An Interpersonal Approach to the Treatment of Social Anxiety Disorder (Social Phobia): A Component Analysis

Ariel Stravynski[1] , Lise Lachance[2]

[1]Department of Psychology, University of Montreal, Montreal, Canada; [2]Department of Education and Pedagogy, University of Quebec at Montreal, Montreal, Canada

ABSTRACT

Background: Most treatments of social anxiety disorder aim at anxiety reduction. To what extent this leads to improved social functioning remains unclear. An effective alternative aiming primarily at social functioning- the Interpersonal Approach- is available. The present study sought to identify its active ingredients.

Methods: This is a randomized controlled study; 102 social anxiety disorder individuals were randomly assigned to 3 versions of the Interpersonal Approach. A total of 76 patients completed treatment and 67, a 1-year follow-up. The patients met Diagnostic and Statistical Manual of Mental Disorders, fourth edition criteria for social anxiety disorder. The study was carried out in an experimental clinic for the treatment of social anxiety disorder at the Research Center of Louis-H. Lafontaine Hospital in Montreal, Canada.

Results: No clinically meaningful change occurred during the waiting list. A significant and equivalent improvement was obtained in all treatment conditions in social functioning, anxiousness, and general psychopathology, maintaining over a 12-month follow-up. Remission rates improved progressively with 54% remission at 1-year follow-up. All variants of the Interpersonal Approach resulted in similar improvements.

Conclusion: The Interpersonal Approach in all its versions has proved to be effective in reducing anxiety complaints and improving social functioning. The combined improvement in these 2 outcomes accounts for the significant remission rates seen at 1-year follow-up. Two active features were common to all: (1) targeting and ultimately dissolving long-standing habits of self-protection across various spheres of life and (2) fostering participatory interpersonal patterns of behavior, enacted by patients systematically and repeatedly between sessions.

INTRODUCTION

Social anxiety disorder (SAD) is characterized by a dread of and a desire to flee or avoid social situations requiring acting in front of, or interacting with, others. Such patients' main concerns are being visibly ill at ease (e.g., sweating, hands shaking, blushing, and grinning). Their ultimate fears are of being ignored and disdained or criticized and mocked.

The anxious arousal reported by such patients is considered a key to the understanding of SAD (e.g., Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV and V), the various facets of SAD-its symptoms. It is assumed that it is the heightened state of anxiety that disrupts social functioning (i.e., enacting social roles within the private as well as public spheres of social life) (pp930-931).[1] Consequently, attenuating the state of anxiety by aiming at factors presumed underlying it has been the goal of most treatments of SAD—be they psychological or pharmacological. Accordingly, in efficacy studies, anxiety is the principal outcome.

While demonstrably providing patients with a significant measure of relief,[2] reduction of anxiety by both psychological and pharmacological approaches (and their combination), involves an important limitation; diminishing levels of anxiety do not necessarily result in a meaningful improvement in the typically impaired social functioning of SAD patients.

The extent of the impairment may be ascertained from the evidence of serious handicaps in functioning in the work and marketplace, higher unemployment rates[3] combined with lower marriage rates and fewer friends.[4,5]

How could we account for the fact that social functioning is not necessarily meaningfully improved by lower levels

Cite this article as: Stravynski A, Lachance L. An Interpersonal Approach to the treatment of social anxiety disorder (social phobia): A component analysis. *Psychiatr Clin Psychopharmacol.* 2022;32(1):33-44.

of anxiety? A possible explanation (supported by the chronicity of SAD) could be that at the time of treatment, most social functioning-perhaps except for the crudest forms of avoidance-is rather loosely related to the actual levels of anxiety. Theoretically, this would be consistent with an interpersonal conceptualization of SAD and a related treatment strategy put forward by Stravynski.[6] (pp337-358)[,7] (pp3-37) Such a conceptualization views a particular manner of relating to others as the interpersonal process undermining social functioning. On this view, "… social phobia is a fearful and (relatively) powerless web of interpersonal patterns, protective against the threat of humiliation (either as public degradation or private personal rejection)."[6] (pp266) Several studies[8,9] lend empirical support to such a construal of SAD. Within this conceptual framework, anxiety is a feature (or a byproduct) of menacing transactions (as fever is to infection) rather than a causative factor controlling social functioning. On this view, anxiety or "… fearfulness—is the emotional state (an all-purpose state of alarm), permeating the defensive behavior and arising out of its interaction with the menacing social context, undergirding the self-protective tactics (distancing, evasiveness, submissiveness), while readying the individual to respond to further threats that may arise."[6] (pp267)

In applying this analytical framework to treatment,[7] (pp199-258) the Interpersonal Approach (IA) seeks to shrink and subsequently dissolve defensive interpersonal patterns, aiming at self-protection. This is achieved by a process of building up and improving social functioning aiming at a greater and better participation in social life (in terms of enactment of social roles). Concretely, patients are guided to behave with greater autonomy (e.g., being outspoken or expressive), to assume social roles (e.g., a position of authority), and to enact them in a participatory manner (i.e., complementary to other participants).

Confusingly, 2 studies[10,11] have reported the application of an "interpersonal therapy" —originally developed for the treatment of depression—toward the treatment of social phobia. Conceptually, despite the name, this approach does not view SAD interpersonally, that is, in interactive

terms with others. The main outcome of these studies is anxiety. It is not clear why this therapy self-identifies as "interpersonal."

In a controlled trial of the IA, Stravynski et al[12] assigned 68 SAD patients to either a waiting list or 2 group treatments focused on improving social functioning, either with or without social skills training. Both treatments included 12 weekly sessions followed by 2 additional 3 monthly sessions during the first 6 months of the follow-up. Sixty patients completed treatment and 59, a 1-year follow-up.

While no clinically meaningful change was observed during the waiting period, a statistically significant and equivalent lessening of anxious distress, avoidance, and improved functioning (in numerous facets of social life) was noted in both treatment conditions at the end of treatment and follow-up. Totally, 60% of the patients in both conditions no longer fulfilled criteria for SAD at the end of 1-year follow-up.

These results raise the question: What are the active components of the IA treatment regimen?

The present study sought to answer this question by comparing the effects of 3 variants of the IA. These treatment conditions, while all embodying the main principles of the IA, varied to rule out potentially confounding factors.

Experimentally, the study compared an "active training" IA group (including the systematic rehearsing of targeted social behaviors in the clinic and putting these into practice in real-life as homework (HW) between sessions) to an IA discussion group (of socially phobic difficulties with HW) and to a supervision of HW only—administered in an individual format.

All 3 therapeutic conditions were guided by a similar rationale: SAD was construed as an overall web of self-protective interpersonal patterns permeated by anxiousness. Therapy is aimed at dissolving these self-protective patterns (and the associated anxious state) by means of a shift from self-protection toward active social participation.

The treatment conditions differed in content of sessions and format. The discussion served as a control for systematic training in participatory conduct—both within a group format. The individual HW only acted as a control for both active training and the group format (e.g., observing others rehearsing and training). All other features (i.e., rationale, interpersonal treatment targets, between-sessions HW tasks) including the time of active contact with therapists (20 minutes per session) were equal.

An additional control was a naturally occurring waiting period, involving about a third of the patients.

MAIN POINTS

- The Interpersonal Approach seeks primarily to improve social functioning.
- Improvement consists of diminishing self-protection and increasing participation (i.e., along a power axis), a reduction of anxiety follows.
- An individual format of the Interpersonal Approach is at least equivalent to the group format.
- An interpersonal analysis of social phobic difficulties and interpersonal homework tasks, performed in between sessions, are the key active ingredient of the Interpersonal Approach.

METHODS

Participants

The study was approved by the institutional ethics committee of the Louis-H. Lafontaine Hospital, Montreal, Canada. (The letter of approval does not contain a protocol number). All participants were informed of the experimental nature of treatment involving random assignment and signed a written informed consent form.

One hundred eighty-one individuals (95% self-referred and 5% referred by clinicians) underwent a brief telephone screening interview and 66 were excluded (see criteria below). The remaining 115 were interviewed by 1 of 3 independent psychiatrists; 113 met DSM-IV criteria for SAD while not meeting any of the exclusion criteria (see flowchart in Figure 1).

To reconfirm the principal problem, the selected 113 participants underwent a second interview by 1 of 3 experienced clinical psychologists following the Anxiety Disorders Interview Schedule.[13] Of these, 6 failed to attend. Five cases, in which the second interview failed to reconfirm the original diagnosis, were excluded. Finally, 102 patients were offered treatment: 82 immediately and 20 after a waiting period. Participants were assigned at random to the treatment conditions.

The demographic and clinical characteristics of the final sample are shown in Table 1. No significant differences in these characteristics were noted between the patients in the final sample and those who dropped out.

The most disturbing experience and most frequent complaint of most patients (87%) concerned public speaking, typically in work settings involving clients, colleagues, and figures of authority. Nevertheless, 79% of the patients also reported widespread distress in most interpersonal contacts and a mounting dread ahead of these. Specific concerns about trembling, for example, while drinking or writing (22%), or blushing when spoken to (49%), were also reported.

Altogether, 67% of the patients struggled with difficulties related to performing public roles. These difficulties were often embedded in a more diffuse pattern of dysfunction concerning initiating and maintaining interactions, as well as joining ongoing social activities in a wide range of situations. These patients fulfilled the criteria for the generalized sub-type of SAD with 21% also meeting criteria for avoidant personality disorder. Finally, 32% of the patients reported widespread difficulties in and apprehensions about most social interactions—regardless of circumstances.

At the other end of this spectrum, about 5% of the patients sought help for a circumscribed problem in (typically work-related) public speaking, seemingly without other clinically significant difficulties.

About 10% of the patients reported instances of panic arising typically in the context of public speaking and 1.5% had difficulties in using public toilets. Three patients also met criteria for generalized anxiety disorder.

Most patients' difficulties were long-standing: on average, 26 years duration. Nearly all patients described their problems as life-long, with an onset, typically in adolescence, of increasingly serious consequences—both educational (e.g., forgoing studies) and social (e.g., not daring to approach a group or an individual).

Assessment

Apart from the participants on the waiting list, who were also assessed a week prior to the beginning of the waiting period (T_0), all participants were assessed at 4 points: a week before the beginning of treatment (T_1), a week after its end (T_2), 6 months after the end of treatment (T_3), and 12 months after the end of treatment (T_4). The assessment battery included self-reported measures as mentioned subsequently.

Anxiety

Fear Questionnaire (FQ)[14] is a 17-item scale from which (in addition to a total score), 3 sub-scores are derived for agoraphobia, social and blood-injury phobia. Test–retest reliability ranges between 0.81 and 0.96.

Brief Social Anxiety Disorder Scale (BSPS)[15] is an 18-item scale divided into 3 domains: fear, avoidance, and physiological arousal (e.g., palpitations and tremor). Test–retest reliability is 0.91 and internal consistency 0.81.

Social Avoidance and Distress (SAD)[16] is a 28-item true-false inventory about avoidance of and distress during interpersonal situations. Test–retest reliability is 0.68 and internal consistency 0.90.

Fear of Negative Evaluation (FNE)[16] is a 30-item true-false inventory concerning negative evaluations of self and social life. Test–retest reliability is 0.75 and internal consistency 0.90.

General Psychopathology

Symptom Check List-90-R (SCL-90-R)[17] is a 90-item overview of psychiatric symptomatology. The test gives scores on 9 scales of pathology, as well as a general score of distress. Test–retest reliability of the scales varies between 0.71 and 0.82 and internal consistency is 0.96.

Social Functioning

Social Adjustment Scale Self-Report (SAS-SR)[18] is a 58-item scale that assesses social functioning in the following spheres of life: marital, family, friendships, work, and leisure. Overall, internal consistency is 0.74 and test–retest reliability is 0.80.
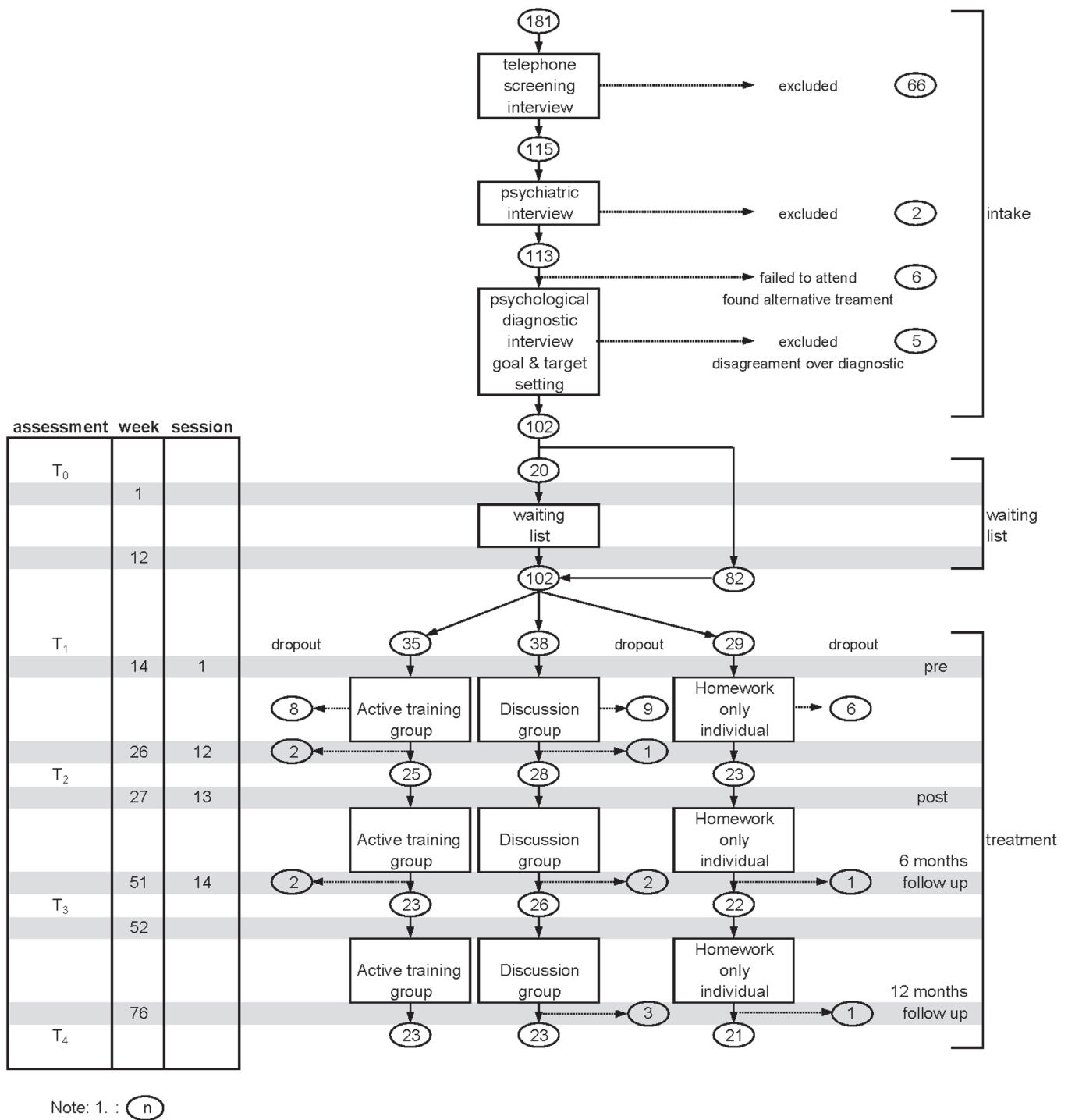
Figure 1. Flow chart of the study.

Clinical Status Interview

Participants were briefly interviewed by the therapists who determined whether they met DSM-IV criteria for SAD.

To control for a potentially positive bias, in a previous study,[12] observations at 1-year follow-up were compared to results obtained in a similar semi-structured interview conducted over the telephone by an independent psychiatrist between 18 and 24 months after the end of treatment. Given the difference in time of assessment, the 86% rate of agreement was acceptable (kappa = 0.71).

Table 1. Demographic and Clinical Characteristics of the Sample

Characteristics	Waiting List (n=20)		Active Training Group (n=23)		Discussion Group (n=23)		Homework Only Individual (n=21)	
	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
Demographic								
Age (years)	39.10	(9.93)	38.22	(10.38)	38.04	(8.87)	41.73	(5.87)
Years of schooling	14.65	(2.30)	14.74	(1.98)	14.08	(1.74)	14.64	(1.56)
Years of cohabitation	5.68	(7.68)	6.12	(8.44)	7.26	(8.17)	8.17	(7.14)
Numbers of children	0.60	(0.82)	0.65	(0.93)	0.92	(0.98)	0.68	(0.84)
Clinical								
Duration of problem	25.39	(10.69)	26.39	(13.17)	24.50	(8.62)	24.50	(8.62)
Age of onset	11.23	(9.62)	11.83	(10.15)	13.54	(9.22)	13.54	(9.22)

SD, standard deviation.

Design

The study contrasted 3 treatment conditions and an assessment-only waiting list. This design did not allow a direct comparison between the treatments and the waiting list as the latter was a period—not an experimental condition.

Treatment

Pre-Treatment Functional Analysis[7] (pp199-221): A pre-treatment interview was conducted with each patient. Its purpose was to identify the individual interpersonal patterns in which anxious reactions were embedded and the social circumstances evoking both.

This analysis led to establishing individual treatment targets, designed to allow greater and better participation in specific circumstances. These interpersonal targets guided each patient's course of therapy. Thus, within each treatment condition, similar goals were pursued, by different means, by each patient.

Treatment Conditions: All 3 versions of the IA were geared toward helping patients shed defensive and passive interpersonal patterns of conduct (e.g., keeping away or at a safe distance and remaining silent) in favor of active participation. In other words, instead of protecting themselves by keeping away from others, not drawing attention to themselves, or submitting in appeasement, patients were encouraged to make their presence felt through joining in, making small talk, expressing opinions, etc.[7] (p222-242)

IA active training: This condition consisted of an adaptation of a sequence of behavior modification techniques aimed at developing and building up pre-set individual patterns of interpersonal conduct from Stravynski et al.[19]

The training involved: (1) "instructions" for the enactment of the targeted behavior within a specific situation; (2) "modeling" a demonstration by the therapists or another patient on how to enact a particular sequence of behaviors (3) "role-rehearsal" enactment of the targeted behavior with the therapists or other patients; (4) "feedback" the therapist and other patients suggest improvements and praise positive aspects of the performance; 5. "homework"—behavior rehearsed to a satisfactory level is assigned as homework to be practiced in real life between sessions.

IA discussion: The group discussed the social difficulties experienced by its members and how to overcome them. The sessions dealt with the same issues (and at the same pace) as the active training IA. The content of the discussions was determined by the patients' problems. No active practice occurred during the sessions.

Targeted behaviors analyzed and discussed during a session were subsequently assigned as tasks to be performed in real life between the sessions.

IA—homework only: Patients in this condition were seen individually and were assigned interpersonal tasks as homework to be performed between sessions. The sessions were used to review previously assigned homework tasks and plan future assignments. The length of the individual sessions (20 minutes approximately) was modeled on the typical duration of focused therapeutic work with 1 patient in the group format. This experimental condition was adapted from Stravynski et al[20] where it was used as a credible and effective therapeutic intervention.

Therapy Format and Therapists

Therapy consisted of 12 weekly and 2 additional 3 monthly sessions during the first 6 months of follow-up. Both group conditions involved treatment sessions of 2 hours each and therapy was led by 1 of 3 principal therapists (all experienced clinical psychologists) and a co-therapist (typically clinical psychology interns or residents in psychiatry). The individual condition was administered in a similar fashion, but its session was of 20 minutes duration. All 3 principal therapists administered all treatment conditions to avoid a potential therapy-therapist confound.

Table 2. Self-Report Outcome Variables: Means (and Standard Deviations) Across Time

	Waiting List				Active Training Group				Discussion Group				Homework Only Individual			
	Pre	Post	df	t	Pre	Post	Follow-up (6 months)	Follow-up (1 year)	Pre	Post	Follow-up (6 months)	Follow-up (1 year)	Pre	Post	Follow-up (6 months)	Follow-up (1 year)
Fear questionnaire (FQ)																
Total	36.3 (12.0)	37.1 (13.1)	19	-0.27	33.0 (11.6)	23.9 (10.9)	21.1 (13.0)	18.2 (11.8)	39.7 (16.5)	27.8 (13.0)	25.9 (14.9)	24.3 (14.2)	28.7 (10.8)	19.0 (11.8)	16.8 (10.2)	13.7 (9.9)
Social phobia	24.1 (6.0)	23.3 (5.3)	19	0.77	21.9 (7.8)	14.5 (5.9)	12.0 (6.4)	10.6 (5.6)	24.2 (6.1)	17.7 (5.3)	16.3 (6.2)	14.7 (5.9)	20.9 (5.6)	13.3 (6.3)	12.6 (7.1)	10.0 (6.6)
Emotional distress	22.1 (7.4)	22.9 (8.2)	19	-0.54	23.0 (7.5)	17.4 (10.0)	11.7 (7.0)	11.8 (7.8)	20.0 (7.2)	17.2 (8.0)	16.5 (7.8)	14.5 (8.3)	16.0 (10.1)	12.1 (9.4)	12.0 (9.4)	10.5 (8.8)
Social anxiety and distress (SAD)																
Total	22.1 (4.0)	21.4 (4.8)	19	1.19	21.8 (3.9)	12.5 (5.3)	9.9 (6.4)	9.0 (6.9)	20.6 (4.7)	12.6 (5.0)	12.6 (6.4)	10.6 (7.3)	19.7 (5.9)	10.1 (6.6)	9.3 (7.8)	7.7 (7.4)
Avoidance	9.9 (2.7)	9.3 (3.0)	19	1.68	9.2 (2.8)	3.5 (2.5)	3.0 (2.7)	2.8 (2.8)	8.3 (3.4)	3.4 (2.9)	4.6 (2.8)	3.4 (2.8)	8.6 (3.4)	3.6 (3.5)	3.5 (3.5)	2.7 (3.6)
Distress	12.3 (2.0)	12.1 (2.3)	19	0.54	12.7 (1.7)	9.0 (4.0)	6.9 (4.2)	6.1 (4.8)	12.2 (2.3)	9.1 (3.4)	8.0 (4.4)	7.1 (5.2)	11.1 (3.0)	6.5 (4.1)	5.9 (4.8)	5.0 (4.5)
Fear of negative evaluation (FNE)																
Total	26.0 (2.6)	26.9 (2.1)	19	-2.50*	26.3 (3.6)	20.1 (6.3)	16.9 (8.3)	15.0 (8.2)	25.0 (4.5)	20.9 (5.8)	18.9 (7.0)	18.2 (6.7)	24.7 (4.2)	15.3 (7.9)	14.5 (8.0)	10.8 (8.1)
Brief Social Phobia Scale (BPSP)																
Fear	19.5 (3.7)	19.6 (4.1)	19	-0.07	19.3 (5.9)	12.4 (5.0)	11.8 (5.3)	11.0 (6.5)	18.3 (5.0)	13.6 (5.0)	13.3 (4.1)	12.9 (5.5)	17.7 (3.7)	12.0 (5.2)	10.9 (5.4)	8.9 (5.3)
Avoidance	18.9 (4.1)	18.6 (4.0)	19	0.54	18.8 (4.7)	10.7 (5.8)	10.3 (5.1)	9.6 (5.9)	17.6 (5.0)	12.2 (4.7)	12.1 (4.3)	11.8 (4.7)	16.0 (3.6)	9.7 (6.1)	10.0 (5.5)	9.1 (6.0)
Physiological	8.4 (3.6)	8.5 (3.7)	19	-0.21	7.8 (4.2)	4.3 (3.1)	3.4 (2.9)	3.5 (2.8)	7.8 (2.9)	5.5 (3.4)	4.3 (3.2)	4.5 (3.5)	9.2 (3.0)	5.0 (3.5)	5.2 (4.5)	3.6 (3.7)
Total	46.8 (9.6)	46.6 (9.6)	19	0.14	46.0 (13.5)	27.5 (12.5)	25.5 (11.7)	24.1 (14.0)	43.6 (10.3)	31.3 (11.3)	29.7 (9.7)	29.2 (12.6)	43.0 (8.6)	26.7 (13.3)	26.0 (13.5)	21.6 (13.9)
General psychopathology (SCL-90-R)																
Somatization	0.7 (0.4)	0.7 (0.5)	19	-0.04	0.7 (0.6)	0.4 (0.3)	0.4 (0.4)	0.4 (0.3)	0.6 (0.5)	0.5 (0.3)	0.4 (0.3)	0.5 (0.4)	0.6 (0.4)	0.5 (0.3)	0.4 (0.3)	0.4 (0.3)

Obsession-compulsion	1.2 (0.7)	1.2 (0.8)	19	−0.57	1.2 (0.9)	0.8 (0.6)	0.6 (0.5)	0.6 (0.4)	1.0 (0.6)	0.8 (0.8)	0.8 (0.6)	0.8 (0.7)	0.9 (0.6)	0.6 (0.4)	0.6 (0.4)	0.5 (0.5)
Interpersonal sensitivity	1.5 (0.7)	1.5 (0.5)	19	−0.07	1.5 (1.1)	0.7 (0.7)	0.7 (0.4)	0.6 (0.6)	1.3 (0.6)	0.9 (0.6)	0.8 (0.5)	0.7 (0.7)	1.1 (0.6)	0.6 (0.4)	0.5 (0.5)	0.6 (0.6)
Depression	1.3 (0.7)	1.3 (0.8)	19	0.10	1.2 (0.8)	0.7 (0.7)	0.7 (0.4)	0.6 (0.5)	1.0 (0.7)	0.8 (0.6)	0.7 (0.5)	0.6 (0.6)	0.9 (0.6)	0.6 (0.4)	0.5 (0.4)	0.6 (0.5)
Anxiety	1.0 (0.7)	1.0 (0.6)	19	0.47	1.0 (0.8)	0.4 (0.3)	0.4 (0.4)	0.3 (0.3)	0.7 (0.5)	0.6 (0.5)	0.5 (0.3)	0.6 (0.4)	0.9 (0.6)	0.6 (0.5)	0.4 (0.4)	0.4 (0.3)
Phobic anxiety	0.4 (0.4)	0.6 (0.5)	19	−1.70	0.5 (0.6)	0.2 (0.3)	0.2 (0.2)	0.2 (0.2)	0.5 (0.5)	0.2 (0.2)	0.2 (0.2)	0.2 (0.3)	0.4 (0.4)	0.2 (0.2)	0.1 (0.2)	0.2 (0.2)
Index of severity	1.0 (0.5)	1.0 (0.5)	19	−0.20	0.9 (0.6)	0.5 (0.5)	0.5 (0.3)	0.4 (0.4)	0.8 (0.4)	0.6 (0.4)	0.6 (0.3)	0.5 (0.5)	0.7 (0.4)	0.5 (0.3)	0.4 (0.2)	0.4 (0.3)
Social functioning (SAS-SR)																
Work	2.0 (0.6)	1.8 (0.5)	10	1.36	1.8 (0.5)	1.7 (0.4)	1.6 (0.4)	1.6 (0.3)	1.8 (0.4)	1.6 (0.3)	1.6 (0.5)	1.6 (0.4)	1.9 (0.6)	1.6 (0.5)	1.6 (0.5)	1.5 (0.3)
Friends	2.2 (0.6)	2.2 (0.5)	19	0.29	2.1 (0.6)	1.9 (0.5)	1.9 (0.5)	1.9 (0.5)	2.0 (0.5)	1.8 (0.5)	1.8 (0.6)	1.7 (0.6)	2.0 (0.6)	1.6 (0.4)	1.7 (0.4)	1.7 (0.4)
Marital	2.1 (0.5)	2.1 (0.6)	10	−0.36	2.0 (0.5)	1.8 (0.7)	1.7 (0.5)	1.8 (0.2)	1.9 (0.3)	1.7 (0.4)	1.8 (0.2)	1.7 (0.3)	2.0 (0.5)	1.9 (0.5)	2.0 (0.5)	2.0 (0.6)
Family unit	1.9 (0.8)	2.0 (0.9)	12	−0.36	2.0 (0.9)	2.0 (1.3)	1.9 (0.9)	1.5 (0.5)	1.8 (0.6)	1.8 (0.7)	1.6 (0.4)	1.6 (0.4)	1.8 (0.7)	1.6 (0.4)	1.8 (0.7)	1.7 (0.7)
Leisure	2.6 (0.7)	2.5 (0.6)	19	0.66	2.6 (0.9)	2.2 (0.8)	2.2 (0.7)	2.1 (0.7)	2.4 (0.6)	2.2 (0.5)	1.8 (0.5)	2.0 (0.6)	2.2 (0.5)	1.9 (0.5)	1.8 (0.4)	1.8 (0.5)
Total	1.5 (0.3)	1.5 (0.3)	19	−0.65	1.4 (0.4)	1.3 (0.4)	1.2 (0.2)	1.2 (0.3)	1.4 (0.3)	1.3 (0.4)	1.3 (0.3)	1.2 (0.3)	1.4 (0.4)	1.3 (0.2)	1.3 (0.2)	1.2 (0.3)

*P = .022.

RESULTS

Seventy-six participants completed treatment: 25 in IA active training, 28 in IA discussion, and 23 in individual HW. Twenty patients were initially put on a waiting list and subsequently reassigned at random. Ten patients dropped out from both IA active training and discussion. Six dropped out from the individual condition; none did while being on the waiting list. Two subjects from both group conditions dropped out after the 6 months follow-up and 1 participant dropped out from the individual condition. Three participants in the discussion and 1 in the individual HW did not attend the 12-month follow-up.

SELF-REPORTED MEASURES

Improvement Over Time

Means and standard deviations were calculated for each experimental condition on every measure over 4 points in time. These may be seen in Table 2.

Outcome data were first analyzed with an analysis of variance (ANOVA) for repeated measures; only data pertaining to participants who had completed treatment and follow-up were included. Initial values in all experimental conditions were compared; no significant differences were found.

Firstly, the effects of being on a waiting list were tested. Apart from a statistically significant worsening on the FNE, patients did not worsen or improve while on the waiting list.

Following these preliminary analyses, the complete outcome results were submitted to a doubly multivariate ANOVA of the total scores of the FQ (social phobia), SAD, FNE, BPSP, SCL-90-R, and SAS-SR via Statistical Package for the Social Sciences (SPSS) (IBM SPSS Corp.; Armonk, NY, USA). This type of analysis was chosen since the research design involved: (1) a between-groups independent variable (treatment conditions), (2) a repeated-measure independent variable (time), and (3) numerous dependent variables (outcome). An additional strength of such an analysis is that it allows the control of type I error.

Neither the interaction group × time effect (Wilks' Lambda = 0.84, $F = 0.94$, $df = 36$, 824, $P = .360$) nor the main group effect (Wilks' Lambda = 0.72, $F = 1.78$, $df = 12$, 118, $P = .089$) were found to be significant. However, participants in all 3 therapeutic conditions reported highly significant and overall equivalent improvements in time (Wilks' Lambda = 0.31, $F = 14.89$, $df = 18$, 529, $P < .001$). Subsequently, univariate analyses of variance were conducted to examine the contribution of variables to the multivariate time effect.

Patients in all 3 therapeutic conditions reported highly significant and overall equivalent improvements in time over a broad range of variables (see Table 2).

Anxiety, in the sense of emotional distress as well as a tendency to avoid threatening situations, considerably diminished. Similarly, somatic arousal and attention to threatening aspects of social situations were much reduced.

As to general psychopathology, all treated patients reported fewer somatic concerns, less obsessive worrying, interpersonal sensitivity and suspiciousness, as well as a lifting of depressive and anxious mood. Altogether, the aggregate severity of psychopathology weakened.

Most importantly—clinically as well as theoretically—participants reported an improved social functioning—both quantitatively and qualitatively—over a broad range of areas. Crucially, patients had more contacts and got on better with colleagues at work, as well as with friends during leisure activities.

Group Differences

A statistically significant difference between treatment conditions was found on the FQ's total ($F = 5.29$, $df = 2$, 64, $P = .008$) and social phobia ($F = 5.25$, $df = 2$, 64, $P = .008$) scores. Post hoc analyses revealed significantly lower social phobia scores associated with the HW only and active training versions of the IA as compared to group discussion. A significant group by time interaction was found on the emotional distress ($F = 2.58$, $df = 6$, 192, $P = .020$) score of the FQ. The active training IA stood out in the improvements it yielded (between pre- and posttreatment and the 6 and 12-month follow-up periods).

A statistically significant difference between-groups ($F = 4.16$, $df = 2$, 64, $P = .020$) and a group by time interaction ($F = 2.29$, $df = 6$, 192, $P = .037$) were found on the FNE. Whereas the effect associated with IA discussion stabilized after the end of treatment, the active training IA resulted in continuing improvement from the end of treatment to the 12-month follow-up. Moreover, the HW only showed significant improvement from pre- to posttreatment and at the 6-month follow-up and a further significant change at the 12-month follow-up.

Finally, a statistically significant difference between-groups ($F = 3.22$, $df = 2$, 64, $P = .047$) was found on the leisure sub-scale of the SAS-SR. A post hoc analysis revealed greater improvement associated with the HW only as compared to the other 2 IA conditions.

Altogether, despite some differences in the rate of improvement detected on a number of sub-scales, the overall results reflect the equipotency of all 3 treatment conditions.

Clinical Status

The proportion of patients no longer fulfilling the criteria for SAD at every assessment point was obtained (Figure 2). Specific (McNemar) post hoc contrasts showed highly statistically significant increases in the rates of remission in all treatment conditions (Cochran's $Q = 63$, $df = 3$,
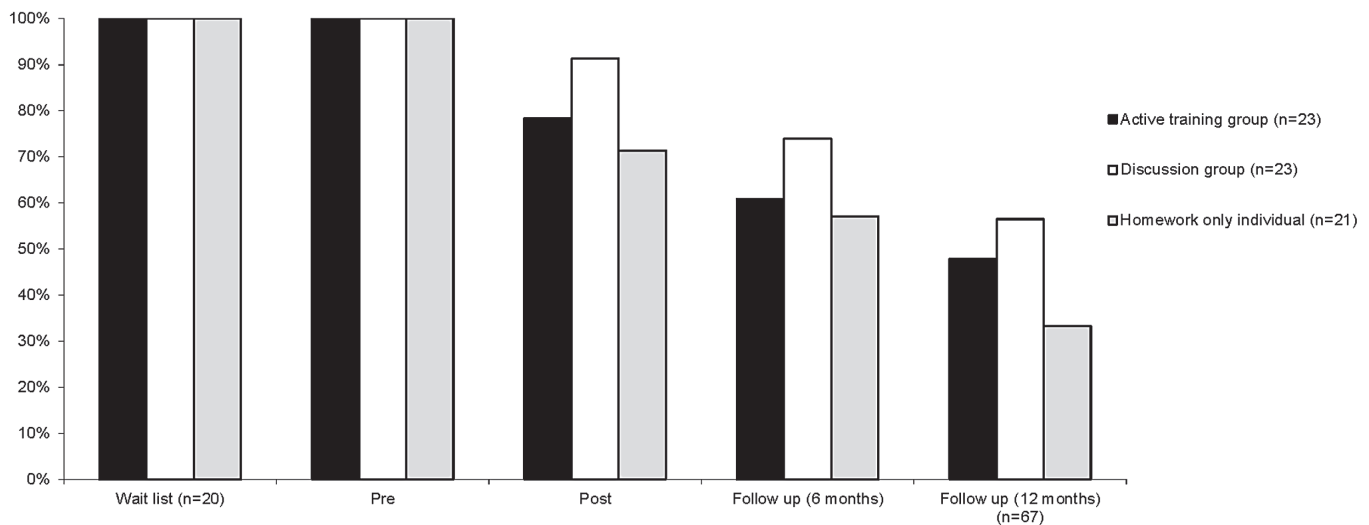
Figure 2. Proportion of patients meeting DSM-IV criteria for social phobia. DSM-IV, Diagnostic and Statistical Manual of Mental Disorders, fourth edition.

$P < .001$). In comparison with pre-treatment rates (100%), statistically significant remission rates were detected at all subsequent points of assessment, that is, posttreatment ($P < .001$), 6-month ($P < .001$), and 12-month ($P < .001$) follow-ups. Progress in remission rates was continuous as can be seen from comparisons between rates at posttreatment and 6-month follow-up ($P = .031$), and at 6- and 12-month follow-ups ($P = .008$).

Seen individually, significant increases in the rates of remission were detected in each treatment condition. In the active training IA, there was a significant drop in the number of patients still diagnosed with SAD at the end of treatment to the 12-month follow-up ($Q=23.1$; $df=3$; $P < .001$). A similar result at the 12-month follow-up was observed for the discussion IA ($Q=17.7$; $df=3$; $P < .001$) and the HW only version of IA ($Q=23.3$; $df=3$; $P < .001$).

After the end of treatment, no statistically significant difference in remission rates between treatment conditions was found at any point. The active training IA yielded a greater pace of improvement initially. Subsequently, both group versions of the IA resulted in an equal level of remission. This, however, was substantially (but not statistically significant) lower than that observed under the HW only individual condition at 6- and 12-month follow-up assessments.

DISCUSSION

Clinical

Altogether, the results did not show any meaningful differences between treatment conditions. With slight exceptions, the 3 versions of the IA resulted—overall—in an equivalent outcome. When differences occurred, these tended to favor the dynamic versions (active training and

HW only) of the IA, in comparison with the discussion group.

This was also true of the drop-out rates; these ranged from approximately 20% in the individual HW condition to 28% in the active training and 26% in the group discussion. It is tempting to speculate that the group conditions, although practically useful and efficient, were at the same time much more stressful to some of the socially phobic patients. It may be understood as amplifying the discomfort related to the considerable demands for active participation made on the patient by the IA.

Two elements were common to all treatment conditions: (1) identification of key interpersonal patterns of behavior of a participatory nature to substitute for self-protective, passively defensive stances and (2) HW assignments, requiring patients to perform cumulative tasks of active involvement in social activities in a variety of individually relevant transactions in their own habitat. We conclude, therefore, that these intertwined aspects of IA, common to all experimental conditions, drove therapeutic change. Such procedures, while gradually building up a pattern of active participation in a variety of social roles, appeared simultaneously to dissolve the fearfully self-protective interpersonal patterns.

These self-protective interpersonal patterns may be roughly divided in 2. On entering threatening social situations, these were typically a mixture of distancing strategies (e.g., outright avoidance, retreat to the margins, or self-effacement). If or when interactions became unavoidable, acts of appeasement and submissiveness (e.g., giving no cause for offence, not leaving oneself open to rejection or ridicule by reaching out, or showing off) became prominent. Consequently, we surmise that the dissolution of these interpersonal patterns drove the reduction of anxiousness that was observed on all relevant measures.

An unpublished pilot study[21] based on field observations of 4 socially phobic individuals going about their daily lives, before and after treatment by the IA, as described earlier, lends preliminary support to such a hypothesis.

Anxious distress, as an independent problem, was largely sidestepped in all 3 versions of the IA. Practically, patients were guided to overlook their initial over-arousal and act adaptively in spite of it. When some participants found the first sessions trying and HW assignments demanding, we found that scaling down homework requirements were usually helpful. Possibly, managing fluctuating anxiety and reactive depressive mood before and during such a demanding course of therapy might be helped by medication.[22] The available evidence supporting a combination of psychological and pharmacological therapy, however, is hardly encouraging,[23] although the combination of phenelzine with cognitive group therapy resulted in better outcome than did each treatment alone.[24]

With its emphasis on HW assignments between sessions, the IA may appear to overlap to some extent with exposure (EX) and cognitive behavioral (CBT) therapies. Notably, in all 3, patients are coaxed to enter previously avoided threatening situations. This ostensible resemblance notwithstanding, the 3 have little in common. Exposure is conducted for the sake of anxiety reduction, guided by considerations of duration of exposure, hierarchy of feared situations, etc. In CBT, entering feared situations is used for the sake of challenging cognitive biases and ultimately, the beliefs underpinning these. In the IA by contrast, entering social situations is just the staging point toward the main purpose: engaging others for the sake of actively participating in the common activity.

Neither EX nor CBT require any particular activity within the previously avoided and/or anxiety-evoking situation— as long as exposure is carried out and a critical eye cast on one's thought processes. The IA by contrast, in pursuit of improved social functioning, prepares the patient for the action to come. The patient is encouraged to adopt and assume a particular social role appropriate to the situation (e.g., best man at a wedding). This is also a great practical advantage, especially in brief social engagements (e.g., bringing in a tray of drinks to a board meeting), where time of exposure is minimal and the possibility of engaging in introspection is limited.

Research and Conceptual Issues

The fact that no statistically significant differences in outcome between treatment conditions were found raises the question of whether our sample size afforded adequate statistical power. Our calculations suggest that it did. These are based on Cohen's formulas[25](pp396) for ANOVA for factorial designs, taking FQ-social phobia and SAS-SR-friends (a vital aspect of social functioning) as criteria of change. Because in a previous study,[12] the size of effect was

smaller for SAS-SR-friends than for other areas of social life, we took it as the main basis for calculations. According to these, 17 participants per experimental condition were needed to detect a moderate ($f = 0.25$) main (i.e., group) effect with a power of 0.80, at a criterion of significance of 0.05. Assuming the same statistical parameters as above, the required size for time and interaction (group $\times$ time) effects was n=18 per experimental condition. As we were looking for robust effects, not subtle ones, setting n=18 participants per experimental condition provides adequate minimal power.

An intriguing difference in 2 categories of outcome is noteworthy. Despite continuing progress in remission rates, discrete dimensions of psychopathology reached a plateau and remained stable. What accounts for this? The stability of dimensional outcome may reflect the crudeness of measures of anxiety as well as that of social functioning. For example, in most inventories, avoidance is taken to be the behavioral sign of social anxiety. Doubtlessly, this is a meaningful index of fear. In measurement terms, however, it may lead to the unwarranted conclusion that a low frequency of avoidance indicates a low level of fear. If avoidance is considered the only behavioral pattern worthy of notice in assessing social anxiety, most behaviors displayed in the face of a social threat[6](pp8-9) might remain undetected.

Similar concerns arise regarding social functioning, a vital but intricately complex concept and exceedingly difficult to measure. Some patients' emerging assertiveness, for example, has led to frictions with spouses or superiors at work. Even more extreme examples are newly emboldened patients who have asked live-in partners to leave. These events, however, are registered as deterioration from previous functioning in the SAS-SR. Arguably, the challenging of previous crippling adjustments (i.e., greater autonomy) ought to be considered an improvement in functioning. Numerous divergences between SAS-SR scores and records of the clinical interviews raise obvious questions of validity.

The main results raise several theoretical issues. Firstly, our approach to the understanding and treatment of SAD has given prominence to social functioning, with anxiety considered an attendant byproduct. Such construal is different from the prevailing view, categorizing SAD as an "anxiety" disorder and regarding the proper treatment for it as one that undoes the hypothetical abnormal intra-personal processes (varying from brain defects to warped thought processes), allegedly underlying the anxiety.

Secondly (and consistently with our theoretical perspective), anxiety in our study was viewed interpersonally, as the emotional feature of the whole living organism - acting under threat from others. Specifically, anxiousness was considered as a state of alarm or arousal supporting self-protective defensive maneuvers, evoked by interpersonal

circumstances and in relation to their threatening potential.[7](pp24-30) This contrasts with anxiety, construed intra-personally, as an enduring personal characteristic with agency, generated from within. Anxiousness, construed interpersonally, is seen as grounded in social exchanges and therefore a process, not a state of mind or of the brain. What could this process be? Put theoretically,[7] we surmise that feelings of fear or anxiety typically arise out of and pervade interpersonal transactions characterized by an insufficiency of power in the face of potentially menacing others.

In Kyparissis,[9] this hypothesis was put to the test. Eighty-five participants, treated by the IA, completed the interpersonal circumplex[26] (adapted from the Interpersonal Check List[27]) on 4 occasions: before and after treatment and at a 6- and 12-month follow-up. The answers to 88 interpersonal statements were subsequently arranged in a 2-dimensional interpersonal space, reflecting power and affiliation. Each axis was defined by 2 ends: dominance-submissiveness and aggressiveness-agreeableness.

Consistent with theory, participants reported a significant lessening in powerlessness after the end of treatment. That improvement maintained over follow-ups of 6 and 12 months. Over time, however, a meaningful qualitative change was also noted. At the end of treatment, despite significant improvement, patients still reported being in a relatively (non-adaptive) position of powerlessness. At 6-month follow-up, however, patients' scores progressed to the adaptive area, shifting from being relatively "less powerless" to becoming increasingly more powerful in their interpersonal transactions.

Specifically, the participants became less submissive over time; significant differences were observed at posttreatment and these gains maintained during follow-up. Within the shrinking of overall submissive patterns, significant reductions in the areas of modesty/self-effacement and docility/dependence were noted after treatment; these remained stable thereafter. These changes dovetail closely the content of the IA as described earlier as well as the progressive improvement in remission rates.

Crucially, in parallel with rallying of interpersonal power, corresponding drops in anxiousness were reported. This finding is consistent with the view of progress in therapy as a gradually unfolding process of shrinking of defensive tactics (e.g., avoiding confrontation) and self-protective (e.g., submissive) acts and—in parallel—a constant rise in personal interactions involving displays of interpersonal power (e.g., initiative, self-expression, flair, and a modicum of audacity). This illustrates the link between relative powerlessness (e.g., being cornered and scrambling to safety) and high levels of anxiety and conversely, committed and involved social participation and normal (i.e., modest and well-modulated) fearfulness.

The idea that anxiety reduction will "release" adaptive social functioning seems unwarranted, either empirically (i.e., the evidence is tenuous) or conceptually. Acting powerlessly and furtively (e.g., appeasing and escaping notice) is a long-standing habit. At the stage when SAD patients seek treatment (in this study on an average 26 years after onset), interpersonal behavior is likely functionally independent and only loosely related to anxiety levels. Moreover, acting powerfully (i.e., critically, authoritatively, or seductively) is something that a SAD individual had little or no experience of doing. Such patterns of conduct need to be nurtured from scratch.

REFERENCES

1. Walz LC, Nauta MH, Aan Het Rot M. Experience sampling and ecological momentary assessment for studying the daily lives of patients with anxiety disorders: a systematic review. *J Anxiety Disord*. 2014;28(8):925-937. [CrossRef]

2. Mayo-Wilson E, Dias S, Mavranezouli I, et al. Psychological and pharmacological interventions for social anxiety disorder in adults: a systematic review and network meta-analysis. *Lancet Psychiatry*. 2014;1(5):368-376. [CrossRef]

3. Moitra E, Beard C, Weisberg RB, Keller MB. Occupational impairment and social anxiety disorder in a sample of primary care patients. *J Affect Disord*. 2011;130(1-2):209-212. [CrossRef]

4. Sheehan DV, Harnett-Sheehan K, Raj BA. The measurement of disability. *Int Clin Psychopharmacol*. 1996;11(3):89-95. [CrossRef]

5. Stein MB, Torgrud LJ, Walker JR. Social phobia symptoms, subtypes, and severity: findings from a community survey. *Arch Gen Psychiatry*. 2000;57(11):1046-1052. [CrossRef]

6. Stravynski A. *Fearing Others: the Nature and Treatment of Social Phobia*. Cambridge: Cambridge University Press; 2007.

7. Stravynski A. *Social Phobia: an Interpersonal Approach*. Cambridge: Cambridge University Press; 2014.

8. Russell JJ, Moskowitz DS, Zuroff DC, Bleau P, Pinard G, Young SN. Anxiety, emotional security and the

interpersonal behavior of individuals with social anxiety disorder. *Psychol Med*. 2011;41(3):545-554. [CrossRef]

9. Kyparissis A. *Is Social Phobia Characterized by a Distinct Interpersonal Pattern?* [Dissertation]. Montreal: University of Montreal; 2013.

10. Borge FM, Hoffart A, Sexton H, Clark DM, Markowitz JC, McManus F. Residential cognitive therapy versus residential interpersonal therapy for social phobia: a randomized clinical trial. *J Anxiety Disord*. 2008;22(6):991-1010. [CrossRef]

11. Lipsitz JD, Gur M, Vermes D, et al. A randomized trial of interpersonal therapy versus supportive therapy for social anxiety disorder. *Depress Anxiety*. 2008;25(6):542-553. [CrossRef]

12. Stravynski A, Arbel N, Bounader J, et al. Social phobia treated as a problem in social functioning: a controlled comparison of two behavioural group approaches. *Acta Psychiatr Scand*. 2000;102(3):188-198. [CrossRef]

13. Di Nardo P, Moras K, Barlow DH, Rapee RM, Brown TA. Reliability of DSM-III-R anxiety disorder categories. Using the anxiety disorders interview schedule-revised (ADIS-R). *Arch Gen Psychiatry*. 1993;50(4):251-256. [CrossRef]

14. Marks IM, Mathews AM. Brief standard self-rating for phobic patients. *Behav Res Ther*. 1979;17(3):263-267. [CrossRef]

15. Davidson JR, Miner CM, De Veaugh-Geiss J, Tupler LA, Colket JT, Potts NL. The Brief Social Phobia Scale: a psychometric evaluation. *Psychol Med*. 1997;27(1):161-166. [CrossRef]

16. Watson D, Friend R. Measurement of social-evaluative anxiety. *J Consult Clin Psychol*. 1969;33(4):448-457. [CrossRef]

17. Derogatis LR, Lipman RS, Covi L. SCL-90: an outpatient psychiatric rating scale--preliminary report. *Psychopharmacol Bull*. 1973;9(1):13-28.

18. Schooler N, Hogarty GE, Weissman MM. Social Adjustment Scale II (SAS-II). In: Hargreaves WA, Atkinson CC, Sorenson JE, eds. *Resource Materials or Community Mental Health Program Evaluators*. Superintendent of Documents. U.S. Government Printing Office; 1979: 290-303.

19. Stravynski A, Marks I, Yule W. Social skills problems in neurotic outpatients: social skills training with and without cognitive modification. *Arch Gen Psychiatry*. 1982;39(12):1378-1385. [CrossRef]

20. Stravynski A, Lesage A, Marcouiller M, Elie R. A test of the therapeutic mechanism in social skills training with avoidant personality disorder. *J Nerv Ment Dis*. 1989;177(12):739-744. [CrossRef]

21. Amado D. *Is Social Phobia Characterized by a Distinct Interpersonal Pattern? An Ethnographic Study* [Dissertation]. Montreal: University of Montreal; 2005.

22. Canadian Psychiatric Association. Clinical practice guidelines. Management of anxiety disorders. *Can J Psychiatry*. 2006;51(8):9S-91S.

23. Pull CB. Combined pharmacotherapy and cognitive-behavioural therapy for anxiety disorders. *Curr Opin Psychiatry*. 2007;20(1):30-35. [CrossRef]

24. Blanco C, Heimberg RG, Schneier FR, et al. A placebo-controlled trial of phenelzine, cognitive behavioral group therapy, and their combination for social anxiety disorder. *Arch Gen Psychiatry*. 2010;67(3):286-295. [CrossRef]

25. Cohen J. *Statistical Power Analysis for the Behavioural Sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates; 1988.

26. Plutchik R, Conte HR. *Circumplex Models of Personality and Emotions*. Washington, DC: American Psychological Association; 1997.

27. Laforge R, Suczek RF. The interpersonal dimension of personality. III. An interpersonal check list. *J Pers*. 1955;24(1):94-112. [CrossRef]