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Efficacy of three treatment protocols for adolescents with social anxiety disorder: A 5-year follow-up assessment

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Abstract

Few studies have reported long-term follow-up data in adults and even fewer in adolescents. The purpose of this work is to report on the longest follow-up assessment in the literature on treatments for adolescents with social phobia. A 5-year follow-up assessment was conducted with subjects who originally received either Cognitive Behavioral Group Therapy for Adolescents (CBGT-A), Social Effectiveness Therapy for Adolescents—Spanish version (SET-Asv), or Intervención en Adolescentes con Fobia Social—Treatment for Adolescents with Social Phobia (IAFS) in a controlled clinical trial. Twenty-three subjects completing the treatment conditions were available for the 5-year follow-up. Results demonstrate that subjects treated either with CBGT-A, SET-Asv and IAFS continued to maintain their gains after treatments were terminated. Either the CBGT-A, SET-Asv and IAFS can provide lasting effects to the majority of adolescents with social anxiety. Issues that may contribute to future research and clinical implications are discussed.

Keywords: Adolescence; Follow-up; Social anxiety; Therapy

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Social phobia, also known as social anxiety disorder, is ''a marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others'' (American Psychiatric Association, 2000). Epidemiology studies have revealed that social anxiety disorder is one of the three most common mental disorders and the most common anxiety disorder in adolescence, while data in clinical settings indicate that it is also the anxiety disorder most commonly diagnosed in this developmental stage (Albano & Detweiler, 2001). Social phobia usually begins in mid-adolescence, has a chronic course and interferes in academic, social, family and personal functioning (Beidel, Ferrell, Alfano, & Yeganeh, 2001). Youth with social anxiety in general have poor social networks, underachieve at school, are less likely to complete school, have poorer adjustment outcomes, fail to meet social expectations for full adult status, as well as, are at a high risk for developing major depression due to social isolation (Masia-Warner, Storch, Fisher, & Klein, 2003). In addition, social phobia precedes onset of internalizing and externalizing disorders, including substance abuse and tends to follow a chronic course (Beidel & Turner, 1998; Essau, Conradt, & Petermann, 2002).

Recent publications report positive treatment effects either by North American researchers (Albano, Marten, Holt, Heimberg, & Barlow, 1995; Hayward et al., 2000; Masia-Warner, Klein, Storch, & Corda, 2001; Masia-Warner et al., in press), European teams (Olivares & Garcia-Lopez, 2001) or multicultural research teams (García-López et al., 2002; Olivares et al., 2002). To date, the only available treatments are the Cognitive Behavioral Group Therapy for Adolescents (CBGT-A; Albano, Marten, & Holt, 1991), Intervención en Adolescentes con Fobia Social—Treatment for Adolescents with Social Phobia (IAFS; Olivares & García-López, 1998), Skills for Academic and Social Success (SASS; Masia-Warner et al., 2001) and the Social Effectiveness Therapy for Adolescents—Spanish version (SET-Asv; Olivares, García-López, Beidel, & Turner, 1998).

Despite the favorable outcome reported in most treatment studies, number of published works including 1-year follow-up assessment is limited to four intervention protocols: (i) the CBGT-A (García-López et al., 2002; Hayward et al., 2000; Olivares et al., 2002), (ii) the SASS (Masia-Warner et al., in press), (iii) the SET-Asv (García-López et al., 2002; Olivares et al., 2002) and (iv) the IAFS (García-López et al., 2002; Olivares et al., 2002). However, to our knowledge, no follow-up study longer than 12 months has been published. The purpose of this work is to examine long-term outcome course for adolescents with generalized social anxiety who received either CBGT-A, SET-Asv and IAFS as reported in the Olivares et al. (2002) and García-López et al. (2002) studies. That is, this work addresses the question of whether psychological treatments for youth with social phobia are effective in the longer term. It was hypothesized that subjects would continue evidencing improvements 5 years following the termination of interventions that were delivered in a school setting. Long-term outcomes were assessed in terms of effect size, clinical, and statistical significance. Our 12-month follow-up results were described in Olivares et al. (2002) and García-López et al. (2002), where detailed information about other aspects of the study were given. Finally, this cross-cultural article also address whether an empirically supported treatment (CBGT-A) can be generalized for use in another language and culture population.

1. Method

1.1. Participants

Fifty-nine subjects completed the original study (15 in the CBGT-A, 14 in the SET-Asv, 15 in the IAFS and 15 in the Control). At 1-year follow-up, all subjects completed the assessment measures. Of the 44 patients who completed the active treatments, 25 were located at 5-year follow-up (8 in the CBGT-A, 7 in the SET-Asv and 8 in the IAFS). The sample ranged in age from 20 to 22 years ($M = 20.83$, S.D. = 0.79) and was composed of 7 males (29%) and 17 females (71%), percentages similar to the original composition of the sample. At this follow-up, 55% of the sample were college or university students, 25% were employed and 20% were unemployed. On the original study, all subjects were diagnosed with generalized social phobia as their anxiety interfered with a wide range of social interaction and performance situations. There was also common comorbidity with other Axis I disorders and avoidant personality disorders. Further, 10% of sample reported a history of selective mutism.

1.2. Measures

Social Phobia and Anxiety Inventory (SPAI; Turner, Beidel, Dancu, & Stanley, 1989): The SPAI is comprised of two scales: the 32-item Social Phobia (SP) subscale and the 13-item Agoraphobia subscale. Finally, in order to control for social anxiety attributable to agoraphobia, a Difference score is computed. This score is calculated by substracting the Social Phobia subscale from the Agoraphobia subscale. Although the SPAI was developed for adults, English and Spanish studies have demonstrated its validity and reliability in adolescence (Clark et al., 1994; García-López, Olivares, Hidalgo, Beidel, & Turner, 2001; Olivares, García-López, Hidalgo, Turner, & Beidel, 1999).

Social Anxiety Scale for Adolescents (SAS-A; La Greca & Lopez, 1998): The three primary factors of the SAS-A include a subscale reflecting fears or worries of negative evaluations from peers (FNE) and two subscales reflecting social avoidance and distress: one that is specific to new social situations or unfamiliar peers (SAD-New) and one that reflects generalized social inhibition (SAD-General). In general, SAS-A consists of 22 items (4 are filler items) arranged in a 5-point Likert rating format. A Total score can be obtained by summing the ratings for the 18 anxiety items, and can range from 18 to 90. The SAS-A has shown good psychometric properties for English- and Spanish-speaking populations (García-López et al., 2001; Inderbitzen & Nolan, 2000; La Greca, 1998; Olivares et al., 2005; Storch, Masia-Warner, Dent, Roberti, & Fisher, 2004).

Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV): DiNardo, Brown, and Barlow (1994) developed this semi-structured interview in order to assess current and lifetime anxiety, mood and substance use disorders. A modified version of this instrument was used in this study, including avoidant personality disorder criteria. Initial findings indicate an adequate level of interrater agreement for anxiety, mood and substance use disorders in a Spanish-speaking population ($k \geq .75$; Olivares & García-López, 1997). The social phobia section (ADIS-SP) consists of 13 dimensional ratings that evaluate fear and avoidance using a clinical severity rating (a 9-point scale ranging from 0, *none*, to 8, *very*

severely disturbing/disabling). Number of feared social situations was employed as a dependent measure in this study. All of these measures have demonstated to be sensitive to treatment effects (Garcia-Lopez, Olivares, & Hidalgo, in press).

1.3. Follow-up assessment procedure

A letter was mailed to the last known address of these subjects to request their participation in the 5-year follow-up assessment. A stamped envelope including self-report measures was enclosed. Participants were asked to complete the self-report measures based on their current symptoms of social anxiety. After receiving these measures, patients were contacted by phone to administer a semistructured interview face-to-face (priority option) or by telephone.

Subjects who did not return the envelope enclosed were contacted by telephone. Of the 44 subjects, 13 could not be contacted (3 in the CBGT-A, 5 in the SET-Asv and 5 in the IAFS), 3 declined participation after telephone contact (1 in the CBGT-A, 1 in the SET-Asv and 1 in the IAFS) and 5 agreed to participate but never returned the forms (1 in the CBGT-A, 2 in the SET-A and 2 in the IAFS). As in the original study, interviewers remained blind at 5-year follow-up.

1.4. Procedure

Social Effectiveness Therapy for Adolescents—Spanish version (SET-Asv; Olivares et al., 1998) consists of 29 treatment sessions over a period of 17 weeks. The components of this program are Educational, Social Skills Training, Exposure and Programmed Practice. The sessions are held twice a week except those concerning the educative phase (one time only) and programmed practice, which is held once a week. The Educational, Social Skills Training and Exposure components are conducted during the first 13 weeks. The Educational component occurs during the first group session; afterwards the other two components are applied simultaneously once a week over 12 weeks. Social Skills Training sessions are implemented in a group, 60-min, including how to begin and maintain conversations, give and receive compliments, establish and maintain friendships, assertiveness, etc. Concurrently, exposure sessions are conducted with an individual format, for approximately 30 min. The last treatment component, Programmed Practice, is developed along four individual 60-min sessions, once the Social Skills Training and in vivo Exposure are finished. Its aim is to maximize generalization and consolidation of the benefits of the treatments in the adolescent's natural environment.

The *Cognitive-Behavioral Group Therapy for Adolescents* (CBGT-A; Albano et al., 1991) includes 16-group-treatment sessions, which are conducted over a period of 14 weeks. All the sessions are 90 min long and held in group format. The first four sessions are conducted within a 2-week period; the remaining 12 sessions are held on a weekly basis. The CBGT-A is divided in two phases of eight session each: (a) Educative and Skills Building and (b) Exposures. During the first phase, the therapist provides information about the treatment program and delivers a presentation of the explicatory model of social phobia. Afterwards, in the skills building unit, social skills, problem solving training and cognitive restructuring (Beck's cognitive model) are presented and taught. During the second phase, Exposure, behavior rehearsals and in vivo exposures are carried out both

within session and assigned as homework in order to address personally relevant social situations that are feared by the adolescents.

The *Therapy for Adolescents with Generalized Social Phobia* (*Intervención en Adolescentes con Fobia Social, IAFS*; Olivares & García-López, 1998) is a school-based program and consists of 12 weekly group sessions, each 90 min in length. Techniques include social skills, exposure and Beck's cognitive restructuring techniques. In addition, treatment includes exposure to social situations using peer assistants, such as: (a) initiating and maintaining conversations with persons of the same or the opposite sex (for this purpose, unknown peers by the subjects are used as cotherapists to interact with them) or (b) speaking in public in front of their group mates and the therapist during 5–10 min each time. Exposure tasks were recorded by a video camera and used as feedback. The videofeedback was used as an objective feedback and helps to detect safety behaviors. In addition to videofeedback, verbal feedback of the group members was utilized as an additional source of information to establish a more realistic self-image. Part of the last session was focused on relapse prevention. Along with group sessions, weekly individual counseling was scheduled as needed. These individual sessions were optional, unlike SET-Asv. Optional telephone consultations with therapists were also available.

1.5. Statistics

Data were analyzed using the statistical program SPSS (2001) and nQuery (1999). In order to evaluate the statistical significance, within-group correlated *t*-tests were performed between pretest and posttest, between pretest and 1-year follow-up, between pretest and 5-year follow-up, between posttest and 1-year follow-up, between posttest and 5-year follow-up and between 1-year follow-up and 5-year follow-up. Effect sizes between group comparisons have been computed at each of the assessments times. We have adopted the criteria proposed by Cohen (1988), in which .2 means a low-effect size, .5 means average and .8 means high. A high-effect size allows statistical significance with no hazard for the sensitivity of the research. Due to small sample size, statistical power was also calculated.

To examine the clinical effectiveness, two criteria were defined, one stricter than the other: in the first one, the subjects must not fulfill the DSM-IV criteria for social phobia; while the second criterion implies a decrease of 75% of the number of feared social situations that the subjects reported in the pretest (measured by the social phobia section of the ADIS-IV; indicating at least partial remission). These effectiveness indicators are assessed at posttest and follow-ups. In order to do this, two contingency tables were constructed, one for each combination of effectiveness criteria with the chronological measure (posttest and follow-ups). Each contingency table included the three experimental categories (SET-Asv, CBGTA and IAFS) and the two possible clinical results according to the criterion used: negative (nonresponders) and positive (responders to treatment).

2. Results

Given that only half of subjects who completed the original study participated in the 5-year follow-up, it was important to examine if there were differences between participants

and nonparticipants. Data indicated nonsignificant differences in any variable ($P > .05$), suggesting that the long-term follow-up participants were fully representative of the original study sample. Further, it was necessary to examine if there were pretreatment differences across treatment conditions on the measures analyzed. Variables assessed included age, comorbidity and scores in the social anxiety measures. Data revealed that patients in the three treatment packages did not differ on any demographic nor social anxiety measure ($P > .05$).

2.1. Statistical and clinical changes

As shown in Table 1, rapid improvement was evident between the pretest and posttest, with maintenance of therapeutic gains demonstrated at 1-year and 5-year follow-ups. Considerable residual clinical social anxiety symptoms were evident at 5-year follow-up in spite of significant improvement. Although results showed a tendency toward lesser improvement on social anxiety measures at 5-year follow-up, nonstatistical differences were found. After treatment, subjects in the present study did not achieve the same level of treatment gains across treatment conditions as evident in the long-term follow-ups. At 5-year follow-up, the SET-Asv or IAFS obtained the lowest scores in all social anxiety measures. However, between-group analysis revealed absence of significant difference in any social anxiety scores at 5-year follow-up ($P > .05$).

Tables 2–4 present data concerning within-group analyses between pretest and the other assessment times. Results demonstrate very high effect sizes, according to Cohen's (1988) criteria. The calculation of effect sizes seems to indicate high effectiveness in the three treatments across time. Estimated power ensured within-group differences. There were no significant differences in any measure among the three conditions in the remaining comparisons (between posttest and follow-ups and over the follow-up interval).

Based on success rate, defined as absence of social phobia DSM-IV criteria, Table 5 shows that the clinical success rates were different among the treatment conditions and assessment measures. Overall, almost half of patients evidenced total remission of social anxiety symptoms. Nevertheless, given that our sample met criteria for generalized social phobia before treatment, results displayed in Table 5 may underestimate treatment gains. Responder status was held to a very high and rigorous criterion. For instance, according to this criterion, if a patient endorsed generalized fear to nine social situations at pretest and reported anxiety to only one social situation at posttest, the patient was qualified as negative/nonresponder. However, if a subject endorsed anxiety to nine social situations at pretest and then reported no feared social situations after treatment (or follow-ups), he or she was scored as a positive/responder. In effect, to qualify as a responder, the patient could not endorse any fear. Although, as it should be noted, in both cases the reduction in fear is similar, the outcome nevertheless is different and reflects the rigorous criterion (nonresponder versus responder). In order to control this bias, we used as a clinical effectiveness criterion a 75% decrease in the number of social phobic situations endorsed at the pretest, such as is given in the ADIS-IV social phobia section. Table 6 shows that almost 9 of 10 subjects significantly reduced the number of feared social situations (partial remission) 5 years after therapy was completed. As it can be seen, success rates consolidated and generalized across time. No statistically significant differences were

Table 1
Means and standard deviations for self-report measures by treatment condition

	SET-Asv		CBGT-A		IAFS	
	M	S.D.	*M*	S.D.	*M*	S.D.
SPAI-SP						
Pretest	138.43	21.56	126.38	28.82	137.88	15.83
Posttest	61.29	25.75	65.50	26.04	69.38	52.11
1-Year follow-up	41.71	13.61	61.38	32.07	56.13	52.04
5-Year follow-up	50.57	26.14	57.63	26.29	53.38	34.93
SPAI—Difference						
Pretest	115.00	18.37	99.37	21.05	111.00	15.64
Posttest	50.43	19.48	50.13	21.69	54.13	39.67
1-Year follow-up	32.14	7.73	45.88	25.36	45.38	39.04
5-Year follow-up	41.71	22.16	36.50	18.77	41.00	25.20
SAS-A/Total						
Pretest	65.43	11.56	64.38	9.29	67.13	10.06
Posttest	45.29	15.66	40.75	9.25	42.25	13.83
1-Year follow-up	42.14	11.75	37.63	10.54	34.38	13.08
5-Year follow-up	41.86	13.52	42.25	12.97	38.63	11.65
SAS-A/FNES						
Pretest	30.57	5.83	30.88	8.45	32.12	4.08
Posttest	22.14	8.92	17.13	4.42	20.38	6.67
1-Year follow-up	20.29	8.38	16.00	5.78	15.50	5.63
5-Year follow-up	20.71	0.25	18.75	7.94	18.38	6.23
SAS-A/SAD-N						
Pretest	21.29	4.85	21.25	2.71	23.38	3.58
Posttest	13.00	3.56	15.25	5.60	13.88	5.03
1-Year follow-up	13.71	1.70	15.13	3.79	12.25	5.80
5-Year follow-up	12.71	2.14	14.88	4.64	13.13	5.25
SAS-A/SAD-G						
Pretest	12.43	3.55	12.25	2.37	12.38	3.77
Posttest	10.14	3.97	8.38	1.76	8.00	3.78
1-Year follow-up	8.14	2.79	8.00	2.72	6.25	2.43
5-Year follow-up	8.43	3.31	8.63	2.39	7.12	2.47
ADIS—Social Phobia section						
Pretest	9.14	2.41	8.63	1.68	8.50	1.41
Posttest	2.29	3.25	2.75	3.01	2.75	4.09
1-Year follow-up	0.43	0.79	2.38	2.32	1.75	2.71
5-Year follow-up	0.71	1.11	1.88	2.23	0.75	0.88
Avoidance personality disorder						
Pretest	1.00	0.00	1.00	0.00	1.00	0.00
Posttest	0.29	0.48	0.25	0.46	0.25	0.46
1-Year follow-up	0.14	0.39	0.25	0.46	0.13	0.35
5-Year follow-up	1.14	0.39	0.25	0.46	0.13	0.35

M: mean, S.D.: standard deviation, SET-Asv: Social Effectiveness Therapy for Adolescents—Spanish version, CBGT-A: Cognitive-Behavioral Group Therapy, IAFS: Intervención en Adolescentes con Fobia Social Generalizada (Therapy for Adolescents with Generalized Social Phobia).

Table 2
Statistical significance (SET-Asv)

	t	*P*	Effect size	Power (%)
SPAI-SP				
Pre/posttest	5.778	.001	3.11	96
Pre/1-year follow-up	10.171	.000	4.48	99
Pre/5-year follow-up	6.049	.001	3.54	99
SPAI-DIF				
Pre/posttest	6.409	.001	3.05	95
Pre/1-year follow-up	11.047	.001	3.92	99
Pre/5-year follow-up	5.761	.001	3.47	98
SAS-A/Total				
Pre/posttest	3.676	.010	1.51	77
Pre/1-year follow-up	5.419	.002	1.75	75
Pre/5-year follow-up	5.975	.001	1.77	71
SAS-A/FNE				
Pre/posttest	3.528	.012	1.44	76
Pre/1-year follow-up	4.584	.004	1.53	71
Pre/5-year follow-up	4.168	.006	1.47	70
SAS-A/SAD-N				
Pre/posttest	4.253	.005	1.49	69
Pre/1-year follow-up	3.958	.007	1.36	60
Pre/5-year follow-up	5.403	.002	1.53	74
SAS-A/SAD-G				
Pre/posttest	–	.244	–	–
Pre/1-year follow-up	3.665	.011	1.05	71
Pre/5-year follow-up	3.013	.024	0.98	70
ADIS-SP				
Pre/posttest	4.768	.003	2.47	94
Pre/1-year follow-up	8.774	.001	3.14	96
Pre/5-year follow-up	8.668	.001	3.04	95

found among the SET-Asv, CBGT-A and IAFS. Despite of this, comparison among treatment conditions revealed that SET-Asv demonstrated the highest clinical success after treatment and at 1-year follow-up, while at 5-year follow-up the IAFS and CBGT-A displayed the highest success rates. However, our small sample size might have affected these results.

2.2. Course of disorder over follow-up

Measured as the number of social situations feared in the ADIS-SP, at pretest subjects met criteria for generalized social phobia, while qualitative data analyses revealed total or partial remission in most of patients at posttest and follow-ups. This suggests that subjects continued decreasing the number of feared social situations or maintained their therapeutic gains over the follow-up interval. As for the SET-Asv, three of seven patients (43%) did not meet DSM-IV social phobia criteria (total remission) at any stage over the follow-up period, one subject (14%) had social phobia during the follow-up interval, one (14%)

Table 3
Statistical significance (CBGT-A)

	t	*P*	Effect size	Power (%)
SPAI-SP				
Pre/posttest	4.545	.003	1.88	86
Pre/1-year follow-up	5.131	.001	2.01	75
Pre/5-year follow-up	7.618	.000	2.12	80
SPAI-DIF				
Pre/posttest	4.541	.003	2.08	92
Pre/1-year follow-up	4.601	.002	2.26	93
Pre/5-year follow-up	7.907	.001	2.66	96
SAS-A/Total				
Pre/posttest	4.746	.002	2.26	93
Pre/1-year follow-up	5.605	.001	2.56	94
Pre/5-year follow-up	3.542	.009	2.12	98
SAS-A/FNE				
Pre/posttest	5.536	.001	1.45	72
Pre/1-year follow-up	5.045	.001	1.57	61
Pre/5-year follow-up	3.111	.017	1.28	68
SAS-A/SAD-N				
Pre/posttest	2.542	.039	1.97	99
Pre/1-year follow-up	3.389	.012	2.01	98
Pre/5-year follow-up	3.147	.016	2.09	99
SAS-A/SAD-G				
Pre/posttest	3.307	.013	1.45	86
Pre/1-year follow-up	3.012	.020	1.59	95
Pre/5-year follow-up	3.506	.010	1.36	98
ADIS-SP				
Pre/posttest	6.563	.001	3.11	99
Pre/1-year follow-up	7.091	.001	3.31	99
Pre/5-year follow-up	10.003	.001	3.57	99

fulfilled DSM-IV criteria at 1-year follow-up but evidenced total remission in the longer term, while two (29%) participants had total remission at 1-year follow-up but met social phobia criteria at 5-year follow-up.

Concerning the CBGT-A, one of eight (12.5%) did not meet DSM-IV social phobia criteria (total remission) at any stage over the follow-up period, three participants (37.5%) fulfilled criteria for social phobia across the whole duration of the follow-up period, two subjects (25%) met DSM-IV criteria at 1-year follow-up but evidenced total remission in the longer term, while one of them (17.5%) evidenced total remission at 1-year follow-up but relapsed at 5-year follow-up.

Regarding to the IAFS, two of eight (25%) did not meet DSM-IV social phobia criteria (total remission) at any stage over the follow-up period, while the same percentage has continued to fulfill diagnostic criteria for social anxiety disorder over the follow-up interval. Further, half of the sample was composed of subjects in remission at 1-year follow-up but who relapsed at 5-year follow-up and vice versa.

Table 4
Statistical significance (IAFS)

	t	*P*	Effect size	Power (%)
SPAI-SP				
Pre/posttest	4.787	.002	3.85	99
Pre/1-year follow-up	5.453	.001	4.59	99
Pre/5-year follow-up	8.584	.000	4.75	99
SPAI-DIF				
Pre/posttest	3.979	.005	3.23	99
Pre/1-year follow-up	4.443	.003	3.73	99
Pre/5-year follow-up	11.209	.001	3.98	99
SAS-A/Total				
Pre/posttest	5.408	.001	2.20	84
Pre/1-year follow-up	9.188	.001	2.89	98
Pre/5-year follow-up	6.613	.001	2.52	93
SAS-A/FNE				
Pre/posttest	5.545	.001	2.56	94
Pre/1-year follow-up	11.869	.001	3.62	99
Pre/5-year follow-up	6.594	.001	2.99	98
SAS-A/SAD-N				
Pre/posttest	5.158	.001	2.36	89
Pre/1-year follow-up	6.733	.001	2.77	97
Pre/5-year follow-up	5.377	.001	2.55	94
SAS-A/SAD-G				
Pre/posttest	3.493	.010	1.03	68
Pre/1-year follow-up	4.657	.002	1.45	66
Pre/5-year follow-up	3.721	.007	1.24	61
ADIS-SP				
Pre/posttest	4.709	.002	3.63	99
Pre/1-year follow-up	10.003	.001	4.26	99
Pre/5-year follow-up	18.816	.001	4.89	99

Qualitative data analysis also revealed significant improvement after treatment for those participants at pretreatment who met criteria for avoidant personality disorder. Also, results indicated maintenance of the proportion of participants who did not meet avoidant personality disorder criteria at 5-year follow-up compared with the 1-year follow-up assessment. For treatment conditions, in the SET-Asv six of seven (86%) did not meet DSM-IV criteria for avoidant personality disorder over the follow-up period, while one subject did not improve at long-term. In the CBGT-A, five of eight (62.5%) maintained a complete recovery from their disorder during the whole follow-up interval, while one subject (12.5%) continued to meet diagnostic criteria for the duration of the follow-up. The remaining 25% was composed by two subjects in remission at 1-year follow-up but relapsed at 5-year follow-up and vice versa. In the IAFS, six of eight subjects (75%) did not meet the DSM-IV criteria over the follow-up period, one subject reported total remission at 1-year follow-up but relapsed at 5-year follow-up, while one subject

Table 5
Clinical significance (100%; total remission)

Result	Type of treatment			Total
	SET-Asv	CBGTA	IAFS	
Posttest				
Negative	4 (57%)	4 (50%)	5 (63%)	13 (57%)
Positive	3 (43%)	4 (50%)	3 (37%)	10 (43%)
		$\chi^2(2) = .245$, $P = .885$		
1-Year follow-up				
Negative	2 (29%)	6 (75%)	4 (50%)	12 (52%)
Positive	5 (61%)	2 (25%)	4 (50%)	11 (48%)
		$\chi^2(2) = 3{,}107$, $P = .211$		
5-Year follow-up				
Negative	4 (57%)	4 (50%)	4 (50%)	12 (52%)
Positive	3 (43%)	4 (50%)	4 (50%)	11 (48%)
Total	7	8	8	23
		$\chi^2(2) = 3{,}107$, $P = .211$		

Note. The percentages of success (denomined as positive) or failure (denomined as negative) reached in each group of treatment are shown under each frequency.

evidenced criteria for avoidant personality disorder at 1-year follow-up but complete recovery at 5-year follow-up.

As a result, these findings suggest that the SET-Asv seems to produce more stable effects over the follow-up interval, while in the CBGT-A and IAFS conditions more changes are noted in subjects who relapsed and recovered over the follow-up period.

Table 6
Clinical significance (75%; partial remission)

Result	Type of treatment			Total
	SET-Asv	CBGTA	IAFS	
Posttest				
Negative	0 (0%)	4 (50%)	2 (25%)	6 (26%)
Positive	7 (100%)	4 (50%)	6 (75%)	17 (74%)
		$\chi^2(2) = 1.218$, $P = .544$		
1-Year follow-up				
Negative	0 (0%)	3 (38%)	2 (25%)	5 (22%)
Positive	7 (100%)	5 (62%)	6 (75%)	18 (78%)
		$\chi^2(2) = 3.025$, $P = .220$		
5-Year follow-up				
Negative	2 (29%)	1 (13%)	0 (0%)	3 (13%)
Positive	5 (71%)	7 (87%)	8 (100%)	20 (87%)
Total	7	8	8	23
		$\chi^2(2) = 1.875$, $P = .392$		

Note. The percentages of success (denomined as positive) or failure (denomined as negative) reached in each group of treatment are shown under each frequency.

3. Discussion

Studies are lacking examining the long-term efficacy of psychological treatments for adolescents with social anxiety disorder. Although the present study involved a modest follow-up sample size, our results demonstrate that psychological treatments for social anxiety in adolescents result in gains that are maintained and consolidated over a 5-year follow-up interval. CBGT-A, SET-Asv and IAFS are found to be effective and durable approaches to the treatment of social phobia in adolescence, with results consistent with the longer term treatment outcome for adults (Fava et al., 2003; Heimberg, Salzman, Holt, & Blendell, 1993; Turner, Beidel, & Cooley-Quille, 1995). Concerning our sample size, the percentage of subjects located was consistent with those found in very long-term follow-up studies (Heimberg et al., 1993; Turner et al., 1995).

The major results examining the statistical significance of the investigation can be summarized as follows: (a) all three treatments effectively reduced social anxiety symptoms over the long-term period; (b) the three interventions were equally effective at 5-year follow-up, although clinical and effect size significance suggest that IAFS is slightly superior to other conditions in the longer time; and (c) the effects of the interventions are generally maintained at the 5-year follow-up, with marginal (nonsignificant) changes over the long-term interval. It is unclear why the intervention protocols demonstrated less robust results in the longer term follow-up versus 1-year follow-up. Although it is assumed that participants will continue to overcome their social anxiety after the cessation of acute treatment in a progressive way, our data suggested a slight deterioration of outcomes in the 5-year follow-up assessment. It might be argued that as young adults engaged in new social contexts such as a workplace, college or university, these formerly socially anxious adolescents must independently cope with uncontrollable and unpredictable events and stressful times, without the benefit of parental guidance and support. Indeed, a number of unexplained variables may contribute to this finding, many of which are associated with advanced developmental age and stage, resulting in very different expectations for young adult as opposed to adolescent functioning. For example, some subjects reported brief counselling experiences following the occurrence of traumatic events, while others reported partner relationship problems occurring after the 1-year follow-up (four subjects; mean of number of sessions: 2.5). These experiences and their associated help seeking may be more likely to occur in adulthood. Whatever the reason, our findings raise the question whether subjects would benefit from informal ''refreshment or booster sessions'' or an explicit maintenance program that could be offered to participants in order to consolidate the treatment gains.

Although there is a controversy concerning the addition of social skills training to treatments to overcome social phobia, our results seem to confirm that treatments including social skills training are effective to treat youth with social anxiety disorder. Further, our results (*t*-tests) indicated that the behavioral condition (SET-Asv) resulted in similar effect sizes, in comparison with cognitive-behavioral packages. These results are similar to those obtained by Van Dam-Baggen and Kraaimaat (2000) and are in line with several meta-analyses (for a review, see Olivares et al., 2003).

We also must note that there are some differences with other long-term follow-up studies: (a) the interview was administered mostly personally (80%) versus by

telephone (20%); (b) the lack of remuneration for completion of the follow-up assessments; and (c) at pretest, subjects were required to meet DSM-IV criteria for social phobia but comorbid disorders were common and not a basis of exclusion. This third issue separates this study from others in the literature, which tend to select for rather ''pure'' social anxiety cases. Given that the onset of most of other anxiety and mood disorders occur after onset of social phobia and later into adolescence or young adulthood, subjects who relapsed at the 5-year follow-up might have developed other mental disorders. Hence, this may well have affected the longer term results. Future research should administer the whole interview over the assessment period to test this hypothesis.

Overall, these data demonstrate that the effect sizes, clinical and statistical significance are greater in the 5-year follow-up than in the posttest, what indicates a maintenance of gains and generalization of the results.

Like most follow-up studies, one limitation is the relatively small follow-up sample size because of difficulty tracking some subjects beyond termination of high school. Second, moderate statistical power obtained in some measures may constitute in some cases a hazard to our results. Finally, assessment measures were administered only to the adolescents, which may also constitute another limitation of our research in the light of the debate that exists at the present time about whether the parents or the adolescents are the ones who provide more reliable information. La Greca (1998) maintains that the adolescents should be the main source of information in these cases. However, DiBartolo, Albano, Barlow, and Heimberg (1998) found that, even though there was high agreement for the cognitive symptoms, there was inconsistency in avoidance symptoms: parents were the best informers about this latter area since adolescents tend to minimize their avoidance symptoms, perhaps as a result of the desire to make a good impression on the evaluator.

Despite limitations, the most important clinical implications of the findings are that the subjects continued improvement after intervention protocols were completed, even when at pretest all of the subjects met criteria for generalized social anxiety disorder and most of them had comorbidity with other Axis I conditions and the avoidant personality disorder. Taken all experimental conditions together, almost 9 of 10 participants responded favourably to interventions, with treatment conditions evidencing statistical differences and high effect sizes at 5-year follow-up. Overall, follow-up results show that all of the three psychological treatments, which were delivered in real-world settings, can produce durable reductions in social anxiety problems and the avoidance personality disorder. This has important clinical implications, especially given that this is the longest follow-up work in the literature on adolescents with social phobia.

Among all the treatments, the CBGT-A is the only one to have demonstrated moderately positive outcome in ethnocultural, diverse population. Further research is needed to assess the transportability of IAFS and SET-Asv from naturalistic approaches (such as school) to clinical research settings. Furthermore, the 10% of the original sample reported past episode of selective mutism. Future research should clarify the clinical conceptualization of selective mutism and relationship with social phobia, as suggested by Anstendig (1999).

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References

Albano, A. M., Marten, P. A., & Holt, C. S. (1991). *Therapist's manual for cognitive-behavioral group therapy for adolescent social phobia*. Unpublished manuscript.

Albano, A. M., Marten, P. A., Holt, C. S., Heimberg, R. G., & Barlow, D. H. (1995). Cognitive-behavioral group treatment for social phobia in adolescents. *Journal of Nervous and Mental Disease, 183*, 649–656.

Albano, A. M., & Detweiler, M. F. (2001). The developmental and clinical impact of social anxiety and social phobia in children and adolescents. In: S. G. Hofmann, & P. M. DiBartolo (Eds.), *From social anxiety to social phobia* (pp. 162–178). Massachusetts: Allyn & Bacon.

APA American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders, fourth edition, text revision*. Washington, DC: Author.

Anstendig, K. D. (1999). Is selective mutism an anxiety disorder?. Rethinking its DSM-IV classification. *Journal of Anxiety Disorders, 13*, 417–434.

Beidel, D. C., & Turner, S. M. (1998). *Shy children, phobic adults: Nature and treatment of social phobia*. Washington, DC: APA.

Beidel, D. C., Ferrell, C., Alfano, C. A., & Yeganeh, R. (2001). The treatment of childhood social anxiety disorder. *Psychiatric Clinics of North America, 24*, 831–846.

Clark, D. B., Turner, S. M., Beidel, D. C., Donovan, J. E., Kirisci, L., & Jacob, R. G. (1994). Reliability and validity of the Social Phobia and Anxiety Inventory for adolescents. *Psychological Assessment, 6*, 135–140.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NY: Lawrence Erlbaum Associated.

DiBartolo, P. M., Albano, A. M., Barlow, D. H., & Heimberg, R. G. (1998). Cross-informant agreement in the assessment of social phobia in youth. *Journal of Abnormal Child Psychology, 26*, 213–220.

DiNardo, P. A., Brown, T. A., & Barlow, D. H. (1994). *Anxiety Disorders Interview Schedule for DSM-IV (Lifetime version)*. San Antonio, TX: Psychological Corporation.

Essau, C. A., Conradt, J., & Petermann, F. (2002). Course and outcome of anxiety disorders in adolescents. *Journal of Anxiety Disorders, 16*, 67–81.

Fava, G. A., Grandi, S., Rafanelli, C., Ruini, C., Conti, S., & Belluardo, P. (2003). Long-term outcome of social phobia treated by exposure. *Psychological Medicine, 31*, 899–905.

García-López, L. J., Olivares, J., Hidalgo, M. D., Beidel, D. C., & Turner, S. M. (2001). Psychometric properties of the Social Phobia and Anxiety Inventory, the Social Anxiety Scale for Adolescents, the Fear of Negative Evaluation scale and the Social Avoidance Distress scale in an adolescent Spanish speaking population. *Journal of Psychopathology and Behavioral Assessment, 23*, 51–59.

García-López, L. J., Olivares, J., Turner, S. M., Beidel, D. C., Albano, A. M., & Sánchez-Meca, J. (2002). Results at long-term among three psychological treatmens for adolescents with generalized social phobia (II): clinical significance and effect size. *Psicología Conductual (Behavioral Psychology), 10*, 165–179.

García-López, L. J., Olivares, J., & Hidalgo, M. D. (in press). Sensitivity of outcome measures for treatments of generalized social phobia in adolescents. *International Journal of Clinical and Health Psychology, 5*.

Hayward, C., Varady, S., Albano, A. M., Thienemann, M., Henderson, L., & Schatzberg, A. F. (2000). Cognitive-behavioral group for social phobia in female adolescents: results of a pilot study. *Journal of American Academy Child and Adolescent Psychiatry, 39*, 721–726.

Heimberg, R. G., Salzman, D. G., Holt, C. S., & Blendell, K. A. (1993). Cognitive-behavioral group treatment for social phobia: effectiveness at five-year follow-up. *Cognitive Therapy and Research, 17*, 325–339.

Inderbitzen-Nolan, H. M., & Nolan, K. S. (2000). Social Anxiety Scale for Adolescents: normative data and further evidence of construct validity. *Journal of Clinical Child Psychology, 29*, 360–371.

La Greca, A. M. (1998). *Manual of the Social Anxiety Scales for children and adolescents*. Miami, FL: Author.

La Greca, A. M., & López, N. (1998). Social anxiety among adolescents: linkages with peer relations and friendships. *Journal of Abnormal Child Psychology, 26*, 83–94.

Masia-Warner, C., Klein, R., Storch, E., & Corda, B. (2001). School-based behavioral treatment for social anxiety disorder in adolescents: results of a pilot study. *Journal American Academic Child Adolescence Psychiatry, 40*, 780–786.

Masia-Warner, C., Klein, R. G., Dent, H. C., Fisher, P. H., Alvir, J., Albano, et al. (in press). School-based intervention for adolescents with social anxiety disorder: results of a controlled study. *Journal of Abnormal Child Psychology.*

Masia-Warner, C., Storch, E., Fisher, P., & Klein, R. (2003). Recent advances and new directions in the assessment and treatment of social anxiety disorder in youth. *Psicologia Conductual (Behavioral Psychology), 11*, 623–641.

nQuery Advisor's®. (1999). *The industry standard for sample size and power calculations*. Statistical Solutions Ltd.

Olivares, J., & García-López, L. J. (1997). *Reliability of the Anxiety Disorders Interview Schedule for DSM-IV for Spanish-speaking population*. Unpublished manuscript.

Olivares, J., & García-López, L. J. (1998). *Therapy for adolescents with social phobia generalized: a new cognitive-behavioral treatment protocol for social phobia in adolescence*. Unpublished manuscript.

Olivares, J., García-López, L. J., Beidel, D. C., & Turner, S. M. (1998). *Social effectiveness therapy for adolescents—Spanish version*. Unpublished manuscript.

Olivares, J., García-López, L. J., Beidel, D. C., Turner, S. M., Albano, A. M., & Hidalgo, M. D. (2002). Results at long-term among three psychological treatments for adolescents with generalized social phobia (I): statistical significance. *Psicología Conductual (Behavioral Psychology), 10*, 147–164.

Olivares, J., García-López, L. J., Hidalgo, M. D., Turner, S. M., & Beidel, D. C. (1999). The Social Phobia and Anxiety Inventory: reliability and validity in an adolescent Spanish population. *Journal of Psychopathology and Behavioral Assessment, 21*, 67–78.

Olivares, J., Rosa, A. I., Caballo, V. E., Garcia-Lopez, L. J., Orgiles, M., & Lopez-Gollonet, C. (2003). Treatments for children and adolescents with social phobia: a metanalytic review. *Psicologia Conductual (Behavioral Psychology), 11*, 599–622.

Olivares, J., Ruiz, J., Hidalgo, M. D., García-López, L. J., Rosa, A. I., & Piqueras, J. A. (2005). Social Anxiety Scale for Adolescents (SAS-A): psychometric properties in a Spanish-speaking population. *International Journal of Clinical and Health Psychology, 5*, 85–97.

SPSS 11.0. (2001). *Statistical package for the social sciences*. SPSS Inc.

Storch, E. A., Masia-Warner, C., Dent, H. C., Roberti, J. W., & Fisher, P. H. (2004). Psychometric evaluation of the Social Anxiety Scale for Adolescents and the Social Phobia and Anxiety Inventory for Children: construct validity and normative data. *Journal of Anxiety Disorders, 18*, 665–679.

Turner, S. M., Beidel, D. C., & Cooley-Quille, M. R. (1995). Two year follow-up of social phobics treated with Social Effectiveness Therapy. *Behaviour Research and Therapy, 33*, 553–556.

Turner, S. M., Beidel, D. C., Dancu, C. V., & Stanley, M. A. (1989). An empirically derived inventory to measure social fears and anxiety: the Social Phobia and Anxiety Inventory. *Psychological Assessment, 1*, 35–40.

Van Dam-Baggen, R., & Kraaimaat, F. (2000). Group social skills training or cognitive group therapy as the clinical treatment of choice for generalized social phobia. *Journal of Anxiety Disorders, 14*, 437–451.