

# ‘Teaching Me to Parent Myself’: The Feasibility of an In-Patient Group Schema Therapy Programme for Complex Trauma

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**Background:** Group schema therapy is an emerging treatment for personality and other psychiatric disorders. It may be particularly suited to individuals with complex trauma given that early abuse is likely to create maladaptive schemas. **Aims:** This pilot study explored the feasibility and effectiveness of a 4-week in-patient group schema therapy programme for adults with complex trauma in a psychiatric hospital setting. **Method:** Thirty-six participants with complex trauma syndrome participated in this open trial. Treatment consisted of 60 hours of group schema therapy and 4 hours of individual schema therapy administered over 4 weeks. Feasibility measures included drop-out rates, qualitative interviews with participants to determine programme acceptability and measures of psychiatric symptoms, self-esteem, quality of life and schema modes pre-, post- and 3 months following the intervention. **Results:** Drop-out rate for the 4-week program was 11%. Thematic analysis of interview transcripts revealed four major themes: connection, mode language explained emotional states, identifying the origin of the problem and the emotional activation of the programme. Measures of psychiatric symptoms, self-esteem and quality of life showed improvement post-treatment and at 3 months post-treatment. There was a reduction in most maladaptive schema modes pre-/post-treatment. **Conclusions:** A group schema therapy approach for complex trauma is feasible and demonstrates positive effects on psychiatric symptoms and maladaptive schemas.

*Keywords:* schema therapy, complex trauma, developmental trauma, psychiatric in-patient

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## Introduction

Complex psychological trauma results from exposure to severe stressors that (1) are repetitive and prolonged, (2) involve harm or abandonment from key attachment figures or other responsible adults, and (3) occur at developmentally vulnerable times, particularly over the course of childhood and consequently become incorporated within the child's biopsychosocial development (Ford and Courtois, 2009). Exposure to such events results in 'complex reactions' (Ford and Courtois, 2009) that are psychological, emotional and social in nature. Rather than a disease process, these responses can be seen as an adaptation to an environment where there was no escape and thus normal emotional and social capacities could not develop (Ford and Courtois, 2009). The core psychiatric features seen in those who present with this clinical construct include affect dysregulation, disturbed identity and self-development, disorganized attachment, structural dissociation and somatic dysregulation (Briere and Runtz, 1993). While there is currently no comprehensive validated measure of complex trauma symptoms, there is much overlap with general psychiatric symptoms.

To date, the empirical base for the treatment of complex traumatic stress disorders remains limited, which may be due in part to a lack of consensus regarding this diagnostic entity and it is considered an 'associated feature' of PTSD (American Psychiatric Association, 2000, p. 465). Review of research findings, clinician observations, client values and perceptions (Anderson, 2006) and expert opinions (Cloitre et al., 2011; Herman, 1992) suggests that treatment foci should include emotion regulation strategies, narration of trauma memory, cognitive restructuring, and address identity and attachment disturbance.

Schema therapy (ST) is a therapeutic approach developed to treat early maladaptive schemas (EMS) resulting from early childhood experiences where emotional needs were not met. EMS is defined as the 'broad, pervasive themes regarding oneself and one's relationship with others, developed during childhood and elaborated throughout one's lifetime, which are dysfunctional to a significant degree' (Young et al., 2003). An EMS consists of memories linked to early experiences, cognitions, emotions and bodily sensations. The 18 maladaptive schemas are organized under five domains of unmet needs and trigger under- or over-modulated emotion and action states referred to as 'modes'. Maladaptive modes prevent individuals from meeting their emotional needs, responding adaptively to life situations, managing interpersonal relationships and improving quality of life (QoL). Child modes are innate reactions to core emotional needs being unmet. Maladaptive coping modes are defence mechanisms used in childhood to survive environments in which core needs including safety were unmet. Dysfunctional critic modes involve a strong internal critic introjected from key abusers early in life including bullies, either from acts of omission (i.e. neglect) or commission (i.e. abuse) (Young et al., 2003). Healthy adaptive modes occur when identity is stable and one can meet core emotional needs in effective and adaptive ways (Young et al., 2003).

There is no 'gold standard' treatment for complex trauma, rather clinical recommendations regarding treatment delivery. Ford and Courtois (2009), experts in the field, use a three-stage process, which is similar conceptually to the stages of treatment employed in group schema therapy (GST) (Table 1) (Farrell and Shaw, 2012). Phase one addresses key clinical areas associated with safety, connection, stabilization and emotional regulation, emphasizing education related to trauma and its biopsychosocial impact (Ford and Courtois, 2009). Phase two includes trauma processing within an individual's window of tolerance (Briere and Runtz, 1993). The final stage focuses on autonomy, skill acquisition and self/relational development (Ford and Courtois, 2009).

**Table 1.** Complex trauma and schema therapy corresponding stages of treatment

Complex trauma stages of treatment	ST/GST stages of treatment
Stage 1: Safety and stabilization Psychoeducation on emotions, regulating emotions, defence mechanisms trauma sequelae, attachment-related problems	Stage 1: Bonding and emotional regulation Stabilization via the therapy relationship, psychoeducation on ST concepts and aetiological model, development of a safe working group where needs are expressed and met
Stage 2: Memory reconstruction Various methods encouraged; e.g. imagery rescripting within the window of tolerance (Briere, 1993)	Stage 2: Schema Mode Change Cognitive, behavioural and emotional interventions to reach and heal vulnerable child mode (where emotional distress is experienced), cognitive reattribution, identifying dysfunctional coping and developing healthy alternatives, diminishing the power of critic modes
Stage 3: Integration of learning, increased adaptive living Utilization of skills learned and rebuild life	Stage 3: Autonomy Strengthen access to the good parent part of healthy adult mode, able to meet adult needs in healthy and adaptive ways; psychoeducation and encouragement to learn about self; healthier self-esteem; healthier interpersonal relationships

ST, schema therapy; GST, group schema therapy.

GST addresses these stages through ‘limited reparenting’ by the therapist and ‘re-family’ effects provided by the group (Farrell and Shaw, 2012). This process provides corrective emotional experiences related to attachment that facilitate changes in EMS and modes (Farrell and Shaw, 2012). Limited reparenting is defined as the therapist meeting core unmet childhood needs within the bounds of professional standards. Limited ‘re-family’ effects do the same and include the experiences of acceptance, belonging and safety in a group that acts as an analogue of the family of origin. These interventions target the child modes to resolve developmental deficits including safety, attachment, identity formation, self-regulation and autonomy and correspond to stage one of complex trauma treatment. The ability to connect safely and the emotional learning that takes place within the group facilitate the processing of childhood trauma, and indirectly impacts trauma-related cognitions and EMSs, corresponding to stage two of complex trauma treatment. The consequent ability to recognize innate core emotional needs, communicate them to others and practise healthier coping strategies in times of distress increases adaptive living and an improved sense of self, which strengthens the healthy adult mode, providing stage three of complex trauma treatment.

ST (Young, 1990; Young et al., 2003) is an effective treatment for complex clinical presentations, particularly borderline personality disorder (BPD) (for a summary, refer to Jacob and Arntz, 2013). Individuals with BPD exhibit many of the core problems associated with complex trauma (identity disturbance, instability of interpersonal relationships, affect, somatic and behavioural dysregulation) and typically have a history marked by neglect and/or physical, emotional, psychological or sexual abuse. A multicentre trial by Giesen-Bloo and colleagues (2006) found that ST was more cost effective and had better treatment retention than transference focused therapy, and demonstrated efficacy over the range of BPD psychopathology and psychosocial outcome measures. Promising results have also been found

for the group modality developed by Farrell and Shaw (2012; Farrell et al., 2009). A randomized controlled trial of thirty sessions of weekly out-patient GST was compared with treatment-as-usual individual psychotherapy (Farrell et al., 2009). Significant reductions in BPD symptom severity and improved global functioning were found for the ST group compared with controls. Reiss et al. (2014) tested the efficacy of a 10–18 week adaptation of GST for BPD in three pilot studies in in-patient psychiatric settings. They similarly demonstrated large reductions in BPD symptoms, global psychiatric severity and improved global function. More recently, Nenadić et al. (2017) reported positive results from a small ( $n = 9$ ) in-patient GST programme using a shorter duration (7–8 weeks) with 12–15 sessions. Combined individual and GST has also shown promising results (Dickhaut and Arntz, 2014). Two additional pilot studies using protocols adapted from Farrell and Shaw (2012) for mixed diagnosis groups reported some symptom improvement (Dickhaut and Arntz, 2014; Skewes et al., 2014).

There are a range of treatments addressing aspects of complex trauma, yet few others have an integrated treatment approach targeting all three stages of clinically recommended complex trauma treatment. The ST treatment approach holistically corresponds to the proposed stages of complex trauma treatment but has yet to be evaluated with a complex trauma population. This study aimed to explore the feasibility of using the GST approach in an in-patient setting for the treatment of adults with complex trauma. An in-patient setting was chosen to provide a safe and controlled setting for participants to undergo trauma treatment in the intensive pilot GST programme (4 weeks versus 10–18 weeks from previous studies). Using qualitative, semi-structured interviews and programme drop-out rates we aimed to explore the acceptability of the programme for participants. We also aimed to explore any changes in psychiatric symptoms, schema modes, self-esteem and quality of life using quantitative measures. It was hypothesized that there would be a reduction in maladaptive coping modes, dysfunctional critic modes and the innate child modes (vulnerable, angry and impulsive child) and global psychiatric symptoms post-treatment and increases in self-esteem and QoL through participation in the GST programme.

## Method

### *Research design and analysis*

A mixed-method design was used for this single group pilot study. The qualitative component used thematic analysis of transcripts recorded from semi-structured interviews using the method of Braun and Clarke (2006). For the quantitative component, measures of schema modes, complex trauma symptoms, QoL and self-esteem were collected. Analysis of the quantitative data employed paired *t*-tests for pre–post measures, and repeated measures analysis of variance (ANOVA) for the 3-month follow-up. Given multiple comparisons, a significance level for each of the main outcome measures was derived using Bonferroni corrections (dividing  $p = .05$  by the number of subscales for each measure: Schema Mode Inventory,  $p < .003$ ; WHO Quality of Life,  $p < .0125$ ; Brief Symptom Inventory,  $p < .004$ ).

### *Participants*

Participants were recruited through referrals from psychiatrists who were associated with the private psychiatric hospital in Melbourne, Victoria, Australia where the study was conducted. Psychiatrists had been informed of the study and provided with study participant information

and consent materials. Participants were also recruited by the direct individual response to advertisements for the study on the hospital website and by brochures in the hospital clinic where the programme was conducted. Inclusion criteria were: a history of complex trauma with chronic problems that had not responded to other treatments as assessed with the Childhood Traumatic Events Scale and the judgement of experienced psychologists who oversaw the clinical interviews. Motivation to actively and voluntarily participate in a treatment programme that required homework completion and included emotional activation was required as well as the commitment to the treatment length. Motivational interviewing was used to assess readiness for change. Meeting these criteria was sufficient to be voluntarily admitted to the in-patient setting of the private hospital in which the study was conducted for the 4-week duration of the experimental programme. Exclusion criteria were: lifetime DSM-IV-TR Axis I psychotic diagnoses (not the transient psychotic episodes found in severe BPD), attention deficit hyperactivity disorder meeting childhood criteria with symptoms uncontrolled by pharmacotherapy, inability to speak or read the language, or an IQ below 80. From an eligible pool of 48 participants who met entry criteria, 36 agreed to participate in the study; see [Table 2](#) for demographic characteristics.

Neighbourhood socioeconomic disadvantage was measured using the Socio-Economic Indexes for Areas (SEIFA) Disadvantage Index corresponding to the participant's postcode of residence (Australian Bureau of Statistics, 2013). The SEIFA of participants was slightly higher than the Australian average (mean = 1000,  $SD = 100$ ), but not significantly different ( $t(35) = 1.86, p = 0.08$ ).

Participants had a history of sexual abuse ( $n = 25$ ) and/or emotional abuse ( $n = 24$ ) and/or physical abuse ( $n = 33$ ) occurring during the developmental period. Twenty-four (66%) had a confirmed diagnosis of BPD based on the SCID-II (First et al., 1997). Fifteen met criteria for post-traumatic stress disorder using the Clinician Administered Post-traumatic Stress Interview (Blake et al., 1995). Schema measures using the Young Schema Inventory Long Version, S3 (Young and Brown, 1994) are reported in [Table 2](#). Control of pharmacological treatment was beyond the scope of this study. However, no changes were made in existing pharmacological treatment over the course of the study. Participants were typically on anti-depressant medication and encouraged to refrain from benzodiazepine use during the programme.

### *Outcome measures*

*Self-esteem.* The Rosenberg Self-Esteem Scale (Rosenberg, 1965) measures self-reported self-esteem via ten questions with items answered on a 4-point scale from strongly agree to strongly disagree. This measure demonstrates appropriate reliability and validity (Crandal, 1973).

*Psychiatric symptoms.* The Brief Symptom Inventory (BSI) is a brief, self-report questionnaire of psychological symptoms with the following subscales: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism (Derogatis and Melisaratos, 1983). The inventory demonstrates appropriate reliability and validity (Boulet and Boss, 1991).

*Quality of life.* The World Health Organization (WHO) Quality of Life (QoL) BREF is a 26-item self-report questionnaire covering four domains: Physical Health, Psychological, Social Relationships, and Environment (WHO, 1996).

**Table 2.** Demographic characteristics of participants

Variable	Description	Program participants <i>n</i> = 36
Age	Years mean, <i>SD</i> [range]	41.3 (12.8) [18–67]
Gender	% male	8 (22%)
Education	Did not complete high school	0 (0%)
	High school graduate	3 (8%)
	TAFE	12 (34%)
	Some university	5 (14%)
	University degree or higher	15 (43%)
% Married/ <i>de facto</i>		20 (57%)
Prior psychiatric hospitalizations	0 admissions	8 (23%)
	1–4 admissions	21 (57%)
	5+ admissions	7 (20%)
Index of relative socio-economic Disadvantage		1020.6 (66.2) [894–1110]
Mean ( <i>SD</i> ) [range]		
DSM-IV-TR Axis 1 comorbidity ( <i>n</i> )	Major depressive disorder	25
	Anxiety disorders	7
	Post-traumatic stress disorder	15
DSM-IV-TR Axis 2 ( <i>n</i> )	Borderline personality disorder	24 (66%)
	Other personality disorder (narcissistic, histrionic, avoidant)	4
Young Schema Inventory Schemas mean ( <i>SD</i> )	Emotional deprivation	3.9 (1.2)
	Abandonment	3.6 (1.2)
	Mistrust abuse	3.4 (1.2)
	Social isolation alienation	4.0 (1.2)
	Defectiveness shame	3.8 (1.3)
	Failure	4.0 (1.3)
	Dependence incompetence	3.5 (1.1)
	Vulnerability	3.6 (1.1)
	Enmeshment	2.5 (1.4)
	Subjugation	3.3 (1.2)
	Self-sacrifice	4.0 (1.0)
	Emotional inhibition	3.3 (1.2)
	Unrelenting standards	3.9 (1.0)
	Entitlement grandiosity	2.8 (1.0)
	Insufficient self-control	3.4 (1.2)
	Approval seeking	3.6 (1.1)
	Negativity pessimism	4.1 (1.1)
Punitiveness	3.8 (1.2)	

*Schema modes.* The Schema Mode Inventory (SMI) is a self-report measure of 16 schema modes (Young et al., 2007), with acceptable test–retest reliability, internal consistency and construct validity (Lobbestael et al., 2008).

*Qualitative interviews.* All participants who completed the programme were invited to participate in an optional interview at the end of the programme, and 12 agreed. Interview questions were adapted from a prior qualitative study on schema therapy (Marieke et al., 2011). Participants were asked semi-structured questions with additional probing if minimal responses were given. The main topics were motivation to participate, expectations and experiences of the programme, barriers and facilitators to participation, opinion regarding effectiveness, experiences with this and any other types of therapy, experience after completion of the programme and any other opinions of the programme.

Four core themes were identified using the 6-step thematic analysis of Braun and Clarke (2006). Two raters (R.Y. and T.M.) worked independently generating initial codes from the data. These codes were then organized into a broader set of themes. Themes were discussed and refined using a consensus process. The complete data were reviewed a second time to ensure that the themes adequately represented the data. Themes were compared and added or removed based on rater agreement. Finally, themes were clearly defined.

### *Treatment programme*

The ST for Complex Trauma programme was adapted from the GST for BPD programme by Farrell and Shaw (2012) and from Farrell et al. (2014) by R.Y. to focus on complex trauma symptoms and psychoeducation regarding the symptoms and neurobiology of trauma, understanding trauma in mode terms and the shorter, more intensive period of treatment. This included translating mode activation terms to understand the problems and symptoms related to trauma, for example coping modes (dissociation, detachment), mood disturbance, interpersonal fear, and flashbacks. The programme consisted of eight key elements listed in Table 3. A clinical manual and patient workbook were developed. The workbook contained worksheets and exercises that were adapted from Farrell and Shaw (2012) and Farrell et al. (2009). Week 1 of the programme corresponded approximately to phase one of trauma treatment; programme weeks 2 and 3 corresponded approximately to phase two; and phase three of trauma treatment was addressed by activities in both weeks 3 and 4 of the programme.

### *Procedure*

This study was approved by the hospital human ethics research committee. Clients provided written informed consent. Participants were assessed by registered psychologists under the supervision of experienced ST psychologists before commencing the programme. All sessions were delivered by two clinicians: one was a registered psychologist and the other a provisionally registered trainee psychologist. Both group therapists had been trained in the ST interventions and provided with a detailed treatment protocol. Group therapists were supervised by ST certified individual, group and training clinicians (R.Y., J.F. and Ida Shaw) with informal daily supervision (with R.Y.) and formal fortnightly supervision. To ensure fidelity of the programme, the treatment team regularly discussed the manual and delivery of sessions with the manual author (R.Y.) with some sessions video-recorded and reviewed by R.Y. for fidelity. As this



**Table 3.** Components of the schema therapy for complex trauma programme

Treatment component	Description
(1) Schema therapy education	Participants understand how a mode is experienced in terms of cognitions, emotions and behaviours Psychoeducation regarding complex trauma provided and understanding of modes in the context of trauma General goals set for mode work
(2) Mode awareness	Enables participants to identify when in a mode
(3) Cognitive mode work	Participants learn to identify cognitive distortions associated with modes and develop cognitive antidotes
(4) Experiential mode work I	Participants learn about experiential triggers and develop experiential antidotes for each mode (based on corrective emotional experiences that fill unmet childhood needs)
(5) Experiential mode work II	Facilitators employ limited re-parenting and experiential techniques; develop and practise experiential antidotes to dysfunctional modes and limited re-parenting for the unmet needs of child modes (e.g. imagery re-scripting and mode dialogues)
(6) ST interpersonal/ mode interaction	This focuses on current modes participants are experiencing and their effects on group interactions and their relationships with others. Provides opportunity to practise healthy adult behaviours
(7) Mode management plans	Enable participants to develop plans for healthy action to meet underlying need when modes are triggered. This plan plays a major role in generalization after discharge
(8) Strengthening adaptive mode development	Monitor the ability to access healthy adult and happy child modes

research was conducted in a naturalistic practice setting with clinicians rather than researchers conducting the programme, further fidelity checks were not feasible.

Participants were admitted voluntarily for the purpose of doing the intensive in-patient 4-week treatment programme and discharged at the completion of the programme. The participants were drawn from six different closed groups that ran consecutively during 2015–2016 and contained a maximum of eight participants per group. Monday to Friday clients attended three (1 hour) sessions of GST (a total of 60 hours of group ST) and one individual ST session per week (total of 4 hours of individual ST). Participants were also able to attend the hospital recreation activities that ran outside of the ST group sessions, such as art and walking.

The quantitative measures were administered before and after the programme and at 3-month follow-up. The number of participants completing each measure is presented in [Table 4](#). Some participants did not return questionnaires and due to a lack of resources were not able to be followed up. Missing data were handled using available case analysis. The qualitative interviews were completed at the end of treatment by a registered psychologist or trainee psychologist who were not involved in the programme delivery.



**Table 4.** Means and standard deviations for the pre–post measures

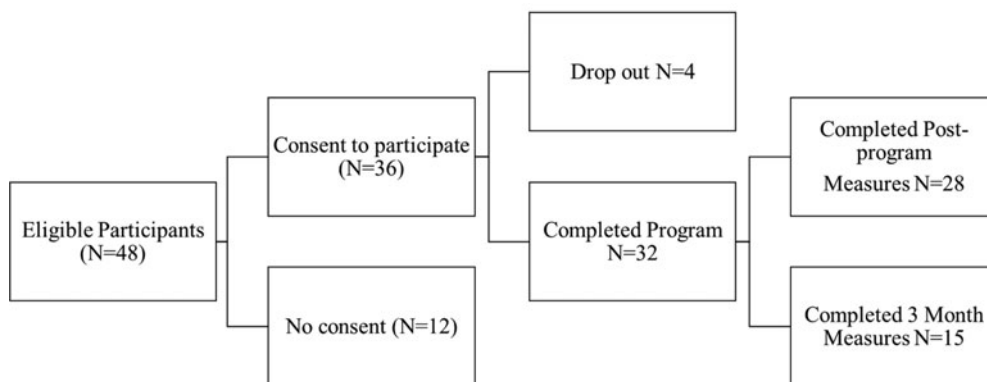
Measure	Baseline mean (SD)	Post-test mean (SD)	<i>t</i>	<i>p</i>	Cohen's <i>d</i>
Schema mode Inventory					
Vulnerable child ( <i>n</i> = 20)	64.9 (12.5)	46.9 (16.6)	3.7	.001 <sup>a</sup>	1.22
Angry child ( <i>n</i> = 20)	47.6 (20.0)	33.6 (16.3)	4.1	.001 <sup>a</sup>	0.77
Enraged child ( <i>n</i> = 20)	18.7 (20.5)	10.9 (10.0)	2.1	.048	0.48
Impulsive child ( <i>n</i> = 20)	43.8 (16.2)	26.7 (11.9)	4.5	<.001 <sup>a</sup>	1.20
Undisciplined child ( <i>n</i> = 20)	52.6 (16.9)	39.5 (9.0)	4.3	<.001 <sup>a</sup>	0.97
Happy child ( <i>n</i> = 20)	36.2 (16.5)	36.9 (15.7)	−0.2	.84	0.04
Compliant surrendered ( <i>n</i> = 20)	56.6 (13.4)	45.6 (15.8)	3.2	.005	0.75
Detached protector ( <i>n</i> = 19)	49.5 (12.4)	37.3 (14.8)	3.3	.004	0.89
Detached self-soother ( <i>n</i> = 20)	59.0 (15.6)	52.2 (18.7)	1.8	.08	.39
Self-aggrandizer ( <i>n</i> = 19)	37.4 (13.7)	25.5 (12.8)	5.4	<.001 <sup>a</sup>	.90
Bully attack ( <i>n</i> = 20)	24.8 (16.2)	15.6 (12.7)	3.4	.003 <sup>a</sup>	.63
Punitive parent ( <i>n</i> = 20)	54.8 (16.8)	41.3 (20.1)	3.6	.002 <sup>a</sup>	.73
Demanding parent ( <i>n</i> = 20)	67.0 (13.3)	60.0 (13.3)	3.0	.008	.52
Healthy adult ( <i>n</i> = 19)	49.3 (14.1)	52.3 (13.4)	−1.1	.29	.22
Rosenberg Self Esteem	7.7 (4.1)	16.0 (6.8)	−5.4	<.001*	1.48
WHO QoL BREF					
Physical health <i>n</i> = 24	18.6 (4.3)	22.3 (3.7)	−3.7	.001 <sup>b</sup>	.92
Psychological health <i>n</i> = 24	11.0 (2.8)	16.2 (3.6)	−5.5	<.001 <sup>b</sup>	1.61
Social relationships <i>n</i> = 24	6.6 (2.2)	8.6 (2.1)	−3.7	.001 <sup>b</sup>	.93
Environment <i>n</i> = 23	23.3 (5.0)	26.0 (5.1)	−3.0	.007 <sup>b</sup>	.53
Brief Symptom Inventory ( <i>n</i> = 27)					
Somatization	10.1 (8.4)	7.5 (6.1)	1.6	.11	.35
Obsession Compulsion	16.2 (4.9)	10.9 (5.3)	5.7	<.001 <sup>c</sup>	1.04
Interpersonal Sensitivity	9.9 (3.7)	6.0 (3.8)	4.3	<.001 <sup>c</sup>	1.04
Depression	17.1 (5.2)	9.7 (5.6)	5.7	<.001 <sup>c</sup>	1.37
Anxiety	14.6 (4.7)	9.2 (5.3)	4.6	<.001 <sup>c</sup>	1.08
Hostility	7.4 (5.1)	4.8 (3.7)	3.1	.005	.58
Phobic anxiety	8.4 (4.6)	5.5 (4.3)	3.8	.001 <sup>c</sup>	.65
Paranoid ideation	8.1 (4.1)	5.6 (3.7)	3.1	.005	.64
Psychoticism	10.5 (3.4)	6.4 (4.1)	4.8	<.001 <sup>c</sup>	1.09
Global Severity Index	110.5 (34.0)	72.2 (35.0)	5.1	<.001 <sup>c</sup>	1.11
T score	76.1 (4.5)	69.0 (7.7)			
Positive symptom Total	41.0 (7.9)	36.5 (9.5)	2.7	.012	0.52
T score	73.5 (6.2)	70.1 (6.2)			
Positive symptom Distress Index	2.5 (0.7)	1.9 (0.6)	4.5	<.001 <sup>c</sup>	0.92
T score	69.4 (8.2)	61.8 (8.4)			

<sup>a</sup>*p* < .003; <sup>b</sup>*p* < .0125; <sup>c</sup>*p* < .004; \**p* < .01.

## Results

### Programme feasibility

Of the 36 participants who began the programme, 32 completed it, resulting in a drop-out rate of 11% (see Fig. 1). One drop-out was due to a breach of standard psychiatric hospital rules



**Figure 1.** Study participation and completion

by bringing in a prohibited substance (alcohol), and three clients left the programme because they reportedly found it too emotionally challenging.

### *Thematic analysis*

Four themes were identified:

*Theme 1. Mode language explains emotional reactions.* The language and theory used in ST increased self-awareness about the sources of emotional reactivity and emotional states. Emotional reactivity was better understood and accepted when explained in mode language: ‘I have awareness of a mode happening...for protective reasons rather than just [me] behaving badly’; ‘I’ve gone from reacting to thinking about things in a schema sort of way’. They reported developing the ability to recognize their emotional shifts: ‘being able to recognize that what is going on with my moods, that they are not just moods that I’m slipping in and out of, for no reason, rather they are modes, which are understandable...’. This clarity shifted their appraisal of how they behaved from being ‘bad’ to a survival strategy from childhood/adolescence: ‘I now know that my first response is my angry protector mode and I notice now when it starts....I’ve had it since I was so tiny...’. Self-reflection was increased: ‘the biggest thing was that I became more self-aware’. This awareness and understanding of schemas, modes and identification of triggering situations allowed participants to evaluate whether their usual reactions met their present needs and to develop more effective plans of action: ‘I asked myself what is going on? I’m really anxious...what do I need right now.... I’m here for you... within two minutes I was OK’. Participants were able to not only reflect on the emotional state they were in but also to realize that as an adult they can make a conscious choice about the action they take in response to schema triggers as an adult: ‘OK well there’s a problem... I feel scared...so what’s my inner child saying to me right now...what do I need in this mode’.

*Theme 2. The programme fosters connection.* ST promoted the development of connection to fellow participants and group therapists: ‘It was really nice to be able to connect with others’; ‘...making the bonds within the group... having those connections throughout’; ‘...it made me feel safe’ and ‘after finishing group I missed belonging to the group’. Connecting was experienced as frightening but also reassuring: ‘being with people who have had similar

experiences and are dealing with similar problems was scary but made it more powerful'. Participants were able to acknowledge that connecting was needed: 'I hated the fleece connections, but it helped connect deep down which I needed' and 'the fleece forced me to connect and even though I wanted to let go of it experiencing that connecting helped'.

*Theme 3. Emotional activation is needed for change.* The emotional intensity of the program was described as '...difficult'; 'intense... it was hard-core'. Reference was made to emotion-focused exercises being the most intense, but also the most valuable: '...rescripting and experiential work was most powerful'; 'the experiential stuff was confronting...'. This was coupled with the appreciation that the programme was delivered in an in-patient hospital setting and thus they felt able to have an: 'emotional outpouring' in a safe and contained way; it allowed for '...continuity and support', some reported that 'to have had to drive home afterwards would have been impossible'. It appeared that although the programme was considered challenging, difficult and intense at times: 'painful... the hardest therapy I have ever done... it was emotional torture...', patients also saw it as necessary in order to change: 'the heavier the better...', 'necessary to make things work better'; '...it was painful but at the same time helpful...'.

*Theme 4. Getting to the roots enables understanding, self-reliance and instils hope for change.* Participants reported developing a better understanding of themselves and their life story, and how ST provided a way to connect the different aspects of themselves, their life experience and daily problems: 'for me it shed light on why I am the way I am and what has happened to me in my life'; 'understanding where the abandonment feelings started... before I had no idea...'; 'The whole concept of being my own parent, me being there for me, when I have looked for solace and help from everywhere but me, I've never thought to find it from myself, never, I've been there all along and learning to look within has been foreign concept. That's how it's [ST] been different, teaching me to parent myself'. In ST terms this could be summarized as having experienced limited reparenting and re-family (Farrell and Shaw, 2012) effects in the group, internalizing these experiences, modelling the skills involved and learning to access them as the 'good parent' aspect of their healthy adult mode.

Participants described clear differences between ST and other the other types of therapy they had experienced. They pointed to ST exploring causation: 'other therapy addresses symptoms, ST looks at causes'; 'DBT is soothing, CBT looks at changing your thinking, whereas schema looks at roots, how it all began and how to heal it...'. This deeper understanding of their problems in comparison with other approaches instilled hope for change and recovery: 'there is a reason why I behave the way I do, this was a relief for me, if there was a reason behind what I was doing then I could interrupt that... If you understand why there is hope, with awareness you can heal...' and 'it puts a lot of things in my life into perspective...it just fits, I understand myself a lot better now'. This understanding in ST is seen as a necessary, but not sufficient, step in change. Behavioural pattern-breaking is another integral component of ST.

#### *Pre-post measures*

There were no significant pre-treatment differences in self-esteem, psychiatric symptoms or QoL among the 28 participants who completed the post-measures compared with the four non-completers. There were significant improvements in self-esteem, psychiatric symptoms (except for somatization) and QoL at programme end, as displayed in Table 4. On the Schema Mode Inventory, there were significant decreases in the percentage of time spent in the maladaptive modes, with the exception of detached self-soother, detached protector, compliant surrender

**Table 5.** Means, standard deviations for pre–post and 3-month measures

Measure	Baseline mean	Post-test mean	3-month mean	<i>F</i>	<i>P</i>	$\eta^2$
Rosenberg Self Esteem ( <i>n</i> = 11)	6.7 (2.9)	14.7 (7.7)	13.8 (4.6)	12.6	<.001 <sup>c</sup>	.558
WHO QoL BREF						
Physical health <i>n</i> = 10	20.1 (3.9)	23.6 (3.6)	23.9 (4.3)	3.5	.052	.280
Psychological health <i>n</i> = 10	11.3 (2.3)	17.2 (2.6)	16.7 (2.9)	23.3	<.001 <sup>a</sup>	.721
Social relationships <i>n</i> = 10	6.4 (2.3)	8.7 (2.2)	7.4 (2.6)	3.1	0.07	.257
Environment <i>n</i> = 9	24.2 (6.1)	27.9 (5.9)	28.1 (5.8)	4.7	.025	.370
Brief Symptom Inventory ( <i>n</i> = 14)						
Global Severity Index	102.8 (34.3)	62.1 (30.0)	59.7 (38.4)	17.4	<.001 <sup>b</sup>	.573
T score	74.7 (4.7)	67.1 (8.1)	66.4 (7.5)			
Positive symptom Total	40.6 (5.6)	33.5 (9.2)	32.3 (9.5)	7.8	.002 <sup>b</sup>	.375
T score	72.6 (4.6)	67.3 (6.5)	66.5 (6.9)			
Positive Symptom Distress Index	2.5 (0.6)	1.8 (0.6)	1.7 (0.7)	20.0	<.001 <sup>b</sup>	.606
T score	69.3 (6.7)	60.4 (8.6)	59.4 (8.7)			

<sup>a</sup>*p* < .0125; <sup>b</sup>*p* < .004; <sup>c</sup>*p* < .05.

and the demanding parent (critic). There was no significant increase in the time spent in the happy child or healthy adult mode.

### Three-month follow-up measures

At follow-up (*n* = 14) the significant improvements in self-esteem, QoL psychological health and psychiatric symptoms remained (Table 5). There were no baseline differences in psychiatric symptoms (BSI), self-esteem or QoL measures for those participants who did and did not complete the 3-month measures.

## Discussion

A 4-week in-patient GST programme for patients with complex trauma was found to be a feasible treatment to implement with low programme drop-out (11%) in an uncontrolled pilot study. Reductions in measures of psychiatric symptoms and improvement in self-esteem and quality of life were significant from pre- to post-treatment and maintained in the group that completed a 3-month follow-up. There were also significant decreases in time spent in most maladaptive schema modes. Limitations of the study include the lack of a control group, and loss of 22 out of 36 participants at 3-month follow-up (due primarily to lack of resources to follow-up participants). Only four other hospital in-patient GST pilot studies have been reported, and these were for severe BPD with treatment lengths ranging from 7 to 18 weeks (Nenadić et al., 2017; Reiss et al., 2014). The present study demonstrated somewhat larger effect sizes for improvements in global psychiatric symptoms than Reiss et al. (2014) ( $d = 1.11$  compared with  $d = .98$  and  $d = .96$  with a drop to  $d = .43$  at 3-month follow-up; although BPD symptom reductions in Reiss et al. post-test were between  $d = 2.15$  and  $d = 0.73$ ). Although the subject group of the present study is a different and generally less severe population than severe BPD, these findings for a much shorter treatment length are noteworthy.

Theoretically, GST is similar in its conceptualization of complex trauma and provides treatment that can correspond to the three stage process developed by experts in complex trauma (Courtois and Ford, 2009). The positive results of this pilot study provide preliminary evidence that the GST approach may be an effective treatment for complex trauma.

In stage one, goals were accomplished by education, understanding the impact of trauma from a biopsychosocial perspective and affect regulating techniques. Participant's report of their experiences in the programme suggests that ST language, namely 'mode' terminology, allowed them to better understand the biopsychosocial impact of their developmental experiences on their problems and symptoms, something they had not experienced in other therapeutic approaches. Such understanding mirrors the essential step in trauma treatment of understanding self-dysregulation and one's complex reactions (Courtois, 2008). The significant increase in self-esteem found could suggest that development of self-understanding allows compassion for their vulnerable child, the part of self that contains the memories, thoughts, feelings and physical sensations from the trauma they experienced. Significant reductions in the dysfunctional critic mode (punitive type), which is thought to maintain low self-worth, may have also contributed to improved self-esteem.

Stage two corresponds to the ST mode change phase where memories and painful feelings related to trauma are elicited and described as the experience of the vulnerable child mode. This mode is accessed in GST to allow the person to have corrective emotional experiences including imagery rescripting in which the unmet childhood needs are met (e.g. safety from their trauma), decreasing the intensity of trauma-related distress. The finding on the SMI of a significant decrease in frequency of time in the vulnerable child mode provides preliminary evidence for the effectiveness of these interventions. Participants' reports about the treatment's emotional intensity supports the assertion that ST interventions operate at the emotional level of experience.

Stage three corresponded to the ST autonomy stage, focusing on issues like identity and establishing and maintaining healthy interpersonal relationships. Significant improvement was found in measures of self-esteem and QoL post-treatment and at 3-month follow-up, which may relate to this aspect of treatment and qualitative findings supporting participant's development of connectedness with others. However, the healthy adult mode did not significantly increase at programme end. Change in this mode may require a longer treatment programme to consolidate the self-awareness of stages one and two into a more stable sense of identity and move to a focus on the interpersonal to more fully address the aims of stage three.

The hypothesis that QoL would be improved was largely supported and maintained at 3-month follow-up, suggesting improvement was not solely due to being in the hospital away from external pressures and the stress of daily living. The social relationships domain was the only measure that decreased at 3-month follow-up. This could be due to changes in unhealthy interpersonal dynamics as the result of treatment gains. As individuals become clearer about their emotional needs and assert those needs with others, conflict and decreases in unhealthy relationships may occur, particularly for relationships that were maintaining dysfunctional schemas and problematic coping modes.

### *Limitations*

The main limitation of this study is the lack of a control group; thus quantitative findings require replication in a controlled study. A control group of in-patients who receive treatment as usual,

not ST, could evaluate the relative contribution to improvement of the ST treatment programme versus other factors such as the therapeutic relationship or the effects of hospitalization.

A reduced number of participants completed the 3-month measures. Although there was no difference in baseline characteristics from those who did or did not complete the measures, there could be a positive response bias in responders, which might have resulted in more positive 3-month results. A longer follow-up period is also required to understand whether treatment gains are maintained in the longer term.

All measures were self-report, which may be biased or have limited accuracy and future studies should include blinded clinician-rated outcome measures. Interviews were coded by individuals involved in the program (R.Y. and T.M.), which may have introduced a bias towards positive findings. However, interviews were coded independently to reduce this likelihood. Treatment fidelity was informally assessed throughout the programme. A more formal assessment of the programme fidelity is needed.

There is also no comprehensive measure of complex trauma symptoms and so a measure of psychiatric symptoms was used in the current study. The participants in the current study also had slightly higher socioeconomic status relative to the Australian population, possibly influencing a bias towards a more positive outcome. Future studies should address these methodological limitations and employ a longer follow-up to evaluate the maintenance of treatment gains. Feasibility of an out-patient rather than in-patient setting should also be considered given the high costs associated with in-patient treatment.

### Conclusions

In summary, these preliminary findings suggest that GST is a feasible approach for individuals with complex trauma. The programme showed promise in reducing psychiatric symptoms, improving QoL and self-esteem, and had high participant retention. Importantly, schema mode changes were also found, supporting the mode change mechanism of action of ST. A controlled trial is warranted to further explore the benefits of ST as a treatment mode for individuals who have experienced complex trauma.

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