

# **Long-Term Effects of Short-Term Psychodynamic Psychotherapy and Cognitive-Behavioural Therapy in Generalized Anxiety Disorder: 12-Month Follow-Up**

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**Objective:** In a previous randomized controlled trial (RCT), short-term efficacy of cognitive-behavioural therapy (CBT) and short-term psychodynamic psychotherapy (STPP) in generalized anxiety disorder (GAD) was demonstrated. In this article, long-term stability of these effects will be examined. Effects of CBT and STPP will be compared.

**Method:** In the original RCT, patients with GAD were treated with either CBT ( $n = 29$ ) or STPP ( $n = 28$ ). Treatments were carried out according to manuals and included up to 30 sessions. As the primary outcome measure the Hamilton Anxiety Rating Scale was used. In addition to short-term outcome previously reported, treatment effects were assessed 12 months after termination of treatment.

**Results:** Both CBT and STPP yielded large improvements at 12-month follow-up. No significant differences were found between treatments concerning the primary outcome measure. This result was corroborated by 3 self-report measures of anxiety. However, in measures of trait anxiety and worry, CBT was superior. Concerning depression, differences reported at posttreatment were no longer significant at 12-month follow-up.

**Conclusions:** In GAD, both CBT and STPP yield large and stable effects 12 months after treatment. Concerning trait anxiety and worry, CBT seems to be superior. For STPP, further studies should be carried out to confirm the results.

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## **Clinical Implications**

- STPP and CBT significantly reduce symptoms of anxiety and depression in patients with GAD.
- These effects are large and stable at 12-month follow-up.
- Results of psychodynamic psychotherapy in GAD may be further optimized by employing a stronger focus on the process of worrying.

## **Limitations**

- The study was not sufficiently powered for an equivalence trial.
- The question: “By which of those 2 treatments an individual patient profits best?” cannot be answered owing to the small sample size.

**Key Words:** *generalized anxiety disorder, short-term psychodynamic psychotherapy, cognitive-behavioural therapy, randomized controlled trial, follow-up, long-term effects*

Generalized anxiety disorder is characterized by chronic, pervasive, and uncontrollable worry and is associated with somatic complaints.<sup>1,2</sup> In many cases, GAD is not adequately identified and treated, especially in primary care, leading to high medical costs.<sup>3,4</sup> Concerning treatment, CBT has proved to be efficacious.<sup>5</sup> CBT is regarded as an empirically supported treatment<sup>6</sup>. For a critical discussion of the empirically supported treatment approach see Joyce et al.<sup>7</sup> For psychodynamic psychotherapy, however, only a few studies addressing the efficacy in GAD exist.<sup>8</sup>

In a previous article,<sup>8</sup> we reported results of an RCT comparing STPP and CBT in the treatment of GAD. We found that both CBT and STPP yielded significant and large improvements concerning symptoms of anxiety and depression.<sup>8</sup> These effects were stable at 6-month follow-up. No significant differences were found between the treatments concerning the primary outcome measure (HARS).<sup>9-11</sup> However, in measures of trait anxiety and worry, CBT was found to be superior.<sup>8</sup> For depression, this was also true at postassessment, but differences no longer existed at the 6-month follow-up.<sup>8</sup>

The long-term efficacy, especially of STPP in GAD, however, is not yet known. In this article, the long-term efficacy of both treatments will be addressed. For that purpose, the results of the 12-month follow-up assessment will be reported.

## Method

### Subjects

The original study included 57 patients with primary diagnosis of GAD (Figure 1).<sup>8</sup> The characteristics of these 57 participants were reported in detail in the previous article.<sup>8</sup> Twenty-nine patients were randomly assigned to CBT, 28 patients to STPP (ITT sample). Five patients of the ITT sample ( $n = 57$ ) dropped out during treatment, and another 3 patients dropped out at 6-month follow-up.<sup>8</sup> At

12-month follow-up, another 8 patients dropped out. Four patients moved (2 CBT, 2 STPP), 3 patients started with antidepressants, and in 1 patient a severe somatic disease (prostate cancer) occurred (all STPP). Thus 41 patients completed the 12-month follow-up assessment, 24 in the CBT group and 17 in the STPP group (Figure 1).

### Treatments

For both CBT and STPP, published treatment manuals were used.<sup>12,13</sup> The CBT manual combines different techniques.<sup>14,15</sup> The STPP manual was based on Luborsky's<sup>16</sup> supportive-expressive therapy, which was specifically tailored to GAD.<sup>13,17</sup> The mean number of sessions for patients who completed CBT was 28.81 (SD 3.44), for STPP it was 29.12 (SD 3.06).<sup>8</sup> The treatments were carried out by 9 licensed psychotherapists in private practice who regularly apply either CBT or psychodynamic therapy. All therapists were specifically trained in the use of the respective treatment manuals by the developers of the German versions of the manuals. Implementation of the treatment manuals, including adherence to the manuals and competent delivery of interventions, was ensured for each group of therapists by continuous group supervision, which was carried out every month by supervisors who were highly experienced in CBT or STPP and highly familiar with the respective treatment manual.<sup>8</sup> All sessions were audiotaped. As reported in the previous article, treatments could be identified with high accuracy by raters blind to the treatment conditions on the basis of randomly selected audiotapes.<sup>8</sup>

### Assessment and Measures

In addition to the assessments carried out before, at the end, and 6 months after the end of therapy, patients were assessed 12 months after termination of treatment. As the primary outcome measure, the HARS was used.<sup>9</sup> It includes 14 items that are rated on a 5-point scale. The scale was rated by 3 specifically trained and independent raters, who were blind concerning treatment allocation.

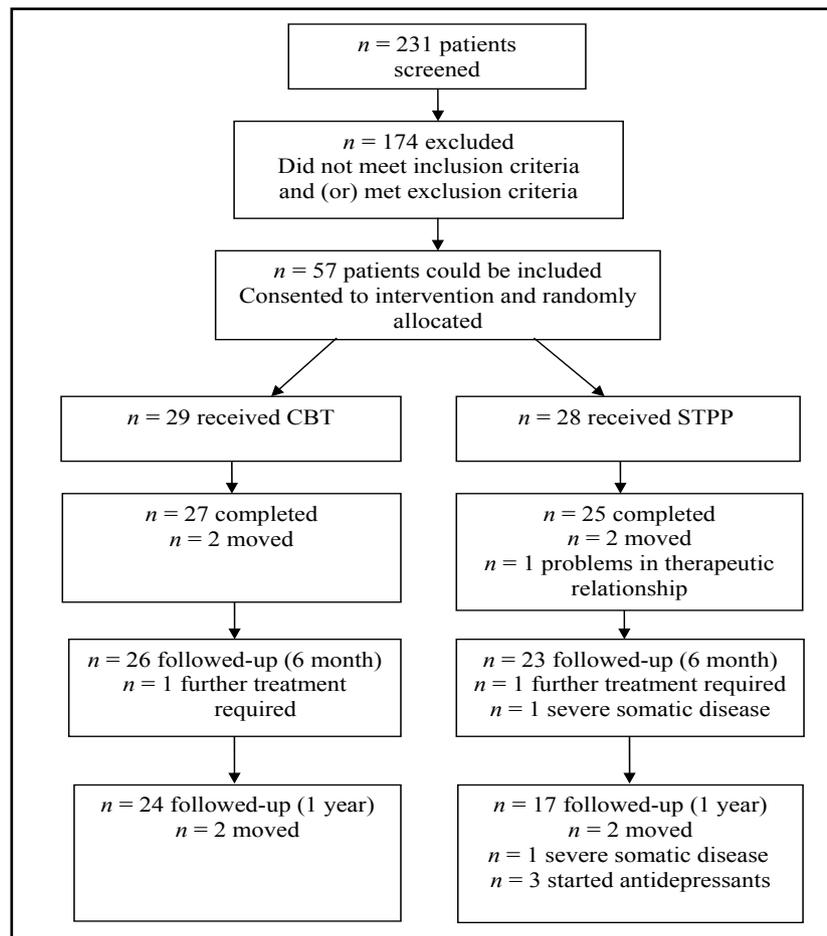
In addition, several self-report measures were applied for which reliability and validity have been demonstrated.<sup>8</sup> Worry was assessed by the PSWQ.<sup>18</sup> Trait anxiety was assessed by the STAI.<sup>19</sup> As 2 other measures of anxiety, we used the BAI and the anxiety scale of the HADS.<sup>20,21</sup> Severity of depression was assessed by the BDI.<sup>22</sup> Interpersonal problems were assessed by use of the IIP, Circumplex Version.<sup>23</sup>

### Data Analysis

Data were analyzed using SPSS Version 16.0 (SPSS Inc, Chicago, IL). Outcome of CBT and STPP from pretreatment to 12-month follow-up was examined by repeated measures ANOVAs. In the case of a significant Group  $\times$  Time interaction, post hoc *t* tests were applied. ITT analysis ( $n = 57$ ) was employed by the last observation carried forward method. In addition, we conducted a completer analysis ( $n = 41$ ) for all patients who completed the 12-month follow-up assessment. Consistent with

## Abbreviations

BAI	Beck Anxiety Inventory
BDI	Beck Depression Inventory
CBT	cognitive-behavioural therapy
GAD	generalized anxiety disorder
HADS	Hospital Anxiety and Depression Scale
HARS	Hamilton Anxiety Rating Scale
IIP	Inventory of Interpersonal Problems
ITT	intention-to-treat
PSWQ	Penn State Worry Questionnaire
RCT	randomized controlled trial
STAI	State-Trait Anxiety Inventory
STPP	short-term psychodynamic psychotherapy

**Figure 1 Patient enrolment, randomization, treatment, and follow-up**

our previous analysis, for the primary outcome measure specified a priori (HARS), alpha was not adjusted. For HARS, a 2-tailed alpha level of 0.05 was used for statistical tests. For the secondary outcome measures, alpha was set to 0.01 (0.05/5) to protect against type I error inflation.

Within-group effect sizes were assessed by dividing the difference between the pretreatment and the 12-month follow-up score by the pooled standard deviation at baseline.<sup>24</sup> Between-group effect sizes were assessed by use of the *F* or *t* values according to Cohen.<sup>24, p 67</sup>

## Results

Significant effects of time were found for all outcome measures at 12-month follow-up, indicating significant improvements (Table 1). Examination of the completer sample yielded similar results.

The interactions of time and group at 12-month follow-up were not significant for the HARS, the BAI, the HADS–Anxiety, the BDI, and the IIP, indicating no significant differences in treatment outcome between CBT and STPP (Table 1). Significant Time × Group interactions emerged

for the PSWQ and the STAI trait measure (Table 1). Analyses of the completer sample yielded the same pattern of results.

The results of the post hoc 2-tailed *t* tests indicated that CBT yielded significantly larger treatment effects for the PSWQ ( $t = 4.11$ ,  $df = 55$ ,  $P < 0.01$ ) and the STAI trait measure ( $t = 3.11$ ,  $df = 55$ ,  $P < 0.01$ ). Superiority of CBT in these measures was associated with large between-group effect sizes in favour of CBT (Table 2). For all other measures, between-group effect sizes in favour of CBT were of small (BAI, IIP) to medium (HARS, HADS, BDI) size.

Repeated measures ANOVAs testing for differences between posttreatment and 12-month follow-up scores did not reveal significant main effects for time (all  $P$ s  $\geq 0.09$ ) or significant Time × Group interactions (all  $P$ s  $> 0.29$ ). Thus effects were stable over the 12-month follow-up period.

At 12-month follow-up, all within-group effect sizes for measures of anxiety and depression were large ( $d \geq 0.80$ ) according to Cohen,<sup>24</sup> except for PSWQ in STPP ( $d = 0.61$ , Table 2).

**Table 1 Outcome measures for CBT and STPP at baseline and at 12-month follow-up**

Variable	CBT ( <i>n</i> = 29) Mean (SD)		STPP ( <i>n</i> = 28) Mean (SD)		Repeated measures ANOVAs <i>F</i>	
	Baseline	12-month follow-up	Baseline	12-month follow-up	Time ( <i>df</i> = 1,55)	Time × Treatment ( <i>df</i> = 1,55)
HARS	25.90 (5.83)	12.34 (7.53)	25.00 (4.18)	13.96 (7.44)	175.03 <sup>a</sup>	1.83 (ns)
PSWQ	63.48 (6.97)	49.69 (9.75)	58.86 (8.30)	54.18 (9.85)	69.49 <sup>a</sup>	16.92 <sup>a</sup>
STAI, trait anxiety	58.83 (8.70)	43.55 (11.57)	55.68 (8.03)	48.50 (9.90)	74.20 <sup>a</sup>	9.65 <sup>a</sup>
BAI	24.59 (10.86)	11.55 (9.62)	24.21 (10.07)	13.18 (9.48)	59.22 <sup>a</sup>	0.41 (ns)
HADS, anxiety scale	14.21 (3.04)	8.31 (4.42)	13.68 (2.68)	9.50 (4.42)	108.83 <sup>a</sup>	3.16 (ns)
BDI	19.21 (6.79)	8.97 (8.35)	17.82 (6.53)	11.75 (8.76)	60.80 <sup>a</sup>	3.97 (ns)
IIP, Circumplex Version	13.78 (4.04)	11.67 (4.54)	13.57 (3.36)	12.21 (4.22)	12.38 <sup>b</sup>	0.57 (ns)

<sup>a</sup>  $P < 0.01$ ; <sup>b</sup>  $P = 0.01$ ; ns = not significant

**Table 2 Paired *t* tests and *P* values and effect size estimates within and between treatment groups**

Variable	CBT ( <i>n</i> = 29) Pre, compared with 12-month follow-up		STPP ( <i>n</i> = 28) Pre, compared with 12-month follow-up		Between-group effect size (Cohen's <i>d</i> )
	<i>t</i> ( <i>df</i> = 28)	Within-group effect size (Cohen's <i>d</i> ) <sup>a</sup>	<i>t</i> ( <i>df</i> = 27)	Within-group effect size (Cohen's <i>d</i> ) <sup>a</sup>	
HARS	9.71 <sup>b</sup>	2.70	9.06 <sup>b</sup>	2.20	0.50
PSWQ	7.76 <sup>b</sup>	1.80	3.59 <sup>b</sup>	0.61	1.19
STAI, trait anxiety	7.83 <sup>b</sup>	1.82	4.18 <sup>b</sup>	0.85	0.97
BAI	5.44 <sup>b</sup>	1.24	5.54 <sup>b</sup>	1.05	0.19
HADS, anxiety scale	7.81 <sup>b</sup>	2.06	7.02 <sup>b</sup>	1.46	0.60
BDI	6.07 <sup>b</sup>	1.53	5.00 <sup>b</sup>	0.91	0.62
IIP, Circumplex Version	2.81 <sup>b</sup>	0.57	2.14 <sup>c</sup>	0.36	0.21

<sup>a</sup> Calculated as the pretreatment mean minus the posttreatment mean, divided by the pooled SD.

<sup>b</sup>  $P < 0.01$ ; <sup>c</sup>  $P = 0.04$

## Discussion

In the previous article,<sup>8</sup> STPP and CBT were reported to achieve significant short-term improvements in anxiety and depression in patients with GAD. In this article, long-term stability of these effects was addressed. Effects were shown to be stable for both treatments over the 12-month follow-up period. Large within-group effect sizes were found in the primary outcome measure (HARS) as well as in several measures of anxiety and depression.

Between-group effect sizes were in favour of CBT, ranging from 0.21 (IIP) to 1.19 (PSWQ). For the STAI and PSWQ the differences between treatments were significant in favour of CBT. This is consistent with the reported results at postassessment and 6-month follow-up.<sup>8</sup> These results may suggest that the outcome of STPP in GAD may be further optimized by employing a stronger focus on the process of worrying. In psychodynamic psychotherapy worrying can be conceptualized as a mechanism of defense that protects the subject from fantasies or feelings that are even more

threatening than the contents of his or her worries.<sup>17</sup> The specificity of pathological worry in GAD, however, has been questioned by several authors.<sup>25,26</sup> Further, it is unclear whether worry exposure is necessary to achieve general improvement in GAD.<sup>27</sup>

The results of our study are consistent with other well-controlled treatment studies of CBT in GAD, which reported large effect sizes for anxiety and worrying that were stable or tended to improve at 1-year follow-up.<sup>28,29</sup>

As a limitation, our study was not sufficiently powered for an equivalence trial.<sup>30</sup> This is true for many studies of (psychodynamic) psychotherapy as well.<sup>31</sup> For STPP, stability of outcome was shown for the first time. Further studies are required to confirm the results.

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**Résumé : Effets à long terme de la psychothérapie psychodynamique à court terme et de la thérapie cognitivo-comportementale dans le trouble d'anxiété généralisée : suivi à 12 mois**

**Objectif :** Dans un essai randomisé contrôlé (ERC) précédent, l'efficacité à court terme de la thérapie cognitivo-comportementale (TCC) et de la psychothérapie psychodynamique à court terme (PPCT) dans le trouble d'anxiété généralisée (TAG) a été démontrée. Dans cet article, la stabilité à long terme de ces effets sera examinée. Les effets de la TCC et de la PPCT seront comparés.

**Méthode :** Dans l'ERC original, les patients souffrant du TAG ont été traités avec soit la TCC (n = 29), soit la PPCT (n = 28). Les traitements ont été effectués conformément aux manuels et comprenaient jusqu'à 30 séances. Comme principale mesure des résultats, l'échelle d'anxiété de Hamilton a été utilisée. Outre les résultats à court terme précédemment rapportés, les effets du traitement ont été évalués 12 mois après la fin du traitement.

**Résultats :** La TCC et la PPCT ont produit de grandes améliorations au suivi de 12 mois. Aucune différence significative n'a été observée entre les traitements pour ce qui est de la principale mesure des résultats. Ce résultat a été corroboré par 3 mesures d'anxiété autodéclarées. Cependant, dans les mesures d'anxiété trait et d'inquiétude, la TCC était supérieure. Quant à la dépression, les différences déclarées post-traitement n'étaient plus significatives au suivi de 12 mois.

**Conclusions :** Dans le TAG, la TCC et la PPCT produisent toutes deux des effets importants et stables, 12 mois après le traitement. À l'égard de l'anxiété trait et de l'inquiétude, la TCC semble être supérieure. Pour la PPCT, il faudrait mener d'autres études pour confirmer les résultats.

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