-7358(02)00107-1
- Stopa, L., & Clark, D. M. (2001). Social phobia: Comments on the viability and validity of an analogue research strategy and British norms for the fear of negative evaluation questionnaire. *Behavioural and Cognitive Psychotherapy, 29*, 423–430.
- Turner, S. M., Johnson, M. R., Beidel, D. C., Heiser, N. A., & Lydiard, R. B. (2003). The Social Thoughts and Beliefs Scale: A new inventory for assessing cognitions in social phobia. *Psychological Assessment, 15*, 384–391. doi:10.1037/1040-3590.15.3.384

- Wells, A., & Papageorgiou, C. (2001). Social phobic interoception: Effects of bodily information on anxiety, beliefs, and self-processing. *Behaviour Research and Therapy*, *39*, 1-11. doi:10.1016/S0005-7967(99)00146-1
- Wells, A., & Papageorgiou, C. (2002). Effects of heart rate information on anxiety, perspective taking, and performance in high and low social-evaluative anxiety. *Behavior Therapy*, *33*, 181-199. doi:10.1016/S0005-7894(02)80024-7
- Wild, J., Clark, D. M., Ehlers, A., & McManus, F. (2008). Perception of arousal in social anxiety: Effects of false feedback during a social interaction. *Journal of Behavior Therapy and Experimental Psychiatry*, *39*, 102-116. doi:10.1016/j.jbtep.2006.11.003
- Wong, Q. J. J., & Moulds, M. L. (2009). Impact of rumination versus distraction on anxiety and maladaptive self-beliefs in socially anxious individuals. *Behaviour Research and Therapy*, *47*, 861-867. doi:10.1016/j.brat.2009.06.014
- Wong, Q. J. J., & Moulds, M. L. (2010). A new measure of the maladaptive self-beliefs in social anxiety: Results from a non-clinical sample. *Journal of Psychopathology and Behavioral Assessment*, *33*, 273-284.
- Wong, Q. J. J., & Moulds, M. L. (2011a). The relationship between the maladaptive self-beliefs characteristic of social anxiety and avoidance. *Journal of Behavior Therapy and Experimental Psychiatry*, *42*, 171-178. doi:10.1016/j.brat.2010.11.004
- Wong, Q. J. J., & Moulds, M. L. (2011b). Impact of anticipatory processing versus distraction on multiple indices of anxiety in socially anxious individuals. *Behaviour Research and Therapy*, *49*, 700-706. doi:10.1016/j.brat.2011.07.007

- Wong, Q. J. J., & Moulds, M. L. (2012). Does rumination predict the strength of maladaptive self-beliefs characteristic of social anxiety over time? *Cognitive Therapy and Research*, *36*, 94-102. doi:10.1007/s10608-01-9316-0
- Woody, S. R. (1996). Effects of focus of attention on anxiety levels and social performance of individuals with social phobia. *Journal of Abnormal Psychology*, *105*, 61-69. doi:10.1037/0021-843X.105.1.61
- Woody, S. R., & Rodriguez, B. F. (2000). Self-focused attention and social anxiety in social phobics and normal controls. *Cognitive Therapy and Research*, *24*, 473-488. doi:10.1023/A:1005583820758
- Zou, J. B., Hudson, J. L., & Rapee, R. M. (2007). The effect of attentional focus on social anxiety. *Behaviour Research and Therapy*, *45*, 2326-2333. doi:10.1016/j.brat.2007.03.014

Table 1

*Means and Standard Deviations of, and Intercorrelations Among the Study Variables.*

	Mean (SD)	1	2	3	4	5	6	7	8
1. Social Performance Anxiety	16.7 (13.1)								
2. Social Interaction Anxiety	19.2 (11.1)	.71**							
3. Post-Event Processing	341.1 (177.9)	.46**	.39**						
4. Interoceptive Self-focused Attention	18.0 (4.7)	.80**	.63**	.30**					
5. Behavioral Self-focused Attention	19.0 (4.7)	.65**	.55**	.33**	.68**				
6. High Standards	186.3 (90.5)	.43**	.40**	.28**	.29**	.27**			
7. Conditional Beliefs	186.9 (147.1)	.58**	.54**	.36**	.44**	.45**	.75**		
8. Unconditional Beliefs	240.0 (63.2)	.50**	.62**	.30**	.42**	.40**	.49**	.76**	

Note:  $N = 101$ . \*\*two-tailed  $p < .01$ .

Table 2

*Results of Hierarchical Multiple Regression Analysis Predicting Time 2 Interaction Anxiety*

Predictor	$\Delta R^2$	Step 1	Step 2	Step 3
<hr/>				
Dependent Variable = Social Performance Anxiety				
Step 1	.70**			
Post-Event Processing		.36**	.35**	.29**
Interoceptive Self-Focused Attention		.65**	.65**	.55**
Behavioral Self-Focused Attention		.18	.17	.12
Step 2	.00			
Interoceptive Self-Focused Attention $\times$ Post-Event Processing		-	-.06	-.01
Behavioral Self-Focused Attention $\times$ Post-Event Processing		-	-.03	-.01
Step 3	.04**			
Social Interaction Anxiety		-	-	.36**
<hr/>				
Dependent Variable = Social Interaction Anxiety				
Step 1	.46**			
Post-Event Processing		.24*	.23*	.10
Interoceptive Self-Focused Attention		.41**	.41**	.12
Behavioral Self-Focused Attention		.17	.18	.12
Step 2	.01			
Interoceptive Self-Focused Attention $\times$ Post-Event Processing		-	-.13	-.12
Behavioral Self-Focused Attention $\times$ Post-Event Processing		-	.11	.11
Step 3	.07**			
Social Performance Anxiety		-	-	.36**

Note:  $N = 101$ . Multiple  $R = .79^{**}$ . \*  $p < .05$ , \*\*  $p < .01$ .