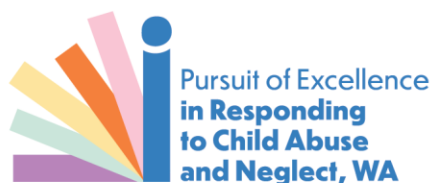


PARKERVILLE THERAPEUTIC TREATMENT MODEL CLIENT OUTCOME REVIEW

JANUARY 2022



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This research was undertaken as part of a Lotterywest grant awarded to Parkerville Children and Youth Care Inc. (Parkerville) and the Australian Centre for Child Protection (ACCP) for the Pursuit of Excellence in Responding to Child Abuse and neglect (PERCAN) initiative.

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This review has also been submitted as a journal article titled *Effects of Therapy at a Community Based Trauma Therapy Service Treating Child Abuse and Neglect: A Pre-Post Study Using Administrative Data* with the Journal for Child Abuse and Neglect.



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EXECUTIVE SUMMARY

The Therapeutic Family Service (TFS) at Parkerville is a service in Western Australia that specialises in providing therapy to children and young people with trauma from abuse and neglect. This study set out to examine the effects of this specialist psychological services which provides a hybrid of Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) with other therapeutic approaches as recommended by a therapeutic supervisory team among a sample of children and young people overwhelmingly experiencing symptoms of complex trauma, and whether different cohorts were more likely to experience the benefits of this treatment.

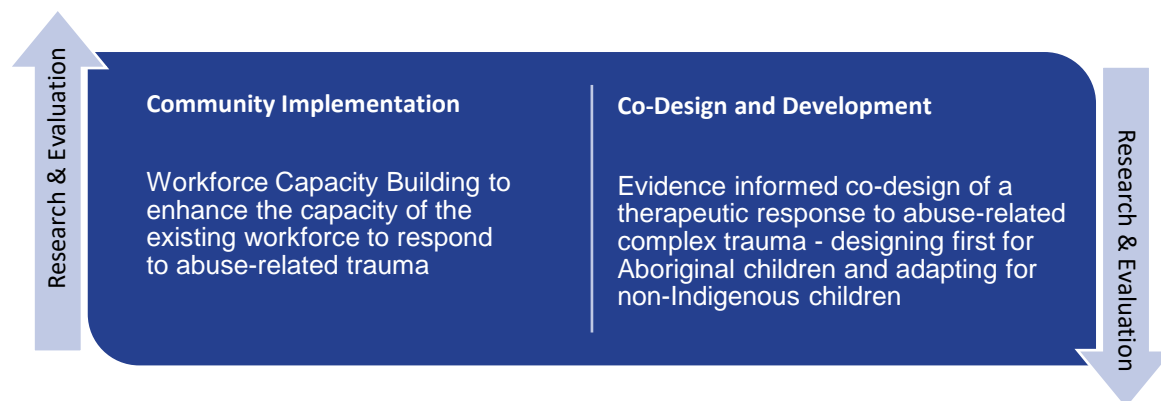
This repeated-measures study drew on administrative data collected during the course of treatment with the service, to examine the effectiveness of this therapy in a community-based clinic for a population of children predominantly with complex trauma from multiple forms of maltreatment. The researchers identified 113 children and young people with viable pre-post treatment assessments during the services period 2017-2020.

Significant improvements on most clinical scales of commonly used psychometrics measuring trauma related symptoms were identified. Sub-analysis of results from the Trauma Symptom Checklist for Children in particular, found no differences in improvement on trauma symptoms across gender, age, care status, therapy funding source, presence of sexual abuse, and living situation at intake. Overall highlighting that this treatment appeared equally effective for children and young people regardless of these differences.

Overall, the study highlights the benefits of adaptive therapy approaches for Complex Trauma populations accessing community-based services, and the challenges associated with implementing the use of psychometrics in a community treatment setting.

PROJECT BACKGROUND

The PERCAN initiative was developed in 2019 via seed funding from Lotterywest in Western Australia. It is a joint project between Parkerville and ACCP that draws upon complimentary areas of specialism to deliver on two streams of work to support the WA Community Services Sector build capacity and enhance responses to responding to complex trauma from child abuse and neglect.



It is within this second stream of work 'Co-Design and Development' that this current review sits.

Co-Design and Development: Therapeutic Responses for Children with Abuse-Related Complex Trauma

The Therapeutic Responses for Children with Abuse-Related Complex Trauma Co-Design Project addresses the international paucity of evidence-based complex trauma treatment models. Critically it addresses the need for responses designed for the Australian service delivery context (including regional and remote areas) and the criticality of culturally responsive approaches for Aboriginal and Torres Strait Islander children. Innovatively, the project is designing first for Aboriginal children and will adapt for non-Indigenous children. Chief Investigator Professor Vickie Hovane (Aboriginal researcher, Registered Psychologist, expert in sexual abuse, domestic violence and co-design) is implementing a culturally governed, culturally led and evidence informed co-design project partnered with an Aboriginal Community Controlled Organisation partner - Yorgum. The project brings together Western and Cultural knowledge regarding healing of complex trauma. The co-design project is scheduled for completion in 2022.

The anticipated outcomes of the research are a co-designed therapeutic model for responding to complex trauma for Aboriginal children and a model for non-Indigenous children particularised and ready for trial and testing. In addition, the project comprises several evidence and clinical reviews of existing treatments for simple trauma and PTSD in children to inform the co-design. This current review of Parkerville's therapeutic

treatment model forms a critical part of this project as it seeks to understand the potential outcomes for children and young people who have experienced trauma from child abuse and neglect and go on to receive specialised treatment from a WA therapeutic services.

The review sought to examine the treatment effects of Parkerville's therapy framework and examine how different characteristics of trauma symptoms respond to this treatment, and whether different client groups benefited disproportionately from the approach. The research questions include:

1. Does the Parkerville Complex Trauma treatment reduce the symptoms of child abuse related Complex Trauma among a community sample of children and young people?
2. Are different client characteristics associated with different rates of trauma symptom improvement?

Project Governance and Ethics

PERCAN is governed by the WA Enhancing Responses to Child Sexual Abuse Executive Steering Group. The Executive Steering Group is Chaired by the Commissioner for Children and Young People and has senior executive representation from the Department of Communities, WA Police, Department of Justice, Department of Health, and WA Country Health. Representatives from both Parkerville, ACCP and the PERCAN Aboriginal Cultural Oversight Group are also members. The Executive Steering Group provides strategic oversight, monitors implementation and supports and guides the engagement of PERCAN with key stakeholder groups (government departments, non-government organisations and Aboriginal Community Controlled Organisations). PERCAN governance also includes a Cultural Oversight Group.

Whilst this study has the approval of the Executive Steering Group it was also approved by the University of South Australia's Human Research Ethics Committee, with organizational approvals from Parkerville's Senior Leadership Group including the Chief Executive and Directors. The study managed potential ethical risks by obtaining only de-identified data, with cases identified by codes that only Parkerville staff could match back to identifying details. All clients receiving services at Parkerville signed a service agreement noting that their data may be used for research or program review. While the data obtained were sensitive, the risks to children and families were low due to the use of de-identified data. As a small proportion of the sample were Aboriginal or were from culturally and linguistically diverse communities, too small for meaningful analysis, the paper does not report separate results by race/ethnicity.

SERVICE CONTEXT

Parkerville is a community agency in Perth, Western Australia that specialises in the treatment of trauma from child abuse and neglect. The agency was part of a co-located multi-agency response to child sexual abuse (Stan and Jean Perron Child Advocacy Centre & George Jones Child Advocacy Centre) and operated an advocacy and therapy service at two sites with detectives from Child Abuse Squad, police forensic interviewers, and staff from the state child protection services (Herbert & Bromfield, 2020, 2021), along with several other smaller therapy sites. The therapy service had several dedicated treatment slots for referral from the multi-agency response, along with services for children in out-of-home care with the organisation, children funded for treatment by the state child protection authority, children attending through a community referral, Medicare-funded and self-funded therapy.

The service primarily provided TF-CBT (Chan et al., 2022) but compared to the standard treatment model it was typically over a longer period of time and often with many more sessions (Cohen & Mannarino, 1996), even compared to the recommended adaption of TF-CBT for Complex Trauma (Cohen et al., 2012). The practice framework for the service also involved several additional components of treatments to address symptoms identified during the assessment process. The matching of additional components to symptoms were determined by the Parkerville clinical team and the Director of Therapeutic & Advocacy Services based on the evidence for the types of treatments associated with addressing individual psychological symptoms. The treatment length was variable and was often affected by the type of program or referral source, with referrals from the multi-agency response and the community-based program having 26 sessions, referrals from the state statutory child protection agency often including services longer than a year, whereas self-referrals typically only included 10 sessions per year under a mental health care plan through Medicare, unless families elected to self-fund additional sessions.

METHODOLOGY

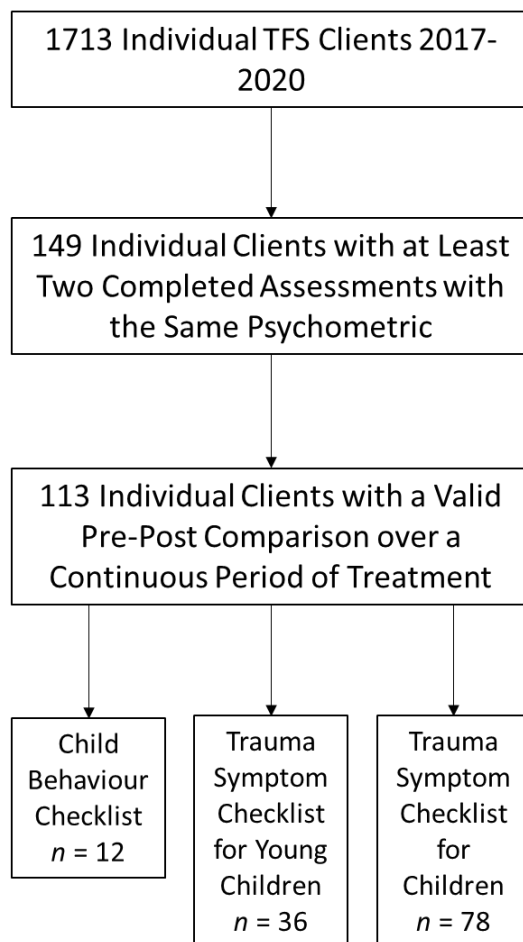
This study undertook a pre-post analysis to assess the treatment effects of a community-based therapy for Complex Trauma. The researchers obtained retrospective de-identified administrative data from the agency and cases were identified/selected based on valid pre-post applications of the same psychometric instrument to examine the effects of this therapy in a community treatment setting. The study represents an uncontrolled repeated measures design, which has the advantage of more closely representing realistic conditions of therapy but has the limitation of non-standardised assessment schedules and a non-randomised sample. These limitations have been controlled by screening for inclusion and reporting other variations that may have affected the treatment effect (e.g., number of therapy sessions prior to the pre-treatment assessment). For this study a valid pre-post required the instruments to be administered over the same discrete course of treatment (>6 sessions), as many of the clients had multiple contacts with the service provider. Six sessions were chosen as the minimum number of sessions for a valid treatment as it was identified as the number of sessions where a therapist could feasibly work through the minimum required content of the therapy.

Sample

Therapeutic Family Services was a directorate within Parkerville that provided psychology services in a community setting in Perth, Western Australia, along with some regional services in the South-West and Wheatbelt regions of Western Australia. The service responded almost exclusively to Complex Trauma cases related to child maltreatment and received referrals from a co-located investigative response for child sexual abuse, the organisation's out-of-home care, funded therapy placements from the state statutory child protection agency, a community-based program, and some Medicare and self-funded clients.

This study sought data from the treatment service inclusive of all cases seen between 2017-2020 that had an administration of a psychometric instrument on their case record, excluding ongoing cases at the time of the data request (October 2020). While 1713 individual children/young people were seen in total over the relevant period, the service often did assessments for other programs and did not provide treatment themselves, and many cases only had a single psychometric in the case record completed typically at the time of assessment.

Figure 1. Diagram of Sample Selection



Of the 149 eligible cases extracted (i.e., relevant treatment by Parkerville and at least two administrations of a psychometric), only 113 were found to have a valid pre-post on the same psychometric and have a valid length of treatment (<6 sessions). To determine validity the treatment sessions were mapped against the administrations of each of the psychometrics to identify whether the pre-post mapped to a discrete period of treatment, as many of the cases involved multiple engagements and dis-engagements with therapy. This also resulted in the screening out of some cases where the relevant treatment period for the observation was too short (<6 sessions).

The final sample was compared against the treatment population the data was drawn from (Table 1), which identified some significant differences. The analysis found that while the sample was equivalent to the treatment population on most characteristics, the sample had a significantly larger proportion of cases in the care of the CEO, cases with parental mental health flagged as a concern, and cases with sexual abuse as a concern.

This reflects that cases with these characteristics were more likely to receive multiple psychometrics, especially children in care who were required to have these measures as part of their case reports. Similarly, children with higher complexity were likely to have higher pre-treatment assessments inclusive of psychometrics which would have increased the likelihood of a similar follow-up assessment towards the end of treatment. While it is preferable methodologically that a sample is representative of the population, these differences were not unexpected based on the need for the closer monitoring of the symptoms of children in out-of-home care, in complex home situations (i.e., parental mental health concerns), and children with histories of sexual abuse. Table 1 in the appendix tables provides a complete overview of the treatment population.

Treatment

The treatment provided by Parkerville's specialist psychology service TFS was primarily based on TF-CBT, with most clinicians indicating this was the approach they aligned most closely to, while EMDR was also commonly used (Chan et al., 2022). The treatment approach was determined through formulation in group supervision with the clinical leads and clinical director, applying an informal matrix of treatments matched to symptoms. A separate research project was undertaken to document this treatment model (Chan et al., 2022).

Instruments

The TFS had a variety of assessments they completed with clients, although the choice of assessments was up to the individual discretion of the clinician. While intended that psychometrics were used at the beginning and ending of treatments, the point at which instruments were used was ultimately determined by the clinicians with their clients; in many cases initial assessments were not completed until the clinician had the opportunity to establish a therapeutic alliance with the client. Similarly, some children suddenly disengaged from therapy making it not possible to complete an end of treatment assessment.

The suite of assessment tools used by TFS are common psychological instruments used for measuring the symptoms of trauma. The administrative data included: The Child Behaviour Checklist (CBCL; n = 28) and accompanying Youth Self Report (YSR; n =3), the Trauma Symptom Checklist for Young Children (TSCC; n = 97) or Trauma Symptoms Checklist for Young Children (TSCYC; n = 48), the Beck Youth Inventory (BYI n = 7), Child Revised Impact of Event Scale (CRIES; n =15), Adolescent Dissociative Events Scale (A-DES; n = 1), Depression Anxiety Stress Scales (DASS; n =7), and the CBCL 1.5-5 yrs (n = 1). As many of these instruments had a small number of pre-post administrations, the analysis was restricted to the CBCL, the TSCC, and the TSCYC.

CBCL

The CBCL is part of a suite of assessments now known as the Achenbach System of Empirically Based Assessment (ASEBA) (Achenbach & Rescorla, 2001). The scores on the CBCL are used to identify total problems, as well as symptoms across eight scales: Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behaviour, and Aggressive Behaviour. These

eight scales group into higher order factors of internalising and externalising symptoms. The CBCL also include diagnostic scales for DSM recognised syndromes: Affective problems; anxiety problems; somatic problems; ADHD; oppositional defiant problems; conduct problems; obsessive compulsive disorder; and post-traumatic stress disorder. The CBCL includes 113 items with responses on a 3-point scale (0 = absent, 1 = occurs sometimes, 2 = occurs often) with reference to behaviour over the last 6 months. The CBCL is completed by parents/carers reporting on the behaviour of a 6-18-year-old child/young person. The CBCL has been extensively used and tested and has consistently been found to have excellent psychometric properties (for a summary see: Achenbach & Rescorla, 2001; Achenbach et al., 2008).

TSCC & TSYCC

The TSCC and TSYCC are standardised trauma measures assessing acute and chronic post-traumatic stress and other psychological symptoms associated with trauma. The TSCC is a 54 item self-report instrument for children ages 8-16 years who have experienced a traumatic event (Briere, 1996). TFS clinicians sometimes also used the TSCC-A (44 items), which is the same instrument but without items covering sexual content. Children are asked to indicate whether each of the items occur (0 = never, 1 = sometimes, 2 = lots of times, 3 = almost all of the time) over the last month, across six clinical scales including: Anxiety, Depression, Post-Traumatic Stress, Sexual Concerns, Dissociation, and Anger. Briere (1996) reported Cronbach's alpha coefficients ranging from .77 to .89 for the clinical scales and .84 for the complete scale. The TSYCC is an adaption of this instrument for use with younger children (3-12 years) by their caregiver (Briere, 2005). It includes 90 items reporting on eight clinical scales: Anxiety, Depression, Anger/Aggression, Posttraumatic Stress - Intrusion, Posttraumatic Stress - Avoidance, Posttraumatic Stress - Arousal, Dissociation, and Sexual Concerns.

Client Demographic Data

In addition to the data relating to the pre and post treatment assessments the following client information was collected:

- Client age at intake and at each administration of a psychometric
- If the child is in out-of-home care
- Client sex
- Client ethnicity
- Referral source and funding for therapy
- Date of referral, commencement, and end of therapy
- Living situation at intake and conclusion of therapy
- Primary abuse type reason for the referral (i.e., witness FDV, physical abuse, sexual abuse) and the presence of other forms of adverse childhood experiences including other forms of abuse in case history (i.e., neglect, parental poor mental health, parental drug and alcohol abuse)
- Number of therapy sessions and dates of therapy sessions

Procedures

Data was extracted by staff from Parkerville and a data analyst contracted by Parkerville and provided to the research team as part of an administrative data request. Primarily this involved fixed field information from the Parkerville administrative data system being exported into an excel sheet, or information recorded in the database in pdf form being manually copied by coders into the data sheet.

While each of the client fields were populated with information generated by the Parkerville database, the assessment results for each instrument were attached to the database as a pdf with results handwritten in some cases (e.g., with the TSCC and TSCYC). Extraction of results involved two Parkerville staff entering the results of these tests into an excel spreadsheet. These staff undertook 25% double entry across each of the cases to determine the rate at which data entry errors occurred; no discrepancies were identified among the double coded cases.

Client demographics were obtained for all cases with at least two administrations of the same psychometric. Dates in the demographics were used to generate the following variables: age at first assessment, number of days from referral to commencement of therapy; number of days from commencement to discharge; days between pre and post assessments. As each case included all interactions with the client, these were limited to interactions that counted as in-person therapy sessions (i.e., 'assessment', 'individual contact', 'safety/risk assessment', 'couple/family contact'). Limited to the sessions that the client attended, this information was used to generate the number of attended sessions between pre and post, and the number of sessions that occurred before the pre assessment. Particularly for more complex cases, clinicians often spent several sessions building rapport and working to stabilise the child and family before administering the first psychometric.

Several procedures were undertaken to screen the data for eligible pre and post assessments. As many of the children had multiple treatment periods, treatment engagements were mapped to help visualise the relationship between the treatment periods and when the assessments occurred. 60 days between sessions was used as the threshold to separate discrete periods of treatment. This helped to highlight where assessments did not reflect pre-post treatment, many of which reflected multiple pre-treatment assessments occurring at the beginning of different treatment periods. Individual tests were also ruled ineligible for the pre-post where less than 6 therapy sessions occurred between the pre-post. This led to 17 CBCL, 19 TSCC, and 12 TSCYC administrations being identified as ineligible for the pre-post comparison.

Analysis

As two of the psychometrics had relatively small sample sizes (CBCL & TSCYC), only basic comparisons of means were completed. For the CBCL this included a paired samples t-test for each of the scales (or a Related Samples Wilcoxon Signed Rank test where the samples were not normally distributed), with effect sizes obtained using Cohen's d. Changes in clinically significant symptomatology were compared using a McNemar test (or Fisher's Exact Test where the expected cell count was less than five). For the TSCYC, an independent

samples t-test (or an Independent Samples Mann-Whitney U where the samples were not normally distributed) was conducted, using differences between pre and post-tests as the dependent variable, and gender, care status, therapy funding, presence of child sexual abuse, living situation at intake and age categories as independent variables. A Bonferroni adjusted significance level was used to correct for multiple comparisons within each of the scales within the included instruments.

A power analysis conducted with G*Power indicated that the required samples for a repeated samples t-test was 34 to achieve a power of 80% and a level of significance of 5% (two sided), for detecting an effect size of 0.5 between pairs. This means that the comparison of means for the CBCL scales was under powered, while the comparisons for the TSCYC and TSCC were adequately powered. For an independent samples t-test the required sample was 64 to achieve a power of 80% and a level of significance of 5% (two sided), for detecting an effect size of 0.5 between groups. This meant that the analyses of how demographic factors influenced the mean differences between pre-post on the TSCC was adequately powered.

FINDINGS

All three psychometrics (CBCL, TSCYC and TSCC) were included in the analysis of differences between pre-treatment and post-treatment. Some additional analyses were conducted with the TSCC results as the larger sample size allowed for a comparison of how different demographic factors influenced treatment effects.

As relevant treatment periods were linked to when the eligible pre-post occurred, treatment characteristics are separated by individual instruments; because of the small number of eligible comparisons, the CBCL cases have not been reported. As reports were by treatment period and instrument this meant that in some circumstances results could include the same client more than once for the same or even different periods of treatment if an eligible pre-post occurred with more than one instrument. For the TSCC there were an average of 229 days between pre and post tests, with an average of 16 attended sessions between observations. On average there were around 4 attended sessions prior to the pre-test. Results were similar for the TSCYC on days between pre and post-tests ($m = 241.9$; $sd = 126.2$), number of attended sessions between observations ($m = 16.0$; $sd = 8.9$), and number of attended sessions prior to the pre-test ($m = 2.9$; $sd = 4.1$).

Across all eligible cases ($n = 113$) the average time a case was active with the treatment provider was just over a year ($m = 422$ days; $sd = 214$ days), although this was based on time a case was open; cases could remain open a long time without activity. There was on average 114 days ($sd = 165$) between the date of referral and the commencement of therapy. The clinician rated reason for discharge was most commonly 'normal completion' ($n = 55$; 48.7%), 'discharged' ($n = 29$; 25.7%), with a smaller number of cases having 'funding ceased' ($n = 3$; 2.7%), 'mutual agreement to discharge early' ($n = 8$; 7.1%), 'withdrawal prior to completion' ($n = 3$; 2.7%), and 'other' ($n = 11$; 9.7%). Complete treatment characteristics table is located at Appendix A.

CBCL

Relatively few comparisons on the CBCL were available, and as noted in the method section, the number of cases were below the required power for a repeated samples t-test. All comparisons across scales on the CBCL were found to not be significant in terms of change on scale scores, and in terms of whether there was a change in terms of clinical significance. See Appendix A, Table 3 for details.

TSCYC Results

Significant improvements were identified between pre and post treatment on TSCYC anxiety, depression, anger/aggression, post-traumatic stress – intrusion, post-traumatic stress – arousal, and post-traumatic stress – total scales. All effect sizes were between the 'medium' to 'large' range (Cohen, 1988). No significant differences were identified for post-traumatic stress - avoidance, dissociation, and sexual concerns. In terms of changes to the presence of clinically significant symptomatology, significant differences were identified for anxiety, anger/aggression, post-traumatic stress – intrusion, post-traumatic stress – arousal, and post-traumatic stress – total. Among all scales with a significant difference in terms of change on

symptom scales, only depression did not also have a significant difference in terms of changes to clinical symptom status. See Appendix A for full table of results.

TSCC Results

Significant differences were identified on anxiety, depression, anger, post-traumatic stress, dissociation, dissociation – overt, and sexual concerns – distress scales of the TSCC. Effect sizes were mostly between the ‘medium’ and ‘large’ range, although improvement on the post-traumatic stress scale indicated a fairly large effect size ($d = .81$). No significant differences were identified for anger, dissociation – fantasy, sexual concerns, sexual concerns – pre-occupation. In terms of the proportions with clinically significant symptoms anxiety, depression, post-traumatic stress scales all had significant differences. Anger, dissociation – overt, sexual concerns – distress all had a significant change in symptoms but not a significant change in the proportions with clinically significant symptoms. See Appendix A for full table of results.

TSCC Comparison with Demographic Characteristics

The TSCC had a larger number of eligible cases than the CBCL and the TSCC, allowing for some comparisons of how demographic factors may have influenced improvements on trauma symptoms. These were examined using the difference between pre-post scores as the dependent variable (see Appendix A for full statistical data).

Sex

Comparing males and females on differences between pre-post on each of the TSCC scales, no significant differences were identified. Males ($m = .35$; $sd = 9.25$) on average did not improve as much on the Dissociation – Fantasy scale compared to females ($m = 3.64$; $sd = 11.19$), however this difference did not reach significance.

Age

No significant differences were identified between age groups (7-12 & 13-17) on improvements on any scales on the TSCC, although older children on average did not improve on the Sexual Concerns Pre-Occupation scale ($m = -.46$; $sd = 12.78$), while younger children showed a minor improvement ($m = 5.62$; $sd = 9.22$).

Therapy Funding

Cases with treatment funded by the state child protection authority experienced similar improvement across scales to Medicare funded cases, with no significant differences. Notably, Medicare funded places had worsening symptoms on the Sexual Concerns – Pre-Occupation scale ($m = -5.14$; $sd = 13.42$) and a very small change on Sexual Concerns ($m = 0.50$; $sd = 13.42$), this may have been because these tended to be cases referred from the co-located Children’s Advocacy Centre response which included recent disclosures of child sexual abuse.

Care status

No significant differences in the extent of improvements on any scales were identified between cases in some form of out-of-home care and those not. While not significant, the not in care group appeared to have larger improvements on the depression ($t(77) = -2.29, p = .025$), anger ($U = 631.000, p = .012$), post-traumatic stress scales ($t(77) = -2.54, p = .013$). However, the not-in-care group ($m = -.23; sd = 12.24$) on average did not improve on the sexual concerns – pre-occupation scale in contrast with the in-care group ($m = 6.00; sd = 9.48$).

Presence of child sexual abuse

On all scales no differences were found between groups with and without the presence of child sexual abuse in the case history.

Living situation at intake

No significant differences in improvements on symptoms were found between a group of children who were in out-of-home care at the point of intake and children that were living with their parents at the point of intake.

SUMMARY

This article examined the treatment outcomes for a cohort of children receiving treatment for trauma associated with child abuse and neglect in a community clinic providing an adapted version of TF-CBT with other treatment components added based on matching treatments to symptoms (Chan et al., 2022). Complex trauma presents considerable challenges for existing treatment models, which are primarily designed around non-complex trauma. Most of the major symptoms of trauma appear to be effectively addressed through the delivery of the hybrid TF-CBT approach, although symptoms related to sexual concerns, and dissociation symptoms among younger children did not appear to be influenced by the treatment. This may have been as on average symptoms were lower on the Dissociation – Fantasy and Sexual Concerns – Pre-Occupation scales for the sample. No significant differences in treatment effect were found across categories the sample was compared on (gender, age, funding source, care status, presence of CSA, living situation at intake). Overall, the study suggests that this adapted TF-CBT approach is effective for children experiencing Complex Trauma, but that within this treatment approach additional components that are known to address sexual concerns may be required for children and young people with these specific concerns.

The sample reflects the type of complexity commonly seen at community clinics, which contrasts from the types of samples typically included in experimental studies of trauma treatments. Whereas experimental studies commonly exclude more complex cases (i.e., ongoing parental mental health issues, homelessness, parental drug and alcohol issues, e.g., Jensen, 2014), this study drew on data from a therapy service that did not exclude treatment based on complexity or require clinically significant symptomology to be eligible. Many cases presented with multiple traumas and concerns and were heterogenous in terms of the length of time between trauma and treatment, the duration and severity of the trauma, and their care situation at intake and the completion of therapy.

The data detailing treatment sessions were complex and highlighted some of the challenges of treating and studying these samples. Many of the included cases had multiple periods of engagement with the service; this analysis was limited to only periods where there was a valid pre-post in the same period. On average therapy began around 114 days after referral, cases were open to the provider on average for around a year (although cases could remain open a long time without active treatment). Around half of cases concluded as a 'normal completion' or 'discharge' (74.4%), suggesting that most children commencing therapy reached the intended conclusion of therapy based on their treatment plan.

Comparing before and after treatment the study identified significant decreases on the TSCC anxiety, depression, and PTS scales, both in terms of scores, and in the proportion of children/young people being below the threshold for clinical significance on these scales. On the anger, dissociation, dissociation – overt, and sexual concerns – distress scales significant decreases were observed, but the proportion of children/young people below the threshold for clinically significant symptoms was not significantly different. The largest effect sizes were observed for PTS ($d = .81$), anxiety ($d = .64$) and depression ($d = .62$) scales. No significant improvements were observed on any of the sexual concerns scales.

Across the characteristics examined, children and young people appeared to experience similar benefits from therapy and did not differ in terms of age groups, gender, care status, therapy funding source, parental mental health, the presence of child sexual abuse in the case history and living situation at intake. This comparison was only possible on the TSCC, which had a larger sample size than the other tests (n = 78).

Similar results were found on the TSCYC, where significant decreases were found on the anxiety, anger/aggression, post-traumatic stress – intrusion, post-traumatic stress – arousal, and post-traumatic stress – total scales in terms of both scores and on the proportion of children/young people below the threshold for clinical significance. On the depression scale there was a significant decrease in scores, but not in the proportion of clinically significant symptoms. The largest effect sizes were on the post-traumatic stress – intrusion, anger/aggression, post-traumatic stress – total, and post-traumatic stress – arousal scales. No significant differences were found on the CBCL, however the sample available for this analysis was very small.

Looking to similar community-based treatment studies utilising TF-CBT, this study found much larger improvements than Ruiz (2016) and Konanur et al. (2015), but similar changes on the PTS scale as Kolko et al. (2011). Ruiz (2016) included only a short treatment period (3-months) among a sample of sexually abused children receiving TF-CBT from a community clinic. T1 scores on the TSCC scales were much lower than in the current study, and the treatment effect was smaller on all scales, although significant in the context of this study. Konanur et al. (2015) had a similar baseline of symptoms on the PTS scale of the TSCC from a community-based intervention for trauma exposed school age children in Canada, with TF-CBT delivered by a Children's Advocacy Centre. The researchers reported only a small reduction on the PTS scale between 'pre-therapy' and 'post-therapy' measurement points, which are equivalent to the measurement period in the current study (Konanur et al., 2015). Kolko et al. (2011) included children with backgrounds of physical abuse in an adapted version of TF-CBT called Alternatives for Families: A Cognitive Behavioral Therapy (AP-CBT). The current study had slightly higher pre-test means for each scale than Kolko et al. (2011), and similarly had slightly higher mean improvements on symptoms.

Limitations

As noted in the method section, the sample did not match the treatment population on several characteristics. The sample was not chosen randomly, rather these cases were selected based on having repeated measures of the same instrument over a continuous treatment period. This meant that the sampled cases disproportionately included some of the more severe cases (both in terms of background and baseline symptoms), which received additional attention from the treatment team and were more likely to have multiple psychometrics administered. This limits the ability to extrapolate the findings to the whole treatment population, which on average were less likely to be in care, have parental mental health as a concern and have a background including child sexual abuse.

As observed in the discussion, the pattern of engagement with therapy was complex, with most children having multiple periods of treatment, many of which were not bookended with the administration of a psychometric. While the study reports on the number of therapy sessions that occurred prior to the first measure, this did not capture the multiple periods of contact often with significant gaps between them. These multiple periods of engagement complicate the observation of the treatment effects, for example a child may have engaged with therapy which reduced their symptoms, then re-engaged 4 months later and received their first measure of a psychometric. This complexity makes it difficult to draw conclusions based on the number of sessions or treatment length.

Implications

This adapted approach to therapy appears to address the major symptoms of trauma (anxiety, depression, post-traumatic stress, anger, dissociation) among a sample of children predominately presenting with Complex Trauma and complex histories of abuse and neglect. This broadly appears to support the approach of adapting TF-CBT to treat Complex Trauma, although a randomised trial would be required to compare this approach against a standard TF-CBT approach. This would also require a more formalised version of the approach to be implemented (Chan, et al., 2022) with appropriate fidelity checking. Despite similarly high symptomatology on the sexual concerns and dissociation scales on the TSCC, there appeared to be limited or no improvement on Dissociation – Fantasy, Sexual Concerns, Sexual Concerns – Pre-Occupation scales. This may suggest that the therapy team should explore additional therapies to add into the matrix that more directly address these symptoms.

As identified, the case histories of the sample were highly complex, often with multiple engagements and disengagements with therapy. The reasons for dis-engaging with therapy are complex and there is some evidence to suggest that barriers to engaging may vary considerably between service systems (Herbert, 2021). Further exploration of the patterns of disengagement and their relationship to the characteristics of children/young people may help to design a more effective system of referral and intake that addresses barriers to access (e.g., Budde et. al., Forthcoming).

APPENDIX A: TABLES

Table 1. Comparison of Treatment Population with Sample

	Population (n = 1564)	Sample (n = 113)	Sig Testing ¹
Sex ²			$\chi^2 (1, n = 1626) = 3.50, p = .06^3$
<i>Female</i>	764 (50.2%)	65 (57.5%)	
<i>Male</i>	753 (49.5%)	44 (38.9%)	
<i>Diverse Gender Identity</i>	4 (0.3%)	1 (0.9%)	
Age	10.34 (3.34)	10.84 (2.86)	$U = 79927.500, z = -1.70, p = .088$
Care Status (in care)	565 (36.1%)	60 (53.1%)	$\chi^2 (1, n = 1677) = 12.98, p = <.004^*$
Primary Concern ⁴			$\chi^2 (4, n = 748) = 3.50, p = .321$
<i>Neglect</i>	184 (23.7%)	20 (21.3%)	
<i>Sexual Abuse</i>	239 (30.8%)	39 (41.5%)	
<i>Physical Abuse</i>	76 (9.8%)	8 (8.5%)	
<i>Witness Domestic Violence</i>	165 (21.3%)	17 (18.1%)	
Parental Drug and Alcohol ⁵	393 (40.1%)	56 (49.6%)	$\chi^2 (1, n = 1090) = 4.77, p = .029$
Parental Mental Health ⁵	231 (23.6%)	49 (55.5%)	$\chi^2 (1, n = 1090) = 22.79, p = <.004^*$
Parental Capacity ⁵	413 (42.1%)	61 (55.5%)	$\chi^2 (1, n = 1090) = 12.98, p = .008$
Physical Abuse ⁵	262 (26.7%)	28 (25.5%)	$\chi^2 (1, n = 1090) = .08, p = .773$
Sexual Abuse ⁵	267 (27.2%)	45 (40.9%)	$\chi^2 (1, n = 1090) = 9.04, p = <.004^*$
Emotional Abuse ⁵	270 (27.6%)	41 (37.3%)	$\chi^2 (1, n = 1090) = .458, p = .032$
Experience of Neglect ⁵	376 (38.4%)	50 (45.5%)	$\chi^2 (1, n = 1090) = 2.09, p = .149$
Witnessing Domestic Violence ⁵	477 (48.7%)	54 (49.1%)	$\chi^2 (1, n = 1090) = .007, p = .934$
Living Situation at Intake			$\chi^2 (3, n = 1534) = 12.01, p = .007$
<i>OOHC</i>	363 (25.5%)	43 (38.4%)	
<i>With Parents</i>	695 (48.7%)	38 (33.9%)	
<i>Extended Relatives</i>	264 (18.5%)	18 (16.1%)	
<i>Alternate Parent</i>	104 (7.3%)	9 (8.0%)	

¹ <.05 with a Bonferroni Correction to .004

² For 51 cases the gender identity was missing from the case record.

³ Note: Due to small numbers of 'diverse gender identity' this analysis was restricted to proportions of female and male.

⁴ Note: For 929 cases the primary concern was missing from the case record.

⁵ Note: For 587 cases the presence/absence of concerns were missing from the case record.

Table 2. Treatment Characteristics

	CBCL (n=12)	TSCYC (n = 36)	TSCC (n = 78)	Sample (n = 113)
Days between Pre-Post	200.3 (105.9)	241.9 (126.2)	229.0 (135.7)	
Number of Attended Sessions between Pre-Post	12.5 (4.8)	16.3 (8.8)	16.1 (8.8)	
Number of Attended Sessions Prior to Pre-Test	4.6 (6.3)	3.0 (4.1)	3.6 (5.1)	
Days the Case was Active with the Treatment Provider	354.3 (221.6)	435.1 (218.8)	433.2 (212.3)	422.1 (214.4)

Days Between Referral and First Therapy Session	123.0 (160.02)	10.53 (131.6)	123.2 (185.3)	114.6 (165.2)
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Table 3. CBCL Scores Pre and Post Treatment (n = 12)

	Pre-Treatment		Post-Treatment		Sig Testing ²	Sig Testing (Clinical Sig) ³
	Score <i>m</i> (sd)	Clinical Sig ¹	Score <i>m</i> (sd)	Clinical Sig		
<i>Competency Scale</i>						
Activity	41.36 (8.31)		38.64 (10.19)		$t(10) = 1.10, p = .30, d = .33^4$	
Social	34.64 (8.52)		34.91 (8.36)		$Z = -.35, p = .73, d = .05$	
School	34.89 (8.15)		39.00 (6.65)		$t(8) = -2.92, p = .02, d = .97$	
Total Competence	34.11 (7.06)		36.00 (8.66)		$t(8) = -1.89, p = .32, d = .352$	
<i>Syndrome Scale</i>						
Anxious/Depressed	62.58 (11.29)	C = 4 B = 0 N = 8	58.75 (8.41)	C = 1 B = 3 N = 8	$t(11) = 2.51, p = .029, d = .47$	n.s.
Withdrawn/Depressed	64.08 (8.96)	C = 4 B = 2 N = 6	59.00 (7.65)	C = 1 B = 1 N = 10	$t(11) = 2.47, p = .03, d = .72$	n.s.
Somatic Complaints	60.83 (7.72)	C = 2 B = 1 N = 9	58.08 (5.64)	C = 0 B = 2 N = 10	$t(11) = 1.18, p = .26, d = .34$	n.s.
Social Problems	62.92 (8.42)	C = 3 B = 3 N = 6	62.58 (9.20)	C = 1 B = 3 N = 8	$t(11) = .12, p = .91, d = .04$	n.s.
Thought Problems	67.75 (5.82)	C = 7 B = 1 N = 4	61.83 (7.79)	C = 3 B = 1 N = 8	$t(11) = 2.43, p = .03, d = .70$	n.s.
Attention Problems	68.83 (6.90)	C = 6 B = 3 N = 3	68.92 (8.48)	C = 5 B = 3 N = 4	$t(11) = -.03, p = .98, d = .01$	n.s.
Rule Breaking Behaviour	67.58 (6.86)	C = 5 B = 2 N = 5	62.50 (8.54)	C = 4 B = 0 N = 8	$t(11) = 1.89, p = .08, d = .54$	n.s.
Aggressive Behaviour	71.58 (12.38)	C = 6 B = 2 N = 4	68.25 (15.68)	C = 5 B = 1 N = 6	$t(11) = .76, p = .47, d = .22$	n.s.
<i>Internalising/Externalising</i>						
Internalising Problems	65.00 (8.94)	C = 6 B = 3 N = 2	57.55 (10.59)	C = 3 B = 2 N = 6	$t(10) = 2.91, p = .02, d = .73$	n.s.
Externalising Problems	69.09 (9.22)	C = 7 B = 2 N = 2	63.91 (11.37)	C = 5 B = 2 N = 4	$t(10) = 1.45, p = .18, d = .44$	n.s.
Total Problems	69.36 (6.92)	C = 8 B = 3 N = 0	63.82 (9.24)	C = 5 B = 3 N = 3	$t(10) = 1.87, p = .09, d = .56$	n.s.

<i>DSM Oriented Scales</i>						
Affective problems	66.00 (7.82)	C = 4 B = 2 N = 4	62.20 (7.05)	C = 1 B = 3 N = 6	$t(8) = 3.66, p = .006, d = 1.46$	n.s.
Anxiety Problems	65.11 (9.92)	C = 4 B = 1 N = 5	59.33 (10.02)	C = 2 B = 1 N = 7	$t(8) = 2.55, p = .03, d = .91$	n.s.
Somatic Problems	61.56 (9.53)	C = 2 B = 3 N = 5	55.44 (5.32)	C = 0 B = 0 N = 10	$t(8) = 2.35, p = .05, d = .66$	n.s.
Attention Deficit/Hyperactivity Problems	66.33 (8.14)	C = 3 B = 3 N = 4	63.78 (10.35)	C = 4 B = 1 N = 5	$Z = -1.10, p = .27, d = .20$	n.s.
Oppositional Defiant Problems	68.22 (8.81)	C = 5 B = 1 N = 4	63.11 (10.18)	C = 4 B = 1 N = 5	$t(8) = 1.54, p = .16, d = .51$	n.s.
Conduct Problems	73.11 (8.92)	C = 7 B = 1 N = 2	64.89 (10.04)	C = 3 B = 3 N = 4	$t(8) = 2.37, p = .05, d = .79$	n.s.
<i>2007 Scales</i>						
Sluggish Cognitive Tempo	62.58 (5.99)	C = 1 B = 2 N = 9	61.25 (6.27)	C = 0 B = 3 N = 9	$Z = -.76, p = .44, d = .14$	n.s.
Obsessive Compulsive Problems	63.83 (8.86)	C = 3 B = 0 N = 9	59.83 (7.48)	C = 3 B = 0 N = 9	$t(11) = 1.98, p = .07, d = .57$	n.s.
Post-Traumatic Problems	68.58 (9.98)	C = 5 B = 2 N = 5	64.42 (9.09)	C = 3 B = 2 N = 7	$t(11) = 1.53, p = .15, d = .44$	n.s.

¹ C = Meets the threshold for clinical significance; B = Borderline for clinical significance; N = Below threshold for clinical significance

² <.05 with a Bonferroni Adjusted Alpha to 0.00185

³ Comparisons of clinical significance were made using McNemar's test, with borderline results combined with clinically significant results.

⁴ Cohen's d from https://memory.psych.mun.ca/models/stats/effect_size.shtml

Table 4. TSCYC Scores Pre and Post Treatment (n = 36)

	Pre-Treatment		Post-Treatment		Sig Testing ²	Sig Testing (Clinical Sig) ³
	Score <i>m</i> (sd)	Clinical Sig ¹	Score <i>m</i> (sd)	Clinical Sig		
<i>Clinical Scales</i>						
Anxiety	68.61 (18.10)	C = 17 B = 6 N = 13	57.94 (12.48)	C = 6 B = 5 N = 25	$Z = -3.38, p = .001, d = .46^{4*}$	.002*
Depression	67.31 (17.55)	C = 18 B = 4 N = 14	57.86 (12.53)	C = 7 B = 7 N = 22	$t(35) = 3.40, p = .002, d = .57^*$	.035
Anger/Aggression	75.17 (19.08)	C = 23 B = 5 N = 8	63.58 (16.13)	C = 9 B = 4 N = 23	$t(35) = 4.21, p = <.001, d = .70^*$	.001*

<i>Post-Traumatic Stress</i>						
Post-Traumatic Stress – Intrusion	67.47 (17.73)	C = 14 B = 5 N = 17	56.83 (12.99)	C = 5 B = 4 N = 27	$Z = -3.84, p = <.001, d = .72^*$	.002*
Post-Traumatic Stress - Avoidance	71.08 (21.48)	C = 16 B = 4 N = 16	63.67 (19.92)	C = 10 B = 3 N = 23	$t(35) = 2.29, p = .028, d = .38$	.092
Post-Traumatic Stress - Arousal	69.25 (15.00)	C = 15 B = 9 N = 12	61.08 (13.21)	C = 9 B = 3 N = 24	$t(35) = 3.94, p = <.001, d = .62^*$	.001*
Post-Traumatic Stress - Total	73.17 (16.72)	C = 19 B = 5 N = 12	62.08 (15.24)	C = 7 B = 6 N = 23	$t(35) = 5.08, p = <.001, d = .67^*$	<.001*
<i>Dissociation/ Sexual</i>						
Dissociation	64.19 (15.78)	C = 12 B = 4 N = 20	59.97 (16.58)	C = 8 B = 4 N = 24	$t(35) = 1.96, p = .057, d = .33$	.549
Sexual Concerns	64.37 (20.19)	C = 11 B = 9 N = 15	59.54 (18.54)	C = 7 B = 3 N = 25	$Z = -1.32, p = .187, d = .21$	.057

¹ C = Meets the threshold for clinical significance; B = Borderline for clinical significance; N = Below threshold for clinical significance.

² <.05 with a Bonferroni Adjusted Alpha to .006.

³ Comparisons of clinical significance were made using McNemar's test, with borderline results combined with clinically significant results.

⁴ Cohen's d from https://memory.psych.mun.ca/models/stats/effect_size.shtml

Table 5. TSCC Scores Pre and Post Treatment (n = 78)

	Pre-Treatment		Post-Treatment		Sig Testing ²	Sig Testing ³ (Clinical Sig)
	Score <i>m</i> (sd)	Clinical Sig ¹	Score <i>m</i> (sd)	Clinical Sig		
<i>Scales</i>						
Anxiety	58.24 (13.97)	C = 27 B = 27 N = 24	50.00 (11.12)	C = 8 B = 31 N = 39	$t(77) = 5.69, p = <.001, d = .64^{4*}$	<.001*
Depression	56.18 (11.47)	C = 18 B = 38 N = 22	48.83 (9.80)	C = 8 B = 25 N = 45	$t(77) = 5.45, p = <.001, d = .62^*$	.002*
Anger	53.90 (11.22)	C = 14 B = 37 N = 27	47.45 (8.87)	C = 3 B = 31 N = 44	$Z = -4.86, p = <.001, d = .58^*$	.007
Post-Traumatic Stress	57.54 (11.26)	C = 21 B = 38 N = 19	48.28 (9.24)	C = 5 B = 28 N = 45	$t(77) = 7.09, p = <.001, d = .80^*$	<.001*
<i>Dissociation</i>						
Dissociation	57.04 (11.86)	C = 20 B = 37 N = 21	52.13 (10.46)	C = 10 B = 31 N = 37	$t(77) = 3.87, p = <.001, d = .44^*$	.021
Dissociation – Overt	58.05 (12.29)	C = 24 B = 34 N = 20	52.99 (10.75)	C = 9 B = 36 N = 33	$t(77) = 3.87, p = .001, d = .44^*$	.007

Dissociation – Fantasy	53.06 (10.93)	C = 12 B = 36 N = 30	50.63 (9.60)	C = 6 B = 33 N = 39	$t(77) = 2.05, p = .039, d = .23$	.019
<i>Sexual</i>						
Sexual Concerns	57.24 (18.03)	C = 12 B = 14 N = 27	52.28 (16.70)	C = 7 B = 17 N = 27	$t(45) = 2.61, p = .009, d = .38$	.039
Sexual Concerns – Pre- Occupation	52.58 (15.98)	C = 4 B = 17 N = 31	50.20 (14.71)	C = 6 B = 13 N = 32	$Z = -1.92, p = .055, d = .21$	1.00
Sexual Concerns - Distress	63.52 (22.56)	C = 16 B = 15 N = 19	57.15 (18.90)	C = 11 B = 15 N = 25	$Z = -2.72, p = .007, d = .37^*$	.125

¹ C = Meets the threshold for clinical significance; B = Borderline for clinical significance; N = Below threshold for clinical significance.

² <.05 with a Bonferroni Adjusted Alpha to .005.

³ Comparisons of clinical significance were made using McNemar's test, with borderline results combined with clinically significant results.

⁴ Cohen's d from https://memory.psych.mun.ca/models/stats/effect_size.shtml

Table 6. Comparison of Symptom Change between Sex (n = 75)

	Male Score <i>m</i> (sd)	Female Score <i>m</i> (sd)	Sig Testing ¹
<i>Scales</i>			
Anxiety	(<i>n</i> = 26) 8.88 (14.37)	(<i>n</i> = 49) 7.82 (12.41)	$U = 617.000, p = 8.22$
Depression	(<i>n</i> = 26) 8.12 (12.31)	(<i>n</i> = 49) 7.14 (12.13)	$U = 634.000, p = .973$
Anger	(<i>n</i> = 26) 8.31 (14.66)	(<i>n</i> = 49) 5.53 (9.11)	$U = 565.500, p = .426$
Post-Traumatic Stress	(<i>n</i> = 26) 10.62 (11.84)	(<i>n</i> = 49) 8.61 (11.66)	$U = 588.000, p = .585$
<i>Dissociation</i>			
Dissociation	(<i>n</i> = 26) 4.31 (12.29)	(<i>n</i> = 49) 5.12 (10.99)	$U = 618.500, p = .837$
Dissociation – Overt	(<i>n</i> = 26) 4.92 (13.34)	(<i>n</i> = 49) 4.92 (10.81)	$U = 607.500, p = .793$
Dissociation – Fantasy	(<i>n</i> = 26) .35 (9.25)	(<i>n</i> = 49) 3.61 (11.31)	$U = 508.500, p = .151$
<i>Sexual</i>			
Sexual Concerns	(<i>n</i> = 9) 12.33 (9.80)	(<i>n</i> = 35) 3.37 (13.35)	$U = 91.000, p = .051$
Sexual Concerns – Pre-Occupation	(<i>n</i> = 8) 7.12 (10.58)	(<i>n</i> = 35) 1.57 (11.91)	$U = 117.500, p = .490$
Sexual Concerns - Distress	(<i>n</i> = 9) 13.22 (19.08)	(<i>n</i> = 35) 4.91 (16.82)	$U = 127.500, p = .389$

¹ <.05 with a Bonferroni Adjusted Alpha to .005.

Table 7. Comparison of Symptom Change between Age Groups (n = 78)

	7-12-Year-Old Score <i>m</i> (sd)	13-17-Year-Old Score <i>m</i> (sd)	Sig Testing ¹
<i>Scales</i>			
Anxiety	(<i>n</i> = 43) 8.46 (15.42)	(<i>n</i> = 35) 7.97 (8.78)	$t(68.65) = .178, p = .860$
Depression	(<i>n</i> = 43) 8.30 (13.69)	(<i>n</i> = 35) 6.17 (9.34)	$t(73.92) = .814, p = .418$
Anger	(<i>n</i> = 43) 8.02 (13.80)	(<i>n</i> = 35) 4.51 (6.55)	$U = 644.000, p = .275$
Post-Traumatic Stress	(<i>n</i> = 43) 10.67 (13.60)	(<i>n</i> = 35) 7.51 (8.16)	$t(70.39) = 1.27, p = .209$
<i>Dissociation</i>			
Dissociation	(<i>n</i> = 43) 5.02 (13.35)	(<i>n</i> = 35) 4.77 (8.00)	$t(72.355) = .142, p = .887$
Dissociation – Overt	(<i>n</i> = 43) 4.86 (13.57)	(<i>n</i> = 35) 5.31 (8.62)	$t(73.98) = -.135, p = .893$
Dissociation – Fantasy	(<i>n</i> = 44) 2.28 (11.18)	(<i>n</i> = 35) 2.63 (9.74)	$t(77) = -.121, p = .904$

<i>Sexual</i>			
Sexual Concerns	(n = 21) 6.19 (14.86)	(n = 24) 3.96 (11.40)	U = 254.500, p = .859
Sexual Concerns – Pre-Occupation	(n = 21) 5.62 (9.22)	(n = 24) -.46 (12.78)	U = 192.000, p = .164
Sexual Concerns - Distress	(n = 21) 4.05 (20.19)	(n = 24) 8.67 (14.23)	U = 224.500, p = .382

¹ <.05 with a Bonferroni Adjusted Alpha to .005.

Table 8. Comparison of Symptom Change Across Therapy Funding Source (n = 59)

	Child Protection Funded Score <i>m</i> (sd)	Medicare Funded Score <i>m</i> (sd)	Sig Testing ¹
<i>Scales</i>			
Anxiety	(n = 30) 8.27 (12.55)	(n = 29) 7.55 (13.25)	U = 406.500, p = .665
Depression	(n = 30) 5.47 (12.63)	(n = 29) 8.28 (12.38)	t(57) = -.86, p = .392
Anger	(n = 30) 5.60 (13.85)	(n = 29) 8.10 (9.71)	U = 323.500, p = .090
Post-Traumatic Stress	(n = 30) 8.47 (12.11)	(n = 29) 10.38 (11.28)	t(59) = -.63, p = .533
<i>Dissociation</i>			
Dissociation	(n = 30) 2.40 (11.29)	(n = 29) 5.07 (12.22)	U = 395.000, p = .544
Dissociation – Overt	(n = 30) 2.43 (11.67)	(n = 29) 5.48 (12.72)	t(57) = -.96, p = .341
Dissociation – Fantasy	(n = 30) 1.00 (9.57)	(n = 29) 1.03 (10.80)	t(57) = -.013, p = .990
<i>Sexual</i>			
Sexual Concerns	(n = 13) 6.69 (12.73)	(n = 14) .50 (13.05)	U = 75.500, p = .316
Sexual Concerns – Pre-Occupation	(n = 13) 5.38 (10.59)	(n = 14) -5.14 (13.42)	U = 54.000, p = .076
Sexual Concerns - Distress	(n = 13) 5.62 (15.77)	(n = 14) 8.14 (13.96)	U = 93.000, p = .856

¹ <.05 with a Bonferroni Adjusted Alpha to .005.

Table 9. Comparison of Symptom Change across Care Status (n = 78)

	In Care of the CEO Score <i>m</i> (sd)	Not in Care Score <i>m</i> (sd)	Sig Testing ¹
<i>Scales</i>			
Anxiety	(n = 35) 6.17 (14.09)	(n = 43) 9.93 (11.54)	t(76) = -1.30, p = .199
Depression	(n = 35) 4.00 (12.89)	(n = 43) 10.07 (10.42)	t(76) = -2.30, p = .024
Anger	(n = 35) 4.63 (9.97)	(n = 43) 7.93 (12.06)	U = 615.500, p = .168
Post-Traumatic Stress	(n = 35) 5.71 (11.34)	(n = 43) 12.14 (10.96)	t(76) = -2.53, p = .013
<i>Dissociation</i>			
Dissociation	(n = 35) 2.88 (12.35)	(n = 43) 6.56 (10.02)	U = 607.000, p = .143
Dissociation – Overt	(n = 35) 2.57 (12.74)	(n = 43) 7.09 (10.19)	U = 591.000, p = .104
Dissociation – Fantasy	(n = 35) 2.17 (10.71)	(n = 43) 2.65 (10.44)	t(76) = -.20, p = .842
<i>Sexual</i>			
Sexual Concerns	(n = 19) 8.84 (12.17)	(n = 26) 2.19 (13.13)	t(44) = 1.76, p = .086
Sexual Concerns – Pre-Occupation	(n = 19) 5.95 (9.74)	(n = 26) -.23 (12.24)	U = 187.000, p = .159
Sexual Concerns - Distress	(n = 19) 8.42 (17.58)	(n = 26) 5.12 (17.16)	U = 235.500, p = .625

¹ <.05 with a Bonferroni Adjusted Alpha to .005.

Table 10. Comparison of Symptom Change Across Presence of CSA (n = 75)

	CSA Score <i>m</i> (sd)	No CSA Score <i>m</i> (sd)	Sig Testing
<i>Scales</i>			
Anxiety	(n = 35) 7.74 (13.20)	(n = 40) 8.18 (12.39)	$t(73) = -.15, p = .884$
Depression	(n = 35) 7.31 (11.07)	(n = 40) 7.50 (11.81)	$t(73) = -.07, p = .944$
Anger	(n = 35) 5.86 (13.74)	(n = 40) 7.12 (7.50)	$U = 593.000, p = .255$
Post-Traumatic Stress	(n = 35) 10.17 (10.99)	(n = 40) 8.22 (11.40)	$t(73) = -.75, p = .456$
<i>Dissociation</i>			
Dissociation	(n = 35) 4.86 (10.30)	(n = 40) 5.00 (11.64)	$U = 665.000, p = .710$
Dissociation – Overt	(n = 35) 5.06 (10.78)	(n = 40) 5.12 (11.85)	$U = 669.500, p = .877$
Dissociation – Fantasy	(n = 35) 1.94 (10.36)	(n = 40) 2.88 (10.88)	$t(73) = -.38, p = .706$
<i>Sexual</i>			
Sexual Concerns	(n = 25) 6.00 (13.96)	(n = 19) 3.42 (12.23)	$U = 234.000, p = .712$
Sexual Concerns – Pre-Occupation	(n = 14) 1.44 (14.15)	(n = 19) 3.10 (7.22)	$U = 222.500, p = .716$
Sexual Concerns – Distress	(n = 25) 9.08 (16.67)	(n = 19) 3.26 (18.27)	$U = 234.000, p = .702$

¹ <.05 with a Bonferroni Adjusted Alpha to .005.

Table 11. Comparison of Symptom Change Across Living Situation at Intake (n = 56)

	OOHC Score <i>m</i> (sd)	Living with Parents Score <i>m</i> (sd)	Sig Testing (0.005 Bonferroni Adjusted Alpha)
<i>Scales</i>			
Anxiety	(n = 25) 5.08 (11.49)	(n = 31) 10.77 (11.26)	$U = 258.000, p = .033$
Depression	(n = 25) 4.76 (10.69)	(n = 31) 9.97 (11.07)	$t(54) = -1.78, p = .081$
Anger	(n = 25) 6.44 (15.06)	(n = 31) 7.23 (8.39)	$t(54) = -.247, p = .806$
Post-Traumatic Stress	(n = 25) 7.52 (12.22)	(n = 31) 11.68 (10.08)	$U = 274.500, p = 0.06$
<i>Dissociation</i>			
Dissociation	(n = 25) 3.32 (10.28)	(n = 31) 6.32 (10.62)	$t(54) = -1.07, p = .291$
Dissociation – Overt	(n = 25) 3.48 (10.98)	(n = 31) 6.10 (10.60)	$t(54) = -.904, p = .370$
Dissociation – Fantasy	(n = 25) 0.84 (9.14)	(n = 31) 4.03 (10.59)	$t(54) = -1.19, p = .239$
<i>Sexual</i>			
Sexual Concerns	(n = 15) 4.47 (14.30)	(n = 19) 4.74 (10.38)	$t(33) = -.04, p = .965$
Sexual Concerns – Pre-Occupation	(n = 15) 5.07 (9.88)	(n = 19) 2.16 (10.33)	$U = 132.500, p = .725$
Sexual Concerns – Distress	(n = 15) 2.33 (22.13)	(n = 19) 6.47 (12.18)	$U = 142.000, p = .777$

¹ <.05 with a Bonferroni Adjusted Alpha to .005.

APPENDIX B: REFERENCES

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