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Fear and avoidance of eye contact in social anxiety disorder

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Abstract

Background: Excessive fear of scrutiny is a defining feature of social anxiety disorder. Eye contact may trigger feelings of being scrutinized, and although eye contact is commonly feared in persons with social anxiety disorder, it has been studied little. The purpose of this study was to characterize fear and avoidance of eye contact in patients with social anxiety disorder and in nonpatient samples.

Methods: Gaze fears and avoidance, social anxiety, and depression were assessed in 44 patients with generalized social anxiety disorder, 17 matched healthy comparison subjects, and 79 undergraduates. Patients were reassessed after 8 to 12 weeks of treatment with paroxetine. A new self-report instrument, the Gaze Anxiety Rating Scale (GARS), was used to assess fear and avoidance of eye contact, and its psychometric properties were analyzed.

Results: Patients with generalized social anxiety disorder, in comparison with healthy control participants, reported significantly increased levels of fear and avoidance of eye contact, which decreased significantly after 8 to 12 weeks of treatment with paroxetine. Fear and avoidance of eye contact were significantly associated with severity of social anxiety in all 3 samples. The GARS demonstrated excellent internal consistency within each sample.

Conclusions: Self-reported fear and avoidance of eye contact are associated with social anxiety in both nonpatient and social anxiety disorder samples. Preliminary psychometric analyses suggest that the GARS has utility in the assessment of gaze anxiety.

Social anxiety disorder (SAD) is one of the most common psychiatric disorders, with a lifetime prevalence of 5% to 13% [1,2], and it frequently causes severe distress and impairment [3]. In the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, SAD is defined by a persistent fear of “social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others,” and its generalized subtype (GSAD) involves fear of *most* social situations. Common measures of severity of social anxiety quantify fear and avoidance across a variety of social or public situations (eg, Liebowitz Social Anxiety Scale (LSAS) [4] or focus on severity of anxious states and

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interference with functioning in social interactions (eg, Social Interaction Anxiety Scale [SIAS]) [5]. Relatively little attention has been paid, however, to assessment of fear of eye contact, a fundamental form of scrutiny fears.

Available data suggest that fear and avoidance of eye contact may be an important feature of SAD. In factor analyses performed in 3 SAD patient samples, the single “fear of eye contact” item of the 24-item LSAS loaded on the factor accounting for the most variance, consistent with an association with core features of the disorder [6-8]. Persons with SAD make less eye contact during social conversations, as observed by independent raters in laboratory studies [9]. In eye tracking studies, SAD subjects show less gaze fixations on the eyes of faces presented for 10-second periods [10-12]. This avoidance of gaze appears to have functional relevance in SAD, as it leads to loss of social information that might otherwise counter the disorder’s common biases that others will be critical and rejecting. Others may misinterpret gaze avoidance by the person with SAD as a sign of disinterest, diminishing opportunity for positive social interaction.

Gaze behavior also holds potential as a link to the underlying neurobiology of SAD because it can be measured objectively and studied across primate species. Fear and avoidance of gaze have been noted to be elements of submissive behavior seen across group-living species [13]. Human social anxiety has been suggested to relate to such submissive behaviors as part of an evolved defensive system [14,15].

Despite a growing body of data on objective assessment of gaze behavior, little is known about the subjective experience of gaze aversion in patients with SAD and whether it differs from that of the general population. In nonpsychiatric samples, the gaze aversion that occurs while engaging in difficult cognitive tasks has been reported to be primarily related to decreasing the distracting cognitive load associated with the processing of visual environmental information, and social-emotional causes have appeared to be of secondary importance [16]. In persons with SAD, however, gaze aversion appears to be primarily related to regulation of social anxiety, but this relationship has not been systematically studied. In addition, it is not known whether social anxiety is the only social-emotional symptom associated with gaze aversion or whether other symptoms, such as depression, are also associated.

To begin to identify clinical correlates of fear and avoidance of eye contact, we developed the Gaze Anxiety Rating Scale (GARS), a self-report instrument. The purpose of this study was to characterize self-reported fear and avoidance of eye contact in nonanxious persons and in patients with GSAD, before and after treatment, and to assess the psychometric properties of the GARS. We hypothesized that patients with GSAD, compared with matched control participants, would report more fear and avoidance of eye contact and that this would decrease with treatment of GSAD. We also hypothesized that within GSAD and nonpatient samples, the GARS would demonstrate internal consistency, convergent validity with measures of social anxiety and submissive behavior, and divergent validity with measures of depression.

1. Methods

1.1. Participants

Participants consisted of 3 samples: GSAD patients, matched healthy comparison (HC) subjects with no psychiatric disorder (“supernormals”), and a student sample of undergraduates which provided complementary data that were more representative of young adults in the community. The student sample included 79 undergraduates who completed the GARS and other measures for credit or extra credit in psychology classes. This student sample has been reported on previously (eg, Rodebaugh and Heimberg [17]), but not in regard to the GARS. All student participants gave written informed consent and the protocols were approved by Washington University’s Institutional Review Board. The student sample was predominantly female ($n = 52$, 66%), with a racial distribution of 54 (69%) whites, 9 (12%) Asians, 5 (6%) blacks, 3 (4%) Hispanics, and 7 (9%) “other,” with a mean (SD) age of 19.3 (1.1) years.

The GSAD sample consisted of 44 patients pooled from participants who were entering either a clinical trial ($n = 26$) or a functional magnetic resonance imaging (fMRI) study ($n = 18$) that used the same entry criteria. The HC participants ($n = 17$) had no lifetime psychiatric disorders and were matched by age and sex to the fMRI study patients. Diagnoses in GSAD patients and HC participants were made using the Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* [18]. All patients had a principal diagnosis of GSAD, without current major depressive disorder, substance use disorders, or lifetime bipolar or psychotic disorders, and they were free of psychoactive medications. Other current diagnoses were permitted if they were of secondary clinical severity to GSAD: 4 patients had comorbid generalized anxiety disorder, 2 had dysthymia, and 1 each had panic disorder and bulimia nervosa. Patients were reassessed after open label treatment (for 12 weeks in the clinical trial or 8 weeks in the fMRI study) with the serotonin reuptake inhibitor paroxetine, a Food and Drug Administration–approved treatment for SAD, and a randomly selected subset of 8 HC participants were reassessed after a time interval of 8 weeks. All of the GSAD patients and HC participants gave written informed consent, and the protocols were approved by the New York State Psychiatric Institute’s Institutional Review Board.

The GSAD patients and HC participants did not differ significantly in mean (SD) age (32.0 [11.2] vs 31.4 [10.8] years; $df = 59$, $t = 0.20$, $P = .84$), sex (52% vs 41% male; $\chi^2 = 0.64$, $df = 59$, $P = .62$), marital status (20% vs 12% married; $df = 59$, $P = .49$), or mean (SD) years of education (15.9 [2.3] vs 16.6 [2.1] years; $df = 57$, $t = 1.1$, $P = .27$). Racial distribution differed significantly between groups (Fisher exact test, $P = .011$). The GSAD patients included 26 (59%) whites, 3 (7%) blacks, 7 (16%) Hispanics, 6 (14%) Asians, and 2 (5%) “others,” whereas the HC participants included 13 (76%) whites, 0 (0%) blacks, 2 (12%) Hispanics, 1 (6%) Asians, and 1 (6%) “other.”

1.2. Assessments

Student participants completed the GARS and the SIAS, among other measures, in a single session lasting an hour or less. The GSAD patients and HC participants completed the

GARS and a different battery of clinician-rated and self-rated assessments of social anxiety, depression, and submissive behavior, and the GSAD patients repeated the same assessments after 8 to 12 weeks of paroxetine treatment.

1.2.1. Gaze Anxiety Rating Scale (see Appendix)—This self-report scale was developed based on unstructured interviews with GSAD patients that were used to generate a list of 17 situations in which eye contact was frequently feared and/or avoided. Fear and avoidance of making eye contact in each situation are rated on a 0–3–point Likert-type scale (none, mild, moderate, severe), and scores are summed over the 17 situations to yield a fear subtotal, avoidance subtotal, and overall total scores. In this study, additional questions assessing associated cognitions and life course of gaze anxiety were administered only in the GSAD patients and HC samples, and these items were not included in the calculation of the GARS total score.

1.2.2. Liebowitz Social Anxiety Scale [4]—This clinician-rated scale has been widely used in clinical trials as a measure of severity of SAD. It assesses fear and avoidance of 24 social situations, one of which is “looking at people you don’t know very well in the eyes.” It has been shown to have good psychometric properties including sensitivity to treatment response [19].

1.2.3. Hamilton Rating Scale for Depression [20]—The 17-item Hamilton Rating Scale for Depression (HRSD) is a standard clinician-rated measure of the severity of depression.

1.2.4. Beck Depression Inventory II [21]—The self-rated Beck Depression Inventory (BDI), which assesses depression, has been shown to have specificity for depressive symptoms relative to anxiety symptoms [22].

1.2.5. Social Interaction Anxiety Scale [5]—The SIAS includes 20 self-rated items in a 0 to 4 Likert-type format. Items assess anxiety in social interactional situations, including 1 eye contact item: “I have difficulty making eye contact with others.” Research on the scale suggests good to excellent reliability and good construct and convergent validity (see Heimberg and Turk [23] for a review). Three reverse-scored items are omitted here because evidence suggests that they fail to load on the same factor as the other items [24] and appear less related to social anxiety and more related to extraversion [25].

1.2.6. Submissive Behavior Scale [26]—The self-rated Submissive Behavior Scale (SBS) assesses the frequency of involuntary submissive behaviors items with 16 items rated on a 5-point Likert-type scale (never = 0, always = 4). Two items relate to eye contact (“I don’t like people to look straight at me when they are talking” and “I avoid direct eye contact”).

1.3. Statistics

The internal consistency of the GARS was assessed using Cronbach’s α coefficients and item-total correlations. Construct validity analyses included comparisons between GSAD and HC groups using χ^2 tests or Fisher exact tests, Student t tests, and Cohen’s d as

a measure of effect size [27], as well as pretreatment vs posttreatment analyses within the GSAD group using paired *t* tests and using Cohen's *d* for correlated samples to calculate within-group effect sizes. The test-retest reliability and convergent and divergent validity of the GARS with measures of social anxiety, submissive behavior, and depression were analyzed with Pearson correlations and comparisons of correlations [28]. Spearman correlations were also performed because of some nonnormal distributions. Demographic features of age, sex, and race were explored for potential associations with gaze anxiety. Because the GSAD and HC groups differed in racial composition, analyses comparing these groups were repeated within whites only. These analyses did not result in any differences in significance of outcome (available by request from authors). Level of significance was set at $P < .05$, and all tests were 2 tailed.

2. Results

2.1. Reliability of the GARS

In the undergraduate sample, Cronbach α coefficients were .88 for the anxiety subscale, .90 for the avoidance subscale, and .95 for the full scale. Item-total correlations (using the full 34-item score with the particular item removed) ranged from 0.30 to 0.71, all significant ($P < .05$). Anxiety and avoidance scales were highly correlated ($r = 0.75$, $P < .001$).

Among GSAD patients, Cronbach's α coefficients were .91 for the anxiety subscale, .93 for the avoidance subscale, and .96 for the full scale. Item-total correlations (using the full 34-item score with the particular item removed) ranged from 0.31 to 0.73. Anxiety and avoidance scales were highly correlated ($r = 0.92$, $P < .001$). Among the HC participants, coefficients were .85 for the anxiety subscale, .81 for the avoidance subscale, and .91 for the full scale.

The test-retest reliability of the GARS was high in the subset of HC participants who were randomly selected to be reassessed after an 8-week interval ($r = 0.99$, $P < .001$), with Spearman correlations yielding identical results.

2.2. Gaze anxiety in student, GSAD, and HC samples

In the undergraduate sample, mean (SD) total scores on the GARS did not differ between men and women (25.6 [14.8] vs 29.9 [16.2]; $df = 76$, $t = 1.2$, $P = .25$), although the range of total scores in men (4-49) did not extend as far into the severe end as did the range in women (4-70). Mean (SD) total scores on the GARS did not differ between whites and nonwhites (28.8 [16.6] vs 27.4 [13.8]; $df = 76$, $t = 0.37$, $P = .72$), and they were not associated with age ($r = 0.08$, $P = .47$).

The GSAD patients reported significantly increased levels of gaze anxiety on the GARS compared with the HC participants, with large between-group effect sizes that approached the magnitude of that found for the global measure of social anxiety (LSAS, see Table 1). Among the 37 patients who completed open label paroxetine treatment, gaze anxiety decreased significantly (see Table 2), as did severity of social anxiety, submissive behavior, and depressive symptoms. Among the GSAD patients at baseline, total scores on the GARS did not differ between men and women (mean [SD], 45.8 [21.6] vs 54.6 [19.6]; $df = 42.0$, $t =$

1.4, $P = .17$), although the range in men (7-91) extended further into the milder end than did the range in women (26-89). Total scores in the HC sample ranged from 0 to 24, with only 1 subject reporting a total score of higher than 15. Mean (SD) total scores on the GARS for the GSAD patients did not differ between whites and nonwhites (49.1 [20.9] vs 51.3 [21.5]; $df = 36.0$, $t = 0.34$, $P = .73$), and scores were not associated with age ($r = 0.20$, $P = .19$), with similarly nonsignificant findings in the HC group.

On the additional descriptive items of the GARS, the GSAD patients, in comparison with the HC participants, reported increased rates of at least moderate severity of gaze avoidance due to anxiety (54.6% vs 0%; $\chi^2 = 13.1$, $df = 59$, $P < .0001$), feeling self-conscious making eye contact (61.3% vs 0%; $\chi^2 = 16.3$, $P < .0001$), and difficulty deciding how much eye contact is best (50% vs 0%; $\chi^2 = 11.2$, $df = 59$, $P < .001$). Both groups reported low rates of gaze avoidance attributed to interference with concentration (11.4% vs 0%; $P = .31$) and fear of staring *too much* into others' eyes (20.5% vs 0%; $P = .27$). Most GSAD and HC participants viewed making eye contact as at least moderately important for their social and work relationships (75% vs 82%; $P = .74$). The GSAD patients reported onset of fear or avoidance of eye contact at a mean (SD) age of 12.9 (5.1) years, not significantly different from their mean (SD) age of onset of SAD (14.6 [6.6] years; $t = 1.3$, $df = 30$, $P = .20$).

2.3. Correlations with social anxiety, depression, and submissive behavior

In the undergraduate sample, GARS total scores were significantly correlated with social anxiety (SIAS, $r = 0.65$, $P < .001$). Depression and submissive behavior were not assessed in this sample.

In the GSAD patients at baseline, GARS total scores were significantly correlated with measures of social anxiety (LSAS, $r = 0.61$, $P < .001$) and submissive behavior (SBS, $r = 0.47$, $P = .001$) but not with measures of depression (HRSD, $r = 0.21$, $P = .17$; BDI, $r = 0.26$, $P = .09$). The GARS-LSAS correlation was significantly greater than correlations of the GARS with the HRSD ($z = 2.5$, $P = .01$) and with the BDI ($z = 2.1$, $P = .03$). Spearman correlations showed the same pattern of significance except that the GARS-LSAS correlation was greater than the GARS-BDI correlation at only a trend level of significance ($z = 1.8$, $P = .07$).

In the HC sample at baseline, GARS total scores were significantly correlated with social anxiety and with the BDI (LSAS, $r = 0.74$, $P = .001$; SBS, $r = 0.19$, $P = .47$; HRSD, $r = 0.03$, $P = .90$; BDI, $r = 0.56$, $P = .02$). The only significant difference between correlations found the GARS-LSAS correlation to be greater than the GARS-HRSD correlation ($z = 2.7$, $P = .01$). Spearman correlations showed the same pattern of significance except that the correlation of the GARS with the BDI was not significant ($r_s = 0.27$, $P = .34$).

3. Discussion

These findings demonstrate that persons with GSAD commonly report fear and avoidance of eye contact, and this gaze anxiety is more severe in persons with GSAD than in healthy persons. Gaze anxiety decreases along with other GSAD symptoms during treatment with paroxetine. Preliminary psychometric data on the GARS suggest that it has excellent

internal reliability across a variety of samples and measures a gaze anxiety construct that is correlated with severity of social anxiety in both patient and nonpatient samples. Divergent validity is suggested by significantly lower correlations of gaze anxiety with depressive symptoms among GSAD patients and HC participants, but interpretation of this is limited by the constricted range of depression present in these samples that excluded patients with major depressive disorder. Overall, these findings support the idea that self-reported gaze anxiety is measurable using the GARS and is associated with social anxiety severity and with the diagnosis of GSAD.

Commonalities between gaze anxiety and GSAD extend to similarity in ages of onset, although the reliability of this finding is limited by the retrospective collection of these data. The construct validity of the GARS is supported by findings that GSAD patients attributed gaze aversion predominantly to anxiety and to feelings of self-consciousness and that few GSAD patients or HC participants attributed gaze aversion to non-anxiety-related impairment in concentration. The finding that half of the GSAD patients reported at least moderate uncertainty about how much eye contact is appropriate suggests that social skill deficits may contribute to gaze anxiety, although the GSAD and HC groups similarly recognized the importance of making eye contact. Post hoc analysis of GSAD patients who had at least moderate uncertainty about how much eye contact is appropriate and were reassessed after paroxetine treatment shows that 11 (73%) of 15 reported only none to “a little” uncertainty after treatment. This improvement with paroxetine treatment suggests that uncertainty about eye contact represents primarily a cognitive manifestation of anxiety, rather than a deficit in knowledge of social skills. More broadly, the high sensitivity of the GARS to change with paroxetine treatment does not support a social skills deficit as the major cause of gaze anxiety.

Age and sex were not associated with gaze anxiety in this study. In the student sample, however, severity of gaze anxiety extended into a higher range of severity in women than in men. This is consistent with established findings of greater social anxiety among women in the general population [1,2], reflected in this study’s student sample by nonsignificantly higher SIAS scores among women (mean [SD], 22.2 [13.6]) than among men (16.4 [8.8]; $t = 2.3$, $df = 70.9$, $P = .27$). In the GSAD sample, gaze anxiety severity extended into a milder range among men, consistent with significantly milder social anxiety (mean LSAS total) in this sample among men (mean [SD], 71.3 [21.2]) than among women (84.6 [17.5]; $t = 2.2$, $df = 47$, $P = .032$).

Gaze anxiety was also not associated with race, although small numbers of nonwhite participants limit the power of this study to detect such differences. Given the known cultural differences in beliefs and norms related to eye contact, future studies should consider the impact of ethnicity and acculturation on gaze fears. Fear of offending others by too-direct gaze has been described as a symptom of GSAD in some East Asian cultures, although a previous study found that fear of offending others due to eye contact was similarly prevalent in US and Korean GSAD patients and less common in both groups than fear of embarrassment due to eye contact [29]. The GARS total score was designed to quantify overall anxiety and avoidance related to eye contact but not to differentiate attributions of anxiety to embarrassment, offending others, or other concerns.

These findings of gaze anxiety in GSAD, based on the GARS, provide more detailed and reliable confirmation of previous findings of eye contact fear and avoidance in SAD that had been assessed with single items in the LSAS and SIAS, observation of social conversations [9], and using eye tracking to demonstrate avoidance of the eye region during 10-second presentations of face stimuli, particularly for facial expressions of anger or disgust [10-12]. During initial exposure or briefer exposures to face stimuli, however, eye tracking studies of gaze behavior find that socially anxious adults and children evidence normal or *increased* attention to the eye region of faces [12,30-32]. These studies are consistent with the idea that initial hypervigilance for a feared stimulus may, in general, precede phobic avoidance [33]. Self-reports of gaze anxiety appear to focus on the phobic avoidance associated with prolonged eye contact, whereas the initial hypervigilance for scrutiny may generally go unreported by persons with GSAD.

The study of eye contact as a feature of social anxiety has the potential advantage of assessment by complementary self-report measures and objective measures of eye tracking and functional neuroimaging in humans and in nonhuman primates. Eye contact engages specific neurocircuitry that has been identified in brain imaging studies of monkeys [34] and healthy human subjects [35]. Imaging studies in nonpatient samples show that direct eye contact activates regions involved in high-level visual processing (superior temporal sulcus, fusiform gyrus) and other regions that have been termed part of the “social brain” (amygdala, medial prefrontal cortex, and orbito-frontal cortex) [35]. These latter areas have been shown to be activated abnormally in GSAD subjects responding to stimuli of emotional facial expressions and stimuli involving verbal criticism [36,37]. We have started to examine neural correlates of eye contact in GSAD [38].

The reduction in gaze anxiety observed during treatment of GSAD in this study occurred with open label paroxetine treatment. Absent a placebo group, the possibility that improvement was due to nonspecific effects cannot be excluded. The magnitude of parallel improvement in social anxiety observed here, however, was consistent with paroxetine treatment effects observed in placebo-controlled trials (eg, Liebowitz et al [39]). Future studies could assess the impact of other controlled treatments on gaze anxiety. Cognitive-behavioral therapy, the best-established psychosocial treatment for GSAD, incorporates cognitive restructuring and behavioral exposure to a hierarchy of feared situations [40]. Assessment of gaze anxiety could be clinically useful for identifying patients who might benefit from specifically addressing maladaptive beliefs about eye contact and from incorporating exposure to eye contact into cognitive-behavioral therapy.

Several limitations should be considered in interpreting these findings. The psychometric analyses of the GARS must be considered preliminary because of limited test-retest reliability assessment, the need for larger samples to conduct factor analyses, and the need for more stringent testing of divergent validity with depression. The relevance of self-reported gaze anxiety to a variety of disorders, including body dysmorphic disorder, delusional disorder, and autism spectrum disorders, the last of which have high levels of comorbid social anxiety [41] but also have specific perceptual deficits during gaze processing that are not found in GSAD, remains to be assessed. Construct validity of the

GARS could be further assessed by comparing this self-report instrument with objective measures of gaze behavior in observed social interactions.

In conclusion, these findings show that self-reported fear and avoidance of eye contact are associated with GSAD and with social anxiety severity in both nonpatient and GSAD patient samples. This gaze anxiety also decreases in GSAD patients after treatment with paroxetine. Preliminary psychometric analyses suggest that the GARS has adequate properties for the assessment of fear and avoidance of eye contact. The assessment of gaze anxiety may be useful as a research tool as well as for clinical evaluation and treatment planning.

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Appendix: Gaze Anxiety Rating Scale

The following questions ask if you feel anxiety making eye contact and avoid eye contact in various situations. Base your ratings on the way you have felt and behaved in the past week. If you have not been in the situation recently, please you imagine your expected anxiety and avoidance of eye contact in the situation.

Note: Do not rate anxiety related to just being in the situation. Rate anxiety and avoidance of *making eye contact* while in the situation.

	Anxiety making eye contact	Avoidance of eye contact
	0 No anxiety	0 No avoidance
	1 A little anxiety	1 Avoid a little
	2 Moderate anxiety clinic	2 Avoid moderately
	3 A lot of anxiety	3 Avoid a lot
1. Giving a speech	_____	_____
2. Speaking to a group of people at a party	_____	_____
3. Speaking up at a meeting	_____	_____
4. Speaking in a discussion with a few people	_____	_____
5. Dealing with a cashier when buying something	_____	_____
6. Being introduced	_____	_____
7. Greeting an acquaintance passing by on the street	_____	_____
8. Speaking with someone you don't know well	_____	_____
9. Speaking to someone you find attractive	_____	_____
10. Inviting someone you don't know well on a date or other social activity	_____	_____
11. Feeling close to someone you love	_____	_____
12. Discussing the quality of your work with a boss or a teacher	_____	_____
13. Having a routine talk with a close family member	_____	_____
14. Listening while a person speaks to you, in general	_____	_____

15. Speaking while a person listens to you, in general	_____	_____
16. Expressing a disagreement	_____	_____
17. Receiving a compliment	_____	_____
TOTAL SCORE	_____ +	_____ =

(Sum of items 1-17):

Grand Total

Descriptive Items

Please rate the additional items on the following scale:

0 — Not at all

1 — A little

2 — Moderately

3 — A lot

18. ____ I avoid eye contact because it make me anxious

19. ____ I avoid eye contact only because it interferes with my concentration (not due to anxiety)

20. ____ I feel self-conscious when I make eye contact.

21. ____ I am concerned that I stare *too much* into others' eyes.

22. ____ I have difficulty deciding how much eye contact is best.

23. ____ Making eye contact is important for my social and work relationships

(If you have no anxiety about eye contact, check here ____ and skip items below.)

Complete the following items if you have some anxiety about eye contact or avoidance of eye contact

24. Earliest age when I had anxiety about eye contact or avoidance of eye contact: ____ years old

25. My *current* anxiety and avoidance related to eye contact is:

0. worse than in my childhood

1. no different than in my childhood

2. a little better than in my childhood

3. moderately better than in my childhood

4. a lot better than in my childhood

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Table 1

Baseline assessments for HC and GSAD participants

	HC		GSAD		<i>df</i>	<i>t</i>	<i>P</i>	<i>d</i>
	Mean	SD	Mean	SD				
GARS	6.7	6.7	50.0	20.9	57.9	12.2	<.001	2.8
Anxiety	4.3	4.0	26.6	9.9	58.8	12.5	<.001	3.0
Avoidance	2.4	3.0	23.4	11.4	55.0	11.2	<.001	2.5
LSAS	7.9	5.3	77.1	20.2	53.6	20.7	<.001	4.7
SBS	13.6	6.8	35.9	9.0	59.0	9.2	<.001	2.8
HAM-D	0.3	0.7	7.1	4.7	47.5	9.4	<.001	2.0
BDI	1.0	1.5	13.3	11.3	46.8	7.1	<.001	1.5

HC indicates healthy comparison; GSAD, generalized social anxiety disorder; GARS, Gaze Anxiety Rating Scale; LSAS, Liebowitz Social Anxiety Scale; SBS, Submissive Behavior Scale; HAM-D, Hamilton Depression Scale; BDI, Beck Depression Inventory.

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Table 2

Baseline and posttreatment assessments for GSAD completers of 8 to 12 weeks of paroxetine

	<u>Baseline</u>		<u>Posttreatment</u>		<i>df</i>	<i>t</i>	<i>P</i>	<i>d</i>
	Mean	SD	Mean	SD				
GARS	49.1	20.2	24.9	18.1	34	6.0	<.001	1.3
Anxiety	26.4	9.5	14.8	9.3	34	5.6	<.001	1.2
Avoidance	22.6	11.1	10.1	9.7	34	5.9	<.001	1.2
LSAS	77.6	18.9	41.4	25.3	34	8.2	<.001	1.6
SBS	35.0	9.0	26.2	8.7	37	6.3	<.001	1.0
HAM-D	6.9	4.8	3.6	3.6	37	3.4	.002	0.8
BDI	11.6	9.4	5.0	6.0	36	4.9	<.001	0.8

GSAD, generalized social anxiety disorder; GARS, Gaze Anxiety Rating Scale; LSAS, Liebowitz Social Anxiety Scale; SBS, Submissive Behavior Scale; HAM-D, Hamilton Depression Scale; BDI, Beck Depression Inventory.