

Group Climate Development in Brief Group Therapies:

A Comparison Between Cognitive-Behavioral Group Therapy and Group Psychotherapy for Social Anxiety Disorder

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Lokaverkefni til Cand. psych.-gráðu Sálfræðideild Heilbrigðisvísindasvið



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Table of Contents

Acknowledgement	i
Abstract	1
Introduction	2
Method	6
Participants	6
Treatments	6
Cognitive-behavioral group therapy	6
Group psychotherapy	7
Measures	7
The Group Climate Questionnaire – short form (GCQ-S)	7
Clinical Global Impression Scale for Social Anxiety Disorder (CGI)	8
Structured Clinical Interview for DSM-IV, Non-Patient Version (SCID)	8
Procedure	8
Statistical Analysis	8
Results	10
Baseline Profile	10
Overall Levels of Group Climate Variables	10
Engagement	11
Avoidance	13
Conflict	14
Discussion	15
References	18

Tables and Figures

Table 1. Background Variables, Clinical Characteristics and GCQ-S Scores of the Sample	10
Table 2. Fixed and Random Effect Estimates for Models of Engagement	12
Table 3. Fixed and Random Effect Estimates for Models of Avoidance	14
Figure 1. Group climate development in cognitive-behavioral group therapy (CBGT) and group psychotherapy (GPT)	,

Abstract

This study was designed to explore differences in group climate development between two brief group therapies, cognitive-behavioral group therapy (CBGT) and group psychotherapy (GPT), using multilevel growth curve analysis. Participants were 42 university students with a primary diagnosis of social anxiety disorder (SAD), randomly assigned to either of the two treatment conditions. Each group consisted of eight, weekly 2-hour sessions and members completed the Group Climate Questionnaire after each session. Similar patterns were found in both treatment conditions; engagement rose linearly throughout the sessions, avoidance decreased linearly, and conflict was overall low. The results support the hypothesis that brief group therapies (consisting of less than 10 sessions) will stay in the engagement phase of MacKenzie's four-stage developmental model. There was more avoidance and less conflict in the CBGT groups compared to GPT, reflecting the more dynamic and interactional nature of the latter treatment. Conflict was lower than reported in previous studies, which may be due to the SAD diagnosis of group members. Future directions involve studying interactions between group climate dimensions and treatment conditions as they relate to treatment outcome

Group climate refers to the general atmosphere in group therapy and is affected by how members behave and how they interact (McClendon & Burlingame, 2010). The therapeutic environment can be described along three dimensions which can positively or negatively affect group members: *engagement* which describes a trusting and caring working atmosphere and is related to Yalom's concept of cohesion (Yalom & Leszcz, 2005), *avoidance* of personal responsibility and difficult issues, and *conflict*, reflecting anger, rejection and distrust (MacKenzie, 1983).

MacKenzie (1997) has integrated various theories of how groups develop over time into a comprehensive four-stage developmental model. During the first stage, engagement, members engage in self-disclosure and a sense of membership and connectedness is established. Members realize the universality of their problems, and acceptance and hope is generated. At this time, the group leader should actively work on engaging members. The second stage, differentiation, is characterized by conflict and members begin differentiating themselves from one another. The atmosphere is confrontational and the task is to tolerate negative emotions and resolve conflicts. During the third stage, interpersonal work, the focus shifts from differences to a deeper exploration of individual and common issues. Fear of intimacy is challenged and group cohesion increases. At the final stage, termination, members deal with grief and how to cope in the outside world. According to MacKenzie and Livesley (1983), the stage model is especially useful for therapies consisting of 30 to 40 sessions, although the time frame can vary with factors such as members' characteristics, therapeutic context and leadership style.

Most of what has been written about group developmental models comes from the tradition of dynamic- and interpersonal group psychotherapy (Brabender, 2010). Group

psychotherapy capitalizes on group dynamics as an agent of change; relationship bonds are challenged, confrontation is encouraged and avoidance of personal matters discouraged. According to MacKenzie's (1997) developmental model, these groups can be described with: a) engagement following a cubic pattern, starting low but increasing rapidly, dropping during the differentiation stage but rising again during interpersonal work and staying high thereafter, b) avoidance being high in the beginning but decreasing throughout the treatment (although increasing somewhat during the differentiation stage due to conflict as well as during termination), and c) conflict having a quadratic pattern, being highest during the differentiation stage but relatively low during other stages (although conflict can occur at other stages). Conflict mirrors engagement to some degree, although the group can be engaged and in conflict simultaneously.

Group cognitive-behavioral therapy (CBT), in contrast to group psychotherapy, is highly structured and manualized. Its emphasis is on specific techniques, based on cognitive-behavioral models, such as cognitive restructuring and exposure (see e.g. Heimberg & Becker, 2002). Group leaders are responsible for the group work and for staying with the agenda, at the risk of members becoming passive in the group. Interpersonal issues such as conflict are managed but not specifically explored and group CBT has been criticized for overlooking the dynamic features of group therapy (Bieling, McCabe, & Antony, 2006). According to MacKenzie (1997), leaders in CBT groups make little use of the differentiation stage, and the general atmosphere in these groups is best described by the engagement phase.

Research on developmental stages in group psychotherapy has yielded mixed results.

Kivlighan and Jauquet (1990) found a similar developmental pattern in six personal growth groups: engagement did not follow the cubic pattern expected from MacKenzie's

model but increased linearly throughout the sessions, avoidance decreased linearly but did not show any stage specific fluctuations, and conflict followed the expected low-high-low pattern. In contrast, Kivlighan and Lilly (1997) found no consistent patterns across personal growth groups. However, therapeutic gain was highest in groups that followed a high-low-high developmental pattern of engagement, high-low-high-low for avoiding and low-high-low for conflict. Furthermore, growth patterns explained more variance in treatment outcome than did values at static time points, which supports the notion of analyzing the dynamic nature of group climate. Participants in the studies above were students enrolled in group process classes, fulfilling course requirements, and did not, therefore, constitute clinical samples.

Only a few studies have examined differences in group climate development between cognitive-behavioral versus group psychotherapy. Tasca, Balfour, Ritchie and Bissada (2006) compared group cognitive-behavioral therapy (GCBT) to group psychodynamic-interpersonal psychotherapy (GPIP) for female outpatients with a binge-eating disorder. They found that engagement increased linearly in GCBT but followed a more cubic pattern for members in GPIP by increasing during the first sessions, plateauing in the middle phase and increasing again during the final sessions. Avoidance decreased linearly in the GCBT group but remained stable for patients in GPIP. Conflict followed a decreasing linear slope in both groups although being on average lower in the GCBT group. Bonsaksen, Lerdal, Borge, Sexton, and Hoffart (2011) found a difference between cognitive group therapy (RCT) and interpersonal group therapy (RIPT) for patients with social anxiety disorder (SAD), in a residential program. Engagement increased linearly over time in RCT but followed an opposite trend in RIPT, decreasing linearly. Conflict showed a low-high-low pattern for all groups when outliers were removed but avoidance did not follow a specific pattern.

An important factor, which has not gained enough attention in previous studies, is treatment duration. As previously mentioned, MacKenzie and Livesley (1983) argued that the stage model is especially useful for therapies consisting of 30 to 40 sessions. While Kivlighan and Jauquet (1990) were close to that range with 26 sessions, the number of sessions varied from 14 to 26 sessions for Kivlighan and Lilly's (1997) groups, the duration of Tasca et al.'s (2006) groups was 16 sessions and only 10 in Bonsaksen et al.'s (2011) study. We contend that groups consisting of less than 10 to 15 sessions will not have transitioned past the first stage, engagement.

The present study was designed to explore differences in group climate development between two brief group therapies, cognitive-behavioral group therapy (CBGT) and group psychotherapy (GPT), for social anxiety disorder (SAD), using multilevel growth curve analysis. In a previous report on this randomized controlled trial, the treatments were shown to be equally credible and efficacious (see Bjornsson et al., 2011). Given that both treatment conditions consisted of only eight sessions, our first hypothesis was that the groups would stay in the first developmental stage, engagement, characterized by increasing engagement, decreasing avoidance and overall low conflict. Furthermore, within the engagement stage, we expected the group climate dimensions to differ between the two treatment conditions. Group dynamics are at the heart of GPT and members are encouraged to take responsibility for the therapy process and express how they perceive each other, and to explore how such feedback can be generalized to their lives outside the treatment context. In contrast, the group leaders in CBGT capitalize on cognitive restructuring and exposure in highly structured settings with little emphasis on group dynamics, at the risk of members becoming relatively passive and having to rely on the leader for direction. Based on these differences, we hypothesized that engagement and conflict would be higher and avoidance lower in GPT compared to CBGT.

Method

Participants

Participants were 42 students at the University of Colorado at Boulder (CU), recruited with university-based e-mail systems and on-campus fliers. Participants were 18 to 25 years of age and met DSM-IV criteria for SAD as a primary diagnosis (American Psychiatric Association, 2000). Exclusion criteria were the following: current suicidal ideation, receiving pharmacological or psychological treatment, diagnosis of a psychotic disorder, bipolar disorder, alcohol or substance dependence, or a primary diagnosis of a disorder other than SAD. Those attending less than three sessions were excluded from this report.

Treatments

Each treatment condition was delivered in eight weekly 2-hour group sessions. Each group consisted of five to seven participants and one therapist. Each therapist led both types of treatments with order of group leadership randomly assigned. All four therapists were advanced clinical psychology graduate students who had completed at least 1 year of therapy supervision and training. Therapists received intensive training in both interventions and were supervised by licensed therapists with extensive experience in supervising group therapies

Cognitive-behavioral group therapy. The main elements in CBGT are psychoeducation, exposure (both in sessions and in daily life) along with cognitive restructuring which is integrated with the exposures. A shorter version of Heimberg and Becker's (2002) treatment was used. The first two sessions consisted of a treatment rationale with emphasis on the cognitive-behavioral model of SAD. Participants confronted personally relevant fears in the group settings in sessions two to eight (where situations, such as making small talk at a party, were recreated in the group) with other members

participating as role-players or an audience. At the end of each session, members decided on personalized homework assignments (in-vivo exposures) with the therapist. Each participant's progress during treatment was reviewed during the final session and relapse prevention was discussed.

Group psychotherapy. GPT was based on Yalom and Leszcz's (2005) and adapted specifically to SAD. Group members were encouraged to take responsibility for the group process, share their views of one another and explore reactions to those comments and how others in the group view them. The group leaders' task was one of facilitating group process. During sessions, group members were asked to come up with personally relevant homework assignments but therapists were prohibited from suggesting specific tasks or use specific techniques such as cognitive restructuring. In the final session, each participant's progress during treatment was reviewed.

Measures

The Group Climate Questionnaire – short form (GCQ-S) is a 12-item, self-report measure of perceived group atmosphere, completed after each session (MacKenzie, 1983). The items are statements about the group as a whole, rated on a 7-point Likert scale ranging from 0 (not at all) to 6 (extremely). GCQ-S is divided into three subscales: engagement (5 items), conflict (2 items) and avoidance (4 items), plus a single item measure not used in our analysis (item 12). Engagement reflects a positive working atmosphere where members self-disclose, confront, care about and support one another. Conflict captures anger, distrust and rejection in the group and avoidance measures withdrawal and avoidance of personal responsibility for group work as well as dependence on the leader for direction. Internal consistency of GCQ-S subscales has been shown to be high, with Chronbach's alphas ranging from .85 to .91 (Kivlighan & Lilly, 1997). Somewhat different factor structures have been derived in different studies,

we chose the original structure (MacKenzie, 1983) as most authors in this literature have done (Bonsaksen et al., 2011; Kivlighan & Jauquet, 1990; Kivlighan & Lilly, 1997).

Clinical Global Impression Scale for Social Anxiety Disorder (CGI) is a clinical rating scale commonly used for assessing severity and improvement of SAD over time (Zaider, Heimberg, Fresco, Schneier, & Liebowitz, 2003). The scale has been shown to be a valid measurement of severity and improvement of SAD in clinical populations (Zaider et al., 2003).

Structured Clinical Interview for DSM-IV, Non-Patient Version (SCID) is a semi-structured interview used to measure current and lifetime DSM-IV defined axis I disorder such as SAD (First, Spitzer, Gibbon, & Williams, 1995). It has a good interrater and test-retest reliability with a median inter-rater kappa of .80 in one study (Zanarini et el., 2000).

Procedure

After initial phone screening, participants signed an informed consent and took part in a comprehensive baseline assessment. Those who met the inclusion criteria but none of the exclusion criteria (described above) were randomly assigned to either CBGT or GPT. Independent assessors (blind to treatment assignment) conducted all pre- and post-treatment assessment. Random sessions in both treatments were assessed for treatment integrity, which revealed excellent adherence to the treatment protocols (see Bjornsson et al., 2011).

Statistical Analysis

Since our data contained repeated measures within subjects, nested within treatment groups, we used multilevel growth curve models for our analyses. It also allowed us to model growth trajectories of the groups as well as individuals in the group climate dimensions over time and parse out interdependence of observations (Gelman & Hill,

2006). As an aid in forming the appropriate higher order polynomial regression models, we graphically inspected the profiles of individual participants over time, for each group and overall. Linear trends were evident, and possibly quadratic effects as well. However, we found little evidence of cubic trends and did therefore not consider cubic analyses.

In our three-level model, sessions (time) were first level units, individuals second level and therapy groups third level units. We ran analyses separately for each GCQ-S subscale with individuals and groups as random effects. To represent different trajectories for individuals and groups, growth curves (time) varied randomly between individuals and groups. For enhanced stability of the analyses, time was set to midpoint of therapy (session 4.5). Three models were tested: 1) GCQ-S Scale = Intercept + Condition, which gave the overall mean level across all sessions for each subscale as well as its interaction with treatment condition; 2) GCQ-S Scale = Intercept + Condition + Time + (Condition \times Time), adding linear trend (time) to the analysis with its interaction to treatment condition and; 3) GCQ-S scale = Intercept + Condition + Time + (Condition \times Time) + Time² + (Condition \times Time²), adding quadratic effect to the model as well as its interaction with treatment condition. Intraclass correlation (ICC) was derived from an unconditional intercept only model, giving proportion of GCQ-S variance that is between individuals and between groups.

Results

Baseline Profile

Background variables and comorbidity can be seen in Table 1. On average, participants in the CBGT group were marginally older (t(40) = 1.72, p = .09) and had more severe SAD at baseline (t(40) = 2.32, p = .03 for the CGI severity rating).

Table 1

Background Variables, Clinical Characteristics and GCQ-S Scores of the Sample

	CBGT $(n = 19)$	GPT (n = 23)
Sex (% female)	8 (42.1%)	11 (47.8%)
Race (% white)	16 (84.2%)	21 (91.3%)
Generalized SAD	18 (94.7%)	18 (78.3%)
Current MDD or dysthymia	4 (21.1%)	3 (13.0%)
Current comorbid anxiety disorder	3 (15.0%)	3 (13.0%)
Current comorbid disorder	7 (36.8%)	7 (30.4%)
Severity (CGI)	5.2 (0.77)	4.7 (0.65)
Age	20.2 (1.93)	19.4 (1.12)
Engagement	4.0 (0.97)	4.3 (0.88)
Avoidance	2.4 (0.93)	1.7 (0.96)
Conflict	0.0 (0.05)	0.2 (0.35)

Note. CBGT, cognitive-behavioral group therapy; GPT, group psychotherapy. Percentage or standard deviations are reported in parentheses. "MDD" stands for major depressive disorder; and "Current comorbid disorder" refers to those who met criteria for axis I disorders other than SAD at baseline. GCQ-S scores are averaged over all sessions for each treatment condition.

Overall Levels of Group Climate Variables

Averaging over all sessions, members perceived their group as engaged, somewhat avoidant and with very little conflict, according to the GCQ-S criteria (see Table 1 and Figure 1).

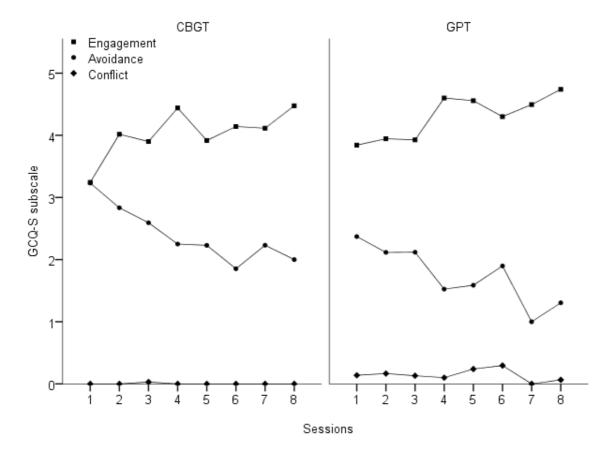


Figure 1. Group climate development in cognitive-behavioral group therapy (CBGT) and group psychotherapy (GPT).

Engagement

ICC of .39 and .11 for between-individuals and between-groups variation, respectively, supports the inclusion of participants and groups as random effects in models for engagement. We established the effect of time by comparing models 1 and 2 (see Table 2), Δ AIC = 56.91, χ^2 (6, N = 42) = 68.91, p < .001. Adding the quadratic effect did not enhance the fit, Δ AIC = -5.61, χ^2 (7, N = 42) = 8.39, p = .30. With reference to fixed effects of treatment condition in model 2, we found no appreciable difference of engagement at midtreatment. Overall, increasing linear slope was significant (see model 2 and Figure 1), but a difference in slopes for treatment conditions was not evident. In light of the random effects, between-individual difference in slopes

was relatively small and not significant. In contrast, between-group differences in slopes was substantial and three times larger. In summary, the findings supported our first hypothesis that engagement would increase over time in both treatment conditions. However, we could not confirm higher engagement in GPT compared to CBGT (against hypothesis 2). Interestingly, change of engagement over time was perceived more similarly within groups than between groups, supporting the idea that each group forms a somewhat distinct group climate.

Table 2

Fixed and Random Effect Estimates for Models of Engagement

Parameter	Model 1	Model 2
Fixed effects		
Intercept	4.23* [3.90, 4.54]	4.30* [3.85, 4.72]
Condition	-0.08 [-0.40, 0.23]	-0.15 [-0.78, 0.49]
Time		0.12* [0.02, 0.21]
Condition \times Time		-0.01 [-0.15, 0.14]
Random effects		
Intercept (group)	0.35* [0.09, 0.81]	0.35* [0.04, 0.65]
Linear slope (group)		0.09* [0.02, 0.16]
Intercept (individual)	0.58* [0.36, 0.75]	0.60* [0.44, 0.75]
Linear slope (individual)		0.03 [0.00, 0.83]
Residual	0.65* [0.60, 0.71]	0.55* [0.49, 0.59]
AIC (df)	640.13 (5)	583.22 (11)

Note. Multilevel model analysis with fixed and random effect estimates and 95% confidence intervals in brackets. Fixed effect parameters are estimates of the mean level of engagement (intercept) and predictors' effects on engagement. Random effect parameters are estimates of variation (standard deviations) of intercepts and slopes over individuals and groups as well as residual variation. AIC, Akaike's information criterion, is a measure of the trade-off between the relative quality and complexity of a model. * p < .05.

Avoidance

ICC of .42 and .08 for between-individuals and between-groups variation, respectively, supports the inclusion of participants and groups as random effects in models for avoidance. The time effect was established by comparing models 1 and 2 (see Table 3), $\triangle AIC = 93.36$, $\chi^2(6, N = 42) = 105.36$, p < .001. Adding quadratic effect to the model did also improve its fit, $\triangle AIC = 2.16$, $\chi^2(7, N = 42) = 16.16$, p = .02. Inspecting coefficients from model 3, it was evident that no quadratic trend reached statistical significance, nor was there an interaction with treatment condition. However, coefficients for linear trends were roughly similar to model 2, so we based our discussion on the more parsimonious model 2. With reference to fixed effects in model 2 (see also Figure 1), members perceived greater avoidance at midtreatment in CBGT groups compared to GPT groups. Overall, a decreasing linear effect was significant, but a difference in slopes between treatment conditions could not be established. By analyzing random effects, between-individual variation in slopes was not significant in contrast to a substantial between-group variation. In summary, the findings supported both our hypotheses that avoidance would decrease over time for groups in both treatment conditions but be overall stronger in CBGT compared to GPT groups. Furthermore, similar to what we found for engagement, the comparison of random coefficients indicated a distinct group climate for each group.

Table 3

Fixed and Random Effect Estimates for Models of Avoidance

Parameter	Model 1	Model 2	Model 3
Fixed effects			
Intercept	2.06* [1.84, 2.28]	1.78* [1.42, 2.14]	1.72* [1.31, 2.12]
Condition	0.31* [0.09, 0.52]	0.58* [0.04, 1.08]	0.48 [-0.10, 1.04]
Time		-0.16* [-0.23, -0.09]	-0.17* [-0.23, -0,10]
Condition × Time		-0.02 [-0.11, 0.09]	-0.01 [-0.10, 0.08]
Time ²			0.01 [-0.01, 0.04]
Condition \times Time ²			0.02 [-0.02, 0.06]
Random effects			
Intercept (group)	0.00 [-0.37, 0.29]	0.25* [0.02, 0.53]	0.24 [-0.37, 0.41]
Linear slope (group)		0.05* [0.02, 0.12]	0.04 [-0.06, 0.07]
Quadratic slope (group)			0.02 [-0.03, 0.03]
Intercept (individual)	0.64* [0.49, 0.82]	0.65* [0.47, 0.79]	0.73* [0.54, 0.90]
Linear slope (individual)		0.06 [0.00, 1.00]	0.07 [-0.03, 0.10]
Quadratic slope (individual)			0.03 [-0.01, 0.05]
Residual	0.71* [0.65, 0.77]	0.54* [0.49, 0.60]	0.51* [0.68, 0.75]
AIC (df)	677.48 (5)	584.12 (11)	581.96 (16)

Note. Multilevel model analysis with fixed and random effect estimates and 95% confidence intervals in brackets. Fixed effect parameters are estimates of the mean level of avoidance (intercept) and predictors' effects on avoidance. Random effect parameters are estimates of variation (standard deviations) of intercepts and slopes over individuals and groups as well as residual variation. AIC, Akaike information criterion, is a measure of the trade-off between the relative quality and complexity of a model. * p < .05.

Conflict

Due to almost no conflict in CBGT groups, growth curve analysis was not feasible. However, we noted a difference between the two treatment conditions. With reference to all ratings by each member, 94.7% of members in the CBGT groups rated conflict as nonexistent (score of 0) throughout the treatment, in contrast to only 34.8% of members in the GPT groups, $\chi^2(1, N = 42) = 13.42$, p < .001. This supports our prediction of overall lower conflict in GPT groups compared to CBGT groups.

Discussion

In line with our first hypothesis, the groups in the present study followed a general trend of increasing engagement, decreasing avoidance and overall low conflict. The developmental course was not significantly different for the two treatment conditions. This supports our belief that groups in brief group therapy will stay in the first developmental stage, engagement, of MacKenzie's (1997) four-stage developmental model. It might also explain why previous studies on brief group therapy (e.g. Bonsaksen et al., 2011; Kivlighan & Lilly, 1997; Tasca et al., 2006) failed to find the expected stages but detected instead a simpler developmental pattern. In so few sessions, it seems unlikely that groups will have established enough trust to venture into the next stage, differentiation, which is characterized by confrontations and expressed disagreement.

Furthermore, we found partial support for our second hypothesis that engagement and conflict would be higher and avoidance lower in GPT compared to CBGT. We did not find a difference in perceived engagement. However, members in the GPT groups perceived less avoidance and more conflict than members in the CBGT groups did, reflecting the more dynamic and interactional nature of GPT compared to CBGT. GPT members are encouraged to express interpersonal differentiation (reflected in greater conflict) as well as disclosing personal information and taking responsibility for the group process (reflected in less avoidance).

The average level of conflict in our study (CBGT = 0 and CBGT = 0.2) was much lower than previous studies reported (Kivlighan & Lilly, 1997; Tasca et al., 2006). The difference may be explained by our sample. Social anxiety disorder is characterized by fear of being scrutinized or judged negatively which often leads to passive communication and avoidance of discussing sensitive issues. The only other study with

SAD groups was Bonsaksen et al.'s (2010). Members in their RCT groups perceived conflict on average as 0.63 and as 0.76 in RIPT groups. Their somewhat higher scores (although also low) might be due to the fact that members were patients in a residential program who had much more contact before and during the treatment. This could have led to more ease among the patients in expressing their opinions.

In addition, developmental patterns of avoidance and engagement in our study were perceived more similarly within groups than between groups. This finding reveals the importance of using multilevel growth curve analysis when analyzing group climate development, since each group seems to have its unique and distinct group climate.

Studies on group climate development, including our own, have yielded mixed results. But they also differ significantly on important factors, namely treatment duration, treatment orientation and members' characteristics, and might therefore not be comparable. As our results indicate, a group treatment consisting of 8 sessions will only stay in the first stage, engagement, while a treatment that lasts three times longer might well go through the third stage, interpersonal work (as partially found by Kivlighan & Jauquet, 1990). Also, levels and patterns of group climate dimensions will differ between treatment orientations (as in our study and in studies by Tasca et al., 2006, and Bonsaksen et al., 2011). Moreover, there is reason to believe that students in growth therapy classes (as in the study by Kivlighan & Lilly, 1990) will engage differently in group work than members diagnosed with eating disorders or SAD (as in the studies by Tasca et al., 2006, and Bonsaksen et al., 2011). We may only be starting to understand the complex interactions and effects of different factors on group climate development. It will be important in future studies to compare group climate development between treatments of varying duration, between different treatment orientations and with members diagnosed with different disorders.

Limitations to this study need to be addressed. First, our groups consisted of students diagnosed with SAD which may not generalize to other populations such as group members diagnosed with other mental disorders. Secondly, the current study had only a small number of groups and the results should be replicated with a larger sample.

Although both treatment conditions in our study were equally effective, we do not know if or how group climate development was related to treatment outcome. Future research should study interactions between group climate dimensions and treatment condition as they relate to outcome. For instance, positive correlation has been found between early group engagement and treatment outcome in GPT (see e.g. Kivlighan & Lilly, 1997) but we do not know if the same holds true for group CBT. It is also important to investigate whether groups that follow the expected developmental pattern of the engagement stage will be related to better outcome than those that do not. Additionally, it would be useful to study interactions between different group climate dimensions in relation to treatment outcome such as whether engagement would correlate differently with outcome depending on levels of conflict in the groups.

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