



Group schema therapy for personality disorders: A pilot study for implementation in acute psychiatric in-patient settings



Igor Nenadić^{a,*}, Sina Lamberth^b, Neele Reiss^{b,c}

^a Department of Psychiatry and Psychotherapy, Jena University Hospital, Friedrich-Schiller-University of Jena, Philosophenweg 3, 07743 Jena, Germany

^b Department of Differential Psychology and Psychological Assessment, Institute of Psychology, Goethe University of Frankfurt am Main, Theodor-W.-Adorno-Platz 6, 60323 Frankfurt, Germany

^c Institute for Psychotherapy Mainz (IPSTI-MZ), 55116 Mainz, Germany

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ABSTRACT

Group schema therapy (GST) has been proposed as a novel long-term treatment programme for borderline and cluster C personality disorders. We implemented a short-term GST programme (12–15 sessions, based on the manual by Farrell and Shaw (2012), including both cognitive / behavioural and experiential interventions for in-patients (n=9) with either borderline or cluster C personality disorders (and axis I co-morbidities) treated in a (sub)acute psychiatric in-patient setting. We evaluated pre- and post-treatment self-report of maladaptive and adaptive schema modes (using the SMI) and early maladaptive schemas (YSQ-3), as well as overall symptom severity (brief symptom check list, BSCL-53-S), patient satisfaction (ZUF-8) and group climate and coherence (GCQ-S). We found significant reduction of symptoms, and trend-level improvement for schema mode activation, but not maladaptive schemas. Effect sizes of Cohen's $d=0.857$ for symptoms and $d=0.693$ for maladaptive schema mode reduction were, however, lower than previous GST trials in in-patient settings with a longer treatment phase and outpatient GST trials using the Farrell and Shaw-model, indicating importance of duration in ST treatment. Our findings in this uncontrolled study provide first evidence that GST (based on the Farrell and Shaw model) can be implemented and adapted for use in short-term in-patient (sub)acute settings.

1. Introduction

Personality disorders, such as borderline personality disorder, present an ongoing treatment challenge for clinicians. Patients often require prolonged psychotherapy, and repeated parasuicidal behaviour in BPD or crises often necessitate short-term hospital admission, leading to drawbacks for the out-patient therapy process. Psychotherapy strategies also have to take into account the considerable rates for drop-outs, which are additional outcome parameters (Binks et al., 2006). Despite the increasing availability of novel effective psychotherapy approaches for BPD with a growing evidence base (Stoffers et al., 2012), several clinical needs are not fully met. This includes the problem of therapy delivery in in-patient settings, as well as exploring group psychotherapy as an option for cost-effective delivery of treatment.

Schema therapy (ST; (Young et al., 2003b)) has emerged as a viable treatment option for borderline personality disorder (BPD), as well as other cluster B and also cluster C personality disorders (PDs). It has shown superiority over other therapies in long-term out-patient treatment of BPD (Giesen-Bloo et al., 2006) as well as cluster C PDs

(Bamelis et al., 2014). ST is based on cognitive-behavioural therapy (CBT), but extends CBT to include emotional and experiential intervention techniques, emphasises limited re-parenting as a main strategy for dealing with interpersonal difficulties and dysfunctional behaviour (Sempertegui et al., 2013). In particular, the mode model of schema therapy, which describes the patient's current cognitions, emotions, and behaviour based on a set of defined different mind states at any given moment, has become an element central to its interventions (Kellogg and Young, 2006).

Group schema therapy (GST) is a more recent addition to ST treatment options. Rather than just translating the schema therapy model to group settings, it aims to introduce a set of specific techniques and approaches that might augment the effect of ST treatment (Farrell and Shaw, 2012). There have been initial studies using GST in borderline personality disorder, showing improvement on both symptom levels as well as offering the possibility of remission, i.e. patients not meeting BPD criteria by the end of treatment. An 8-month out-patient treatment programme with weekly 1.5 h sessions showed a significant effect of GST (in addition to treatment-as-usual, TAU) as opposed to TAU only on both reduction of general assessment of

* Correspondence to: Department of Psychiatry and Psychotherapy, Philipps University of Marburg / UKGM, Rudolf-Bultmann-Str. 8, 35039 Marburg, Germany.
E-mail address: nenadic@staff.uni-marburg.de (I. Nenadić).

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functioning (GAF) and remission rates, as well as lower drop-out rates (Farrell et al., 2009). A subsequent study combining 1.5 h of GST with 1 h per week of single ST in out-patients with BPD over a 2 year treatment course also showed significant reduction of BPD-related symptoms and dysfunctional schemas, as well as higher rates of recovery and patient satisfaction than non-specific treatment (Dickhaut and Arntz, 2014). Positive results have also been obtained with other schema-related treatment out-patient programmes (Simpson et al., 2015; Skewes et al., 2014; van Vreeswijk et al., 2014). These group-treatment programmes derived from a cognitive-behavioural schema protocol by Broersen and van Vreeswijk (2013) and van Vreeswijk and Broersen (2014) but a significantly greater emphasis was put on schema mode work and experiential change techniques. It consisted of 20 GST sessions and resulted in lower effect sizes than previous studies using the Farrell and Shaw model, but was also much shorter in treatment length.

The Farrell and Shaw model of GST has then also been applied in uncontrolled trials of in-patient BPD treatment with high intensity of 8 h/week of GST plus 1.5 h of single ST sessions over the course of a 10–18 week treatment programme, resulting in significant alleviation of BPD-related symptoms (Reiss et al., 2014, 2013).

However, it remains unclear whether group schema therapy might also be used to augment in-patient therapy with shorter duration of treatment, as would be necessary for treatment delivery in (sub)acute facilities without a dedicated in-patient psychotherapy programme.

We conducted an uncontrolled, open pilot study of group schema therapy (GST) adapted to serve the needs of an in-patient crisis intervention and short-stay unit, hypothesising that even with short, but intensive treatment, GST might demonstrate general and BPD-related symptom reduction. Our study was thus focused on the feasibility of modified GST in a crisis intervention setting. In addition, we tested the hypothesis, that this modified GST protocol would lead to a reduction of overall symptoms, as well as maladaptive schemas and modes.

2. Methods

This study is based on data collected from two in-patient group therapies carried out in the Department of Psychiatry and Psychotherapy, Jena University Hospital, Germany, on an open general psychiatric (sub) acute ward specialising in crisis intervention. All participants gave written informed consent to a protocol approved by the local Ethics Committee of Jena University Medical School as part of an observational study. The study included psychometric assessments / questionnaires prior (T0) and after (T1) GST. Inclusion criteria were a diagnosis of borderline personality disorder in the first group, and either a diagnosis of borderline personality or a cluster C personality disorder in the second group (applying DSM-IV criteria). Exclusion criteria were psychotic disorders, traumatic brain injury or organic cognitive impairment; none of the patients were undergoing involuntary treatment.

During the recruitment period, we approached patients that met inclusion criteria and started treatment once a group of at least 5 patients meeting criteria and agreeing to participation was reached.

2.1. Subjects

We initially approached 11 patients in two successive groups, of which 2 patients subsequently did not participate in the study or were discharged prior to commencement of GST, and one patient did not provide post (T1) questionnaires, hence enrolling 9 patients. Pre- post-intervention data were thus available from 8 patients (age 20–31yrs, mean 23.9yrs; 7 female, 1 male). Patients had been admitted to the crisis intervention unit for in-patient treatment of an acute personal crisis or depressive episode, which included further diagnostic assessment (as no formal prior diagnosis of a personality disorder had been

established) in the case of three patients.

All patients had undergone diagnostic assessment using clinical history and mental status exams, as well as a structured assessment for personality disorders using the Structural Clinical Interview for DSM-VI (SCID) axis II screening and subsequent interview by a clinical psychologist or board-certified psychiatrist. Main diagnoses were borderline personality disorder (BPD; n=6) or avoidant personality disorder (AvPD; n=2), while co-morbid disorders included AvPD in two BPD patients, post-traumatic stress disorder (PTSD, n=2), recurrent major depressive disorder (MDD, n=6) with a concurrent major depressive episode, furthermore adjustment disorder with depressed mood / minor depression (n=2), anorexia nervosa (n=1; currently in remission), and substance abuse (n=2; currently abstinent). Somatic co-morbidities included obesity in two patients, as well as atopic eczema, hypertension (controlled), and migraine in one patient each; one patient had an incidental finding of corpus callosum agenesis (without neurological symptoms or cognitive impairment). Concurrent medication (antidepressants, mostly SSRI or SNRI, for patients with concurrent major depression, as well as antipsychotics) were not changed as part of this study and in fact remained stable during the treatment period. Patients were in-patients for a duration of up to two weeks before inclusion in the treatment programme.

2.2. Intervention

The GST intervention of this study was based on the manual by Farrell and Shaw (Farrell and Shaw, 2012) and its German translation (Farrell and Shaw, 2013), modified to account for the needs of a) a time-limited in-patient treatment (12–15 sessions), and b) ease of implementation into a (sub) acute psychiatric in-patient setting. This GST approach we applied (Farrell et al., 2014) was validated in in-patient settings (Reiss et al., 2014), and has served as the defining model for an ongoing international multi-centre trial (Wetzelaer et al., 2014) as well as the group schema therapy training programme of the International Society of Schema Therapy (ISST).

Patients received GST treatment in addition to ongoing treatment in the unit, which included one to two weekly therapy sessions (with a CBT therapist), physiotherapy and occupational therapy, as well as general psychiatric psychoeducation sessions.

The adaptation for this GST programme included shortening the therapy programme to at least 12 sessions, which were spread across 6–7 weeks, with each session lasting 45–50 min, including 2–3 double sessions during the overall course of treatment. Therapy sessions were conducted by a board-certified psychiatrist and psychotherapist, who was also a schema therapist and trainer (certified by the ISST), and co-therapist (clinical psychologist with CBT training).

Therapy was structured into three parts: a) introduction, b) main therapy phase, and c) a consolidation / transition and farewell phase. The introduction part included setting ground rules for therapy (e.g. confidentiality, respectful behaviour towards group members, participation in all sessions and homework), as well as an introduction to imagery work. The main therapy phase aimed to focus on emotional and experiential group work using exercises from the GST manual (Farrell and Shaw, 2013, 2012), and explained in depth in a clinician's guide on GST (Farrell et al., 2014), such as:

- imagery work to create a secure working environment (“safety bubble” imagery) and establish group coherence (“the web” exercise)
- introduction to the mode model (theory of the model, in-group discussion of personal examples, followed-up by homework for all major schema modes, i.e. vulnerable / angry / happy child modes, punitive parent modes, coping modes, healthy adult mode)
- subsequent in-depth mode work with presentations and discussion of differences between modes, personal example, and home work assignments
- schema mode role play (acting out modes and assessing modes in

others)

- dealing with punitive parent modes (“effigy” experiential exercise)
- happy child mode: practical exercises and home work assignments to increase awareness and include happy child activation / experiences in everyday settings
- in addition, commonly used GST tools were applied through, such as limited re-parenting (throughout the therapy), limited self-disclosure of the therapist (e.g. explaining examples during schema mode work sessions), use of transitional objects (developing / emphasising group coherence and as an experiential component), as well as emphasising shared and different personal(ity) characteristics of the participants within the group.

The final 2–3 sessions placed an emphasis on a) application of schema mode work for use in subsequent out-patient use (labelling one's own emotions / states, increasing awareness, understanding mode dynamics), and b) transition to more active change phase in subsequent out-patient therapy.

2.3. Psychometric assessments

Patients were asked to complete five questionnaires before (T0) and after completion (T1) of therapy. These instruments were selected to detect changes in a) schemas and b) schema modes, as assessed with commonly used schema therapy derived tools, i.e. a) the Young Schema questionnaire (YSQ, German version; (Young et al., 2003a)), and b) the Schema Mode Inventory (SMI, German version; (Reiss et al., 2012)). While the YSQ is aimed at capturing schemas as the trait marker relevant to schema therapy interventions, the SMI serves to identify state characteristics more amendable to short-term changes. From these questionnaires, we derived parameters for maladaptive schemas (overall), maladaptive modes and adaptive modes.

In addition, we used the Brief Symptom Check List BSCL-53 (Franke, in preparation) to assess psychological distress and somatic symptoms during the preceding seven days (analysing the Global Severity Index, GSI, of this instrument as a means to reflect overall distress). For exploratory analyses of secondary parameters, we included questionnaires on overall patient satisfaction (Fragebogen zur Patientenzufriedenheit, ZUF-8; (Schmidt et al., 1989)) and group climate / coherence (Group Climate Questionnaire, GCQ-S; variables: commitment, conflict, avoidance (MacKenzie, 1983; Tschuschke et al., 2002)).

2.4. Statistical analysis

Data were analysed using SPSS 22 (IBM, Armonk, USA). Prior to analysis, we conducted a Kolmogorov-Smirnov test for normal distribution, which was non significant for all variables tested ($d_{(8, 0.95)} < 2.2$; $p = n.s.$).

We first tested the hypothesis that GST would improve maladaptive schemas, adaptive and maladaptive schema modes, as well as overall symptoms (GSI derived from BSCL-53) applying a MANOVA with repeated measures to assess changes over time. In addition, we calculated effects sizes for comparison with previous schema therapy studies.

Secondly, we performed an exploratory correlation analysis of secondary outcome parameters to test the hypothesis derived from previous studies (Reiss et al., 2013), that symptom improvement (defined as difference between T1 and T0 BSCL-53) is associated with group climate parameters.

3. Results

We found significant improvement for overall symptoms (BSCL-53; $p = 0.029$), and trend-level improvement for maladaptive schema modes (from SMI; $p = 0.054$) with considerable effect sizes ($d = 0.857$, and

Table 1

Results of repeated-measures MANOVA for questionnaire measures (* $p < 0.05$ significant, † $p < 0.1$ trend-level finding).

Measure	Mean (SD) at T0	Mean (SD) at T1	F	p (one-tailed)	D (pre / post)
Symptom severity (BSCL-53-S)	1.68 (0.55)	1.29 (0.49)	5.173	0.029 *	0.857
Maladaptive schemas (YSQ)	3.72 (0.48)	3.59 (0.76)	0.335	0.291	0.216
Maladaptive modes (SMI)	3.15 (0.32)	2.91 (0.51)	3.372	<i>0.054 †</i>	0.693
Adaptive modes (SMI)	2.88 (0.35)	3.23 (0.62)	1.352	0.142	0.439

$d = 0.693$, resp).

Results with mean values (pre and post) are shown in Table 1.

Exploratory analysis did not show a significant correlation between symptom improvement (BSCL-53 reduction) and patient satisfaction (ZUF-8 at T1) with $r_{(6)} = -0.114$ ($p = n.s.$, one-tailed). Also, there was no significant correlation either with commitment ($r = -0.244$; $p = 0.28$), conflict ($r = 0.124$; $p = 0.385$), or avoidance ($r = -0.221$; $p = 0.299$).

4. Discussion

This uncontrolled observational study using an abbreviated GST programme for in-patients with either borderline or cluster C personality disorder has shown that even short-term schema therapy treatment leads to general and PD-related symptom improvement. While our small study shows considerable effect sizes for the reduction of general symptom severity as well as reduction of maladaptive modes, the reduction of maladaptive modes failed to reach significance. Our findings, although preliminary, have three main implications for BPD treatment: first, they demonstrate feasibility of short-term symptom reduction even in patients with severe (borderline) personality disorder; second, they suggest particular aspects of PD might be more amenable to short-term change with GST than others (i.e. maladaptive modes vs. maladaptive schemas), and third, our findings provide a first indication of effect sizes of even an abbreviated GST protocol similar to those reported in previous GST studies.

A main finding of this pilot study is that implementation of a modified GST protocol is feasible for in-patient psychiatric settings. Our treatment protocol was well accepted by the patients, as shown from the low drop-out rates. Also, our study shows, on a qualitative level, that implementation is feasible even on a general psychiatric ward, and with no specialist in-patient setting. This suggests that wider use of GST could provide a benefit to cluster B and C personality disorder patients even outside typical treatment settings in either specialised in-patient wards or specialised units providing combined in-patient and out-patient care. While showing feasibility of implementation and providing some evidence of treatment efficacy, we need to consider the limitations of an uncontrolled study design and several other factors that might have contributed to reduction of symptoms. These include selection of a particular patient group to receive additional treatment (unlike other patients on the ward), as well as selection bias for a patient group that has been admitted for in-patient care and thus has received additional elements of (sub)acute psychiatric care.

Strongest effect sizes in our study were shown for overall symptom severity with a $d = 0.857$. This is a considerable effect size, which compares well with previous GST studies, esp. considering the overall number of treatment sessions. Higher effect sizes were found for global assessment of functioning after long-term GST treatment of $d = 2.84$ in a 18-week intensive in-patient programme (Reiss et al., 2014), and $d = 1.49$ for a longer trial over more than 2 years, combining single and

group ST in an out-patient setting (Dickhaut and Arntz, 2014). There have also been other schema-oriented approaches that have not used the Farrell and Shaw model, such as short-term group schema cognitive behavioural therapy (SCBT-g) or schema-centered emotional-behavioural therapy (SET). A pilot study of SCBT-g in mixed personality disorder patients has shown strong effect sizes also in a study of 22 weeks of out-patient treatment with $d=1.10$ for reductions on the SCL-90-R scale (Skewes et al., 2014), while a study on a mixed psychiatric population (not restricted to PD) over 28 weeks showed only smaller effect sizes of $d=0.66$ (van Vreeswijk et al., 2014). Similarly, a SET study in personality disorders over 15 weeks showed an effect size of $d=0.79$ (Zorn et al., 2008). As for general symptom improvement, our results compare favourably with previous GST and similar studies, although the latter mostly used long-term treatment, either in out-patient or specialised in-patient settings. The feasibility of our treatment programme is also underlined on a qualitative level of analysis, given that implementation of this programme was quickly achieved with one trained senior schema therapist, co-therapists with minimal prior ST training, and continuous supervision. This underlines the usefulness of our approach for implementation even in general psychiatric in-patient units lacking exhaustive resources in terms of personnel or staff training. Still, our treatment programme closely mirrors the established and validated GST models for long-term treatment (Farrell and Shaw, 2012).

The impact on general symptoms and maladaptive modes, as opposed to the rather smaller effects on schemas highlights not only a limitation of our study, but also suggests a sequence of treatment effects. While schema modes are conceptualised as a state construct in schema therapy, actual schemas have trait properties. This would explain why short-term treatments (either over a shorter time period or with a smaller number of treatment sessions) fail to induce significant changes on the schema domain level. Indeed, findings of a recent SET trial are consistent with this notion (Tschacher et al., 2012).

An important aspect in the further development of these programmes will be the isolation of those treatment components that are most associated with early improvement. A recent study using cognitive therapy in cluster C personality disorder found emotional activation to be important for treatment success over time (Hayes and Yasinski, 2015). Another aspect might be the actual distribution of maladaptive schemas present in a given sample, which has been discussed in previous studies of axis I disorders (Kwak and Lee, 2015). Interestingly, our study also failed to provide evidence of significant improvement of adaptive modes, i.e. cognitive-emotional states that are either characterised by mature integration of concurrent needs and functional coping strategies, as well as basic emotions of happiness. Like maladaptive schemas, these modes might also only evolve over longer treatment.

The main limitations of our study are its sample size and lack of control condition. Also, we need to consider selection bias given the mode of enrolment into the study, which (although considering naturalistic aspects of the patient group admitted to this particular ward) might have affected sample composition. Furthermore, we need to consider that inclusion of patients during crisis intervention, while being the rationale of the study, makes the design prone to over-estimation of treatment effects. Still, the study succeeds in demonstrating the basic tenet that short-term improvement even in severely affected PD patients can be delivered in an in-patient setting, thus suggesting feasibility for clinical implementation.

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