



RESEARCH ARTICLE

The CASA Trauma and Attachment Group (TAG) Program for Children who have Attachment Issues Following Early Developmental Trauma

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Abstract

Objective: There is relatively little research about effective therapeutic approaches for children in middle childhood who have attachment related diagnoses as a result of experiencing significant, early developmental trauma. This study describes findings from an intensive, dyad-based intervention, aimed at stabilizing attachment relationships with primary caregivers, increasing caregiver reflective function skills, and reducing children's trauma-related behavioural sequelae.

Method: We analyzed retrospective data from 51 caregiver/child dyads who participated in the Trauma and Attachment Group (TAG) Program from September 2011-December 2014. This data included pre- and post-intervention scores retrieved from the Parenting Relationship Questionnaire (PRQ), the Parent Report of Post-Traumatic Stress Symptoms (PROPS), and the Parental Reflective Functioning Questionnaire (PRFQ-1)

Results: The preliminary findings show statistically significant improvements in attachment, communication, discipline practices, involvement, and relational frustration. Additionally there were statistically significant improvements in parental reflective functioning, and a trend towards a reduction in symptoms typical of post-traumatic stress disorder. **Conclusion:** Poor quality or inconsistent interactions with early caregivers can lead to life-long impairments in physical and mental health. This intensive program shows potential as a way to improve longer-term outcomes for children exposed to early developmental trauma. Longer-term research is required to further substantiate outcomes, appraise cost analysis, as well as to consider evaluation with appropriate comparison groups.

Key Words: attachment, developmental trauma, intervention, dyadic intervention, group intervention, trauma-informed care.

Résumé

Objectif: Il y a relativement peu de recherches sur les approches thérapeutiques efficaces pour les enfants en phase intermédiaire de l'enfance qui ont des diagnostics liés à l'attachement pour avoir vécu des traumatismes développementaux précoces significatifs. Cette étude décrit les résultats d'une intervention intensive, dyadique, visant à stabiliser les relations d'attachement avec les soignants principaux, à accroître les capacités de la fonction réflexive, et à réduire les séquelles comportementales liées au traumatisme chez les enfants. **Méthode:** Nous avons analysé les données rétrospectives de 51 dyades soignant/enfant qui ont participé au programme de groupe traumatisme et attachement (TAG) de septembre 2011 à décembre 2014. Ces données incluaient les scores d'avant et d'après intervention obtenus du Parenting Relationship Questionnaire (PRQ), du Parent Report of Post-Traumatic Stress Symptoms (PROPS), et du Parental Reflective Functioning Questionnaire (PRFQ-1). **Résultats:** Les résultats préliminaires révèlent des améliorations significatives de l'attachement, de la communication, des pratiques de discipline, de la participation, et de la frustration relationnelle. En outre, il y avait des améliorations statistiquement significatives du fonctionnement réflexif parental, et une tendance vers une réduction des symptômes typiques du trouble de stress post-traumatique. **Conclusion:** Des interactions

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de mauvaise qualité ou incohérentes avec les premiers soignants peuvent mener à des déficiences de durée de vie de la santé mentale et physique. Ce programme intensif présente un potentiel comme façon d'améliorer les résultats à long terme pour les enfants exposés à un traumatisme développemental précoce. Il faut une recherche à plus long terme pour étayer les résultats, estimer l'analyse des coûts et envisager l'évaluation avec des groupes de comparaison appropriés.

Mots clés: *attachement, traumatisme développemental, intervention, intervention dyadique, intervention de groupe, soins tenant compte des traumatismes.*

Introduction

Early childhood is typically characterized by a period of rapid growth with regard to physical, emotional, and cognitive development. During the process of normal development, caregivers foster fundamental attachment needs through play, learning, protection, and emotional co-regulation. Positive developmental outcomes, including self-esteem, social competence, academic success, appropriate social behaviour, and the ability to make and maintain relationships, have all been linked to the quality of the attachment relationship with a primary caregiver (Delima & Vimpani, 2011; Perry & Szalavitz, 2006; Schore, 2005, 2001; van der Kolk 2005). In contrast, poor or inconsistent interactions with early caregivers are associated with deficits in executive function and a decreased ability to self-regulate (Anda et al., 2007; Schore 2005, 2001); and can lead to life-long impairments in physical and mental health (Johnson, Riley, Granger, & Riis, 2013; Shonkoff et al. 2012; Anda et al. 2007; Anda, Butchart, Felitti, & Brown, 2010), including an inability to form and maintain appropriate emotional attachments (Rahim, 2014; Lawson, Davis, & Brandon, 2013; Delima & Vimpani 2011; van Dijke et al., 2011; Perry & Szalavitz, 2006; Schore, 2005, 2001). These challenges are often compounded by problems with self-regulation, self-concept, and anxiety (Knoverek, Briggs, Underwood, & Hartman, 2013; Wöller, Leichsenring, Leweke, & Kruse, 2012).

Despite growing awareness of the impact of early attachment related deficits on child neurodevelopment and mental wellness there is a relative dearth of research regarding the best therapeutic approaches for children and youth who have developed attachment related disorders as a result of early trauma. Documented approaches with older children have included cognitive behaviour therapy (CBT; Cohen, Mannarino, Kliethermes, & Murray, 2012) and psychodynamic psychotherapy (Wöller et al., 2012). Interventions with both a caregiver and a young child in a dyad have also been suggested (Child Parent Relationship Therapy (CPRT; Cornett & Bratton, 2014) and Circle of Security (Marvin, Cooper, Hoffman, & Powell, 2002). However, we were unable to identify evidence-based interventions aimed specifically at traumatized youth in middle-childhood together with their primary caregiver. Here we describe initial findings from an intensive dyad-based treatment program designed to address the impact of early relational trauma on latency-aged children, the Trauma and Attachment Group

(TAG) program. We outline program content, objectives, and format, followed by a presentation of preliminary findings based on retrospective data collected by the program through its internal evaluation procedures.

CASA TAG Program

CASA, Child, Adolescent, and Family Mental Health is an Edmonton-based provider of mental health services for families, children, and youth. Their TAG Program was designed to help children in middle childhood diagnosed with attachment disorders following complex developmental trauma. It aims to promote healing through the development and strengthening of caregiver-child attachment relationships.

CASA offers two TAG programs for the caregiver/child dyad, TAG for children aged 5-11 and Teen TAG for youth aged 12-17. Here, we focus on the former of the two, which is split into two separate sections (TAG I and II), each of which lasts for four months and has the capacity to treat a maximum of ten caregiver/youth dyads, during the eight-month course of treatment. Dyads meet once a week for two to two and a half hours with separate sessions for caregivers, children, and inclusive caregiver-child dyad sessions.

Facilitation Team

TAG programs are delivered by an experienced multi-disciplinary team, which meets to review progress every two weeks, and includes a psychiatrist, a psychiatric nurse, a clinical support worker, psychologists, social workers, and a part-time occupational therapist. Because the program is carried out at a teaching facility, others may be involved in the program for educational purposes. In addition to group involvement, the team makes weekly support calls to families, schools, and family community-care teams where necessary.

Inclusion and Exclusion Criteria

The TAG program was designed for children with attachment related mental health needs. All of the children treated in the TAG program have either a diagnosis or query of PTSD or developmental trauma, and an attachment related disorder such as Reactive Attachment Disorder or Disinhibited Social Engagement Disorder. Children recommended for TAG have often been exposed to emotional, physical, and sexual abuse, as well as neglect. In addition, many have

complex trauma symptoms (including dissociation, emotional dysregulation) and boundary issues like stealing or food hoarding.

Children considered for admission to TAG must be stable enough to benefit from and safely participate in a group treatment setting. Children who are not suitable for a group setting, or who present a serious danger to themselves or others may receive individual and/or family therapy in place of TAG participation.

In addition to the diagnostic and safety criteria, in order to be eligible for the program a child must have “placement stability” (i.e. living with a family with no intention to move the child, for at least one year prior to participation in TAG programs). Families must also agree to minimize or eliminate factors that could jeopardize placement stability for children participating in the program (i.e. contact with family members associated with the developmental trauma).

Caregiver factors also impact whether a dyad can be admitted to the program. It is important that they demonstrate their own stability with regard to mental health and have well-established access to supports like respite care and social support. Caregivers must also be committed to the intensity of the program (i.e. attending eight months of weekly sessions, taking time off from work, arranging care for other children in the family), in addition to working to minimize potential treatment disruptions like family vacations.

Group Format

The TAG program, designed to address developmental trauma, (Rahim, 2014; Bremness & Polzin, 2014; van der Kolk, 2005) is based, in part, on a trauma-informed three-stage treatment model, which aims to integrate developmental, biological, psychodynamic and interpersonal theoretical perspectives (van der Kolk, 2005; van der Kolk & Fissler, 1994). The first stage of this model, Stabilization (establishing safety), is the primary intervention goal for the first part of the program (TAG I). The second two stages, addressed during the second phase of the program (TAG II), are Trauma Resolution and Reconnection/Generalization to Community.

Aspects of TAG I

To achieve Stabilization, TAG I focuses on establishing a “safe place” for participants, in terms of clinical and environmental stabilization, as well as developing a practical model for caregivers for both mindfulness (Seigel & Hartzel 2004) and reflective functioning (Slade, 2005). Clinical stabilization, considered internal to the child, is encouraged through the establishment of physiological and emotional regulation with the help of group dyad activities centered around emotional, cognitive, and behavioural regulation. Emotional regulation is connected to receiving consistent

and attuned responses (involved in reflective functioning) from the primary caregiver (Perry & Szalavitz, 2006). Reflective functioning on behalf of the caregiver is believed to be an integral part in the development of a child’s safety and comfort in the attachment relationship (Slade, Grienerberger, Bernbach, Levy, & Locker, 2005). In an attempt to help develop this attunement in caregivers, TAG I begins with caregiver education on the neurological, emotional, and behavioural effects of developmental trauma, through the Neurosequential Model of Therapeutics (Snyder, Shapiro, & Treleaven, 2012; Perry, 2009), a developmentally driven neurobiological model. For example, caregivers learn the importance of healing dysfunction in the brain stem (which controls regulation, arousal, and attention) before trying to move on to higher-level functions, like decision-making and problem solving.

During caregiver/child dyad time, group activities for clinical stabilization include role-playing, body feeling map drawings, and safe place visualizations. Children are supported to increase their self-regulation skills both through reflection on their feelings and thoughts, and through connection with their caregiver. Caregiver-child attachment is further encouraged outside of group meeting times through dyadic activities such as “kit time”, where caregivers and children set aside time every day to do activities together that mimic early attachment behaviours (i.e. providing one-to-one attention and connection through games that encourage eye contact or touch between the caregiver and child).

Once clinical stabilization has been achieved, the TAG facilitation team then supports the family to increase the child’s environmental safety. This is achieved, in part, through the development of family connections to school or community supports, and includes the need to help the child begin to generalize feelings of safety gained within the relationship with their caregiver, to others in the child’s social world.

Aspects of TAG II

The TAG II treatment component seeks to support Trauma Resolution (stage two of van der Kolk’s treatment model) (van der Kolk, 2005; van der Kolk & Fissler, 1994), through encouraging the child’s recollection of their early traumatic experiences in a safe environment. The caregiver learns to become a witness to the youth’s “trauma story” in a mindful, non-judgmental, and supportive manner (Purvis et al. 2013). Children are supported to integrate past trauma into a narrative that also includes present experiences and respond to their present environment without viewing it through the lens of their trauma. Children begin to tell their story through drawing, collages, and sand tray work. They also participate in regulatory activities, (i.e. learning to “be present” in their own bodies), practice mindfulness-based stress reduction (Kabat-Zinn, 2011), and are guided through relaxation exercises. During this part of the process, children

are also encouraged to reframe their early attachment experiences to help them understand that the current caregiver is not the one responsible for their early developmental trauma. Caregivers are supported with regard to increasing their capacity to make sense of their own and their child's mental states, which is believed to play a critical role in helping children to self-regulate and establish healthy and meaningful relationships (Slade, 2005). This reframing for both children and caregivers aims to re-build models of healthy attachment and reinforce safety and stability.

The final goal of the TAG II session is to address Reconnection/Generalization to the Community (van der Kolk, 2005; van der Kolk & Fissler, 1994), and involves the transfer of treatment gains across environments. This is encouraged through the provision of caregiver collaboration to advocate with community support systems for their child's needs. The TAG families practice positive participation in a wider community through group sand tray and group dyadic movement activities while continuing to stabilize each child through one-on-one, caregiver/child activities. The goal is that the dyad and their families will learn more about the impact of early relational trauma on the child's current functioning. As children are increasingly open to positive attachment relationships with their caregiver and other community members, children are provided with tools to begin to honour primary (albeit dysfunctional) attachments. Once this is achieved, the family can work to build and maintain connections in a child's social, community, and educational support systems.

Methods

Results for this study were derived from secondary use of data collected for program evaluation at CASA. Before participating in TAG, all caregivers gave written informed consent for the use of their child's and their own information for evaluation and research purposes. The Research Health Ethics Board of the University of Alberta provided ethics committee approval for retrospective use of this data. All data was de-identified prior to being collected for analysis.

Participants

During the study period (2011–2014 inclusive) a total of 51 children entered the TAG program. Though exact numbers were unavailable for analysis, we feel it is important to mention that many children in the program lived with kinship, foster, or adoptive parents, and those living with biological parents were with non-offending parents.

Most of the children were between 8–12 years of age (63%), with the remainder (38%) being 5–7 years of age. There were similar percentages of female (51%) and male (49%) children.

The majority of families (64%) joining the TAG program lived within the city of Edmonton. The remainder came

from the city's immediate surrounding communities (22%), with a few families (14%) coming to the program from communities up to 100 km away.

Outcome Measures

Data from three outcome measures routinely used to internally evaluate TAG efficacy were utilized in this analysis. These outcome measures were selected to evaluate the TAG program because they assess the targeted areas of treatment: caregiver-child attachment and relationship health; child trauma symptoms; and, parental reflective function skills.

For the purpose of this study, changes in caregiver-child attachment were measured with the Parenting Relationship Questionnaire (PRQ) (Kamphaus & Reynolds, 2006a). Though our initial interest was in measuring changes in attachment, this 71-item measure consists of several subscales focused on the quality of caregiver-child interactions including, attachment, relational frustration, communication, and involvement, as well as discipline practices and parenting confidence. The PRQ was also chosen for TAG evaluation because of its normed population data and comparative clinical thresholds (Jacobson, Follette, & Ravenstorf, 1984). The manual explains that clinically significant thresholds for scores on the PRQ were established through testing with normative samples of both female and male raters in the U.S. (Kamphaus & Reynolds, 2006b). In addition, its authors report that reliability and validity testing for the PRQ was assessed alongside the *Parent-Child Relationship Inventory* (PCRI) (Gerard, 1994), the *Parenting Stress Index*, Third Edition (PSI) (Abidin, 1995) and the *Stress Index for Parents of Adolescents* (SIPA) (Sheras, Abidin, & Konold, 1998). The correlations between the related subscales on these measures ranged from .41 to .67. Because the literature suggests that strengthening the attachment relationship may allow for change in symptomology related to early relational trauma, a primary stated outcome for TAG, our primary outcome measurement was the Attachment subcategory of the PRQ.

Possible changes in trauma symptoms were measured with the Parent Report of Post-Traumatic Stress Symptoms (PROPS; Greenwald & Rubin, 1999). This 32-item measure was designed to assess changes in the child's frequency of post-traumatic stress symptoms, and addresses a range of trauma symptoms including somatic complaints (stomach and headaches), anxiety, mood swings, and behavioural indicators of trauma such as fighting, hyper-vigilance, and sleep issues. Unlike the PRQ, there were no clinical thresholds available with this measure.

The other outcome measure used for retrospective analysis in this study was the Parental Reflective Functioning Questionnaire (PRFQ-1; Lyuten et al., 2009). This is a 36-item measure designed to assess caregivers' reflective function specifically in regards to their relationship with their child. The authors of this questionnaire, (Lyuten et al., 2009), met

Table 1. Outcome scores and level of statistical significance

PRQ	Pre-Test (SD)	Post-Test (SD)	t-test	p (sig)
Attachment (+)	37.23 (9.5)	41.95 (10.8)	-3.258	0.001**
Communication (+)	38.55 (13.2)	42.25 (12.2)	-2.441	0.045*
Discipline practices (-)	43.35 (11.2)	38.50 (10.4)	2.498	0.003**
Involvement (+)	44.20 (8.2)	48.50 (8.4)	-3.580	0.001**
Parental confidence (+)	41.35 (9.6)	42.90 (10.1)	-1.134	0.277
School satisfaction (+)	46.03 (11.9)	46.18 (9.8)	-0.070	0.935
Relational frustration (-)	65.73 (11.2)	61.10 (12.2)	3.413	0.003**
PROPS (-)	31.44 (11.17)	27.26 (12.23)	2.010	0.053
PRFQ-1 (+)	4.84 (0.37)	5.05 (0.35)	-2.464	0.019*

*p < 0.05, **p < 0.01, and ***p < 0.001
 (+) or (-) after the subscale refers to the expected direction of change in mean scores
 PRQ = Results from the Parenting Relationship Questionnaire, PROPS = the Parent Rating of Post-traumatic stress Symptoms, PRFQ-1 = Parental Reflective Functioning Questionnaire

with experts in the field of reflective function to determine how mothers, skilled or lacking in the skill of mentalizing, would answer a variety of items. An increase in score on this measure indicates an increase in reflective thinking, however there are no clinical cut points at this time. The validity and reliability of this measure are currently under investigation by its authors.

It is important to note that CASA evaluates the TAG program internally and includes the above three measures as well as assessing changes in child general function through the Health of Nations Outcome Scales, Child and Adolescent (HoNOSCA; Gowers et al., 1999). The evaluation team also examines caregiver satisfaction with the program through specific TAG program questionnaires. Though we have not included these in preliminary analysis, they will be under consideration in future outcome investigation.

Data Collection and Analysis

In order to measure the overall effectiveness of the TAG intervention, we took our lead from the stated goals of the TAG program (to increase attachment, decrease trauma symptoms, and increase parental reflective functioning) to form our proposed study outcomes. Our primary objective was to determine if there were improvements in the caregiver-child attachment relationship following involvement in the TAG program; with a secondary objective of revealing a reduction in the children's developmental trauma symptoms, which may be a useful guide to longer-term positive outcomes (van der Kolk, 2006). These symptoms can include attention difficulties, challenges with sleeping and eating, anxiety, irritability, somatic symptoms, and an inability to trust and respond positively to caregivers. Continuing along with the anticipated TAG outcomes, we also examined the potential impact of the program on caregivers'

ability to engage in reflective thinking about their relationship with their child before and after treatment, a proposed mediator to negative long-term outcomes (Slade, 2005). Our team compared pre-treatment values to those collected shortly after the program had been completed. We utilized IBM SPSS Statistics Version 22 to analyze the results, utilizing two tailed *t*-tests to determine statistical significance. Levels of significance are observed in the results with noted confidence intervals of 95% ($p < 0.05$).

Results

Of the 51 dyads starting the program, 40 had complete data sets (both pre- and post-test scores) and these form the study group. Though we did not have access to specific details for analysis (like reasons given), yearly reports indicate that incomplete data sets primarily arose from dyads that left the program before completion, or did not provide post-test data. Analysis revealed no statistically significant differences between completers and study dropouts in level of baseline severity or demographic data.

Our findings show that for the total study population there was statistically significant change ($p < 0.01$) in Attachment, as measured by the subscale of the PRQ (Table 1). Unanticipated, though not surprising, there were also statistically significant improvements in Communication ($p < 0.05$), Discipline Practices ($p < 0.05$), Involvement ($p < 0.01$), and Relational Frustration ($p < 0.01$). Also of note, the PRQ has established clinical thresholds where scores of 10-40 points demonstrates clinical significance, (except with the relational frustration subscale, which is reverse-scored with negative change scores indicating a positive outcome), with scores of 41-59 points considered to be in the average range. In our analysis, we found that the participants' scores on the Relational Frustration subscale moved from a clinical

Table 2. Proportion of families showing clinically significant improvements ¹ on the Parenting Relationship Questionnaire (PRQ)		
PRQ - subscales	% of families starting treatment in the clinical range (# out of 40)	% of families starting in the clinical range of PRQ who moved into the average range ²
Attachment	63% (25/40)	40%
Communication	48% (19/40)	32%
Discipline practices	43% (17/40)	18%
Involvement	33% (13/40)	77%
Parental confidence	40% (16/40)	31%
School satisfaction	35% (14/40)	50%
Relational frustration	63% (25/40)	32%

¹ The PRQ clinical cut-point scale is: 10-30 is lower extreme; 31-40 is sig. below average; 41-59 is average; 60-69 is sig. above average; 70+ is upper extreme.

² For the purposes of this analysis pre-post scores were analyzed for movement from <41 to ≥41.

to average range, indicating positive change. In contrast, as a complete cohort, changes within the other four sub-scales (Attachment, Communication, Discipline Practices, and Involvement) were statistically significant but clinical scores remained within the average range. In spite of this, it is important to mention, many individual caregiver-child dyads made clinically significant improvements (moving from a clinical score into the average or normal range). (Table 2).

In addition to the PRQ results, there was statistically significant improvements in the ability of caregivers to recognize and understand both their own and their child's feelings about the parent-child relationship, as seen in the caregiver scores on the PRFQ-1 ($p < 0.05$). As well as a trend indicating a reduction in symptoms typical of post-traumatic stress disorder (PTSD), determined by answers provided through the PROPS measure ($p = 0.053$) (Table 1).

Discussion

The results from the present study suggest that the TAG program may be meeting its goals of fostering attachment, increasing parental reflective functioning between children and their primary caregiver, and supporting a reduction of children's trauma symptoms. These preliminary findings demonstrate a significant improvement over the course of the program in attachment (our primary outcome measure), in addition to communication, discipline practices, involvement, and relational frustration. While later stages of analysis may uncover more regarding these additional caregiver-child relationship related findings, the improvements in communication and involvement can be interpreted as aspects of the increasing attachment between caregivers and children. The scores on the discipline practices subscale show a decrease after receiving treatment, which may reflect increased caregiver attunement related to the

specialized parenting required to support children with attachment trauma (Purvis et al., 2013). The significant reduction in caregiver relational frustration is a hopeful finding due to the strong relationships between parental stress, family function, and child outcomes (Cornett & Bratton, 2014; Bradley & Mandell, 2005).

Similarly to CPRT (Cornett & Bratton, 2014), and Circle of Security (Marvin et al., 2002), TAG findings indicate that including parents in treatment may improve attachment related outcomes. Parental responses indicate that they perceive a change in their ability to communicate and become more involved with their children, in addition to reporting a decrease in their discipline practices and relational frustration. Others support these changes as promising indicators (Cornett & Bratton, 2014; Lawson et al., 2013; Purvis et al., 2013; Perry & Szalavitz, 2006), along with the reported increase in parental reflective functioning (Lawson et al., 2013; Marvin et al., 2002), for improving long-term outcomes. In distinction from the Circle of Security results, which provides dyadic caregiver child intervention to those under the age of three, our study suggests that relational intervention may be effective even past the established critical period for attachment (Britto & Pérez-Escamilla, 2013), which is consistent with previous research findings and suggestions (Joussemet, Mageau, & Koestner, 2014; Knoverek et al., 2013; Toth, Gravener-Davis, Guild, & Cicchetti, 2013; Purvis et al., 2013; Perry & Szalavitz, 2006; Schore, 2001).

Of interest is the marginally significant reduction in child trauma symptoms, as reported by the caregiver on the PROPS measure. While we cannot confirm why these scores were not as significant at the caregiver-child relationship results, it is possible that timeframe (symptom checklist requests those occurring within the last seven days) and the common clinical phenomenon of temporary symptom

increase as a result of participating in treatment, may play a role in the significance of these findings. The addition of future cohort results, as well as more in-depth analysis of the correlation between cohorts and other demographic data, may help understand this finding more clearly.

TAG staff reported finding it difficult to locate an outcome measure sensitive enough to detect changes in attachment specifically with regard to those who have experienced early developmental trauma. In contrast to previous studies, the TAG program chose to utilize the PRQ. Findings indicate that this measure may indeed be sensitive enough to detect changes in caregiver-child related relational outcomes with this population. Also unique to this study is the caregiver/child dyad as the core treatment participant in a group setting. In this way, TAG differs from CPRT (Cornett & Bratton, 2014), which is provided to caregivers, only, and the investigation by Cohen and colleagues (2012), which provided stage-based CBT intervention only to youth. This dyad-focused design may encourage the transfer of skills to other environments, (Levine, 2010), and may foster the development of safety and security with the caregiver in place of the therapist or facilitators (Purvis et al., 2013; Levine, 2010; Pearlman & Curtois, 2005).

The present study is limited by the absence of a control group, and there is also no clear understanding at this time as to whether all components of the present program are required to achieve clinical outcome goals. Though research with this population makes randomized control an inappropriate validation tool due to the inability to withhold treatment, future prospective research may help elucidate the potential benefits of this program in comparison to other interventions. There may also be an opportunity to compare TAG participant outcomes with those who attend other CASA programs. In addition, further analysis can examine correlations between demographic variables and outcome measures to better understand specific effects of this intervention. It is also recognized that TAG is a highly intensive program; further research examining the potential cost-benefit of this approach may also be appropriate prior to recommendation regarding more widespread use.

In relation to sample size and the statistical significance of observed effect, we note that enrollment in the TAG program from 2011 to 2014 predetermined the sample size in this study. Although a power analysis is typically utilized to determine whether the study sample would be large enough to serve as a representative of the entire population, in this study the participants are the entire population. In addition, this study emerges as more of a program evaluation than experimental design, as a result, we allowed the t-tests and *p*-values to help us establish the power of statistical relevance (Field, 2013). We feel that given the size of the sample available to our study, it is gratifying that we were able to detect these levels of significance. We would also like to acknowledge that this is not a mandated treatment population.

Those who attend TAG have sought out treatment and may be more motivated to change and grow as a result of the intervention they receive. And lastly, though it is conceivable that these levels of significance may be attributed in part to regression toward the mean, we feel confident in this sample's potential to represent TAG program effectiveness. Later stages of analysis intend to explore this potential more thoroughly. Concurrently, we would expect that with the inclusion of data from current (Sept 2014-April 2015) and future cohorts, that the power of this significance will be further supported and validated.

Conclusion

In addition to providing support for the proposed effectiveness of relational intervention for healing attachment related trauma with latency-aged youth (Joussemet et al., 2014; Knoverek et al., 2013; Toth et al., 2013; Purvis et al., 2013; Perry & Szalavitz, 2006; Schore, 2001), the results of this study contribute to current therapeutic recommendations that caregivers be included in treatment (Purvis et al., 2013; Perry & Szalavitz, 2006; Schore, 2005, 2001). Longer-term research is required to further substantiate outcomes, appraise cost analysis, as well as to consider evaluation with appropriate comparison groups. The present findings support such research endeavours.

Acknowledgements/Conflicts of Interest

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