Trauma-Focused Cognitive Behavioural Therapy for Abused Children with Posttraumatic Stress Disorder: A Pilot Study

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A manualised trauma-focused cognitive behavioural therapy (TF-CBT) programme was developed for multiply-abused children diagnosed with posttraumatic stress disorder (PTSD; Feather & Ronan, 2004). It was piloted with 4 children (aged 9-14 years) referred to a specialist clinic of the statutory child protection agency. The locally developed programme built on efficacious treatments for childhood anxiety and PTSD as a result of sexual abuse. It comprises psychosocial strengthening, coping skills training, gradual exposure using creative media, and special issues relevant to trauma and abuse. A multiple baseline design was used to demonstrate the controlling effects of the treatment. The results indicate a good deal of promise. PTSD symptoms generally decreased and child coping increased. Gains improved over 3, 6, and 12 month follow-ups. Results are discussed in terms of the value of clinicians engaging in local research aimed at increasing outcomes for their clients.

Child abuse (CA) statistics in New Zealand are alarmingly high. Violence against children leading to death is an indicator for non-fatal forms of CA. Of 27 wealthy nations, New Zealand had the third highest CA death rate (1.2 per 100,000) in the 1990's (UNICEF, 2003). Life time estimates of CA suggest that 4% to 10% of New Zealand children experience harsh or severe physical punishment and approximately 18% experience sexual abuse (Ministry of Health, 2001). It is commonly agreed by service providers in New Zealand that one in seven families experience family violence (Snively, 1994). Family violence encompasses child physical, sexual, and psychological/emotional abuse including threats and witnessing violence (The Risk Management Project, 1997). Notifications of suspected CA reported to the Child, Youth and Family Service of the Ministry of Social Development (CYF) continue to rise. CYF statistics show that intakes to the end of June 2005 stood at 53,097, up from 43,314 the year before (to end of June 2004) and 31,781 the year before that (year to end of June 2003). CA requiring further action was established in approximately 85% of these cases each year (Department of Child Youth and Family Services, 2005).

Clinical and population studies have found that CA is responsible for long-term psychiatric disabilities, medical problems, substance abuse, learning problems, interpersonal violence and other serious social and health problems (Mullen, Martin, Anderson, Romans, & Herbison, 1996; Streeck-Fischer & van der Kolk, 2000). While recent researchers have emphasised the potential for growth rather than pathology (Christopher, 2004), reviewers have identified that many children who have been abused demonstrate adverse reactions in their affective, cognitive, behavioural, and neurobiological development both in the short- and long- term (Berliner & Elliott, 2002; Glasser, 2000; Kaplan, Pelcovitz, & Labruna, 1999; Kendall-Tackett, Williams, & Finkelhor, 1993; Kitzmann, Gaylord, Holt, & Kenny, 2003; Kolko, 2002; Putnam, 2003). There is growing evidence that early comprehensive intervention may effectively reverse some of these changes and considerably lessen the long-term risk abused children pose to themselves and to society at large (Streeck-Fischer & van der Kolk, 2000).

It has been recognised that CA can lead to a pattern of psychological distress similar to that derived from other traumatic events (van der Kolk, Weisaeth, & van der Hart, 1996; Weaver & Clum, 1995). In 1980, the psychological effects of trauma exposure became subsumed under the diagnosis of Posttraumatic Stress Disorder (PTSD) (American Psychiatric Association, 1980). In 1987, it was acknowledged that PTSD can also occur in children (American Psychiatric Association, 1987). In fact, children appear to be the demographic group at highest risk for PTSD (e.g., Norris et al., 2002). Like adults, children show the cardinal tripartite grouping of symptoms: re-experiencing, avoidance and increased arousal (American Psychiatric Association, 1994). However, symptoms of PTSD in children may manifest differently at different ages, and other reactions can also occur (Terr, 1991; Yule & Williams, 1990). Interpersonal and separation

difficulties are common. Children may become irritable and angry with parents and peers. Some blame themselves for events (Yule, Smith, & Perrin, 2005). Co-morbid conditions may include depression, anxiety, oppositional behaviour and grief reactions (Ronan & Johnston, 2005).

Abuse-focused clinicians have argued that the trauma/PTSD conceptualisation does not specifically cover all manifestations of CA (Briere, 1992; Herman, 1992; Terr, 1991). Nevertheless, a PTSD diagnosis can help victims of CA gain understanding, acceptance and appropriate treatment. Recent research has documented diagnostic rates of PTSD in abused children of between 19% and 64%, with higher figures reflecting multiple traumatisation, younger age, lack of parental support, and other risk factors (Ackerman, Newton, McPherson, Jones, & Dykman, 1998; Dubner & Motta, 1999; Lehmann, 2000; Pelcovitz, Kaplan, DeRosa, Mandel, & Salzinger, 2000; McCloskey & Walker, 1999; Norris et al, 2002).

Despite the fact that CA is so prevalent and an array of psychological treatment approaches have been developed and are in use clinically, until recently there has been little emphasis on studying the effectiveness of treatments (Skowron & Reinemann, 2005). Narrative reviews have variously concluded that psychological interventions for CA have generally been ineffective (Emery, 1989; Melton, 1994; O'Donohue & Elliott, 1992) or conversely, that some appear promising (Finkelhor & Berliner, 1995; Oates & Bross, 1995; Saywitz, Mannarino, Berliner, & Cohen, 2000). These conflicting reports reflect not only the particular samples of studies reviewed, and treatments used, but also some of the interacting and confounding effects which are inevitably present when working in real life settings with children with a history of abuse and violence. One of the issues underpinning a number of studies is a lack of rigour in the research designs used. Many researchers in the field have been reluctant to use experimental designs entailing no-treatment or placebo control groups because of the ethical issues related to withholding treatment with this population (Skowron & Reinemann, 2005). Additionally, to date, the broad field of CA and its treatment has been characterised by specialised fields of interest and practice and a lack of a co-ordinated, planned approach to treatment outcome research (Saunders, 2003).

A recent meta-analysis has made a significant contribution by being the first to review quantitatively the effectiveness of psychological interventions for CA across a range of types of abuse, treatment modalities and types of comparison group (Skowron & Reinemann, 2005). The 21 treatment studies published between 1974 and 2000 included in the review had participants who had been referred for CA, child physical abuse (CPA), child sexual abuse (CSA), and/or physical neglect. One of the main inclusionary criteria was that the treatment had been compared with a control group from the same population, and results reported in sufficient detail to calculate or estimate effect sizes. The results showed that following intervention the treated clients appeared to be functioning better than 71% of control group participants. The average weighted effect was d = .54, a medium effect size (J. Cohen, 1988). This is a similar effect size to those found by other meta-analyses of psychological treatments for child-identified problems, and somewhat lower than others (Casey & Berman, 1985; Durlak, Fuhrman, & Lampman, 1991; Weisz, Weiss, Alicke, & Klotz, 1987; Weisz, Weiss, Han, Granger, & Morton, 1995).

However, treatments for sexual abuse were found to be associated with higher effect sizes (average ES, d = .69) compared to those for general forms of child maltreatment (CM) (average ES, d = .40). The authors also noted in particular a dearth of treatments developed and evaluated for CPA (physical abuse, n = 1 study found and included in the meta-analysis). In addition, it was noted that only a small number of studies included follow-up of immediate effects making generalisations not yet possible. Consequently, Skowron and Reinemann rendered the following conclusion and recommendation:

> "In response, we encourage CM[1] treatment researchers to ... obtain follow-up data on all clients completing treatments, because professionals who work with this group have long asserted that "sleeper effects," defined as the development of serious psychological symptoms at some point in time after termination of abuse, are likely present among victims of CM (Finkelhor & Berliner, 1995)" (p. 66).

Treatments for CA trauma reflect the fact that PTSD is an anxiety disorder. CBT treatment for child anxiety is currently considered to be the gold standard (Howard & Kendall, 1996; Kane & Kendall, 1989; Kendall, 1994; Kendall, Chansky, Kane, Kim, Kortlander, Ronan, Sessa, & Siqueland, 1992; Kendall & Southam-Gerow, 1996; Kendall, Schroeder, Panichelli-Mindel, Southam-Gerow, Henin & Warman, 1997). CBT treatment has been established as "probably efficacious" for child anxiety (Kendall, Hudson, Choudhury, Webb, & Pimental, 2005). Strong and consistent impact has been demonstrated across a number of settings and countries, including Australia and New Zealand (Barrett, 1998; Barrett, Duffy, Dadds, & Rapee, 2001; Huzziff & Ronan, 2004). Importantly, treatment manuals are available for use in clinical work and as a basis for further research (e.g., in New Zealand, Girling-Butcher & Ronan, 2002; Kendall et al., 1992).

Given findings to date, practice guidelines recommend a variation of CBT, trauma-focused CBT (TF-CBT), for treating the specific problems of traumatised abused children (Saunders, Berliner, & Hanson, 2001). Treatment outcome studies on TF-CBT for abused children with PTSD have been published (J. A. Cohen, Berliner, & March, 2000; Deblinger, Lippmann, & Steer, 1996). While focused on CSA, the results of a recent multi-site, randomised controlled trial suggests the efficacy of this treatment for children who have experienced multiple traumas (J. A. Cohen, Deblinger, Mannarino, & Steer, 2004). The hallmark of CBT for anxiety and of the trauma processing approach for CSA is gradual exposure, linked in this area to the idea of creating a trauma narrative.

There is a need for more rigorous evaluation of the effectiveness of CA

treatments with clinic-based populations of children who are typically multiply -abused with multiple problems (Saunders, 2003). Within the bounds of ethical and legal standards of care, this can be achieved by using control groups assigned to alternative psychological treatment whose effectiveness has been empirically established, or a community case management condition that is thoroughly documented (Skowron & Reinemann, 2005). However, clinic settings in New Zealand rarely have the resources or the client numbers for large samples to get sufficient cell sizes. Given such problems in real life settings, there has been the additional call for the use of single-case experimental designs in these situations (Saunders, 2003). In this way, local clinicians can draw on evidence-based research carried out in related areas elsewhere to develop and trial the effectiveness of treatment protocols for particular populations and problems. Ultimately, research can most scientifically inform clinical practice if research participants adequately reflect the population for whom the treatment is desired (Behl, Conyngham, & May, 2003).

A manualised treatment programme was developed in the local clinical setting for multiply-abused children with PTSD, typical of the population referred for assessment and therapy to the specialist unit of the statutory child protection agency in New Zealand. The manual presents a TF-CBT programme for abused 9-14 year old children with PTSD in a 16-session format with sessions for parents and/or caregivers (Feather & Ronan, 2004). The manual is designed to be flexible to cater for the range of issues which may present, and designed to be adapted to different developmental stages within this age range. It is based on a manualised CBT programme for children in this age range with anxiety disorders (Kendell, Kane, Howard, & Siqueland, 1990; Ronan & Deane, 1998). A key consideration in adapting an anxiety-based programme to the treatment of PTSD is that anxiety is about current and future threat whereas PTSD, while an anxiety disorder, also has much to do with a past event(s). Children who have PTSD are processing trauma and/or its sequelae in a way that often involves not only ongoing distress but also ongoing reminders (Ehlers & Clark, 2000). Hence, the aim of a treatment programme for PTSD needs to be to help children develop skills to manage their symptoms, and to process trauma so that it is seen as a time-limited past event(s) that can be managed effectively by the child and his family/caregivers. A CBT approach holds that gradual exposure is necessary to reduce PTSD symptoms. This can be achieved using creative media to create a trauma narrative and desensitisation to trauma triggers in a safe therapeutic environment (Yule, Smith & Perrin, 2005).

Adapting a treatment for abused children involves special considerations. CA invariably affects the relationships children have with their family members and means the involvement of helping professionals in the child's life. Many children who come to the attention of child protection services are placed in care to ensure their safety. Removal from parents adds another layer of trauma for these children and necessitates forming new relationships with caregivers. The early part of the treatment programme is devoted to exploring and strengthening the child's psychosocial context as a basis for the later treatment interventions. Abuse-informed issues are incorporated in the treatment, as recommended in practice guidelines, such as psychoeducation about abuse and personal safety, and emotional processing of guilt,

Table 1. Participant characteristics, history and current circumstances

Participant	Sex	Age	Cultural Heritage	Abuse History	Diagnosis	Severity of PTSD	Safety Issues	Placement issues
S1	F	9	New Zealand European	Witnessing domestic violence, physical abuse, emotional abuse	PTSD, Separation Anxiety Disorder, Generalised Anxiety Disorder, depression symptoms, suicidal ideation	Severe	Intermittent contact with itinerant, alcoholic, suicidal mother; alleged father hit her	Foster care broke down, subsequent placement with father broke down, placed in second foster home
S2	M	13	New Zealand European	Physical abuse, emotional abuse	PTSD, Oppositional Defiant Disorder, sexual behaviour problems	Moderate	Was unable to return home as his safety could not be ensured; physically abusive step-father, & non-protective mother	Removed from home, first foster placement broke down, completed a residential programme, placed in second foster home
S3	M	12	New Zealand European	Witnessing domestic violence, emotional abuse, sexual abuse	PTSD, Generalised Anxiety Disorder, obsessive compulsive symptoms	Severe	Some contact with emotionally abusive mother	Removed from mother's care to foster home, to father's care at end of therapy
S4	F	9	New Zealand European	Physical abuse, witnessing domestic violence, emotional abuse	PTSD, Social Phobia, generalised and separation anxiety symptoms	Severe	Ongoing contact with emotionally abusive mother & violent step father	Informal placement with grandmother – formalised during follow-up

blame, anger, separation, grief and loss (Saunders et al., 2001).

The purpose of the present study was to pilot the effectiveness the manualised TF-CBT programme with a group of four multiply-abused children who had been diagnosed with PTSD. It was expected that the participants would show a reduction in PTSD symptoms and an increase in coping behaviours related to specific abuse and trauma related concerns, compared to pre-treatment levels. It was also expected that these gains would maintain over follow-up intervals.

Method

Participants

Four abused children who met DSM IV (American Psychiatric Association, 1994) diagnostic criteria for PTSD participated in treatment. The children ranged in age from 9 to 13 years at the outset of treatment. The sample was drawn from children referred by their Child, Youth and Family (CYF) social worker to the CYF Specialist Services Unit (SSU) in Central Auckland for psychological assessment and treatment. These children were 'open cases' with CYF who were typical of those who presented to SSU with multiple abuse histories and current mental health concerns. The research was carried out with approval from the ethics committees of CYF and Massey University. Informed consent from the child and adults legally responsible for their care (parent/caregiver(s) and/or social worker) was necessary for participation in the research. Participant characteristics are summarised in Table 1.

Measures

The protocol for the research comprised a multi-modal, multi-informant battery of instruments, as recommended by the child abuse and child trauma literature (American Academy of Child and Adolescent Psychiatry, 1998; Myers et al., 2002). A full battery of self-report measures, and parent/caregiver and teacher measures was designed to assess the impact and symptomatology of child abuse trauma pre, post and at 3 month, 6 month and 12 month follow-up. A subset of measures additionally tracked ongoing progress across baseline and treatment. All the measures selected have known reliability and validity and have been shown to be sensitive to the effects of treatment. Assessments were administered by a tracked and independent assessor (i.e., a postgraduate student training in clinical psychology). The current study was primarily interested in answering questions related to selected instruments from this battery: In particular, the weekly self-report measures completed by the children that tracked changes in PTSD symptoms (CPTS-RI) and self-identified coping factors (CQ) (see below).

Anxiety Disorders Interview Schedule for Children (ADIS) (Silverman, 1987). The ADIS is a structured clinical interview administered to children, with a parallel version for parents. Revisions have ensured it is compatible with the DSM IV and can be used for diagnostic purposes (Silverman, 1994). The ADIS has been used extensively by childhood anxiety researchers due to its high reliability, and user-friendly structure which enhances rapport and enables in-depth gathering of information on the child's historical and current functioning (Ronan, 1996).

Children's Post-traumatic Stress Reaction Index (CPTS-RI) (Frederick, Pynoos, & Nader, 1992). The CPTS-RI is a 20-item measure rated on a 5-point Likert scale (scored 0-4) that assesses the features and symptoms of PTSD in children. Widely used in research, it can be administered in a self-report or interview format. Scores can range from 0 to 80, with a cut-off of 12+ indicating a mild PTSD reaction; 25+ a moderate PTSD reaction; and 40+ a severe PTSD reaction.

State Trait Anxiety Inventory for Children (STAIC) (Speilberger, 1973). The STAIC measures both acute (state) and chronic (trait) anxiety in children aged 9 to 12 years. Each scale has 20 items rated on a 3-point Likert scale (scored 1, 2, or 3). The Trait scale is treatment sensitive and can be used to measure the effectiveness of clinical procedures designed to reduce anxiety in children. Scores can range from 20 to 60, with higher scores indicating greater anxiety.

Children's Depression Inventory (CDI) (Kovacs, 1981). The CDI assesses affective, behavioural and cognitive signs of depression. It has 27 items. Each item has 3 choices (scored 0, 1, or 2) each of which characterises the child over the previous two weeks. It is designed to measure the severity of depressive symptoms in children and adolescents aged 8 to 17 years. Scores can range from 0 to 54, with higher scores indicating greater severity.

The Coping Questionnaire (CQ) (Kendall et al., 1992). The CQ-C measures the self-perceived coping ability of a child in specific anxiety-provoking situations. The three situations most distressing for the child are identified during the assessment interviews are listed on the CQ-C and rated each week by the child on a 7-point Likert scale ranging from *not at all able to help myself* (1) to *completely able to help myself feel comfortable* (7).

Child Behaviour Checklist/4-18 – Parent Form (CBCL/4-18) (Achenbach, 1991a). The CBCL measures parent/caregiver reports of child competencies, emotional functioning and behaviour problems in a standardised format. Two sections measure (a) social competencies, assessing the child's participation in areas such as sports, hobbies, and social interactions; and (b) problematic behaviours, comprising 118 problem items rated on a 3-point scale (scored 0, 1, or 2). The problem item raw scores are recorded on a scoring profile, which provides percentile and *T* scores based on norms for each sex in each age range, presented in a series of problem scales.

Child Behaviour Checklist – Teacher Report Form (TRF) (Achenbach, 1991b). The TRF is used to assess child problems and competencies in the realm of social/emotional functioning at school. It mirrors the parent version of the CBCL and provides teacher ratings of the child's academic performance, adaptive functioning, and behavioural/emotional problems.

Design

The current study was based a scientist-practitioner model of local research and utilised a single-case design. A multiple

baseline across subjects involving between-person replications (Hersen & Barlow, 1976) was used to demonstrate the controlling effects of treatment on PTSD symptoms and coping. The four participants were randomly assigned to a baseline of 3, 5, 7, or 9 weeks at intake. Weekly measures were completed throughout the baseline and treatment phases. A non-concurrent procedure was employed (Hayes, 1981; Watson & Workman, 1981). This relaxes the requirement that the participants enter assessment at the same time and makes it possible to use the data from several clients seen at different times, exploiting the fact that their baselines were of different durations. Multiple baseline designs are user-friendly in clinical settings and provide experimental evidence that the treatment effects are probably not due to other processes, nor to the placebo effect of the experience of assessment and treatment itself (Blampied, 1999; Kazdin, 2003). Successive replications across participants that show change in symptoms and coping when treatment is introduced support the hypothesis that the treatment is producing the changes. Furthermore, the graphed results enable visual assessment of the effects of phased treatment elements, as well as the impact on treatment of any documented external events (Kazdin, 2003).

Procedure

Following referral, an assessment interview with the independent assessor was scheduled for the child and parent/caregiver. If the child met diagnostic criteria for PTSD on the ADIS, informed consent from the child and legally responsible adult(s) was sought. The full battery of assessment measures was completed with the child, parent/caregiver and teacher. The child was randomly assigned to a baseline duration of 3, 5, 7 or 9 weeks. The child completed the weekly measures of the short assessment battery (CPTS-RI, STAIC, CDI, and CQ) during the baseline period and during treatment. The full battery was administered again post-treatment and at 3 month, 6 month and 12 month follow-up points. As per the informed consent agreement, if the child did not wish to complete measures at any time, this of course was respected. If there had been concerns that the research constraints would impact on safety, clinical concerns would have been prioritised. Therapy was provided at the SSU clinic by the senior author, a doctoral candidate, postgraduate clinical psychology trainee, and an experienced child and family clinician.

Treatment Manual and Materials

Children received the initial 16-session programme and parents/caregivers were offered 3 structured sessions, as described in a 65-page manual (Feather & Ronan, 2004). In addition, booster sessions and additional parent/caregiver sessions and social worker support were provided as required. The manual describes the purpose and goals for each session, materials required, session format and activities, and associated out-of-session activities (homework). Worksheets for the child are provided to accompany each session. The TF-CBT programme comprises 4 phases as follows:

Phase 1: Psychosocial strengthening. Rapport building and orientation to therapy, relationships and support networks, exploration of the child's history and introduction of the 4-step coping template, the STAR Plan, and a session with parents/caregivers to give additional information about the treatment to caregivers and encourage their support.

Phase 2: Coping skills. Recognition and expression of feelings, recognition of body reactions to trauma and anxiety and introduction of relaxation techniques, introduction to the role of thoughts in perpetuating symptoms and teaching the modification of unhelpful self-talk into coping self-talk, teaching the use of problem solving skills for symptom management, introduction of self-evaluation and self-reward for success in managing symptoms, a review of the STAR Plan and preparation of the child for the trauma processing phase of the programme, and a session with parents/caregivers to review the coping skills the child has learnt, and to prepare the caregivers for the trauma-processing phase of the programme.

Phase 3: Trauma processing. Introduction of the child to the trauma processing phase of the programme and practice telling a story using creative media followed by a series of sessions of imaginal exposure to create a trauma narrative and allow emotional processing of traumatic memories using media chosen by the child, with gradual exposure from least to most traumatic memories. Subjective Units of Distress (SUDS) scales are used to titrate the intervention to maximise exposure, minimise over-whelming symptoms, and enable habituation as indicated via the child's report and from observation. The 4-step STAR Plan is used to manage trauma symptoms. A session with parents/caregivers enables review of the trauma processing phase of the programme and identification of any special issues or problems to be addressed before therapy ends.

Phase 4: Special issues and completion of therapy. Addressing of any special issues that have been identified by the child and/or caregivers, and relapse prevention, celebration of the child's progress in therapy and saying goodbye.

Results

The major research goal of this study was to pilot the effectiveness of a TF-CBT programme in reducing posttraumatic stress symptoms and increasing coping in multiply abused children. As can be seen in Figure 1, the level of posttraumatic stress symptoms of participants decreased with treatment, and decreased further over a 12 month follow-up period. The overall average self-reported CPTS-RI score for the four children was in the *severe* range during baseline (mean = 45.3; *SD* = 12.3), in the *moderate* range over the treatment phase (mean = 37.3; *SD* = 12.7), and in the *mild* range over the follow-up phase (mean = 23.2; *SD* = 10.3) on a scale of 0-80. Likewise, the participants' level of self-perceived coping ability increased with treatment, and increased further over the following 12 months. Figure 2 shows that children's mean coping scores (averaged across the four participant's three self-identified target concerns) increased from 3.3 (*SD* = 1.9) during the baseline phase, to 3.8

(*SD* = 2.1) over treatment, and 5.0 (*SD* = 1.8) over follow-up (on a scale of 1 = "not at all able to help myself" to 7 = "completely able to help myself"). While the variability for the overall sample data is relatively high, this masks the individual results; that is, there was less variability within each child's scores on both the CPTS-RI and the CQ. For example, on the CQ the range of scores for each child's individual target concerns within each phase was 3 or less, except in two instances.

Figure 3 presents the graphed weekly level of posttraumatic stress symptoms for each of the four participants across the baseline, treatment and follow-up phases. As can be seen, each participant reported a unique pattern of baseline PTSD symptoms, an idiosyncratic response to treatment, and variation in symptom manifestations over the 12 month follow-up. This is likely to reflect the fact that PTSD is a fluctuating experience that can be triggered by not only internal, but also external factors and subsequent trauma.

In a single-case design the baseline data must be examined for stability (Kazdin, 2003). Notwithstanding the fluctuating nature of PTSD symptoms, a stable baseline is characterised by relatively little variability and the absence of a slope (or trend). At least three baseline points are required to establish stability (Barlow & Herson, 1984). The variability in the CPTS-RI baseline scores for the four participants did not exceed a 50 per cent level in any case (baseline ranges = 47-61, 30-35, 44-50, and 26-55 on a 0-80 scale; variability = 17.5%, 6.2%, 7.5% and 36.3% for S1, S2, S3, and S4 respectively), as recommended for single-case methodology in applied clinical research (Barlow & Herson, 1984). Visual inspection of the baselines of all four participants indicates a relatively horizontal trend in their baseline data. One participant (S2) completed only two of the CPTS-RI baseline measures; however, the slope over the two points shows a slight acceleration, so the lack of a third point is of less concern. Also, while it was planned that the baselines would be 3, 5, 7, and 9 weeks long respectively, practical circumstances dictated an extra week on baseline for each of S1 and S2. In summary, the baseline data is stable enough to make a prediction that without intervention, all four participants would be likely to continue to suffer PTSD symptoms at a similar level.

Visual inspection of the CPTS-RI scores over the treatment phase shows an initial brief upward trend over 2-3 sessions for two participants (S1 and S2). This may reflect the fact that Sessions 2 and 3 covered family relationships and the child's history, precipitating a brief exacerbation of the child's PTSD symptoms. However, over the coping skills phase of the TF-CBT programme all four participants showed a moderate downward trend in PTSD symptoms. As the exposure phase was introduced, all four children then demonstrated a brief upward trend in PTSD symptoms. The spikes in CPTS-RI scores noted at the end of the treatment phase can be explained by individual circumstances: S1 disclosed that her father, with whom she had been placed, had recently physically abused her; S2 found out he was not returning to the care of his mother as he had been led to believe; S3 disclosed a further incident of sexual abuse; and S4 was experiencing emotional abuse from her mother and placement uncertainty with her grandmother. These issues are discussed further below, with regard to the impact on each child's coping.

Following the completion of the 16 week intervention, two participants (S1 and S4) required booster sessions as their symptoms remained elevated. This is likely to have related to their younger age as well as their individual circumstances, including, in each case, intermittent contact with emotionally abusive parents, and ongoing placement uncertainty. There were no additional contacts with S2 and S3 following

Figure 1. Changes in level of posttraumatic stress symptoms (average of CPTS-RI scores for all four participants) across baseline, treatment, and follow-up phases.

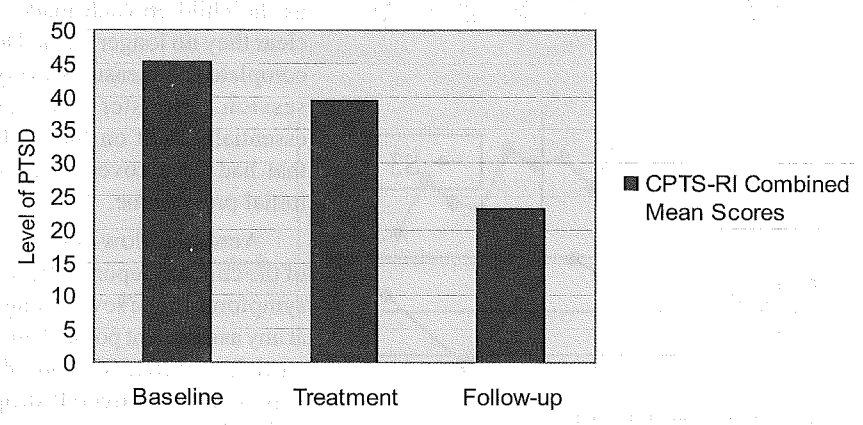


Figure 2. Changes in level of child reported coping (average of CQ scores for all four participants) across baseline, treatment, and follow-up phases.

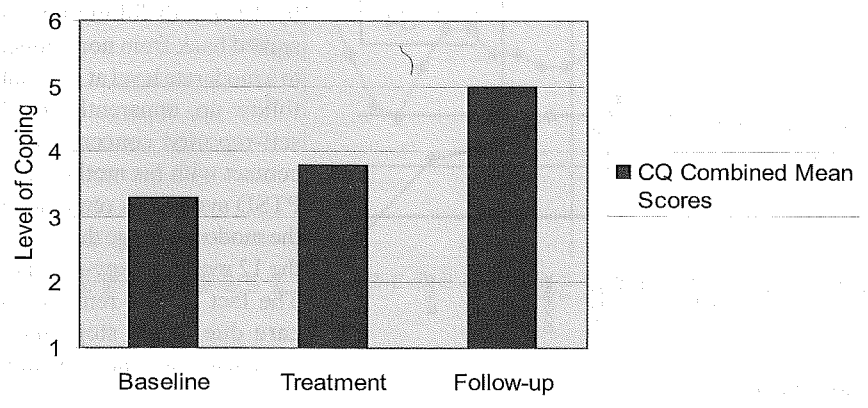
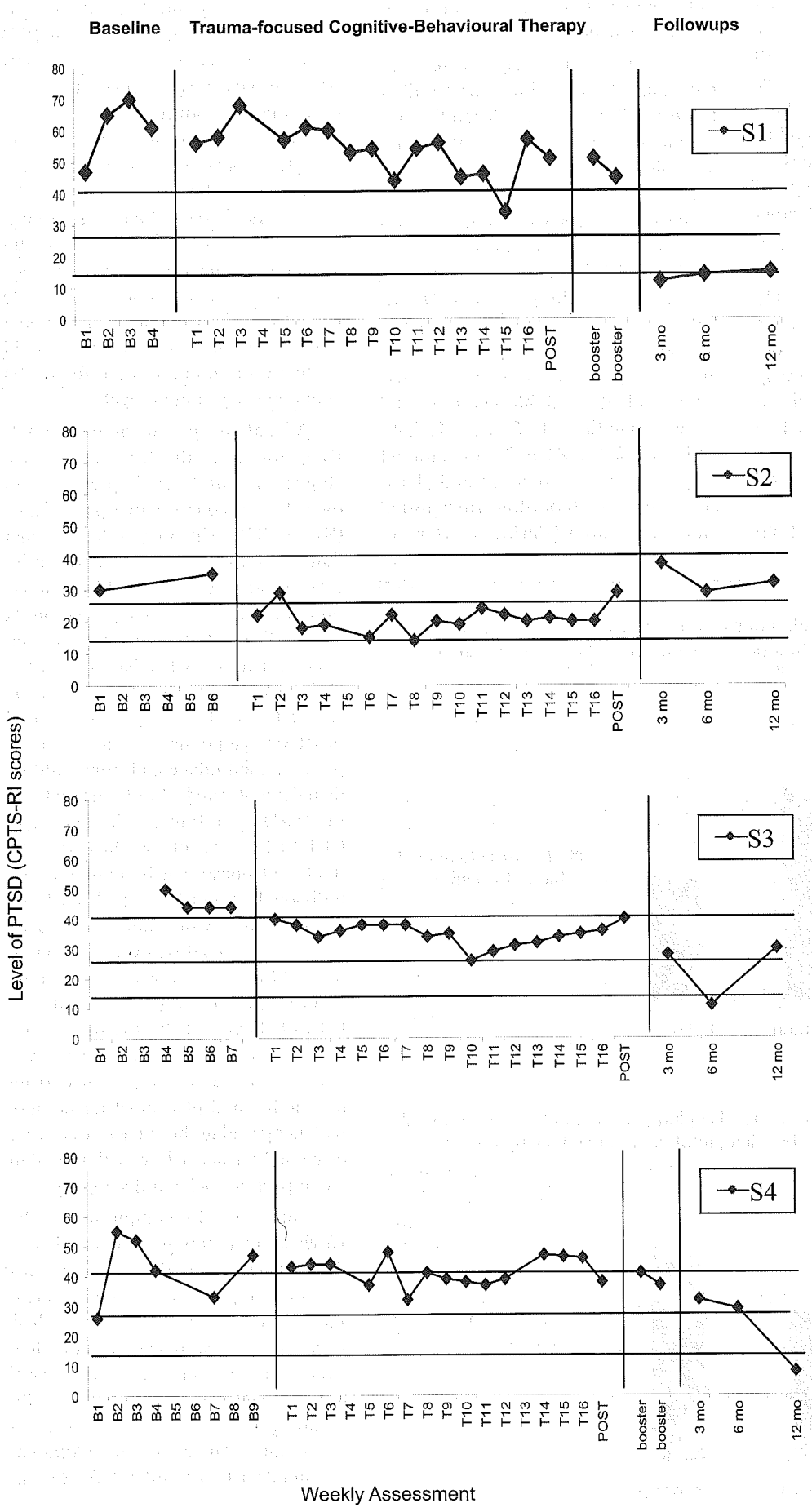


Figure 3. Changes in posttraumatic stress symptoms (CPTS-RI scores) across assessment, treatment and follow-up sessions.

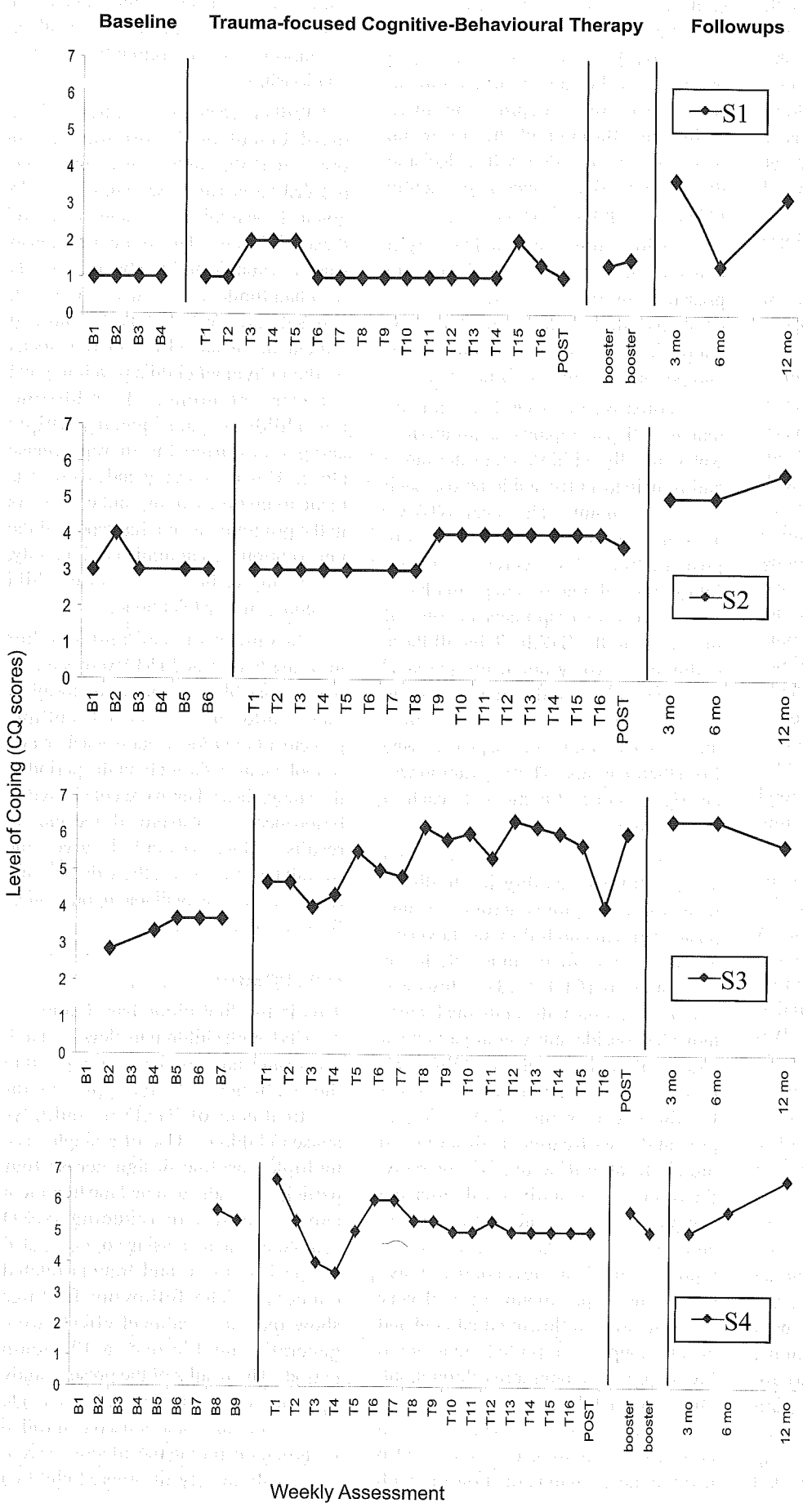


the completion of the 16 week programme, other than at the prescribed follow-up assessment points. S2 was referred for brief specialist treatment for sexual acting out problems, which occurred during the follow-up phase.

The complete intervention for each of S1 and S4 involved individual booster sessions, parent sessions, joint parent and child sessions, and caregiver and social worker support throughout the follow-up phase, as perceived necessary by clinical judgement. This amounted to 45 face-to-face contacts with each of S1 and S4 and/or their caregiving adults. Assessment data was collected at two scheduled booster sessions prior to the 3 month follow-up, and subsequently at the 6 month and 12 month points. It was decided to discontinue collection of data at each individual booster session as the children each made it clear they no longer wished to complete the measures every session. Booster sessions essentially built on the skills that had been covered in the initial programme.

Across follow-up, none of the children reported PTSD symptoms in the severe range at any assessment point. Three participants (S1, S3, and S4) experienced an overall drop in level of PTSD symptoms compared to baseline and treatment levels. S1 and S4's scores tracked down from severe to non-clinical/mild by 12 month follow-up. S3 spiked back from non-clinical to a moderate level at 12 month follow-up, apparently due to self-reported concerns about contact with his mother. S2's PTSD symptoms remained in the moderate range throughout the 12 month follow-up phase. The fact that he remained in care due to his stepfather's refusal to undertake treatment

Figure 4. Changes in child reported coping skills (average of scores for three target concerns) across assessment, treatment and follow-up sessions.



for physically abusing him, and that he was receiving further treatment for sexual acting out problems, may have contributed to the continued elevation of S2's PTSD symptoms. As reported below, it is notable that for those children who experienced ongoing trauma triggers during the follow-up interval, coping remained high relative to baseline levels (S2, S3), or bounced back after a setback (S1).

Figure 4 presents each child's self-reported coping over the baseline, treatment and follow-up phases. The baseline data is stable in terms of variability and trend. Coping tended to increase slowly over the treatment phase and generally showed much higher levels across the 3 month, 6 month and 12 month points.

S1 reported extremely low levels of coping throughout the treatment phase. She was worried about her mother's whereabouts and risk from suicide. While her coping increased slightly during the coping skills training, it dropped again during the exposure phase, during which S1 worked through the trauma of witnessing her mother's serious suicide attempt. Her coping rose slightly during the special issues phase, when her identity and self-esteem were addressed. It dropped at the end of treatment, coincident to her disclosure of physical abuse by her father. Subsequently, S1 was placed with caregivers, but continued to report worries about her mother. Booster sessions were arranged in which S1's mother was able to reassure her that she was getting help for her problems. The relieving of safety concerns appeared to enable S1 to utilise her coping skills,

as evidenced by the marked increase in her self-reported coping scores at 3 month follow-up. At the 6 month follow-up, S1 had not had contact from her mother and did not know where she was, and, not surprisingly, her coping had decreased. By the 12 month follow-up, S1 had been placed in a stable foster home. While she was still anxious about her mother's wellbeing, she reported that she was more frequently utilising helpful coping strategies to control her anxiety.

S2 demonstrated a stable pattern of moderate coping throughout the coping skills training phase of the treatment, with a slight increase in coping coinciding with the exposure and special issues phases. During the exposure phase, the impact of the physical abuse from S2's step father was fully explored with a trauma narrative. The special issues sessions focused on psycho-education around the effects of abuse on young people, strategies for keeping safe, and anger management. Despite the fact that S2 reported experiencing ongoing child mental health symptomatology throughout the follow-up phase, notably both his self-reported and collateral-reported coping was high. His caregiver commented at 6 month follow-up: "S2 is infinitely better...CBT has been good for him; he has strategies for dealing with situations."

S3 showed an overall trend of increased coping throughout the treatment and follow-up phases. A drop in coping coincided with the end of the exposure phase, when he disclosed further sexual abuse. S2 was referred to the CYF Evidential Video Unit (EVU) to formally report the abuse immediately prior to the post-treatment assessment. Following the EVU interview, his self-reported coping increased to a high level, where it remained at 3 month, 6 month and 12 month follow-ups.

S4 demonstrated a decrease in coping over the first four sessions. This is likely to be because she entered the programme initially denying her problems, even though she was well aware of her symptoms in sessions. These early sessions focused on strengths and support networks, but also elicited the problem areas. S4's self-reported coping increased during the coping skills phase and maintained during the exposure phase. These were new-found skills for S4, and while she could not always utilise them in real-life situations evoking strong feelings, she clearly demonstrated that she could use them in the therapy environment. S4's self-reported coping continued to increase throughout the follow-up phase. This coincided with a decision that she would be placed permanently in her grandmother's care.

Child report scores for target concerns and co-morbid problems are presented in Table 2. The co-morbid data fills out the picture of what was happening for each participant at pre- and post-treatment and follow-up.

Scores on the STAIC-S indicate that for all participants, state anxiety was generally within the normal range and remained fairly stable across each assessment point. The mean STAIC-T scores were similar at pre- and post-treatment but decreased during follow-up. Of note was the remarkable consistency in responses on one of the items on the STAIC-T by all these children: "I worry about my parents" was invariably scored 'often', reflecting the fact that for duration of the study most of these children were placed away from their parents. This separation was clearly a source of anxiety for each of the children.

The mean scores on the CDI suggest little variability in childhood depression symptoms across pre- and post-treatment and follow-up, hovering around the cut-off for moderate levels of symptoms (CDI $\geq$ 13). However, closer inspection of the individual scores indicates considerable within-participant and across-participant variability. S1 reported symptoms above the cut-off for the severe range (CDI $\geq$ 30) at pre- and post-treatment, dropping to moderate at follow-up. Conversely, S2 reported virtually no depressive symptoms at pre- and post-treatment, and moderate levels at follow-up. S3 reported a moderate level of depressive symptoms at pre-treatment, and very few symptoms following treatment and at follow-up. S4 reported moderate to low depressive symptoms throughout. Of note is that the two participants who experienced the most variability in depressive symptoms (S1 and S2) also had the most tenuous relationship with caregiving adults. The period of most severe depression in each case correlated with losing contact and/or connection with their most significant parent, albeit an unprotective, emotionally abusive relationship.

With regard to parent/caregiver involvement in the programme, it was found that adhering to the three prescribed sessions was not possible given the caregiving arrangements of these children. The typical scenario was unavailable and/or abusive parents who had limited, generally supervised, contact, and busy caregivers who had limited time to attend sessions and focus on the individual child's psychological progress at home. In addition, two children experienced multiple caregivers during the therapy phase alone. However, every endeavour was made to involve parents and caregivers in the programme and this aspect of the intervention was administered flexibly, for example, before and after child sessions, and by telephone.

Parent/caregiver and teacher measures (CBCL and TRF) were gathered where possible, but as the majority of these children experienced multiple placements and/or several teacher and school changes throughout the period of the study, these data were considered to be too inconsistent to provide meaningful results. Thus, particularly given the overall low return rate, these data are not reported (but are available upon request from the first author).

Discussion

This is the first clinic-based study of TF-CBT with children in New Zealand. The results are promising in suggesting the usefulness of this approach for the treatment of PTSD in multiply-abused children. Use of a single case multiple baseline design across four participants indicated that the treatment can be helpful in reducing PTSD symptoms and increasing coping related to specific abuse and trauma-related concerns. The follow-up findings show that the treatment effects were generally durable over a 12 month period. The results of the present study are consistent with the results of single case studies and randomised controlled trials demonstrating the effectiveness of CBT with anxiety disordered children

(Howard & Kendall, 1996; Kendall, 1994; Kendall & Southam-Gerow, 1996), and TF-CBT with sexually abused children (J. A. Cohen et al., 2004; Deblinger et al., 1996; Deblinger, Steer, & Lippmann, 1999). It is also complementary to a pilot study carried out in the same setting trialling a manualised play therapy programme with CBT elements for younger children with abuse trauma (Woolf, 2002).

The four participants had PTSD diagnosed at referral. Symptoms remained at clinically significant levels throughout the baseline phase. These young people were having trouble coping with a range of problems related to a history of multiple CA, such as flashbacks and bad dreams, having trouble sleeping, getting angry, and anxiety related to being separated from their parent(s). The results across treatment represent clinically significant changes in their functioning, indicating that TF-CBT can be effective in resolving past child abuse trauma. In addition, all four children and/or their caregivers anecdotally reported they had learned skills to cope with current situations. The young people consistently recorded high levels of coping at follow-up, even when their PTSD symptoms had been re-triggered by subsequent traumas (with the exception of one assessment point for one child, at which time she was experiencing an extremely anxiety provoking situation).

Table 2. Child Self-Report Scores on Repeated Measures

Measures	Participants	Assessment Points				
		Pre-treatment	Post-treatment	3 month follow-up	6 month follow-up	12 month follow up
CQ (Mean)	S1	1.0	1.0	3.7	1.3	3.2
	S2	3.0	4.0	3.7	5.0	5.7
	S3	2.8	6.0	6.3	6.3	6
	S4	-	5.0	5.0	5.7	6.7
	Mean	**2.3**	**4.0**	**4.8**	**4.6**	**5.4**
CPTS-RI (Total)	S1	47*	51*	12	14	15
	S2	30	29	38	29	32
	S3	48*	40*	28	11	30
	S4	26	38	32	29	8
	Mean	**37.8**	**39.5**	**27.5**	**20.5**	**21.3**
STAIC-S (Total)	S1	42	31	27	23	30
	S2	23	25	35	20	21
	S3	35	37	-	-	29
	S4	27	30	23	26	30
	Mean	**31.7**	**30.7**	**28.3**	**23.0**	**27.5**
STAIC-T (Total)	S1	35	46*	22	22	22
	S2	31	32	32	32	38
	S3	39	30	25	31	27
	S4	36	41	37	42	38
	Mean	**35.3**	**37.3**	**29.0**	**31.8**	**31.3**
CDI (Total)	S1	34*	39*	12	20	19
	S2	3	2	26*	26*	26*
	S3	14	0	4	4	6
	S4	13	8	6	11	11
	Mean	**16.0**	**12.3**	**12.0**	**15.3**	**15.5**

*Clinical cut offs indicating severity of concerns are reported where available from test developers.

Note: CQ = Coping Questionnaire; CPTS-RI = Child Post Traumatic Stress Reaction Index; STAIC-S = State Trait Anxiety Inventory for Children – State; STAIC-T = State Trait Anxiety Inventory for Children – Trait; CDI = Child Depression Inventory.

A strength of this study is that it was carried out in a real-life clinical setting with typically-referred children. The fact these children all presented with multiple-abuse histories supports calls for researchers to move away from speciality areas and re-focus on studying the complexity and the reality of exposure to violence and abuse for young people (Saunders, 2003). A further strength is that the study is based on a locally developed manual derived from empirically supported treatments and local clinical practice, supported by local experience and knowledge about what works in the context.

The use of a single-case experimental design means that preliminary conclusions can be made about the overall effectiveness of the programme, as well as an initial investigation of the specificity of treatment elements, and comparisons about individual responses to treatment. Visual inspection of the data suggests that the psychosocial phase of the treatment had mixed effects on the children, whereas the coping skills phase was generally associated with a reduction in PTSD symptoms and an increase in self-identified coping, as would be hoped. The exposure sessions seemed to be associated with a slight increase in symptoms and decrease in coping. However, the 12 months following treatment were generally characterised by a reduction in PTSD symptoms and a marked improvement in coping, whether or not the child was having ongoing booster sessions, suggesting the long-term helpfulness of the treatment approach. The pattern of findings here, combined with a limited number of previous studies reporting follow-up data, point to the critical need

for examining treatment effectiveness over longer intervals (see also, Skowron & Reinemann, 2005)

The pattern of individual responses to treatment highlighted a number of potentially confounding variables embedded within the study, as exemplified by the variation in number of sessions required to resolve problems. By chance, the sample comprised two 9 year old girls and 12 and 13 year old boys At initial assessment, there appeared little disparity in the nature and severity of problems between all four young people. However, the older boys were not re-referred to the clinic after the 16 session programme was completed, whereas the social workers and caregivers of the younger girls requested booster sessions on and off over the next 12 months. One explanation is that both boys were in safe placements following treatment, although they had ongoing family issues, and one had residual behaviour problems for which he was receiving treatment elsewhere. Both girls had ongoing contact with an emotionally abusive parent, which appeared to re-trigger their trauma symptoms and compromise their treatment gains. Additionally, clinical observation suggested that younger children did not integrate the coping skills into their everyday lives as quickly as the adolescents, suggesting there was perhaps an additional developmental difference in response to this treatment approach. These findings are similar to those of other researchers who have found that treatment response may vary with developmental/age level (Kane & Kendall, 1989), and that in clinical settings, treatment may extend to as many as 40 or more sessions depending on the needs of the child and the complexity of the case (Deblinger & Heflin, 1996). Overall, these factors highlight the need for therapists who work with traumatised abused young people to keep in mind safety issues, contextual factors, and a developmental focus. Researchers should also take account of these potentially confounding variables when designing future studies.

The use of a single-case design, while having advantages, also confers limitations. With a small sample size, it cannot be assumed that the results can be generalised to other cases. All four children identified as "Pakeha" (European) New Zealanders. It will need to be investigated the extent to which this manualised approach is appropriate, and what adaptations may need to be made, for working with other cultures, including Maori and Pacific Island children and families, and other migrant and refugee populations. Furthermore, while a multiple baseline design can allow for visual inspection of the data, only broad generalisations can be made about the effects of treatment or its components, particularly in light of so many complexities associated with each case. Related, given the infrequency of data collected across multiple informants, findings are also restricted here to self-report data. However, with that said, the self-report data themselves are a valuable source of information regarding these children's circumstances (Ronan, 1996; Ronan & Deane, 1998).

A positive therapeutic relationship is considered essential for CBT with young people, including for those with anxiety disorders (Kendall & Southam-Gerow, 1996). While the use of a manualised treatment may potentially reduce the contribution of the therapeutic relationship to treatment outcome (Shirk & Karver, 2003), it is a limitation of this study that the treatment was carried out by a single therapist. Use of the manual by other therapists will enable the specificity of this approach to be determined. In addition, a full assessment of treatment integrity was not carried out as this was a development project and the manual was being written as the study progressed.

Another limitation of this study is that fact that the psychological treatment was not the only intervention occurring in the lives of these children. They were also receiving social work input, caregiver support, and in some cases, the support of extended family members. While the single-case design can capture changes in target outcome measures associated with the term of the treatment, the specific contribution of the various aspects of the overall intervention for these children cannot be definitively distinguished. Having said that, the clinical goal of all involved of course is a good outcome for the child, and may best occur with a multi-element approach, of which the psychological therapy is a part (e.g., Curtis, Ronan, & Borduin, 2004) .

Overall, this study makes a contribution to treatment outcome research in this area. Child abuse is a major problem in New Zealand and worldwide. There is limited research on the effectiveness of psychological treatments for multiply-abused children who typically present to child protection services and are referred for therapy not only to specialist clinics, but also community agencies. Real-world tests of empirically based locally-informed treatments are vital, and the field can only move forward on the basis of increased use of related strategies (Kazdin & Nock, 2003). It is hoped that this study will encourage other local practitioners to carry out their own clinic-based research, whether based on further applications of this manualised TF-CBT programme, or development and testing of their own treatment approach (see also, Feather, 2004b). Ultimately, children and families who receive treatment under these circumstances will benefit from an increased commitment to quality delivery and evaluation.

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Notes

1. CM; child maltreatment, an alternative term to CA.

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