1988

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Published in *Journal of Personality Assessment* 52:4 (1988), pp. 626–639;

doi: 10.1207/s15327752jpa5204_3

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Submitted September 21, 1987; published online June 10, 2010.

Public and Private Self-Consciousness and Social Phobia

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Abstract

The relationship between public and private self-consciousness and self-report questionnaires, clinician ratings, and various measures derived from an individualized simulation of an anxiety-provoking situation was examined in a sample of men and women seeking treatment for social phobia. As predicted, public, not private, self-consciousness was generally related to self-report and naive observer ratings of anxiety and to behavioral disruption during the simulation. The predicted relationship between public self-consciousness and how accurately subjects evaluated their performance in the anxiety-provoking situation was marginally supported. Hypotheses regarding the relationship between private self-consciousness and self-reported anxiety during an anxiety-provoking situation, and between private self-consciousness and the correspondence between physiological assessment and self-report, were not supported. The discussion focuses on methodological issues and the theoretical implications of the relationship between self-consciousness and social anxiety.

Fenigstein, Scheier, and Buss (1975) developed the Self-Consciousness Scale (SCS) to assess individual differences in dispositional self-awareness. The SCS consists of three subscales labeled *public self-consciousness*, *private self-consciousness*, and *social anxiety*. Public self-consciousness was defined as awareness of the public aspects of oneself and was measured by items such as “I’m concerned about the way I present myself” and “One of the last things I do before I leave my house is look in the mirror.” Private self-consciousness, the awareness of private aspects of oneself, such as thoughts and feelings, was measured by items such as “I’m alert to changes in my mood” and “I reflect about myself a lot.” The third subscale, social anxiety, assessed discomfort in the presence of other people and included items such as “Large groups make me nervous” and “I have trouble working when someone is watching me.” Fenigstein and colleagues reported that the public and private

self-consciousness subscales and the public self-consciousness and social anxiety subscales were moderately related ($r_s = .21-.26$ for two samples, $N = 604$) but that the correlation between social anxiety and private self-consciousness fluctuated around zero.

Subsequent research has associated high private self-consciousness with increased awareness of internal sensations (Scheier, Carver, & Gibbons, 1979), increased attitude consistency across time (Scheier, 1980), higher correlations between self-report measures and behavior (Scheier, Buss, & Buss, 1978), and greater responsiveness to experimental manipulation of mood (Scheier, 1976; Scheier & Carver, 1977). High private self-conscious subjects describe themselves more extensively (Franzoi, 1983; Turner, 1978b) and more accurately (Bernstein & Davis, 1982; Franzoi, 1983) than those low in private self-consciousness.

High public self-consciousness has been associated with high self-reported conformity, high need for affiliation, low self-esteem, and low risk taking (Tunnell, 1984). In experimental situations, high public self-conscious subjects are more compliant than low public self-conscious subjects (Froming & Carver, 1981) and are more likely to moderate privately expressed attitudes when those attitudes are to be exposed to others (Scheier, 1980), suggesting that they may be more likely to engage in impression management. Fenigstein (1979) demonstrated that high public self-conscious women were more sensitive to passive rejection by a peer than low public self-conscious women.

Schlenker and Leary (1982) and Buss (1980) suggested that high public self-consciousness may be a necessary precondition for social anxiety. Schlenker and Leary's self-presentational model postulates that social anxiety is a function of the motivation to make a particular impression and doubt that one will be successful. High public self-consciousness may increase the motivational component of the equation by increasing the salience of social goals, which may increase attempts at impression management and, consequently, increase an individual's vulnerability to social anxiety. In fact, several studies have demonstrated that socially anxious subjects are preoccupied with the public aspects of themselves, including how they might be evaluated by others (e.g., Smith, Ingram, & Brehm, 1983), and whether or not others will perceive their anxiety (McEwan & Devins, 1983).

High levels of public self-consciousness may also increase the doubt component of Schlenker and Leary's model by interfering with feedback from the interaction partner about the success of self-presentational efforts. In a manner similar to that proposed by Wine (1971) and Hartman (1983), excessive self-focused attention may detract from the amount of attention focused on the other person, resulting in reduced effectiveness in social interactions and increased social anxiety.

Although Fenigstein and colleagues (1975) among others (e.g., Buss, 1980) proposed that the SCS may be useful in clinical settings, all of the studies just cited involved college students. With rare exceptions (e.g., Puente & Morrissey, 1981), little published normative or validation information on the SCS is available for noncollege populations. Therefore, an examination of self-consciousness in a clinical, socially anxious population would seem to be particularly appropriate. This study examined public and private self-consciousness in individuals meeting the *Diagnostic and Statistical Manual of Mental Disorders*, third edition (DSM-III; American Psychiatric Association, 1980) criteria for social phobia. DSM-III defines social phobia as:

a persistent, irrational fear of, and compelling desire to avoid, situations in which the individual may be exposed to scrutiny by others. . . . Examples of Social Phobias are fears of speaking or performing in public, using public lavatories, eating in public, and writing in the presence of others. Usually the individual is aware that the fear is that others will detect signs of anxiety in the phobic situation. (p. 227)

It seems likely that concern about being watched or evaluated by others would be related to public self-consciousness. On the other hand, private self-consciousness may be related to an individual's subjective experience of anxiety or awareness of physiological changes (e.g., increased heart rate) when exposed to phobic events.

Four hypotheses were investigated in our study. First, it was predicted that public self-consciousness would be positively correlated with measures of social anxiety. Next, in light of previous research with college students (cf. Scheier & Carver, 1977; Scheier et al., 1978), it was anticipated that private self-consciousness would be positively related to both the intensity of affect reported in response to experimentally induced anxiety and to the accuracy of self-reports of anxiety. Finally, because public self-consciousness is defined as awareness of those aspects of oneself that are visible to others, it was expected that public self-consciousness would be related to the accuracy of social phobics' reports of their observable behavior in an anxiety-provoking, social situation. However, we made no specific predictions on the nature of this relationship. Because high levels of public self-consciousness have been associated with impression management (Framing & Carver, 1981; Scheier, 1980), it could be argued that public self-consciousness would be positively related to social phobics' ability to describe accurately a specific sample of their behavior. In contrast, Clark and Arkowitz (1975) demonstrated that socially anxious college students underrated their performance in social situations, suggesting that high public self-consciousness may be associated with inaccurate self-assessments of performance.

Method

Subjects

Subjects were 20 women and 24 men, between the ages of 20 and 51, ($M = 30.24$, $SD = 7.66$), who sought treatment at the Center for Stress and Anxiety Disorders, State University of New York at Albany, for social anxiety in a variety of situations, including heterosocial interactions and public speaking. The majority of subjects had some postsecondary education, and 47% of the women and 56% of the men were college graduates. Forty-two percent of the women and 72% of the men had never married.

All subjects were screened with the Anxiety Disorders Interview Schedule (ADIS; DiNardo, O'Brien, Barlow, Waddell, & Blanchard, 1983) or its recent revision (Barlow, 1985) and received a primary diagnosis of social phobia according to DSM-III criteria. The ADIS is a structured interview with demonstrated reliability for the diagnosis of anxiety disorders ($\kappa = .91$ for social phobia; Barlow, 1985). Diagnostic interviews were conducted by licensed clinical psychologists or advanced doctoral students. In addition to determining diagnosis, the ADIS interviewer also rated each subject on the Hamilton Anxiety Rating Scale (Hamilton, 1959) and the Phobic Severity Rating Scale (Watson & Marks, 1971).

Only subjects exhibiting moderate to severe impairment in daily functioning, as indicated by a severity rating greater than or equal to 4 on the scale ranging from 0 to 8, participated in the study ($M = 5.64$, $SD = 1.11$). The data presented here are drawn from the extensive assessment procedure completed by all subjects prior to entering treatment. This pretreatment assessment included a battery of self-report questionnaires and various measures derived from a behavioral simulation of a personally relevant, anxiety-provoking situation.

Self-Report Questionnaires

All subjects completed the public and private self-consciousness and social anxiety subscales of the SCS.¹ Fenigstein and colleagues (1975) reported adequate test-retest correlations for the subscales ($r_s = .73$ to $.84$), and other studies have supported their discriminant validity (Carver & Glass, 1976; Turner, Scheier, Carver, & Ickes, 1978).

In addition to the SCS, each subject completed a variety of questionnaires assessing anxiety. These included four measures of various aspects of social-evaluative anxiety: the Social Avoidance and Distress Scale (SADS; Watson & Friend, 1969), the Fear of Negative Evaluation Scale (FNE; Watson & Friend, 1969), the Social Interaction Self-Statement Test (SISST; Glass, Merluzzi, Biever, & Larsen, 1982), and the Personal Report of Confidence as a Speaker (PRCS; Paul, 1966). The trait portion of the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970) was used to assess generalized anxiety. Subjects also completed the Cognitive-Somatic Anxiety Questionnaire (CSAQ; Schwartz, Davidson, & Goleman, 1978), a 2-factor scale that examines the frequency of cognitive and somatic anxiety symptoms.

Behavioral Simulation

All subjects participated in a behavioral simulation of an anxiety-provoking situation. In order to examine each subject's anxiety, as it was likely experienced in his or her daily life, simulations were individually designed on the basis of questionnaire data and initial interviews to recreate a situation that typically evoked high levels of anxiety. The simulations included situations such as initiating a conversation with a member of the opposite sex or making a presentation at a staff meeting. Graduate and undergraduate assistants served as role-play partners and audience members.

Each 10-min simulation was divided into three phases. Following a 3-min adaptation period for the heart rate assessment (outlined next), the experimenter described the scenario for the upcoming simulation and asked the subject to think about it for 3 min (the anticipatory phase). Immediately after the anticipatory phase, subjects were taken to another room in which the audience or role-play partners were ready and waiting. Subjects had been previously informed that the simulation would be videotaped, and this room contained video recording equipment in full view of the subject. The final phase, referred to as the performance phase, consisted of the 4-min role play.

Heart rate

Subjects' physiological arousal in anticipation of the simulation and during the simulation itself was assessed with a portable heart rate monitor (Exersentry III, Model No. 51330, by Respirationics, Inc.), described in detail by Heimberg, Gansler, Dodge, and Becker (1987).

Minute-by-minute heart rate (HR; in beats per minute) was calculated separately for adaptation, anticipatory, and performance phases.

Subjective anxiety

Subjects reported their subjective anxiety during the simulation on the Subjective Units of Discomfort Scale (SUDS), which ranges from 0 to 100, developed by Wolpe and Lazarus (1966). Subjects were prompted for their ratings at 1-min intervals, resulting in three anticipatory and five performance SUDS ratings.

Thought listing

Cognitive activity in response to the simulation was assessed with the thought listing procedure, previously used with socially anxious college students (Cacioppo, Glass, & Merluzzi, 1979; Heimberg, Acerra, & Holstein, 1985; Heimberg, Nyman, & O'Brien, 1987). Immediately following the simulation, subjects were given forms and were asked to record the thoughts they experienced during the performance phase, ignoring spelling, grammar, and punctuation. Trained graduate assistants, unaware of the hypotheses of this study, later categorized thoughts as positive (facilitating relaxed and effective performance), negative (hindering relaxed and effective performance), or neutral. Interrater agreement for a sample of 17 subjects was 86% for positive thoughts and 95% for negative thoughts ($kappas = .79$ and $.93$, respectively).

Simulation ratings

After completing the thought-listing forms, subjects were asked to describe their maximum anxiety and the quality of their performance during the simulation on single-item scales, ranging from 0 to 100 (higher ratings indicating higher anxiety or better performance). Undergraduate research assistants who were not directly associated with the study viewed the videotapes of the simulations and completed the same two ratings for each subject.

In keeping with the goal of obtaining consensus ratings that would reflect how people in the subjects' daily life would evaluate their performance in an anxiety-provoking situation, the raters were not specifically trained to rate subjects' anxiety or performance. Rather, they were instructed to use their own criteria and evaluate each subject as if he or she were someone they were seeing in a naturally occurring situation. They were further instructed not to discuss the ratings among themselves. Although the raters were aware that the subjects were awaiting treatment for social phobia, they were blind to the specific hypotheses of the study and to subjects' scores on all other measures, including the SCS. To further facilitate generalizability, each of the six independent raters viewed all of the videotapes, as recommended by Farrell, Mariotto, Conger, Curran, and Wallander (1979).

The intraclass correlation coefficient (Winer, 1982) was calculated as a measure of interrater agreement for the six raters. Despite the absence of formal training, interrater consensus was quite high: $r = .89$ for maximum anxiety and $r = .88$ for performance quality. The six raters' scores were averaged for the two variables, and mean consensus ratings were used in all statistical analyses.

Results

The means and standard deviations for men and women on the three subscales of the SCS are presented in the top portion of Table 1. Although women's scores were somewhat more variable than men's, there were no gender differences on any of the subscales. As can be seen in the bottom part of Table 1, all three zero-order correlations among the subscales were significant (r s = .27 to .53). The partial correlations between public and private self-consciousness, controlling for social anxiety, and between public self-consciousness and social anxiety, controlling for private self-consciousness, were also significant (partial r s = .47 and .42, respectively). Private self-consciousness and social anxiety were not related when the effects of public self-consciousness were removed (r = .02, ns). Because public and private self-consciousness were highly correlated, partial correlations were used to test the hypotheses outlined in the introduction. However, both partial and zero-order correlations are reported.

Table 1. Means, Standard Deviations, and Subscale Correlations for the Self-Consciousness Scale

	Women ^a		Men ^b	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Private self-consciousness	25.70	7.23	25.08	4.97
Public self-consciousness	20.70	5.03	20.75	4.45
Social anxiety	17.00	4.95	17.79	3.67
Subscale Correlations				
	Public		Social Anxiety	
Private	.53** (.47)** ^c		.27* (.02)	
Public			.49** (.42)**	

a. n = 20

b. n = 24

c. Correlations in parentheses represent partial correlations controlling for the remaining subscale.

* p < .05, ** p < .002

As expected, public self-consciousness was positively related to most measures of social anxiety, including the PRCS, the SADS, the FNE, the negative self-statement subscale of the SISST, the percentage of negative thoughts listed in the thought listing procedure, and both subject and consensus ratings of maximum anxiety during the simulation (r s = .31 to .68; see Tables 2 and 3). The consensus rating for quality of the simulation performance was inversely related to public self-consciousness. Two measures of general anxiety, the STAI and the cognitive subscale of the CSAQ, were also positively related to public self-consciousness.

Table 2. Zero-Order and Partial Correlations of Public and Private Self-Consciousness with Self-Report Questionnaires and Clinical Ratings

	<i>n</i>	Public		Private	
Hamilton anxiety	43	.10	(.11) ^a	.00	(−.06)
Phobic severity	43	.18	(.19)	.04	(−.07)
PRCS	43	.45***	(.47)***	.13	(−.16)
SADS	43	.36**	(.35)**	.13	(−.08)
FNE	44	.71***	(.68)***	.30*	(−.12)
STAI	43	.53***	(.45)***	.33*	(.07)
SISST-positive	42	−.14	(−.22)	.06	(.17)
SISST-negative	42	.48***	(.47)***	.15	(−.14)
CSAQ-Cognitive	44	.53***	(.37)**	.46***	(.25)*
CSAQ-Somatic	44	.21	(.04)	.34**	(.27)*

Notes: *ns* vary due to missing data. PRCS = Personal Report of Confidence as a Speaker. SADS = Social Avoidance and Distress Scale. FNE = Fear of Negative Evaluation. STAI = State-Trait Anxiety Inventory. SISST = Social Interaction Self-Statement Test. CSAQ = Cognitive-Somatic Anxiety Questionnaire.

a. Correlations in parentheses represent partial correlations controlling for the other self-consciousness subscale.

p* < .05, *p* < .01, ****p* < .001

Table 3. Zero-Order and Partial Correlations of Public and Private Self-Consciousness with Behavioral Simulation Measures

	<i>n</i>	Public		Private	
Total thoughts	43	.35**	(.17) ^a	.40**	(.27)
% of negative thoughts	43	.49***	(.38)**	.34	(.11)
% of positive thoughts	43	−.18	(−.15)	−.09	(.00)
Mean SUDS					
Anticipatory	43	.35**	(.23)	.31*	(.16)
Performance	39	.53***	(.49)***	.25	(−.05)
Mean heart rate					
Anticipatory	39	.18	(.08)	.21	(.15)
Performance	37	.13	(.02)	.21	(.17)
Maximum anxiety during simulation					
Subject rating	44	.48***	(.36)**	.36**	(.14)
Consensus rating	38	.32*	(.31)*	.12	(−.07)
Performance quality during simulation					
Subject rating	44	−.16	(−.07)	−.18	(−.12)
Consensus rating	38	−.33*	(−.31)*	−.13	(.05)

Notes: *ns* vary due to missing data. SUDS = Subjective Units of Discomfort.

a. Correlations in parentheses represent partial correlations controlling for the other self-consciousness subscale.

p* < .05, *p* < .01, ****p* < .001

In contrast, private self-consciousness was generally not related to the anxiety measures (see Tables 2 and 3). Although there were significant zero-order correlations between private self-consciousness and the FNE, the STAI, the subject's maximum anxiety rating, the total number of thoughts listed; the percentage of negative thoughts listed, and both the cognitive and somatic subscales of the CSAQ (r s = .30 to .46), only three of these correlations (total number of thoughts listed and the CSAQ subscales) remained significant when the effects of public self-consciousness were removed.

It was hypothesized that private self-consciousness would be positively correlated with subjects' anxiety in response to the behavioral simulation. This was not confirmed. Private self-consciousness was not related to the mean SUDS in anticipation of the simulation (r = .16, ns), the mean SUDS during the simulation (r = -.05, ns), or the maximum anxiety rating obtained immediately after the simulation (r = .14, ns).

A comparison was made between SUDS ratings and heart rate, in both the anticipatory and performances phases of the behavioral simulation, to test the hypothesis that the subjective anxiety reports of those higher in private self-consciousness would correspond more closely to their physiological arousal than the reports of those lower in private self-consciousness. The correspondence index was calculated by converting HR and SUDS to standardized scores, then taking the absolute value of the difference between HR and SUDS for each minute. The difference scores were then averaged across each phase, resulting in a mean anticipatory HR-SUDS correspondence score and a mean performance HR-SUDS correspondence score. Neither of these variables were significantly related to private self-consciousness (r s = .08 and .15, respectively).²

It was predicted that public self-consciousness would be related to the accuracy of subjects' descriptions of themselves in an anxiety-provoking situation. In order to test this hypothesis, the absolute value of the difference between the subject's performance quality rating and observers' consensus performance quality rating was calculated and served as an index of "inaccuracy." (Note that a smaller inaccuracy index indicates greater agreement between subjects and observers.) High public self-consciousness was marginally associated with lower levels of disagreement between subjects and objective observers on performance quality, r = -.25, p < .067. Private self-consciousness was not related to performance quality inaccuracy, r = .09, ns.

Discussion

As would be expected, the social phobics in this sample scored approximately one standard deviation higher on the social anxiety subscale of the SCS than has been reported for college students (Fenigstein et al., 1975). However, they did not differ substantially from college students on either of the self-consciousness subscales. Subscale correlations for the social phobics were much higher than those reported by Fenigstein and colleagues (1975). It is unclear why public and private self-consciousness were more highly related for our social phobics than for Fenigstein et al.'s college students. Perhaps public and private self-consciousness are more similar in social phobics than in college students because much of social phobics' private experience involves anxiety symptoms, which they fear will become visible to others (McEwen & Devins, 1983). Thus private self-consciousness may "merge

with" public self-consciousness in social phobics as public self-conscious concerns are triggered by the private experience of anxiety. It should be kept in mind, however, that, in addition to social anxiety, the social phobics also differed from college students on variables such as age, socioeconomic status, and marital status. Finally, it should also be noted that at least one public-private subscale correlation as high as .54 has been reported for college students (Turner, 1978a).

Public self-consciousness was related to most measures of social anxiety. This relationship was most consistent for the self-report measures. Public self-consciousness did not influence clinician ratings of anxiety, but naive observers' ratings of subjects' behavior in the phobic situation were also related to public self-consciousness scores. It would be interesting to investigate whether the differential impact of public self-consciousness in these two assessment settings was due to the presence of a sample of the subject's behavior in the phobic situation, the difference between expert and novice raters, or other factors.

As expected, private self-consciousness was generally not related to measures of social anxiety, with the exception of the CSAQ subscales and the total number of thoughts listed in the thought listing procedure. CSAQ items generally ask the subject to rate cognitive activity and physiological symptoms. Because previous work has shown that high private self-conscious individuals report more extensively and more accurately on internal states (e.g., Franzoi, 1983; Scheier et al., 1978), it is not surprising that high private self-conscious social phobics identified more cognitive and physiological symptoms of anxiety. In fact, when cognitive activity was addressed in a free-response format in the thought listing task, high private self-consciousness was again associated with more extensive reporting of cognitive activity.

We hypothesized that public self-consciousness and performance quality inaccuracy would be related and suggested that, based on available evidence, either a positive or negative relationship was plausible. Although the correlation was only marginally significant, these data suggest that high public self-conscious social phobics may report more accurately on their behavior in anxiety-provoking situations than low public self-conscious social phobics. Failure to find a stronger relationship may be attributable to methodological factors. Buss (1980) distinguished between the enduring trait of public self-consciousness, as measured by the SCS and a corresponding transient state of public self-awareness, which may be experimentally manipulated with presence of mirrors, cameras, and audiences. The presence of the video equipment during the behavioral simulation may have induced a uniformly high level of public *self-awareness* across all subjects, thus reducing the impact of individual differences in public *self-consciousness*. In fact there was a significant correlation between consensus ratings and subjects' ratings for performance quality, $r = .35, p < .01$, indicating at least moderate agreement between subjects and objective observers, irrespective of subjects' level of public self-consciousness.

Putting aside this methodological issue for a moment, consideration of both the accuracy of subjects' perception of their performance and the negative correlation between consensus performance ratings and public self-consciousness suggests a situation in which high public self-conscious social phobics may be acutely aware of their poor performances, whereas low public self-consciousness social phobics may be relatively unaware of their more adequate performance. Although this hypothesis is quite speculative on the basis of

this study alone, it deserves further exploration to consider the implications it may have for both the etiology and treatment of social phobia.

The hypothesis concerning how accurately subjects would report on their anxiety in the behavioral simulation was not supported. Private self-consciousness did not predict the relationship between subjects' SUDS reports and their HR. Subjects may be unable to accurately monitor their HR regardless of their level of dispositional self-consciousness (Gillis & Carver, 1980). However, Johansson and Ost (1982) reported that social phobics were more accurate than claustrophobics in HR estimation, and Heimberg and colleagues (1987) found positive correlations between the somatic subscale of the CSAQ and HR among social phobics, suggesting that social phobics are aware of their physiological response to anxiety. Given these studies and the fact that there was a significant correlation between CSAQ-somatic and private self-consciousness, it seems unlikely that private self-consciousness is unrelated to awareness of HR in social phobics. Failure to find the expected relationship may be attributable to the instructions subjects received in this study. Subjects were instructed to rate their subjective discomfort, not specifically their HR. SUDS ratings may have been based on a variety of factors (e.g., cognitive activity, various physiological processes, and behavior); HR was only one. This hypothesis should be evaluated in future studies by asking subjects to base their SUDS ratings specifically on HR or some other measurable physiological symptoms of anxiety.

Our results are generally supportive of excessive self-focus explanations of social anxiety. However, they do not support the notion that public self-consciousness is a necessary prerequisite for social anxiety (Buss, 1980; Schlenker & Leary, 1982) because all subjects were severely socially anxious, but a range of public self-consciousness scores were reported.

Although the possible clinical usefulness of the SCS was discussed in Fenigstein and colleagues' (1975) initial article, this study is one of the first to report using the scale with a clinical population. We hope this study may help lay the groundwork for future research on the relationship between social anxiety and self-consciousness by demonstrating that the SCS is a useful and valid instrument for use with a highly socially anxious clinical population.

Acknowledgments – This study was supported by grant number 38368 from the National Institute of Mental Health to Richard Heimberg. Portions of this article were presented at the annual meetings of the Association for the Advancement of Behavior Therapy, Houston, November 1985, and Boston, November 1987. We express our appreciation to Jerry Suls, PhD, and Monroe A. Bruch, PhD, for their comments on an earlier draft of this manuscript.

Notes

1. Subsequent to the initiation of data collection for this project, Scheier and Carver (1985) reported that noncollege populations may experience difficulty reading the SCS and have published a revised scale. We are unaware of any subjects experiencing difficulty understanding the SCS, and because 77% of the subjects had at least some postsecondary education, it is unlikely that scale readability is a serious concern.

2. All analyses involving HR data were also conducted with HR computed as a change score from baseline. This analysis did not affect the outcome of the comparisons with the SCS subscales.

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