Original

Eva Prats[1]
Elisabet Domínguez[2]
Silvia Rosado[1]
Guillem Pailhez[1,3]
Antoni Bulbena[1,3]
Miquel A. Fullana[1,3]

Effectiveness of cognitive-behavioral group therapy for panic disorder in a specialized unit

[1]Institut de Neuropsiquiatria i Addiccions, Hospital del Mar, Barcelona

[2]Universitat Autònoma de Barcelona

[3]Departament de Psiquiatria i de Medicina Legal, Universitat Autònoma de Barcelona

Introduction. The efficacy of cognitive-behavior therapy for panic disorder (PD) with or without agoraphobia is well established, but few data exist on its effectiveness using a group format. The goal of the present study was to assess the effectiveness of group CBT in a sample of PD patients in a specialized unit.

Methods. Treatment consisted of nine weekly group sessions. Patients with PD (n=56) were assessed at baseline, after the treatment and in one and three-months follow-ups.

Results. There were significant reductions in panic/agoraphobia symptoms and related variables between baseline and post-treatment, and these reductions were maintained in three-month follow-up. No differences were observed between those patients who received only CBT and those who received pharmacological treatment as well as CBT. Only initial panic/agoraphobia symptoms were significant predictors of treatment response at the end of treatment (a greater severity was associated with a worse response to CBT).

Conclusions. Our results show that group CBT in a specialized unit is effective for PD patients.

Keywords: Cognitive-behaviour therapy, Group therapy, Effectiveness, Panic disorder, Agoraphobia

Efectividad de la terapia cognitivo-conductual grupal para el trastorno de pánico en una unidad especializada

Introducción. La eficacia de la terapia cognitivo-conductual (TCC) en el trastorno de pánico (TP) con o sin agorafobia está bien documentada, pero existen pocos datos sobre su efectividad en formato grupal. El objetivo del presente estudio era valorar la efectividad de de la TCC grupal en una muestra de pacientes con TP en una unidad especializada.

Método. El tratamiento consistió en 9 sesiones de TCC con frecuencia semanal en 56 pacientes con TP. Se realizaron evaluaciones en el momento inicial, al final, al mes y los 3 meses de seguimiento.

Resultados. Tras la intervención cognitivo-conductual, se observó una disminución significativa en las puntuaciones de la sintomatología de pánico-agorafobia y variables relacionadas, que se mantenía en el seguimiento a 3 meses. No se observaron diferencias entre aquellos pacientes que realizaron tratamiento único (TCC) y los que realizaron tratamiento combinado (TCC+ tratamiento farmacológico). Sólo la sintomatología de pánico-agorafobia inicial se mostró como un buen predictor de la respuesta final al tratamiento (a mayor intensidad, menor respuesta a la TCC).

Conclusiones. Los resultados indican que TCC aplicada en formato grupal a pacientes con TP en un servicio especializado es un tratamiento efectivo.

Palabras clave: Terapia cognitivo-conductual, Terapia grupal, Efectividad, Trastorno de pánico, Agorafobia

Correspondence:
Dr. Miquel Angel Fullana
Unitat d'Ansietat
INAD, Parc de Salut Mar, Hospital del Mar
Passeig Marítim 25-29
08003 Barcelona, Spain
Tel.: 93 2483646
E-mail: 98157@parcdesalutmar.cat

INTRODUCTION

Panic Disorder (PD) is characterized by the presence of recurrent unexpected panic attacks followed by persistent worry about having more attacks and/or concern about their consequences. Approximately two thirds of patients with PD develop agoraphobia,[1] described as anxiety regarding sites or situations from which it may be difficult to escape or in the case of a panic attack or similar symptoms where help may not be available.[2]

The recommended interventions for management of PD according to the NICE guidelines[3] are: (1) cognitive-behavioral therapy (CBT); (2) pharmacological treatment; and (3) bibliotherapy based on the CBT principles.

Several CBT protocols have been developed. These include psychoeducation, interoceptive exposure (to sensations) and situation exposure, together with, in some cases, cognitive restructuration techniques and activation control techniques (training in relaxation and/or controlled breathing). Using these protocols, reductions between 75% to 95% have been achieved in the frequency of panic attacks at the end of the treatment and maintenance of the results up to two years following the intervention.[4-8] Greater effect sizes and improvements maintained for more time have been observed with CBT than with other psychotherapy forms,[9-12] as well as lower relapse rates in comparison with psychopharmacological treatment.[11-14]

Although CBT is well established as a treatment for PD, few studies have evaluated its effectiveness (that is, the efficacy in the "real" clinical setting) in group format. This is important because of the advantages in terms of cost/benefit offered by group therapy for the individual.[15]

The effectiveness of group CBT in PD has been studied in samples of patients from different populations, including the Japanese, Brazilian, USA or Canadian populations in treatment programs that used 10,[16] 12[17] or 14 sessions,[18,19] and that included psychoeducation, interoceptive exposure, situational exposure, cognitive restructuration techniques and activation control techniques. In general, the results of these works show significant reductions in panic attacks and in agoraphobic behaviors at the end of the treatment. The percentage of patients who reach remission criteria range from 54 to 80%.[17,20]

In our setting, only one study evaluated the effectiveness of group CBT. Garriga et al.[21] conducted an intervention based on the Panic Control Model[22] with 29 participants recruited in a Mental Health Center in Murcia. The intervention included psychoeducation, interoceptive and situation exposure, control techniques of activation and cognitive restructuring. After twelve 90-minute long weekly sessions, significant reductions were obtained on the scales that evaluated panic symptoms and associated symptoms. This clinical improvement coincided with a reduction of pharmacological treatment in more than 50% of the cases and with it termination in 20%. One limitation of this work is that it did not evaluate the effectiveness of the intervention according to whether the patients were receiving or not receiving pharmacological treatment.

Furthermore, in recent years, it has been established empirically that the addition of components such as activation control techniques does not add efficacy to the CBT based on psychoeducation, interoceptive exposure and situational exposure[23] and that similar results have been achieved with shorter protocols.[15,18]

The purpose of the current study was to evaluate the effectiveness of a short format (nine sessions) of group CBT based on the Panic Control Model[24] that does not include activation control techniques in a sample of patients with PD in a specialized unit.

METHOD

Participants

The initial sample was made up of 62 patients recruited consecutively in the Anxiety Unit of the Hospital del Mar. The subjects were offered to participate in a CBT program with a group format.

All the study patients fulfilled the following inclusion/exclusion criteria: (I) primary diagnosis of panic disorder with or without agoraphobia or agoraphobia with no history of panic disorder according to DSM-IV criteria; (II) absence of major depressive disorder, psychotic disorder or comorbid bipolar disorder; (III) not having undergone changes in drug treatment (if they had received it) in the month prior to the onset of the treatment and (IV) absence of medical disease that would condition the psychology treatment. The sample was made up by 39 women (63%) and 23 men (37%), whose ages ranged from 20 to 58 years (M=36.7; SD=8.76). Most of the patients (n=50; 80.7%) received CBT added to their usual drug treatment (antidepressants (n=11; 17.5%), anxiolytics (n=12; 19%) or drug combinations (n=28; 44.3%)] while a small percentage (n=12; 19%) only received CBT. The drugs used and the remaining sociodemographic and clinical characteristics are shown in table 1.

Of the 62 patients who were offered treatment, 56 initiated the program. Data are available for 46 patients at the end of the treatment, for 31 at one month and for 28 at 3 months of follow-up. Twenty-four patients were evaluated in all of the points in time (see Figure 1).

| Table 1	Sociodemographic and clinical characteristics of the sample		
Characteristics		**Frequency**	**%**
Gender			
	Man	23	37.1
	Woman	39	62.9
Civil status			
	Single	15	24.2
	Married or significant other	39	62.9
	Separated or divorced	8	12.9
Age *		36.79	8.76
Studies			
	Primary	7	11.3
	Secondary	32	51.6
	University	23	37.1
Work status			
	Active	37	59.7
	Student	2	3.2
	Unemployed	10	16.2
	Pensioner	4	6.5
	Sick leave	9	14.5
Years of evolution of the disease*		10.13	8.10
Secondary diagnoses			
	Other anxiety disorders	3	4.8
	Anorexia nervosa	1	1.6
	Depersonalization disorder	1	1.6
	Cannabis dependence	1	1.6
Medication at onset			
	Anxiolytics	12	19
	Antidepressants	11	17.5
	Anxiolytics + Antidepressants	25	39.5
	Others	3	4.8
Antidepressants used			
	Paroxetine 20-40 mg/day	17	46
	Citalopram 10-45 mg/day	5	13.5
	Fluoxetine 10-30 mg/day	4	10.8
	Sertraline 50-100mg /day	3	8.1
	Escitalopram 10-20 mg/day	2	5.4
	Clomipramine 75mg/day	1	2.7
	Imipramine 75-150 mg/day	2	5.4
	Venlafaxine 75mg/day	1	2.7
	Combination of 2 antidepressants	2	5.4

* M (SD)
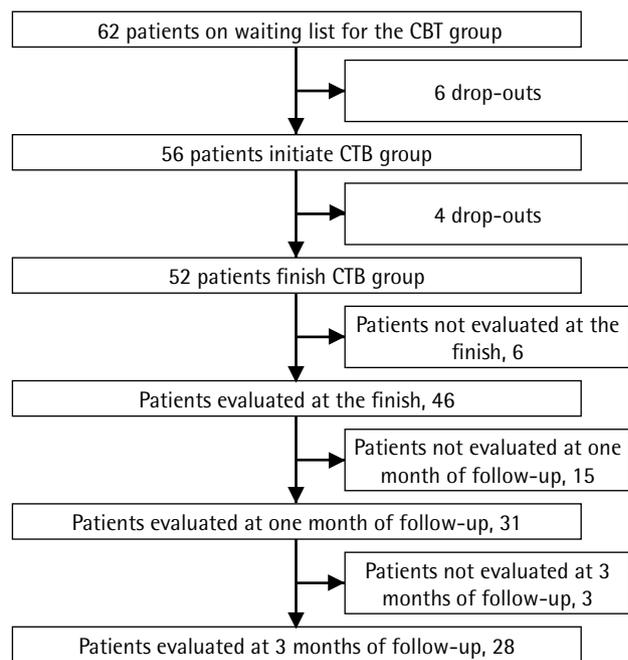
Figure 1 | Recruitment of participants

Evaluation

The participants were evaluated initially by a nurse with a mental health specialty with the Spanish adaptation[25] of the Mini-international neuropsychiatric interview (MINI) version 5.0.[26] After, another experienced clinician (psychiatrist or clinical psychologist) confirmed the primary diagnosis of panic disorder (with or without agoraphobia) or agoraphobia without a background of panic disorder using a semi-structured clinical interview.

The following instruments were also administered in all the evaluations:

- The Panic and Agoraphobia Scale of Bandelow (PAS)[27] that evaluates panic and agoraphobia symptoms. It is made up of 13 items that are scored from 0 to 4, according to severity of the symptoms during the previous week. The total score ranges from 0 to 52.

- State-Trait anxiety inventory, trait version (STAI-T),[28] that evaluates tendency to anxiety. It is made up of 20 items scored from 0 to 3. Total score ranges from 0 to 60.

- Beck Depression Inventory (BDI-II)[29] Spanish adaptation[30] that evaluates depressive symptoms. It is made up of 21 items that are scored from 0 to 3, according to intensity in the two previous weeks. Total score ranges from 0 to 63.

- Anxiety Sensitivity Index (ASI-3)[31] Spanish adaptation[32] that evaluates fear of anxiety symptoms. It is made up of 18 items grouped into 3 subscales (physical/somatic, cognitive and social concerns), which are scored 0 to 4. Scores in each one of the scales range from 0 to 24.

- Sheehan Disability Inventory (SDI)[33] Spanish adaptation[34] that evaluates the disability grade of the symptoms in the work, social and family area. It is made up of 3 items, which are scored from 0 to 10. The score on global disability ranges from 0 to 30.

Treatment

The patients completed the treatment protocol based on the Barlow and Craske Manual for Panic Disorder,[24] following a modified manual for group treatment and adapted to our context (Fullana et al., unpublished data). The current study considered data obtained in 11 treatment groups performed between 2008 and 2010, formed by 4 to 8 patients.

The treatment consisted of an initial presentation and evaluation session followed by 9 weekly 1-hour long sessions with the following contents: (I) psychoeducation (sessions 2 to 4), (II) interoceptive exposure (sessions 5 and 6) and (III) situational exposure (sessions 7 to 10). The tasks to be performed at home included reading psychoeducation material, daily registers of symptoms and individualized practice of the interoceptive exposure exercises (initially practiced in the group) and situational exposure. The groups were led by a clinical psychologist who was specialized in anxiety disorders and by a nurse with a specialty in mental health (or clinical psychology resident), who acted as co-therapist.

Statistical analysis

A treatment procedure was applied initially for the lost values, so that those items for which no response had been obtained were assigned the value of the mean of the scores on the scale or subscale they belonged to. The differences between the patients who completed the treatment and the drop-outs and the differences between patients with and without drug treatment at the onset were analyzed using means comparison tests (Student's t test or Mann-Whitney U Test, and X^2 or Fisher's Exact Test for categoric variables.).

To determine the effectiveness of the group CBT, the results of the clinical variables (PAS, the three subscales of the ASI-3, STAI-T, BDI-II and SDI) were compared at the onset, end, follow-up at 1 month and 3 months using a one factor repeated measures ANOVA. The adjustment for multiple comparisons of Bonferroni was used. The Cohen's d (combined standard deviation) was used to calculate the effect size of the differences.

To evaluate the differences between patients who were receiving drug treatment or not at the onset of the group treatment, a repeated measures ANOVA with a within-subject factor (time: onset, end, follow-up at one month and follow-up at 3 months) and a between-subjects factor (single treatment and combined treatment) were used. In those cases in which Mauchly's sphericity test was not fulfilled, Greenhouse-Geisser correction was used.

To identify possible outcome predictors, Pearson's bivariate correlations between relevant pretreatment variables (initial intensity of panic-agoraphobia symptoms and the three sensitivity factors to anxiety) and the primary outcome variable (final intensity of the panic-agoraphobia symptoms at the end of the treatment) were calculated. After, a hierarchical lineal regression was performed, introducing the scores in the BDI-II at the onset in the first step to thus control the effect of the depressive symptoms and in a second step, the variables that had shown a significant correlation with the dependent variable (intensity of the panic-agoraphobia symptoms at the end of the treatment) using the step-wise method.

The data were analyzed using the SPSS v15 statistical program.

RESULTS

Treated patients versus drop-outs

There were no significant differences between treated patients (n=46) and the drop-outs (n=16) on the clinical scales or in regards to gender and age (data not presented).

Effectiveness of cognitive-behavioral therapy

The results of the ANOVA showed a significant effect of the Time factor in all the variables studied: total PAS, $F_{(3.69)}$=19.081, $p<0.001$; ASI-3 cognitive, $F_{(3.69)}$=8.629, $p<0.002$; ASI-3 physical, $F_{(3.69)}$=28.866, $p<0.001$; ASI-3 Social, $F_{(3.66)}$=17.523, $p<0.001$; BDI-II, $F_{(3.69)}$=9.261, $p<0.001$; STAI-T, $F_{(3.66)}$=17.465, $p<0.001$; and global SDI, $F_{(3.69)}$=15.295, $p<0.001$. As can be observed on Table 2, the PAS variable and the three subscales of the ASI-3 variable (physical, cognitive and social) showed significant decreases on the scores obtained between the initial and final evaluation. However, the final scores did not show significant differences from those obtained at one month and three months of the follow-up. The initial scores on the BDI-II did not significantly differ from those shown by the patients after treatment. However, there was a significant decrease in the scores between the final evaluation and the follow-up at 1 and 3-months. Finally, the scores on the STAI-T scale and on the SDI showed a significant decrease between the initial and final moments and between the final moment and the follow-up at one month, the scores

| Table 2 | Results of group CBT at onset, end and follow-up at one and three months | | | | | | | |

Measurement	Group CBT				Comparisons by pairs	Effect size		
	Onset	Final	1 month	3 months		Onset – Final	Onset – 1 month	Onset – 3 months
	M (SD)	M (SD)	M (SD)	M (SD)				
total PAS	19.08 (8.28)	10.96 (8.99)	8.83 (9.08)	9.92 (8.95)	Onset > Final = 1 month = 3 months	0.94	1.18	1.06
ASI3-c	10.92 (8.00)	6.04 (5.61)	6.17 (6.68)	5.17 (5.47)	Onset > Final = 1 month = 3 months	0.71	0.64	0.84
ASI3-p	15.42 (6.74)	8.00 (5.85)	6.88 (5.07)	6.42 (6.02)	Onset > Final = 1 month = 3 months	1.17	1.43	1.41
ASI3-s	13.96 (6.45)	8.13 (4.85)	8.17 (5.70)	7.04 (6.25)	Onset > Final = 1 month = 3 months	1.02	0.95	1.09
BDI-II	18.79 (11.17)	13.88 (9.26)	9.33 (7.26)	12.00 (10.99)	Onset = Final > 1 month = 3 months	0.48	1.00	0.61
STAI-T	34.96 (9.58)	28.91 (10.22)	23.48 (9.57)	23.48 (10.97)	Onset > Final >1 month = 3 months	0.61	1.20	1.11
global SDI	16.17 (6.84)	11.13 (7.30)	8.21 (7.70)	6.96 (6.73)	Onset > Final > 1 month = 3 months	0.43	0.82	1.06

Total PAS: Panic and Agoraphobia Scale; ASI3-c: Anxiety Sensitivity Index, cognitive concerns; ASI3-p: Anxiety Sensitivity Index, physical/somatic concerns; ASI3-s Anxiety Sensitivity Index, social concerns; BDI-II: Beck Depression Inventory; STAI-T: Trait-State Anxiety Index, Trait version; Global SDI: Disability Inventory; M: Mean; SD: Standard Deviation.

| Table 3 | Descriptive statistics and comparisons of initial means between patients who complete the follow-up at 3 months with (n=19) and without (n=5) drug treatment at the onset of the group treatment | | | | | |

Measurement	CBT		Combined treatment		Statistics (t/U)	p
	M	SD	M	SD		
Gender (man)*	3 (60%)		3 (15.8%)		Fisher's T.	0.078
Age	33.71	5.02	38.19	7.81	1.21	0.240
Total PAS	19.00	4.85	19.11	9.08	0.02	0.980
ASI3-c	8.40	8.44	11.58	7.98	36.5	0.431
ASI3-f	12.00	7.71	16.32	6.38	1.29	0.209
ASI3-s	12.20	8.93	14.42	5.86	0.68	0.505
BDI-II	16.00	5.15	19.53	12.28	0.62	0.542
STAI-T	25.40	7.70	37.37	8.23	2.93	0.008
Global SDI	13.40	4.67	16.89	7.23	1.02	0.320

* Frequency (%)
Total PAS: Panic and Agoraphobia Scale; ASI3-c: Anxiety Sensitivity Index, cognitive concerns; ASI3-f: Anxiety Sensitivity Index, physical/somatic concerns; ASI3-s: Anxiety Sensitivity Index, social concerns; BDI-II: Beck Depression Inventory; STAI-T: Trait-State Anxiety Index, Trait version; Global SDI: Sheehen Disability Inventory; M: Mean; SD: Standard Deviation; Fisher T.: Fisher's Exact Test.

remaining without differences in regards to the follow-up at 3 months. When the effect size of the differences between all the evaluations were analyzed, it could be observed how the greatest differences were found at the end of one month of follow-up on the total PAS scale (Cohen's d=1.18), ASI-3 physical (Cohen's d=1.43), BDI-II (Cohen's d=1.00) and STAI-T (Cohen's d=1.20); while the greatest differences were found at 3 months of having completed the treatment for the ASI-3 cognitive (Cohen's d=0.84), ASI-3 social (Cohen's d=1.09) and the SDI (Cohen's d=1.06).

Effectiveness of the cognitive-behavioral therapy with or without coadjuvant drug treatment

Patients with drug treatment did not initially differ from those without drug treatment in any of the clinical/sociodemographic variables analyzed except for in the STAI-T score, which was greater in patients receiving drug treatment (M=37.37; SD=8.23) versus patients without treatment (M=25.40; SD=7.70) [t(22)=2.93; p<0.01] (see table 3).

Table 4	Results of the group CBT at the onset, end, and follow-up at one month and at three months between patients with (n=19) and without (n=5) drug treatment at the onset of group treatment

Mean	Group CBT				Time		Interaction Treatment x Time	
	Onset	Final	1 month	3 months				
	M (SD)	M (SD)	M (SD)	M (SD)	F(gl)	p	F(gl)	p
total PAS					13.695 (3.66)	<0.001	0.292 (3.66)	0.773
CBT	19.00 (4.85)	10.40 (5.32)	6.20 (5.26)	9.40 (9.84)				
CBT+DT	19.11 (9.08)	11.11 (9.84)	9.53 (9.83)	10.05 (8.98)				
ASI3-c					5.006 (3.66)	<0.02	0.528 (3.66)	0.602
CBT	8.40 (8.44)	4.80 (4.87)	2.60 (3.29)	4.40 (4.34)				
CBT+DT	11.58 (7.98)	6.37 (5.86)	7.11 (7.09)	5.37 (5.82)				
ASI3-f					16.241 (3.66)	<0.001	0.478 (3.66)	0.236
CBT	12.00 (7.71)	8.80 (7.16)	4.40 (3.65)	5.40 (5.73)				
CBT+DT	16.32 (6.38)	7.79 (5.67)	7.53 (5.26)	6.68 (6.22)				
ASI3-s					12.741 (3.66)	<0.001	0.185 (3.66)	0.906
CBT	12.20 (8.93)	5.60 (4.56)	5.00 (4.80)	4.00 (4.00)				
CBT+DT	14.42 (5.86)	8.79 (4.81)	9.00 (5.73)	7.84 (6.57)				
BDI-II					6.315 (3.66)	<0.002	0.258 (3.66)	0.855
CBT	16.00 (5.15)	8.00 (8.43)	5.80 (6.26)	8.20 (9.96)				
CBT+DT	19.53 (12.28)	15.42 (9.03)	10.26 (7.36)	13.00 (11.27)				
STAI-T					5.482 (3.63)	<0.003	2.063 (3.63)	0.114
CBT	23.50 (7.42)	23.00 (12.88)	19.50 (15.26)	21.25 (17.56)				
CBT+DT	37.37 (8.23)	30.16 (9.52)	24.32 (8.29)	23.95 (9.72)				
global SDI					9.086 (3.66)	<0.001	0.042 (3.66)	0.963
CBT	13.40 (4.67)	9.00 (6.78)	5.80 (8.17)	5.20 (7.92)				
CBT+DT	16.89 (7.23)	11.68 (7.50)	8.84 (7.67)	7.42 (6.54)				

Total PAS: Panic and Agoraphobia Scale; ASI3-c: Anxiety Sensitivity Index, cognitive concerns; ASI3-f: Anxiety Sensitivity Index, physical/somatic concerns; ASI3-s: Anxiety Sensitivity Index, social concerns; BDI-II: Beck Depression Inventory; STAI-T: Trait-State Anxiety Index, Trait version; Global SDI: Sheehan Disability Inventory;

CBT+DT (Cognitive behavioral therapy + drug treatment); M: Mean; SD: Standard Deviation; gl: degrees of freedom

The ANOVA results indicated that there was a principal effect of the Time factor for all the variables studied (all the F values were >5.006 and their statistical significance was always <0.02) at the end of the treatment, at the one-month follow-up and at the three-month follow-up. However, the effect on the treatment x time interaction was not significant for any of the variables studied, indicating that the scores between both groups did not differ significantly in the final evaluation, in the follow-up at one month or in the follow-up at three months (see table 4).

Predictors of results for the cognitive-behavioral therapy

There were significant positive correlations between the initial scores on the BDI-II ($r=0.596$; $p<0.001$), ASI-3 physical ($r=0.324$; $p<0.03$), ASI-3 cognitive ($r=0.351$; $p<0.02$), PAS ($r=0.572$; $p<0.03$) and final PAS. The results of the linear regression showed that after controlling for the initial depressive symptoms, only the initial PAS variable accounted for an additional part (5.6 %) of the varia-

Table 5		Summary of the statistics of the hierarchical linear regression analysis with the intensity of the panic-agoraphobia symptoms at the end of the treatment (final PAS) as dependent variable				
DV	Model	Predictors	β	R^2	Change in R^2	p
final PAS	1	Initial BDI-II	0.497	0.355		
	2	Initial BDI-II	0.323	0.411	0.056	0.049
		Initial PAS	0.326			

DV: Dependent variable; Final PAS: Panic and Agoraphobia Scale, score on scale at end of treatment; Initial PAS: Panic and Agoraphobia Scale, score on scale at onset of evaluation; Initial DBI-II: Beck Depression Inventory, score on scale at onset evaluation

bility in the final response to the treatment (final PAS). The coefficients showed a direct relation between both variables ($\beta_{BDI-II\ initial}$=0.323; $\beta_{PAS\ initial}$=0.326) and intensity of the panic-agoraphobia symptoms at 3 months of the intervention (see table 5).

DISCUSSION AND CONCLUSIONS

The results obtained support the effectiveness of CBT applied in group format to patients with PD in a specialized service. After 9 group sessions of CBT (approximately 9 hours of intervention), the patients with PD showed a significant improvement in panic/agoraphobia symptoms that was maintained at 3 months of follow-up. Marchand et al.,[18] Nakano et al.[16] and Heldt et al.[17] obtained similar results, indicating a rapid reduction of the symptoms from the initial to final evaluation and a floor effect in the subsequent follow-ups. These results support that short intervention are as effective as the longer ones, since similar reductions in symptoms are observed in the interventions that involve 10,[16] 12[17] and 14[18] weeks of treatment.

The results obtained are comparable with those found in similar interventions that also included techniques for the control of activation. This supports the proposals of some authors that state that these techniques do not generate added benefits to psychoeducation and exposure techniques.[23]

A reduction in the associated depressive symptom that was not a specific object of the treatment was also observed, but this occurred at one month of follow-up. These data partially contradict those obtained in other studies[18,20,21,35] in

which the improvement in depressive symptoms was clear after the intervention. This could be explained by the presence of a more marked depressive symptom[18,20,35] and lower number of sessions performed, which would make the evaluation at one month of follow-up in this study approach that of the final evaluation in others.[21]

In regards to the disability associated with PD, the reduction of the disability in the patients seems to increase over time, the effect size being greater at three months of follow-up. This could indicate that the patients continue to apply the skills learned once the psychological treatment is completed.

The drop-out index in our study is 26%. These data are similar to the rates obtained by Wade et al.[36] when they applied group CBT in a North American mental health center (26%) or those of Galassi et al.[20] (22%), but much lower than those that Shap et al.[37] found in a sample of patients recruited in primary care (47%).

It should be stressed that the improvements achieved were similar in patients who had a single treatment (CBT) compared to those with combined treatment (CBT and drug treatment), although these analyses should be interpreted with care as they are based on a limited number of participants. In any case, our study suggests that in the usual clinical practice, many patients can receive CBT as a single treatment and do not need to receive concomitant drug treatment. This is important, among other things, because of the greater cost entailed with combined treatments.[38]

When other predictive factors were studied, we found that only the severity of the initial panic-agoraphobia symptoms predicted the results of the treatment, after controlling for the possible effects of the depressive symptoms. The results have shown that the greater the initial panic-agoraphobia symptoms, the greater the final symptoms. These data agree with those found by Dow et al.[39] when they evaluated the effectiveness of CBT in individual format and with by Baillie et al.[40] when they did so in group format.

Our study has some important limitations. It is an open study and thus has no control group. However, being able to have data on the "clinical reality" may be useful in future research and in the daily clinical practice. Furthermore, we do not have data regarding the exact number of patients who are diagnosis-free after the intervention and in the follow-ups performed. Another limitation is the sample size, which especially affects the comparison analyses of patients with and without concomitant drug treatment (see further above).

In spite of these limitations, our study makes it possible to conclude that in the "real" clinical practice, CBT produces benefits in the panic-agoraphobia symptoms as well as in

the associated symptoms, and it also generates a reduction in the disability associated with PD. The use of a group format makes it possible for the therapist to treat more patients. Thus, we could state that CBT is effective in the clinical setting and that when performed in group format, it is an effective and efficient treatment.

REFERENCES

1. Robins LN, Regier DA. Psychiatric Disorders in America: The Epidemiologic Catchment Area Study. New York: The Free Press, 1991.
2. Diagnostic and Statistical Manual of Mental Disorders. 4th ed, revised text. Washington DC: American Psychiatric Association, 2000.
3. National Institute for Clinical Guideline 22. Anxiety. Management of anxiety (panic disorder, with or without agoraphobia, and generalised anxiety disorder) in adults in primary, secondary and community care. NICE clinical guideline 22, 2007. Available from www.nice.org.uk/CG022.
4. De Beurs E, Van Balkom AJLM, Lange A, Koele P, Van Dyck R. Treatment of panic disorder with agoraphobia: comparison of fluvoxamine, placebo, and psychological panic management combined with exposure and of exposure in vivo alone. Am J Psychiatry. 1995;152:683-91.
5. Fava GA, Savron G, Zielezny M, Grandi S, Rafanelli C, Conti S. Overcoming resistance to exposure in panic disorder with agoraphobia. Acta Psychiatr Scand. 1997;95:306-12.
6. Barlow DH, Gorman JM, Shear MK, Woods SW. Cognitive-behavioral therapy, imipramine, or their combination for panic disorder: A randomized controlled trial. JAMA. 2000;283(19):2529-36.
7. Berger P, Sachs G, Amering M, Holzinger A, Bankier B, Katschnig H. Personality disorder and social anxiety predict delayed response in drug and behavioral treatment of panic disorder. J Affect Disord. 2004;80:75-8.
8. Kiropoulos LA, Klein B, Austin DW, Gilson K, Pier C, Mitchell J, Ciechomski L. Is internet-based CBT for panic disorder and agoraphobia as effective as face-to-face CBT? J Anxiety Disord. 2008;22(8):1273-84.
9. Clum GA, Clum GA, Surls R. A meta-analysis of treatments for panic disorder. J Consult Clin Psychol. 1993;61(2):317-26.
10. McCabe RE, Gifford S. Psychological treatment of panic disorder and agoraphobia. En: Antony MM, Stein MB, eds. Oxford handbook of anxiety and related disorder. Oxford: University Press, 2009; p. 308-20.
11. Foldes-Busque G, Marchad A, Landry P. L'identification et le traitement du trouble panique avec ou sans agoraphobie: mise à jour [Identification and treatment of Panic Disorder with/without Agoraphobia: Update]. Le Médecin de famille Canadien. 2007;53:686-93.
12. Gould RA, Otto MW, Pollack MH. A meta-analysis of treatment outcome for panic disorder. Clin Psychol Rev. 1995;15:819-44.
13. White KS, Barlow DH. Panic disorder and agoraphobia. En: Barlow DH, ed. Anxiety and its disorders: The nature and treatment of anxiety and panic. New York: The Guilford Press, 2001; p. 328-79.
14. Fava GA, Rafanelli C, Grandi S, Conti S, Ruini C, Mangelli L, Belluardo P. Long-term outcome of panic disorder with agoraphobia treated by exposure. Psychol Med. 2001;31(5):891-8.
15. Roberge P, Marchand A, Reinharz D, Savard P. Cognitive-behavioral treatment for panic disorder with agoraphobia: a

16. Nakano Y, Lee K, Noda Y, Ogawa S, Kinoshita Y, Funayama T, et al. Cognitive-behavior therapy for Japanese patients with panic disorder: acute phase and one-year follow-up results. Psychiatry Clin Neurosci. 2008;62(3):313-21.
17. Heldt E, Gus Manfro G, Kipper L, Blaya C, Isolan L, Otto MW. One-year follow-up of pharmacotherapy-resistant patients with panic disorder treated with cognitive-behavior therapy: Outcome and predictors of remission. Behav Res Ther. 2006;44(5):657-65.
18. Marchand A, Roberge P, Primiano S, Germain V. A randomized, controlled clinical trial of standard, group and brief cognitive-behavioral therapy for panic disorder with agoraphobia: a two-year follow-up. J Anxiety Disord. 2009;23(8):1139-47.
19. Penava SJ, Otto MW, Maki KM, Pollack MH. Rate of improvement during cognitive-behavioral group treatment for panic disorder. Behav Res Ther. 1998;36(7-8):665-73.
20. Galassi F, Quercioli S, Charismas D, Niccolai V, Barciulli E. Cognitive-behavioral group treatment for panic disorder with agoraphobia. J Clin Psychol. 2007;63(4):409-16.
21. Garriga A, Martín JC, Lopez C. Tratamiento cognitivo-conductual grupal del trastorno de pánico con o sin agorafobia en un centro de salud mental público. Revista de psicopatología y psicología clínica. 2009;14(2):79-93.
22. Barlow DH, Cerny JA. Psychological treatment of panic. New York: Guilford Press, 1988.
23. Schmidt NB, Woolaway-Bickel K, Trakowski J, Santiago H, Storey J, Koselka M, et al. Dismantling cognitive-behavioral treatment for panic disorder: questioning the utility of breathing retraining. J Consult Clin Psychol. 2000;68(3):417-24.
24. Barlow DH, Craske MG. Mastery of your Anxiety and Panic: MAP-3. New York: Graywind Publications, 2000.
25. Ferrando L, Bobes J, Gibert J, Soto M, Soto O. Mini-International Neuropsychiatric Interview. Versión en Español 5.0.0. DSM-IV. Madrid: Instituto IAP, 2005.
26. Sheehan DV, Lecrubier Y, Harnett-Sheehan K, Janavs J, Weiller E, Keskiner A, et al. The validity of the mini international neuropsychiatric interview (MINI) according to the SCID-P and its reliability. Eur Psychiatry. 1997;12:232-41.
27. Bandelow B. The assessment of efficacy of treatments for panic disorder and agoraphobia. II. The Panic and Agoraphobia Scale. Int Clin Psychopharmacol. 1995;10:73-82.
28. Spielberger CD, Gorsuch RL, Lushene RE. STAI. Manual for the state-trait anxiety inventory. Palo Alto, California: Consulting Psychologists Press, 1970.
29. Beck AT, Steer RA, Brown GK. Manual for Beck Depression Inventory-II. San Antonio, TX: Psychological Corporation, 1996.
30. Sanz J, Navarro ME, Vázquez C. Adaptación española del inventario para la depresión de Beck-II (BDI-II): 1. Propiedades psicométricas en estudiantes universitarios. Anl Modif Conduct. 2003;29(124):239-88.
31. Taylor S, Zvolensky MJ, Cox BJ, Deacon B, Heimberg RG, Ledley DR, et al. Robust dimensions of anxiety sensitivity: development and initial validation of the Anxiety Sensitivity Index-3. Psychol Assess. 2007;19(2):176-88.
32. Sandin B, Valiente RM, Chorot P, Santed MA. ASI-3: nueva escala para la evaluación de la sensibilidad a la ansiedad. Revista de psicopatología y psicología clínica. 2007;12(2):91-104.
33. Sheehan DV, Harnett-Sheehan K, Raj BA. The measurement of disability. Int Clin Psychopharmacol. 1996;3(Supl):89-95.
34. Bobes J, Badía X, Luque A, García M, González MP, Dal-Ré R. Validation of the Spanish version of the Liebowitz social anxiety scale, social anxiety and distress scale and Sheehan disability

inventory for the evaluation of social phobia. Med Clínica. 1999;112(14):530-8.

35. Martinsen EW, Olsen T, Tonset E, Nyland KE, Aarre TF. Cognitive-behavioral group therapy for panic disorder in the general clinical setting: a naturalistic study with 1-year follow-up. J Clin Psychiatry. 1998;59(8):437-42.

36. Wade WA, Treat TA, Stuart GL. Transporting an empirically supported treatment for panic disorder to a service clinic setting: a benchmarking strategy. J Consult Clin Psychol. 1998;66(2):231-9.

37. Sharp DM, Power KG, Swanson V. A comparison of the efficacy and acceptability of group versus individual cognitive behaviour therapy in the treatment of panic disorder and agoraphobia in primary care. Clin Psychol Psychother. 2004;11:73–82.

38. McHugh RK, Otto MW, Barlow DH, Gorman JM, Shear MK, Woods SW. Cost-efficacy of individual and combined treatments for panic disorder. J Clin Psychiatry. 2007;68(7):1038-44.

39. Dow MG, Kenardy JA, Johnston DW, Newman MG, Taylor CB, Thomson A. Prognostic indices with brief and standard CBT for panic disorder: I. Predictors of outcome. Psychol Med. 2007;37(10):1493-502.

40. Baillie AJ, Rapee RM. Predicting who benefits from psychoeducation and self help for panic attacks. Behav Res Ther. 2004;42(5):513-27.