

Treatment of Social Anxiety Disorder and Avoidant Personality Disorder in Routine Care: A Naturalistic Study of Combined Individual and Group Therapy

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Keywords

Effectiveness · Group therapy · Social phobia · Avoidant personality disorder

Abstract

Background: Cognitive behavioral therapy (CBT) in a group or individual format has proven effective for treating social anxiety in numerous randomized controlled trials. Studies in routine care are rare and focus exclusively on social anxiety disorder (SAD). Findings for avoidant personality disorder (AVPD) are missing. The current effectiveness study evaluates a combination of group and individual CBT for patients with SAD with or without AVPD. **Methods:** One hundred and five patients diagnosed with SAD with or without comorbid AVPD completed a combination of group and individual CBT. We administered outcome measures prior to individual therapy, prior to group therapy, after group therapy, and after individual therapy. **Results:** Patients experienced a strong decline in social anxiety symptoms ($d = 1.1$), depression ($d = 1.0$), and general mental distress ($d = 1.1$). They also showed a large increase in self-efficacy ($d = 1.1$). Descriptively, the largest decreases in social anxiety occurred during the group treatment. Controlling for pretreatment severity and depression, a comorbid diagnosis of AVPD was not associated with symptom improvement during treatment. **Discus-**

sion: The results of the combined treatment were comparable to those of other effectiveness studies. Group treatment seemed to accelerate change in social fears. Patients with AVPD showed the same average improvements as patients without comorbid AVPD. © 2019 S. Karger AG, Basel

Die Behandlung der sozialen Angststörung und ängstlich-vermeidenden Persönlichkeitsstörung in der Versorgung: eine naturalistische Studie zu einer kombinierten Einzel- und Gruppentherapie

Schlüsselwörter

Effectiveness · Gruppentherapie · Soziale Phobie · Ängstlich-vermeidende Persönlichkeitsstörung

Zusammenfassung

Hintergrund: Eine Vielzahl von randomisiert-kontrollierten Studien belegen die Wirksamkeit der kognitiven Verhaltenstherapie (KVT) für soziale Ängste. Die Wirksamkeit der KVT unter Routinebedingungen wurde allerdings seltener untersucht. In den wenigen naturalistischen Studien werden Ergebnisse ausschließlich für die soziale

Angststörung (SAS) berichtet. Befunde für die ängstlich-vermeidende Persönlichkeitsstörung (ÄVPS) stehen noch gänzlich aus. Die vorliegende Studie untersucht die Wirksamkeit einer kombinierten Gruppen- und Einzeltherapie für SAS und ÄVPS in der Routineversorgung. **Methode:** Einhundert und fünf Patient*innen mit SAS, von welchen 36% komorbid mit ÄVPS diagnostiziert waren, nahmen an einer Kombination aus Gruppen- und Einzeltherapie teil. Die Patient*innen füllten zu Beginn der Einzeltherapie, vor der Gruppentherapie, nach der Gruppentherapie und am Ende der Einzeltherapie Fragebögen aus. **Ergebnisse:** Die Behandlung führte zu einer starken Verbesserung sozialängstlicher Symptome ($d = 1,1$), zu einer Verringerung depressiver Symptome ($d = 1,0$) und allgemeiner psychischer Beschwerden ($d = 1,1$) sowie zu einem starken Anstieg der Selbstwirksamkeit ($d = 1,1$). Während der Gruppentherapie nahmen die sozialen Ängste am stärksten ab. ÄVPS war kein signifikanter Prädiktor für den Therapieerfolg. **Diskussion:** Die Effektstärken der kombinierten Behandlung sind mit denen anderer Studien in der Routineversorgung vergleichbar. Patient*innen mit ÄVPS erlebten ähnliche Therapieerfolge wie Patient*innen ohne ÄVPS.

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Introduction

Social anxiety disorder (SAD) is one of the most common mental disorders in Western countries. Lifetime prevalence rates vary between 6.6 and 12.1% in Europe and North America [Fehm et al., 2005; Kessler et al., 2005]. Closely related in concept and therefore highly comorbid with SAD is avoidant personality disorder (AVPD). Its co-occurrence with generalized SAD is estimated to range between 40 and 88%. There is ongoing debate regarding the question whether AVPD and SAD are qualitatively different phenomena. Many studies support the continuum hypothesis, where AVPD and SAD are considered to be expressions of the same underlying construct (social anxiety), with AVPD depicting the more severe form, being associated with more pronounced impairments in all areas of functioning [e.g., Bögels et al., 2010]. Other studies focus on specific features that are characteristic of patients with AVPD but not of patients with SAD [e.g., emotional guardedness: Marques et al., 2012]. It seems that the delineation of SAD and AVPD largely depends on how broadly one defines the construct of social anxiety. Broader definitions of social anxiety (including its impact on self-perception and relation to others) support the continuum hypothesis, whereas narrower understandings of social anxiety favor the notion of qualitative differences between AVPD and SAD [for a more detailed discussion, see Weinbrecht et al., 2016].

Cognitive behavioral therapy (CBT) is a well-established psychological treatment for SAD. Recent meta-analyses report effect sizes from randomized controlled trials of $d = 0.70$ – 1.19 compared to waitlist control [Acarturk et al., 2009; Mayo-Wilson et al., 2014; Barkowski et al., 2016]. For AVPD, empirical evidence on treatment outcome is more limited as trials on the treatment of SAD often do not depict outcomes for individuals with (comorbid) AVPD separately. Some studies investigated whether a comorbid diagnosis of AVPD dampens the effects of CBT for SAD in that individuals with AVPD report less benefit from treatment. The majority found no such association [Brown et al., 1995; Hope et al., 1995; Feske et al., 1996; van Velzen et al., 1997; Scholing and Emmelkamp, 1999; Huppert et al., 2008; Borge et al., 2010]. Two studies found poorer outcomes for individuals with comorbid AVPD on at least some outcome measures [Chambless et al., 1997; Oosterbaan et al., 2002]. In addition, some trials have been conducted with a focus on the treatment of AVPD alone reporting moderate to large reductions in social anxiety symptoms and moderate remission rates for the diagnosis of AVPD [Renneberg et al., 1990; Emmelkamp et al., 2006; Strauss et al., 2006; Rees and Pritchard, 2015].

CBT for SAD and AVPD can be applied in a group or in an individual format. There is a lively ongoing debate as to which treatment format is preferable for socially anxious patients [Aderka, 2009]. Each format has its advantages. Group therapy activates mechanisms of change that are unique to the group setting: cohesion, sharing of information, learning from each other, and universality of suffering [Fiedler, 2005]. These may enhance the effects of cognitive behavioral interventions. In addition, group therapy sessions provide ongoing exposure for socially anxious patients. Individual therapy, on the other hand, guarantees more time for the detailed exploration of the individual's specific beliefs and the design of individually tailored behavioral experiments. Also, some authors argue that the social situation of a group therapy session can be too anxiety-provoking for some patients and therefore hinder the learning process [Stangier et al., 2003]. So far, only one study has examined a combination of group and individual therapy. Olivares-Olivares et al. [2008] found that adding individual sessions improved the effect of a group treatment for socially anxious youths. Thus, it seems possible that combining group and individual treatment may be a valuable option for individuals suffering from social anxiety.

While the evidence for the efficacy of CBT is robust for SAD, and to a smaller degree also for AVPD, data on the effectiveness of these treatments in routine clinical practice are rarer. Effectiveness studies are important to establish how well a treatment performs in real-life settings. In order to maximize external validity, effectiveness studies apply fewer inclusion criteria (e.g., do not exclude certain comorbidities), do not apply manuals or do not control adherence

to manuals, and make no restraints regarding spacing and amount of sessions. Four trials in SAD evaluated the generalizability of the effects of randomized controlled trials to routine care. They all found moderate to large decreases in social anxiety ($d = 0.7-1.0$) [Lincoln et al., 2003; Gaston et al., 2006; McEvoy, 2007; Crecelius and Hiller, 2014]. All of these studies applied only few exclusion criteria. Three of them used recruitment procedures similar to routine care. Three applied a manual. Recently, Hoyer et al. [2017] have reported results of a study in routine care where 77 patients showed large decreases in social anxiety. However, it should be noted that procedures and exclusion criteria in this trial were very similar to those of randomized controlled trials, so that findings may not depict the reality in routine care.

So far, none of the effectiveness trials have evaluated the impact of a comorbid diagnosis of AVPD. It remains unclear whether severely impaired patients benefit from routine-care CBT to the same degree as less severely impaired patients. Furthermore, previous effectiveness studies all evaluated either group or individual therapy. The current trial evaluated a combination of individual and group treatment. The study followed a naturalistic, uncontrolled design, aiming to assess how individuals improve during participation in a combined treatment approach in routine clinical practice. We describe change rates at different treatment periods (individual therapy, group therapy, further individual therapy) to get an impression of when changes occur. As this study was conducted in routine care, we did not directly compare the combined treatment with other treatment formats. The influence of a comorbid diagnosis of AVPD on symptom improvements during treatment is considered.

Methods

Participants and Procedure

The study was conducted at a German university-based psychotherapeutic outpatient clinic. In this clinic, licensed cognitive behavioral therapists treat adult patients. The treatment is covered by health insurance companies. After an initial intake interview, patients undergo the Structured Clinical Interview for DSM-IV (SCID) Axis I and Axis II disorders [Fydrich et al., 1997; Wittchen et al., 1997], conducted by trained and supervised Master-level psychology students.

For the current study, patients with a primary diagnosis of SAD or AVPD were invited to take part in a standardized group treatment in addition to their individual therapy. Individual therapists decided for whom the additional group treatment seemed suitable and explained the benefits of the combined approach. Patients started with individual therapy and were then invited to the next available group treatment. After 6 weeks of group therapy, patients continued and concluded their individual therapy. We analyzed the data of all patients undergoing the combined treatment approach between January 2010 and November 2016. We applied no specific inclusion or exclusion criteria for the current study.

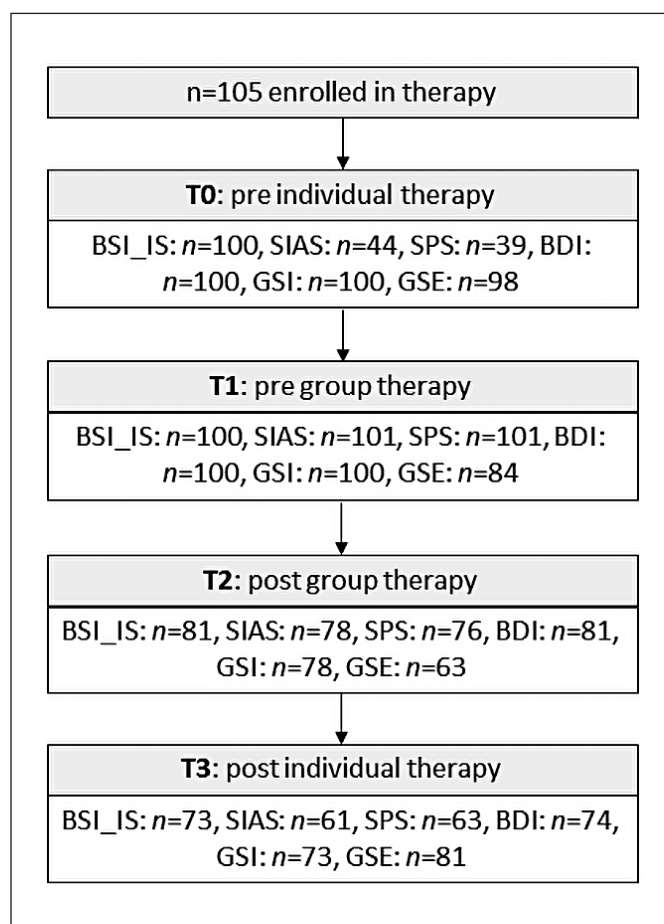


Fig. 1. Patient flow and number of completed questionnaires at each assessment point. BDI, Beck Depression Inventory; BSI_IS, interpersonal sensitivity subscale of the Brief Symptom Inventory; GSE, General Self-Efficacy Scale; GSI, Global Severity Index; SIAS, Social Interaction Anxiety Scale; SPS, Social Phobia Scale.

Figure 1 depicts the patient flow. A total of 105 patients were enrolled in the combined treatment. Of these, 5 (4.8%) failed to complete the primary outcome measure at pre-assessment, 7 (6.7%) did not complete the primary outcome measure prior to group treatment, and 26 (24.8%) and 32 (30.5%) failed to complete the primary measure post group and post individual treatment, respectively. Attrition rates on other questionnaires were higher (Fig. 1), which was due to organizational problems at the beginning of the study. For 4 participants, information on the SCID interview was not available. At the time of data analysis, 16 patients (15%) were still in individual therapy, having completed an average of 39.7 sessions ($SD = 8.4$). Seventy-nine patients (75%) had completed therapy with an average of 35.2 ($SD = 20.6$) individual sessions. Ten patients (10%) had discontinued individual treatment after an average of 29.0 ($SD = 13.3$) sessions. Only two patients had terminated the group program prematurely. Discontinuation of group therapy had no consequence on individual therapy. Averaging across all patients at the time of data analysis, patients had received 36 h of individual therapy ($SD = 18$).

Fifty-five percent of the patients were female. Mean age was 34 years ($SD = 9$). The majority of participants was highly educated. Thirty patients (35.3%) had finished college and nearly half of them had a university degree (47.1%). Only 20% of our patients were in a relationship at the beginning of the study.

Table 1. Mean change in outcome measures

	Overall change			Pre individual to pre group			Pre group to post group			Post group to post individual		
	M (SE)	<i>p</i>	<i>d</i> [95% CI]	M (SE)	<i>p</i>	<i>d</i> [95% CI]	M (SE)	<i>p</i>	<i>d</i> [95% CI]	M (SE)	<i>p</i>	<i>d</i> [95% CI]
BSI-IS	-0.93 (0.09)	<0.001	-1.08 [-1.35, -0.80]	-0.15 (0.09)	0.085	-0.18 [-0.38, 0.03]	-0.50 (0.09)	<0.001	-0.57 [-0.79, -0.35]	-0.28 (0.09)	0.001	-0.38 [-0.61, -0.15]
SPS	-15.16 (2.17)	<0.001	-0.98 [-1.33, -0.63]	-2.05 (1.91)	0.283	-0.15 [-0.42, 0.12]	-8.30 (1.15)	<0.001	-0.81 [-1.06, -0.56]	-4.82 (1.41)	0.001	0.37 [0.15, 0.59]
SIAS	-15.96 (1.83)	<0.001	-1.19 [-1.6, -0.78]	-1.57 (1.48)	0.286	-0.15 [-0.41, 0.12]	-8.28 (0.94)	<0.001	-0.93 [-1.19, -0.68]	-6.11 (1.47)	<0.001	-0.51 [-0.75, -0.27]
GSI	-0.55 (0.05)	<0.001	-1.11 [-1.37, -0.85]	-0.11 (0.06)	0.048	-0.22 [-0.45, 0.02]	-0.30 (0.06)	<0.001	-0.60 [-0.82, -0.38]	-0.14 (0.05)	0.008	-0.35 [-0.6, -0.09]
BDI-II	-11.31 (1.11)	<0.001	-1.01 [-1.29, -0.74]	-3.45 (0.86)	<0.001	-0.41 [-0.62, -0.2]	-5.47 (0.83)	<0.001	-0.74 [-0.96, -0.51]	-2.39 (1.27)	0.060	-0.23 [-0.48, 0.01]
GSE	5.32 (0.56)	<0.001	1.13 [0.84, 1.43]	-0.22 (0.42)	0.603	-0.05 [-0.25, 0.14]	3.54 (0.51)	<0.001	0.76 [0.51, 1.01]	2.00 (0.63)	0.001	0.43 [0.16, 0.69]

Taking Bonferroni correction into account, only differences with $p < 0.003$ (piecewise model) and $p < 0.008$ (overall mean change) were considered statistically significant. Statistically significant results are highlighted in bold. BDI-II, Beck Depression Inventory II; BSI-IS, interpersonal sensitivity subscale of the Brief Symptom Inventory; CI, confidence interval; GSE, General Self-Efficacy Scale; GSI, Global Severity Index of the Brief Symptom Inventory; M, mean change between the corresponding assessment points (means can be interpreted as change in units of the questionnaire's scale); pre individual, before individual therapy; pre group, before group therapy; post individual, after individual therapy; post group, after group therapy; SE, standard error; SIAS, Social Interaction Anxiety Scale; SPS, Social Phobia Scale.

Thirty-six percent of the patients fulfilled the diagnostic criteria of AVPD. More than half of the participants (55%) fulfilled the criteria for any other current axis I disorder. The most common comorbid conditions were depressive disorders and other anxiety disorders. We compared patients who had discontinued therapy to those who had completed treatment. Patients who had dropped out of treatment were significantly younger than patients who had remained in the intervention ($t(16.89) = -2.61$, $p = 0.02$), but did not differ on any other demographic or clinical variable (all p values >0.28) or outcome measure (all p values >0.30) at baseline.

Interventions

Individual Therapy. Treatments followed the principles of CBT for SAD but were not manualized. Comorbid complaints were also addressed during individual treatment.

Group Therapy. Group therapy sessions followed a manual developed for the use in the outpatient clinic. The manual incorporates principles of cognitive therapy [Stangier et al., 2009], CBT group therapy [Heimberg and Becker, 2002], and intensive therapy for AVPD [Renneberg et al., 1990]. Group sessions were conducted by two trained CBT therapists. Groups comprised 3–6 patients. Treatment started with an intensive 2-day treatment, which was followed by five weekly sessions of 2.5 h. During the first day, participants developed an individual cognitive model of their social fears, highlighting the role of a negatively biased self-perception in social situations. Participants conducted role-plays with video feedback. The second day of the treatment was dedicated to behavior experiments on the role of safety behaviors and self-focused attention. Participants created a hierarchy of anxiety-provoking situations. The third session (2.5 h) focused on negative automatic thoughts and their role in maintaining social fears. Patients developed alternative, helpful thoughts and tested their influence on social anxiety in role-plays. The fourth session was dedicated to behavior experiments on pre-event processing. The role of post-event processing was discussed. The fifth session focused on bodily symptoms of social anxiety. In role-plays, patients deliberately increased or tried to increase bodily symptoms and noticed how this affected their social fears. In the sixth session, patients conducted role-plays on relevant standard social situations (e.g., making small talk at a party). The seventh session focused on relapse prevention. Homework assignments with a specific focus on conducting behavioral experiments were developed for each patient at the end of each session.

Outcome Measures

Questionnaires were administered prior to individual treatment, prior to group treatment, after group treatment, and at the end of individual treatment.

As primary outcome measures, we chose the interpersonal sensitivity subscale of the Brief Symptom Inventory (BSI-IS) [German version: Franke, 2000] because it was available for most of the participants. The BSI-IS assesses feelings of inadequacy and embarrassment in social situations with four items on a 5-point rating scale (0–4). For psychotherapy patients, the BSI-IS showed good psychometric properties and high correlations with other social phobia scales [Geisheim et al., 2002]. As secondary outcomes for changes in social anxiety, we assessed fear of social performance situations with the Social Phobia Scale (SPS) and fear of interaction situations with the Social Interaction Anxiety Scale (SIAS) [German version: Stangier et al., 1999]. Depressive symptoms were measured using the Beck Depression Inventory II (BDI-II) [German version: Hautzinger et al., 2000]. In addition, we assessed self-efficacy with the 10-item General Self-Efficacy Scale (GSE) [Jeru-

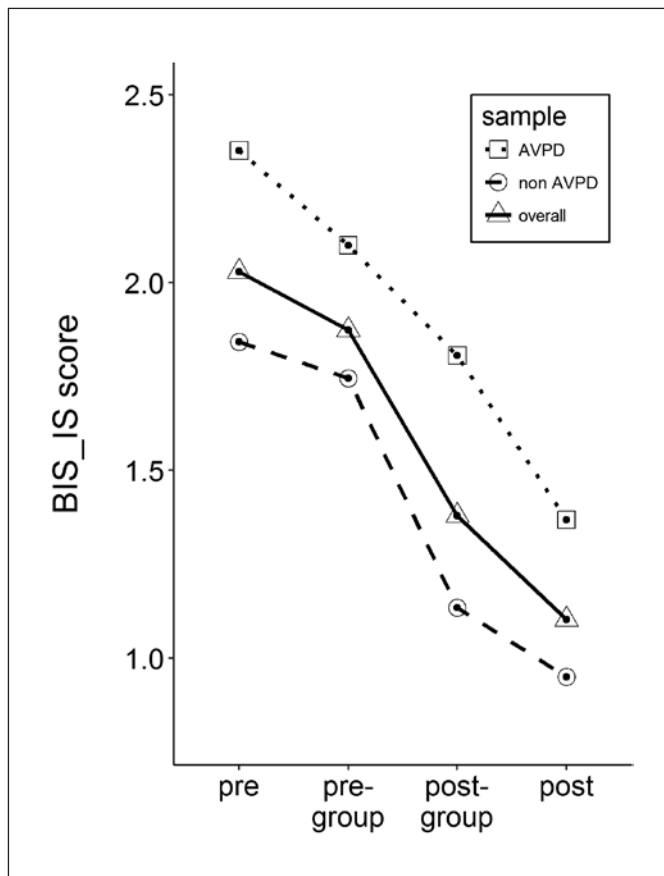


Fig. 2. Unconditional means of BIS_IS scores for the total sample and individuals with and without AVPD at every assessment point. AVPD, avoidant personality disorder; BIS_IS, interpersonal sensitivity subscale of the Brief Symptom Inventory; pre, before individual therapy; pre-group, before group therapy; post-group, after group therapy; post, after individual therapy.

salem and Schwarzer, 1986] and general psychological distress with the Global Severity Index (GSI) of the BSI [Franke, 2000].

Statistical Analyses

Rates of mean change between adjacent assessment points (pre individual therapy, pre group therapy, post group therapy, post individual therapy) were investigated using single-indicator latent change (LC) score models [Newsom, 2015]. Overall, the LC approach is similar to calculate ANOVAs/*t* tests [Coman et al., 2013]. However, the LC approach eases the inclusion of multiple imputed data sets as well as taking clustering into account. First, overall change was investigated considering only the first and last measurement occasions. Second, we estimated piecewise change-score models considering the four assessment points, which allowed us to take discontinuous trajectories of change into account. Nesting of individuals within treatment groups between the second and third measurement occasion (28 groups, average cluster size 3.75) was considered by correcting the standard errors for non-independence using the TYPE = COMPLEX function as implemented in Mplus [Asparouhov, 2004; Muthén and Muthén, 2011]. The estimated models are fully saturated. Therefore, no information regarding model fit is available.

Missing data were dealt with using multiple imputation under the assumption that data were missing at random. Multiple impu-

tation was performed using mice as implemented in R [van Buuren and Groothuis-Oudshoorn, 2011]. One hundred data sets were imputed (40 iterations) using all outcome variables in addition to age, sex, and the diagnosis of AVPD and depression as auxiliary variables. All reported results (mean change, regression weights, rates of improvement and recovery) are pooled estimates across all imputed data sets [Enders, 2010].

Since several outcome measures were considered, the alpha level was corrected for multiple comparisons. Within the pre-post overall comparisons, only differences with $p < 0.008$ were considered significant ($0.05/6$ outcome measures). For the piecewise model, only mean change scores with $p < 0.003$ were considered statistically significant ($0.05/6$ outcomes $\times 3$ change scores per outcome).

To investigate the effect of AVPD on symptom change, we performed a multiple regression analysis with BIS_IS change scores as the dependent variable. To control for initial symptom severity and the presence of comorbid depression, BIS_IS baseline scores and diagnosis of a depressive disorder were entered simultaneously.

Furthermore, rates of clinical change were determined for the three social anxiety measures. We applied the Reliable Change Index to determine reliable improvement and criterion “c” to define recovery [Jacobson and Truax, 1991]. A change ≥ 0.31 for the BIS_IS, ≥ 8 for the SPS, and ≥ 9 for the SIAS indicated reliable improvement. Regarding the cutoff score for formula “c,” participants with post scores < 0.67 on the BIS_IS, < 21 on the SPS, and < 31 on the SIAS were classified as “recovered.”

All analyses were performed using Mplus 8 [Muthén and Muthén, 2011], R, and SPSS 24.

Results

Table 1 depicts mean changes, standard errors, and effect sizes for all outcome measures from pre- to post-treatment as well as for changes between the four assessment points (means and standard deviations for all outcome measures can be obtained from the first author upon request).

Change in Social Anxiety

On our primary outcome measure BIS_IS, a statistically significant decline during the combined treatment was observed ($d = -1.08$). With respect to changes during the different treatment periods, BIS_IS scores did not significantly decline prior to receiving group therapy ($d = -0.18$). BIS_IS scores significantly declined during group therapy ($d = -0.57$) as well as in the following individual treatment sessions ($d = -0.38$). Figure 2 depicts the means of the BIS_IS at each measurement occasion. The pattern of mean changes on both additional social anxiety scales (SIAS, SPS) was comparable. Overall improvements throughout the whole treatment were large (SIAS: $d = -1.19$; SPS: $d = -0.98$). Again, there was no significant decline in social anxiety symptoms on SIAS ($d = -0.15$) and SPS ($d = -0.15$) before the group treatment, but symptoms significantly declined during (SIAS: $d = -0.93$; SPS: $d = -0.81$) as well as after group treatment (SIAS: $d = -0.51$; SPS: $d = -0.37$).

Table 2. Study characteristics and intention-to-treat effect sizes of previous effectiveness studies

	Current study	McEvoy [2007]	Creelius and Hiller [2014]	Lincoln et al. [2003]	McCarthy et al. [2013]	Gaston et al. [2006]	Hoyer et al. [2017]
N	105	153	144	217	252	54	77
Terminated treatment	11%	18%	33%	8%	6%	7%	28%
Missing values	31%	n/a	6%	19%	20%	30%	20–25%
Treatment dosage**	63	28	33	n/a	35	25	25
Within ES social anxiety	1.1	0.7–0.8	0.9	0.7*	0.9–1.0	0.7–0.8*	1.1–1.7
Within ES depression	1.0	0.7		0.5*	1.0		1.1
Within ES general mental distress	1.1		0.3				

ES, effect size. * Intention-to-treat effect sizes cited according to McEvoy [2007]. ** Average number of sessions.

Change in Secondary Outcomes

We examined changes in self-efficacy (GSE), general psychological distress (GSI), and depressive symptoms (BDI-II). A statistically significant decline during the combined treatment was observed (see Table 1 for details), with large effect sizes from pre- to post-therapy observed for all outcome measures (self-efficacy: $d = 1.13$; psychological distress: $d = -1.11$; depression: $d = -1.01$).

Self-efficacy did not change significantly during the first period of receiving individual therapy ($d = -0.05$), but increased significantly during group treatment ($d = 0.76$) as well as during the individual sessions following group treatment ($d = 0.43$). Depressive symptoms declined significantly in the first period ($d = -0.41$) as well as during the group treatment ($d = -0.74$), but not after the group treatment ($d = -0.23$). Global psychological distress only declined during the group treatment ($d = -0.60$).

The Role of AVPD

Figure 2 depicts changes of social anxiety for the group of patients with AVPD and the group without comorbid AVPD (means and standard deviations can be obtained from the first author upon request). As expected, symptom scores were consistently higher for the group with AVPD.

To evaluate whether the diagnosis of AVPD is associated with less favorable symptom development throughout the intervention, overall change scores as well as change during the different treatment periods were regressed on baseline symptom severity, on the diagnosis of a depressive disorder, and on AVPD. Overall change from pre- to post-assessment was only associated with initial symptom severity (BSI-IS; $b = -0.63$, $SE = 0.09$, $p < 0.001$), indicating that higher social anxiety at pre-assessment was associated with more overall symptom decrease. AVPD and affective disorder did not significantly predict overall change from pre- to post-assessment (AVPD: $b = 0.19$, $SE = 0.14$, $p = 0.20$; depression: $b = 0.22$, $SE = 0.14$, $p = 0.19$). Moreover, AVPD and depressive disorder did not predict change during the different treatment periods (AVPD: all $b < 0.35$, all $p > 0.12$; depression: all $b < 0.25$, all $p > 0.08$).

Clinical Change

On the BSI-IS, 73% of the participants showed clinically reliable improvement at post-assessment (72 and 68% on the SIAS and SPS, respectively). Four to six patients (4–6%) showed reliable deterioration; 34% of the participants were classified as recovered (48/66% on the SIAS/SPS), and 28% of the participants met the criteria for clinical change (improved and recovered; 42/50% on the SIAS/SPS).

Maintenance of Treatment Effects

Twelve months after treatment termination, patients were contacted by mail and asked to fill in primary and secondary outcome measures. A subsample of 29 patients (39.7%) returned questionnaires.

A paired t test from post- to follow-up assessment showed that there were no significant changes for the BSI-IS (mean change = 0.16, $t(28) = 1.49$, $p = 0.15$, $d = 0.17$). Similarly, on both additional social anxiety questionnaires SPS (mean change = 0.60, $t(19) = 0.45$, $p = 0.66$, $d = 0.05$) and SIAS (mean change = 1.69, $t(20) = -0.65$, $p = 0.52$, $d = 0.10$), symptoms did not change significantly. Thus, for this small sample, the average symptom load remained stable after treatment. There were also no significant post to follow-up differences for self-efficacy (mean change for GSE = -0.07 , $t(29) = -0.10$, $p = 0.92$, $d = -0.01$), depressive symptoms (mean change for BDI-II = 0.93, $t(28) = 0.76$, $p = 0.46$, $d = 0.09$), and general symptom severity (mean change for GSI = 0.12, $t(28) = 2.06$, $p = 0.05$, $d = 0.20$).

Discussion

This study aimed at providing a first estimate of how patients benefit from a combined treatment of group and individual therapy for SAD and AVPD. This was a naturalistic study, including patients seeking treatment for social fears. Patients undergoing the combined treatment format showed a large decline in social anxiety symp-

toms. Table 2 summarizes the effect sizes of the present trial and previous effectiveness studies for SAD. The observed within-group effect estimates in the current study compare well to the effects of prior studies applying either group or individual treatment. The patient characteristics of the current trial were comparable to those of previous effectiveness studies. Initial symptom load indicated that our sample was not more or less severely impaired than other samples in routine care. A large proportion of our patients was highly educated, which is, however, typical in university-based clinics [Crecelius and Hiller, 2014].

The treatment dosage in the current study was considerably higher than in other effectiveness studies (Table 2). On average, patients completed 36 h of individual therapy plus 28 h of intensive group therapy. Receiving 30–40 sessions of individual CBT is the average at German outpatient clinics [Schindler and Hiller, 2010; Jacobi et al., 2011; Crecelius and Hiller, 2014]. In line with the dose-effect model of psychotherapy [Lambert et al., 2001], the higher treatment dosage in the current study seemed to improve change rates. Crecelius and Hiller [2014] as well as Lincoln et al. [2003] reported improvement rates of 56%, whereas 73% of the participants in the present study experienced reliable improvement post treatment.

Taken together, the results of the current study show that individuals benefit from combined treatment in a routine care setting. Preliminary results in a small subsample of patients also suggest that the average symptom load remains low after completion of treatment.

Descriptively, the largest decrease in social anxiety symptoms occurred during the group treatment. In the current naturalistic study, we did not control for sequence effects so that the effect of group treatment cannot be dismantled. Still, our descriptive findings may indicate that individuals participating in a combined treatment show the largest symptom improvements during the structured and focused group approach. In fact, social anxiety declined significantly only after the start of group therapy. Only depressive symptoms declined significantly before the onset of group therapy. This finding is in line with a more general model of psychotherapy. The phase model of psychotherapy suggests that remoralization or increase in subjective well-being occurs before change in targeted symptoms [Howard et al., 1993].

Patients also showed a large increase in self-efficacy, which improved significantly after the start of group treatment and in the following individual therapy sessions. Gallagher et al. [2013] also found that self-efficacy increased more in later periods of treatment. They attributed this to the experience of mastery in exposure exercises. Our applied group treatment puts great emphasis on engaging patients in in-session exposure and behavioral experiments. This may have increased their perception of control and mastery and thereby their self-efficacy [Bandura, 1997].

On a descriptive level, it seemed that not all patients showed the same amount of symptom reductions during the group treatment. While patients with a comorbid diagnosis of AVPD achieved similar overall change across the whole treatment, they showed less steep change rates during group treatment than patients without AVPD (Fig. 2). However, when exploring the influence of AVPD in a predictor analysis, results revealed no significant impact of AVPD on symptom change during treatment, neither in individual nor during group treatment. This finding is in line with the majority of previous studies (see Introduction) which showed that a comorbid diagnosis of AVPD had no detrimental effect on treatment outcome. In our study, the more severely impaired patients with AVPD achieved a change similar to that in patients without a comorbid diagnosis of AVPD.

Limitations

The first and major limitation of the current study is the lack of a control group. Albeit a common shortcoming in routine care studies, the lack of a comparison group precludes us from drawing definite conclusions on the relative efficacy of the treatment. At the same time, the achieved effect sizes are comparable to those of previous effectiveness studies and exceed those of waitlist comparison groups by far [$g = 0.1$; Steinert et al., 2017]. It therefore seems reasonable to conclude that the applied combination of group and individual treatment is more effective than no intervention in treating social anxiety in routine clinical practice. A more relevant limitation of the current design is the lack of an active comparison group. To estimate the relative benefit of adding a group program to individual therapy, a direct comparison to individual therapy only is needed. Future research should investigate this question in a randomized controlled design.

Another limitation, also often associated with naturalistic studies, is the high proportion of individuals not completing questionnaires. About 30% of our participants failed to provide post-assessment data. This is within the range of previous studies, but rather on the high end. In order to ensure that our handling of missing data did not lead to biased results, we conducted a completer analysis that revealed similar main findings (results can be obtained from the first author upon request). Dropout rates, in contrast, were low in the current study. Only 11% of the patients discontinued treatment, which is noticeable regarding the long length of treatment. A problem specific to the current study was the high proportion of individuals not receiving disorder-specific questionnaires (SIAS and SPS) at pre-assessment, a failure in the initial organization at the outpatient clinic. Therefore, results on SPS and SIAS should be interpreted with great caution. We used the BSI-IS as our primary measure, despite the fact that the assumed nine-factor structure of the BSI has only limited support

[Urbán et al., 2014]. Data from a psychotherapy outpatient population very similar to ours encouraged the use of the BSI-IS as a measure of social fears [Geisheim et al., 2002].

Another limitation of the naturalistic design of the study was that individual therapy was not standardized. While all patients received CBT, we have no information on the therapeutic contents of individual sessions. We assume that individual sessions covered, at least in part, contents similar to those of the group treatment (e.g., individual model of social anxiety). Effects of group therapy might partly be attributed to repetition of learning. Future studies should include a protocol on how many individual sessions are to be completed before entering group treatment. The protocol should also specify the therapeutic interventions of individual sessions. Furthermore, we do not have information on how many patients declined taking part in the additional group treatment.

Taken together, the current study shows that individuals experience a large reduction in social fears during CBT

in routine care. The results suggest that a combination of individual and group treatment is feasible and acceptable. At the same time, the current study revealed effect sizes comparable to those of previous effectiveness trials, albeit treatment dosage was considerably higher. Future studies should investigate how many sessions (of group or individual treatment) are needed to achieve acceptable change rates for different patient populations, including severely impaired patients.

Statement of Ethics

Patients were informed about the goal of the study and provided written consent.

Disclosure Statement

The authors declare no conflict of interest concerning this work.

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