

Training for Adoption Competency (TAC) Effectiveness Study

Summary of Key Findings
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Study 1

Funded by the Annie E. Casey Foundation Grant awarded to the Center for Adoption Support and Education, Burtonsville, MD - www.adoptionsupport.org

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Study 2

Funded by the Dave Thomas Foundation for Adoption. Awarded to the Center for Adoption Support and Education, Burtonsville, MD - www.adoptionsupport.org

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Analyses of Combined Datasets from Studies #1 and #2

Funded by the Dave Thomas Foundation for Adoption. Grant awarded to the Center for Adoption Support and Education, Burtonsville, MD – www.adoptionsupport.org

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This report represents the culmination of nearly two decades of effort to build the evidence base for adoption-competent mental health care. We are deeply grateful to the funders, research collaborators, partners, and participants who made this work possible.

The first study was generously funded by the **Annie E. Casey Foundation**. The second study and subsequent analyses of the combined dataset were generously supported by the **Dave Thomas Foundation for Adoption**, whose Legacy Project award also funded the regression and structural equation modeling that produced an empirically based theory of change.

We extend our sincere appreciation and gratitude to **Anne Atkinson, M.Ed., Principal of PolicyWorks, Ltd.**, for her leadership in the design and implementation of these studies and her commitment to this body of work.

We are especially indebted to **William E. Pate, II of AdHoc Analytics, LLC**, who skillfully analyzed data from both studies and meticulously examined relationships among key variables to develop the theory of change presented in this report. His analytic methods contribute significantly to child welfare research methodology and expand our understanding of the impact of adoption-competent mental health care.

We also wish to acknowledge the **more than 100 clinicians and 300 adoptive parents** who devoted time to responding to our surveys. Their reflections and experiences provide valuable insights into the nature and impact of adoption-competent clinical practices.

This work would not have been possible without the critical support of our **Training for Adoption Competency (TAC) Partner Organizations**, who helped identify and engage participating agencies, practices, and clinicians that served foster, adoptive, and guardianship families and voluntarily participated in these studies:

- **Study 1**
Virginia Department of Behavioral Health and Developmental Services
Clinical Directors in participating Community Services Boards
- **Study 2**
Connecticut: UConn Health, Adoption Assistance Program
Georgia: Georgia State University and the Georgia Division of Family and Children's Services
Missouri: Foster and Adoptive Care Coalition (FACC)
Wisconsin: Helen Bader School of Social Welfare, University of Wisconsin–Milwaukee

Finally, we honor the **adoptive families and clinicians** whose voices form the heart of this report. Their experiences affirm the importance of adoption competency, and the urgent need to ensure access to effective, specialized mental health services for all who need them.

Message from the CEO

Colleagues, Partners, and Friends,

For more than 28 years, the Center for Adoption Support and Education (C.A.S.E.) has been driven by one defining belief: **that every child, family, and individual connected to adoption, foster, and kinship care deserves access to mental health care truly aligned with their needs.** Yet for far too long, that care has lacked a defined foundation—an established set of clinical competencies and specialized knowledge that most mental health professionals, including me, were never taught during our education or training.

When we began this work in the late 1990s, “adoption-competent mental health” was not yet a recognized concept. And yet, the children, youth, and families we served were telling us what they needed. They needed therapists who had adoption clinical competence, who understood the unique layers of profound grief and loss, different from the losses most of us experience. They needed therapists that understood the complexities of identity formation and the impact of trauma. They needed someone to validate their feelings of confusion, sadness, and even anger at not having information to make sense of their own journey. In addition, parents did not want to be blamed for things that they were not responsible for, and they too needed support to navigate complex relational connections. Everyone connected to this community needed a language and a framework that did not yet exist.

So, we built it.

In 2009, we took our next bold step and began developing the **framework of adoption competency** and formulating a rigorous evaluation to **build the evidence.** We partnered with visionary funders who believed in this work—the Annie E. Casey Foundation / Casey Family Services Center for Effective Child Welfare Practice, the Dave Thomas Foundation for Adoption, the Freddie Mac Foundation, the Jockey Being Family Foundation, the W.K. Kellogg Foundation, and the Swett Foundation—to test, refine, and strengthen what we had created. We engaged those with lived experience, scholars, researchers, and experts in mental health and child welfare to help us define the core competencies and guiding principles for our flagship Training for Adoption Competency (TAC) program. The TAC then became one of our primary vehicles for change, offering clinicians across the country the knowledge, values, skills, and coaching needed to support youth and families more effectively.

This report marks a milestone in a journey that spans more than a quarter century. For the first time, we can clearly demonstrate that **adoption-competent mental health care changes outcomes for families**. In the pages that follow, you'll find powerful evidence of improved satisfaction, stronger therapeutic alliances, and better outcomes for families served by clinicians trained through our the TAC program. You'll also find insights into the kinds of clinical practices that make the difference—from psychoeducation and trauma-informed approaches to identity exploration and caregiver support.

This report is both a celebration and a call to action. We have built the foundation and advanced the evidence, but **our work is not done**. We must continue to expand access to adoption-competent services across the country, establish recognized standards of practice, validate this work as a clinical sub-specialty among funders of healthcare, and invest in continued research, ensuring every individual and family—wherever they live and whatever their story—can find the support they deserve.

To our partners, funders, researchers, champions, and the clinicians who carry this work forward: thank you. Together, we are transforming the mental health system to truly meet the needs of adoptive, foster, and kinship families. And to the individuals and families who have trusted us, taught us, and guided us from the beginning—**you are the heart of this mission**, and always will be.

To learn more and explore the full suite of resources associated with this report, visit adoptionsupport.org/stateofpractice.

With appreciation for your partnership—and with hope for what comes next,



A handwritten signature in black ink that reads "Debbie B. Riley". The signature is written in a cursive, flowing style.

Debbie B. Riley, LCMFT
Chief Executive Officer
Center for Adoption Support and Education (C.A.S.E.)

Definition: An Adoption Competent Mental Health Professional

An adoption competent mental health professional has:

- The requisite professional education and professional licensure to provide clinical interventions (services);
- A family-based, strengths-based, and evidence-based approach to working with children and youth and their adoptive and birth families;
- Well-developed knowledge, skills and values in clinically working with children and youth with a history of abuse, neglect, trauma, and other adverse early experiences;
- Well-developed knowledge, skills and values in clinically working with adoptive families and birth families; and
- The ability to clinically work with children and youth who are adopted, and their adoptive and birth families, with sensitivity, respect, and humility.

An adoption competent mental health professional has a full understanding of the nature of adoption as a type of family formation and the different types of adoption; the clinical issues that are associated with grief, separation and loss, attachment, and adoptive identity formation; the common individual and family developmental challenges in the experience of adoption; and the characteristics and skills that make adoptive families successful.

An adoption competent mental health professional is highly skilled in conducting full assessments and using a range of evidence-based and promising therapies that are trauma informed in order to:

- Effectively engage adoptive families toward the mutual goal of helping the child or youth to heal;
- Empower parents to recognize themselves as agents of healing and the experts on their child or youth and to advocate for their child or youth;
- Assisting adoptive families to strengthen or develop and practice parenting skills that support attachment, healthy family relationships and long term well-being; and
- Engaging extended families and other networks to support children and youth who are adopted and their adoptive and birth families.

Principles of Adoption Competent Practice

Foundational Principles

- F1 Adoptive parents have a critical role in facilitating the child's adjustment and healthy identity formation by establishing communicative openness related to adoption.
- F2 Forming a family through adoption is a different experience than by birth, and it involves normative challenges that can influence identity, family relationships, and psychological adjustment.
- F3 Adoption is not a one-time event; it is a lifelong process with intergenerational impact.
- F4 Post adoption supports and services are important in preserving strong and stable families; the need for help should be normalized and help-seeking viewed as a strength.
- F5 The adoptive family is the child's permanent legal family; however, the child's past and current relationships with birth family members and kin play a critical role in the child's development and acknowledging them supports healthy identity formation, attachment, and lifelong relationships.
- F6 Services demonstrate sensitivity to and respect for all children, youth, and families.

Clinical Practice Principles

- C1 Services are attachment-focused, reflect the belief that healing occurs best in the context of family, and engage parents as partners in the therapeutic process and as primary agents of healing.
- C2 The therapist demonstrates and promotes with others a strong respect for and commitment to understanding the child's unique story.
- C3 Core issues of adoption (i.e., loss, rejection, guilt and shame, grief, identity, intimacy, and mastery/control) are recognized and addressed, as needed, with members of the adoption kinship network.
- C4 Approaches used are family-based, strengths-based, and informed by evidence of effectiveness and recognized clinical best practice.
- C5 Approaches acknowledge the child's history of relationships with their birth parents and the impact of the birth parents' psychological and sometimes physical presence in the child's life.
- C6 The therapist refrains from pathologizing normative developmental processes and blaming parents for challenging behaviors.
- C7 The therapist employs an ecological perspective that considers biological, psychosocial, and contextual factors and processes that affect development and adjustment.

Background

Adoption Competent Practice Principles have been developed over a decade and are the product of syntheses of 1) findings from extensive reviews of research and practice literature that inform the Training for Adoption Competency (TAC) curriculum and 2) findings from the ongoing evaluation of the TAC for which clinicians have submitted more than 24,000 descriptions of practice changes influenced by TAC-related learning. Principles are also consistent with the 250 expert-defined knowledge, values, and skills competencies and 141 learning objectives that shaped the design and content of the TAC.

- Foundational Principles are applicable to any professional or paraprofessional working with members of adoption kinship networks.
- Clinical Practice Principles are most applicable to mental health professional working with members of adoption kinship networks.

Testing of Content Validity

An assessment of content validity was conducted in fall 2020 on the two components of Adoption Competent Practice Principles: (1) Foundational Principles and (2) Clinical Practice Principles. Principles were initially rated for their level of importance on a 5-point Likert type scale (1=not at all important, 5=extremely important) by experienced practitioners (n=109) recruited from Training for Adoption Competency (TAC) enrollees. Their ratings resulted in two foundational principles being combined with another foundational principle so that all substantive content was retained but expressed in a single principle. The refined set of principles was subsequently rated by a panel of recognized experts (n=7). Expert ratings produced an item-level content validity index average of 0.952 (modified Kappa of 0.950) for foundation items and 0.939 (modified Kappa of 0.935) for clinical items.

Agreement between experts and clinicians
To assess agreement between experts (n=7) and clinicians (n=109), independent samples t-tests were used. Scale scores were calculated for each of the two sets of principles at the rater level and group means compared.

- For the Foundational Principles scale, no statistically significant difference was found between experts ($M = 28.3$, $SD = 1.7$) and clinicians ($M = 28.2$, $SD = 1.9$), $t(114) = .06$, $p = .952$.
- For the Clinical Practice Principles, no statistically significant difference was found between experts ($M = 33.4$, $SD = 2.6$) and clinicians ($M = 33.2$, $SD = 2.6$), $t(111) = .259$, $p = .796$.

Conclusions

The content validity assessment demonstrated strong agreement between experts on the importance of each scale item for both Foundational Principles and Clinical Practice Principles. Further, when these scales were assessed by clinicians, no difference was found between expert ratings and clinician ratings, indicating agreement. A more detailed technical report of validity testing is available upon request.

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Executive Summary

Background

The Training for Adoption Competency (TAC) Effectiveness Studies evaluate the impact of adoption competency training on outpatient mental health services for adoptive families. The TAC is a specialized curriculum designed to equip clinicians with knowledge, values, and skills to engage in more effective mental health practices with adoptive families. This report presents analyses of combined datasets from an initial Study 1, conducted in one state in 2020, and Study 2, conducted in four additional states in 2024. The combined sample includes data from 302 adoptive families and 109 clinicians.

Methods

Studies compared treatment experiences and outcomes for families treated by TAC-trained clinicians to treatment experiences and outcomes with comparably qualified clinicians who were not TAC-trained. Key areas of inquiry included adoptive parent satisfaction with key aspects of treatment (i.e., services, clinician performance, outcomes), therapeutic alliance, adoption relevance of treatment, and family/child well-being post-intervention. Analyses used t-tests, Mann-Whitney U tests, chi-square tests, and Hedges' *g* for effect sizes; the threshold for statistical significance was set at .05 for all analyses.

Findings

Family groups were demographically comparable; differences associated with higher risk were distributed evenly across both families treated by TAC-trained clinicians and those treated by clinicians not TAC-trained. Although clinician groups did not differ in race, professional, education, or years' experience, TAC-trained clinicians were more likely to have a personal connection to adoption, were more likely to have a family systems orientation to treatment and had more hours of adoption-specific training beyond the TAC.

Families treated by TAC-trained clinicians experienced significantly more therapeutic sessions (mean 19.37 vs. 6.96) and a broader array of interventions, including higher proportions of family sessions, parent groups, and child/youth groups. They reported significantly higher satisfaction across all domains, significantly stronger therapeutic alliance, treatment more relevant to adoption, and significantly better treatment outcomes featuring closer family bonds, greater communicative openness, better understanding of child needs, improved parenting, and positive child behaviors (e.g., coping, social skills, school performance). Effect sizes were large to very large, indicating substantial practical impact, with consistent patterns across studies.

Studies also demonstrated that the practices of TAC-trained clinicians featured significantly greater use of psychoeducation and parental skills development and significantly stronger focus on normalization of adoption experiences, trauma/attachment, loss/grief, child's unique story/identity, communicative openness, family attunement, and parent support.

Discussion

Main findings affirm that families treated by TAC-trained clinicians sustained engagement in treatment over a higher number of sessions, experienced a broader array of services, greater parental involvement in treatment, greater satisfaction, stronger therapeutic alliance, more psychoeducation and support for parenting skills development, greater focus on an array of adoption-relevant issues, and better outcomes. Highly significant differences (at the $p < .001$ level) were found across all key variables. The strength and consistency in the direction of findings add weight to evidence that treatment with TAC-trained clinicians is more effective with adoptive families than treatment with comparably qualified clinicians who are not TAC-trained.

Although parental claims of more positive outcomes for families and children were not independently verified in this study and must be taken at face value, they are credible, consistent, and significant indicators of more effective treatment experiences and outcomes.

Findings on treatment methods and foci affirm differences in treatment methods and foci consistent with practices supported by adoption research, best practice literature, and the TAC content and learning objectives. These findings confirm distinguishing clinical practices emphasized and taught lead to more engaging, relevant, and effective treatment. Strengths of the studies include replication in diverse geographic settings, large samples, and reliable measures. Limitations encompass non-national representativeness, reliance on self-reports, potential selection bias, and fewer items for some constructs.

Effect size comparisons demonstrate large to very large effect sizes across all measures favoring clinicians trained in the TAC to comparably qualified clinicians who have not completed the TAC. These findings highlight the substantial impact of the TAC training on satisfaction metrics, therapeutic alliance, adoption relevance, and family outcomes, with combined analyses providing robust evidence of generalizability across studies. While Study 1 often showed larger effects - possibly due to sample or contextual differences - the patterns suggest the TAC yields practically significant benefits, warranting further replication in diverse clinical settings to inform evidence-based practice.

Conclusions and Implications

Key conclusions include:

- **Superior Treatment Experiences:** Families treated by TAC-trained clinicians sustained engagement in treatment over significantly more sessions, engaged in more family sessions and fewer child-only sessions, and experienced a broader array of services, including groups.
- **Higher Satisfaction and Stronger Therapeutic Alliance:** Adoptive parents expressed significantly higher satisfaction across all dimensions (i.e., services, clinician performance, outcomes, and general satisfaction) when treated by TAC-trained clinicians. They also formed stronger therapeutic alliance featuring greater collaboration, trust, and empowerment.
- **More Adoption Relevant Intervention:** Treatment by TAC-trained clinicians was perceived as more relevant to adoption-specific challenges, with greater use of psychoeducation and strategies to strengthen adoptive parenting skills and greater emphasis on normalization, trauma/attachment, loss/grief, child identity development, communicative openness, family cohesion, and parent self-care.
- **Improved Outcomes:** Families treated by TAC-trained clinicians reported significantly better post-treatment outcomes, including enhanced family well-being, closer family bonds, improved understanding of the child's needs, better parenting strategies, and positive changes in child emotional, behavioral, and social functioning.

Findings also confirm adoption competent practices in real-world settings were independently observed by adoptive parents. Findings confirm that TAC-trained clinicians do make greater use of psychoeducation and strategies to strengthen adoptive parenting skills, and they do place greater emphasis on normalization, trauma/attachment, loss/grief, child identity development, communicative openness, family cohesion, and parent self-care. Importantly, families that experienced elevated levels of these practices also had better treatment outcomes.

Across all measures (satisfaction, alliance, relevance, and outcomes), effect sizes (Hedges' *g* ranging from 1.97 to 5.50) were large to very large, indicating not only statistical significance but also substantial practical impact, with consistent patterns across both studies.

Given evidence that clinicians trained in adoption competent practices provide more effective treatment with adoptive families, a primary implication is there is need to increase the number of trained clinicians and the accessibility to them by adoptive families. These objectives may be achieved through expansion of training; employing hiring, training, and referral practices that favor TAC-trained providers; and expansion of online registries of trained clinicians to aid families in locating qualified clinicians.

The development of broadly recognized standards for practice with adoptive families would facilitate the recognition of this area of clinical practice as a sub-specialty. Recognition and more formal credentialing would ensure that those who claim adoption competency meet established standards and that adoptive families, as consumers of mental health services, can have greater confidence in seeking such services. In addition to supporting more formal credentialing, public policies appropriate for consideration include expansion of funding for training of additional clinicians and requiring adoption competency training for clinicians serving particularly vulnerable populations.

Replications of the study are encouraged. Research in this area can be further advanced also with additional analyses of these study data. To that end, data from these studies are being made available to other qualified researchers for further exploratory analyses. There remain needs for greater insights into the connections between specific therapeutic approaches, methods, and foci and outcomes for family members. These can contribute further to the specification of effective practices to inform treatment protocols that can strengthen the effectiveness of the next generation of clinicians.

I. Background and Brief Overview of Study Design

Background and Purpose

The Training for Adoption Competency (TAC) was developed in 2009 by the Center for Adoption Support and Education (C.A.S.E.) in response to the unmet needs of adoptive families for mental health professionals who understand the unique and complex needs of adoptive family members (Brodzinsky, 2013; Atkinson et al., 2013 & 2017). The TAC has become the nation's pre-eminent adoption competency training for mental health clinicians. It is the only nationally accredited, assessment-based certificate program in adoption competency and is recognized by the California Evidence-Based Clearinghouse as a promising practice with high relevance to child welfare. More than 3,000 professionals across more than 20 states have participated in the 72-hour training that is designed to build a broad range of well-defined knowledge, values, and skills competencies associated with adoption competent practice and to aid transfer of learning to practice through integrated case consultation.

Currently, there is a large body of evidence demonstrating TAC's high quality, relevance to practice, and effectiveness as a training model; there is also strong evidence that the TAC influences clinical practices in ways that are consistent with intended training outcomes. The evidence, however, is based on clinicians' self-reporting. The studies reported here go beyond the ongoing evaluation of the TAC as a training model to assess the effects of the TAC on the quality and effectiveness of community-based outpatient mental health services with adoptive families in real-world settings and rely on adoptive parent reporting.

The purpose of the TAC Effectiveness Studies was to compare out-patient treatment experiences and outcomes for adoptive families treated by TAC-trained clinicians with outpatient treatment experiences and outcomes for adoptive families treated by comparably qualified clinicians who are

not TAC-trained. The study assesses specifically:

- Whether adoptive families have more positive treatment experiences with TAC-trained clinicians than with comparably qualified clinicians who have not completed the TAC.
- Whether outcomes for adoptive families treated by TAC-trained clinicians are more favorable than outcomes for adoptive families treated by comparably clinicians who have not completed the TAC.

The studies also examined differences in therapeutic methods and focus to better illuminate differences in patterns of clinical practices by TAC-trained and not TAC-trained clinicians.

This report summarizes findings from analyses of the combined datasets from two studies – an original and its replication – containing data from a total 302 families and 109 clinicians. Technical reports containing detailed methods and findings as well as study instruments and findings from each study are available at adoptionssupport.org/stateofpractice.

Overview of Study Design

The studies focused on four specific areas of inquiry assessed using standardized measures and a reliable study-specific measure.

1. Adoptive parent satisfaction with treatment services, clinician performance, and outcomes, assessed using 13 items from the Mental Health Statistical Improvement Program Family Satisfaction Survey (MHSIP).
2. Quality of the relationship/alliance between clinician and adoptive family members, assessed using the Therapeutic Scale for Caregivers and Parents (TASCP).
3. Adoption sensitivity/relevance of treatment, assessed using the Adoption Relevance and Outcomes Scale (AROS), a 22-item instrument designed for the study and keyed to adoption-related therapeutic tasks and outcomes strongly associated with adoption

competent practice. Reliability testing produced a Cronbach's alpha of 0.952 indicating excellent reliability.

4. Family well-being and basic functioning of children/youth post-intervention compared to pre-intervention, assessed using outcomes-oriented items from the MHSIP and from the AROS.

Demographic profiles were produced for both clinicians and families. For clinicians, a 10-item questionnaire was used to collect data on education, licensing, years' experience, and other variables that research suggests are relevant for adoption-related clinical work. For adoptive families, a 15-item questionnaire was used to collect basic demographic data for parents and children as well as data on the type of adoption, age at adoption, frequency of contact with birth parent/family, treatment history, types of therapy received and number of sessions.

Data Analyses

Comparisons of data from families treated by TAC- and not-TAC trained clinicians were analyzed using t-tests (if normality assumptions are met) for comparisons of mean differences (Kim & Park, 2019; Wadhwa & Marappa-Ganeshan, 2023). For data where responses were ordinal (i.e., ordered categories), the Mann Whitney U was used (Mann & Whitney, 1947; Nachar, 2008). Differences between TAC- and not-TAC trained conditions where categorical data was used (e.g., race/ethnicity, gender), chi-square analyses were used (Agresti, 2007; Sharpe, 2015). The z-test for proportions was used for comparisons with a single category (e.g., private clinical practice)(Miller & Miller, 2004). For comparisons of effect sizes, Hedges' *g* was used for comparison of means of the two groups (Borstein, 2009; Rosnow & Rosenthal, 2003; Turner & Bernard, 2006). For all analyses, the threshold for statistical significance was set at .05.

Study Site Selection and Recruitment

The study was first conducted in a single state (Study 1) and subsequently replicated in a second study (Study 2) that recruited clinicians and families in four additional states. Study 1 recruited families through collaboration with one state behavioral health agency and its 40 regional boards and their local offices and contractors that included non-profit organizations and private practices. Study 2 recruited families through agencies and practices in four states that were nominated by the TAC partner organizations as having demonstrated interest in and support of adoption competency training and having at least a part of their staff members or practice associates TAC-trained.

Organizations that agreed to participate in the study completed the following key study-related tasks:

- Identified all adoptive families (defined as at least one parent and adopted child/ adolescent, age 3 to 20) treated in the past 24 months and who saw a primary therapist at least two times;
- Invited all adoptive families identified (regardless of whether their therapist was TAC-trained or not) to participate in the study and included with the invitation detailed information provided by the principal investigator about the study; and
- Requested clinicians who treated identified families to a) create a clinician code in accordance with guidance provided that was to be included with the invitation to families they treated and was used to match clinicians with families they treated and b) complete the clinician profile survey. Use of clinician codes enabled the study team to link clinicians and families while preserving the anonymity of both.

Upon completion of the online survey, parents were able to follow a weblink to a separate survey in which they chose the method by which they received the \$25 (Study 1) or \$30 (Study 2) gift card incentive for participating.

II. Findings

Study Families and Clinicians

Recruitment produced a total 302 families treated by 109 clinicians: 168 families treated by 52 TAC-trained clinicians and 134 families treated by 57 clinicians who were not TAC-trained.

Families

Families treated by TAC-trained clinicians and by clinicians who were not TAC-trained were largely comparable. No significant differences were found for transracial status, type of adoption, child age at treatment, or treatment history. In families treated by TAC-trained clinicians the parents were more likely to be white, to have a higher level of education, and moderately higher incomes; children, however, were adopted at a significantly older age, were an average 6.5 months older at treatment, and had more birth parent/family contact. They were also more likely to be treated in a private practice setting.

Table 1. Summary Comparison of Key Demographics of Study Families and Children

Variable	Significant Difference in those treated by TAC-trained clinician & not TAC-trained clinician	No Significant Difference in those treated by TAC-trained clinician & not TAC-trained clinician
Parent Race – Black/African American	17% vs 35% (z = 3.68, p < 0.001)	
Parent Race – Hispanic/Latino Origin		20% vs 17% (z = 0.55, p = 0.582)
Parent Race – Bi/Multi-race		16% vs 22% (z = 1.38, p = 0.168)
Parent Race – White/Caucasian	74% vs 54% (z = 3.63, p < 0.001)	
Transracial adoption status		51% vs 49% ($\chi^2 = 0.042$, p = .837)
Household income	U = 11408.5, p = .002 Higher with TAC-trained clinician	
Education	U = 13655.0, p = .001 Higher with TAC-trained clinician	
Type adoption		$\chi^2 = 1.612$, p = .447
Child – gender	$\chi^2 = 9.392$, p = .002 Not-TAC-trained clinicians saw 38% female vs 61.2% male	
Child age at treatment		12.3 vs 11.7 (t(300) = 1.956, p = .051)
Child race/ethnicity	$\chi^2 = 27.389$, p < .001 TAC-trained clinicians saw more White (34% vs 13%) & fewer Black (24% vs 42%)	
Age at adoptive placement	U = 9643.0, p = .036 TAC-trained clinicians saw older	
Contact frequency w birth parent/family	Parent: U = 11961.5, p = .005 Family: U = 13121.0, p = .004 More frequent w/ TAC-trained clinician	
Treatment history		M=1.00 vs M=1.24 t(222.478) = 1.394, p = .165

Clinicians

Clinicians with and without the TAC training did not differ in race, profession, education, or years' experience working with families in clinical and non-clinical roles. Clinicians who were not TAC-trained were more likely to be male (30% vs 14%). Significant differences were found on three important variables: TAC-trained clinicians were more likely to have a personal connection to adoption (77% vs 54%), to have a family systems therapeutic orientation (85% vs 19%), and to have had more hours adoption-specific clinical training (101 hrs. vs 14 hrs.). Disregarding the 72 hours of the TAC, the TAC-trained clinicians still had 4.5 times the average hours training as those not TAC-trained (28.7 hrs. vs 6.4 hrs.). This difference may be partially explained by greater interest in adoption from significantly higher levels of personal connection to adoption among TAC-trained clinicians. TAC-trained clinicians were more likely to work in private practice settings (50% vs <18%) while clinicians not TAC-trained were more likely to work in a mental health agency setting (77% vs 42%).

Table 2. Summary Comparison of Key Clinician Demographics

Variable	Significant Difference in TAC-trained clinician & not TAC-trained clinician	No Significant Difference in TAC-trained clinician & not TAC-trained clinician
Gender	$\chi^2 = 4.240, p = .039$	
Race		65% vs 67% white/Caucasian; $\chi^2 = 0.020, p = .888$.
Highest degree earned		Fisher's exact test, $p = .116$
Professions		$\chi^2 = 0.357, p = .837$
Years experience (all with families)		12.6 yrs vs 12.9 yrs ($t(107) = 0.448, p = .655$)
Years clinical experience		8.7 yrs vs 8.6 yrs ($t(107) = 0.270, p = .788$)
Estimated hours adoption-specific clinical training	100.7 hrs vs 6.4 hrs; $t(60.566) = 29.600, p < .001$	
Practice setting	$\chi^2 = 13.682, p < .001$ TAC-trained: 50% in private practice; 42% in MH agency Not-TAC-trained: 77% in MH agency; <18% in private practice	
Personal connection to adoption	$\chi^2 = 15.260, p = .002$	
Orientation (family systems & other)	$\chi^2 = 45.545, p < .001$. Family systems orientation: TAC-trained=84.6%; not TAC-trained=19.3%	

Differences in Treatment Experienced

Engagement

Sustained engagement in treatment has significant implications for building therapeutic alliances, optimizing therapeutic support, and achieving desired treatment outcomes (Swift & Greenberg, 2012; Barrett et al., 2008). The studies compared the types and numbers of therapeutic sessions and the array of services experienced by families treated by TAC-trained clinicians and by clinicians who were not TAC-trained. A limited number of families who saw TAC-trained clinicians reported extraordinarily high numbers of sessions. This had the effect of inflating means; therefore, median numbers of sessions and ranges are also considered in comparisons. Findings are summarized in Chart 1 and Table 3.

Statistically significant differences were found across all types of sessions. Families treated by TAC-trained clinicians engaged in treatment over a higher total number of sessions ($M=19.37$ vs 6.96 ; $Mdn=10.0$ vs 6.5), more family sessions that involved both parent(s) and child ($M=5.96$ vs 1.37 ; $Mdn=4.0$ vs 1.0), and more parent only sessions ($M=3.09$ vs 1.16 , $Mdn=2.0$ vs 1.0). Parent and child/youth group sessions were reported by very few families but, for both type groups, families treated by TAC-trained clinicians reported greater engagement. Although fewer families report parent and child/youth groups experienced as part of their treatment, it is clear that those treated by TAC-trained clinicians experience groups more. Numerical data are supported by multiple parent comments about being referred to groups, often offered by agencies other than the primary clinician's organization.

The one deviation from this pattern was engagement with individual child only sessions. In this case, families treated by TAC-trained clinicians still engaged in a high mean number of individual child only sessions ($M=9.25$ vs 4.37), but comparison of medians show the reverse: $Mdn=3.0$ with TAC-trained clinician and $Mdn=4.0$ with not TAC-trained clinician. This is best demonstrated by comparing the array of services shown in Chart 2.

Chart 1. Comparison of Mean and Median Therapeutic Sessions by Type for Families Treated by TAC-Trained and Not TAC-Trained Clinicians

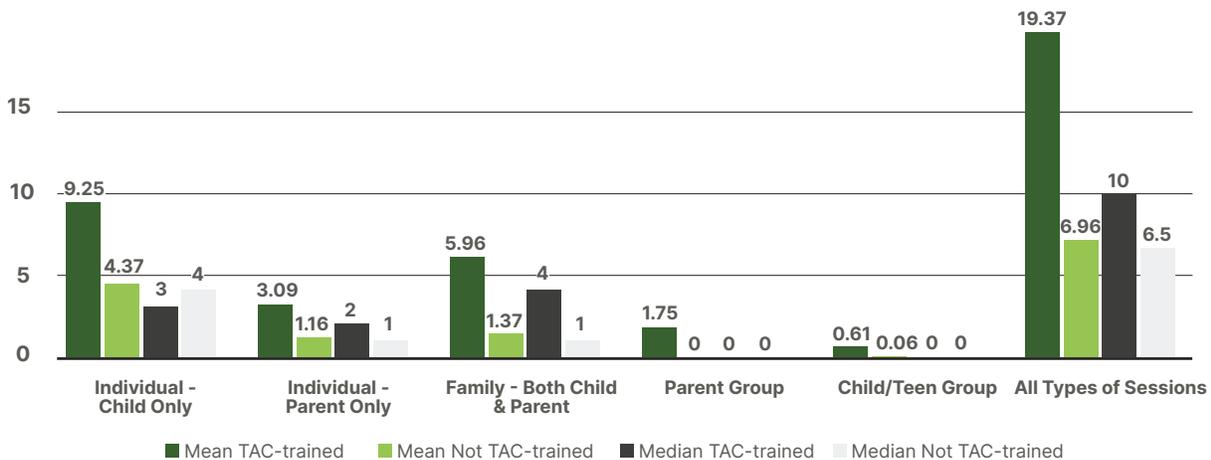


Table 3. Summary of Therapeutic Services Experienced by Study Families

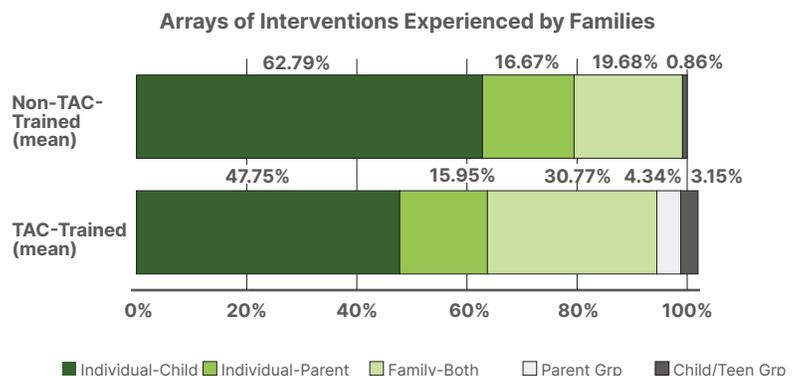
Variable	TAC-trained	Comparison Mean, Median, Range Sessions with TAC-trained clinician & not TAC-trained clinician	Significance of Difference in TAC-trained clinician & not TAC-trained clinician
All types of sessions	Y	<i>M</i> = 19.37, <i>SD</i> = 31.468; <i>Mdn</i> = 10.0; range 5 to 230	$t(168.277) = 5.103, p < .001$
	N	<i>M</i> = 6.96, <i>SD</i> = 1.738; <i>Mdn</i> = 6.5; range 4 to 14	
Individual child-only sessions	Y	<i>M</i> = 9.25, <i>SD</i> = 23.824; <i>Mdn</i> = 3.0; range 0 to 216	$t(165.225) = 2.628, p = .009$
	N	<i>M</i> = 4.37, <i>SD</i> = 1.312; <i>Mdn</i> = 4.0; range 2 to 10	
Individual parent sessions	Y	<i>M</i> = 3.09, <i>SD</i> = 6.728; <i>Mdn</i> = 2.0; range 0 to 60	$t(164.218) = 3.662, p < .001$
	N	<i>M</i> = 1.16, <i>SD</i> = 0.372; <i>Mdn</i> = 1.0; range 1 to 2	
Family sessions	Y	<i>M</i> = 5.96, <i>SD</i> = 8.029; <i>Mdn</i> = 4.0; range 0 to 70	$t(168.480) = 7.330, p < .001$
	N	<i>M</i> = 1.37, <i>SD</i> = 0.741; <i>Mdn</i> = 1.0; range 0 to 4	
Parent group	Y	<i>M</i> = 0.84, <i>SD</i> = 4.264; <i>Mdn</i> = 0.0; range 0 to 45	$t(159.000) = 2.503, p = .013.$
	N	<i>M</i> = 0.00, <i>SD</i> = 0.000; <i>Mdn</i> = 0.0; range 0 to 0	
Child/youth group	Y	<i>M</i> = 0.61, <i>SD</i> = 1.683; <i>Mdn</i> = 0.0; range 0 to 8	$t(174.531) = 4.011, p < .001$
	N	<i>M</i> = 0.06, <i>SD</i> = 0.342; <i>Mdn</i> = 0.0; range 0 to 2	

Arrays of Services Experienced by Families

Chart 2 compares the percentages of sessions by intervention type for families treated by TAC-trained clinicians and not TAC-trained clinicians. Viewed as a percentage of total sessions, families treated by TAC-trained clinicians experienced a lower percentage of individual/child only sessions (62.79% vs 47.75%) and more family sessions (30.77% vs 19.68%) as well as more parent and child/teen group sessions. Each type of intervention represents a fraction of the total number of sessions reported by families.

Overall, families treated by TAC-trained clinicians experienced fewer child only sessions as a percentage of intervention, more family sessions, and a broader array of interventions (including groups) than families treated by clinicians without TAC-training.

Chart 2. Comparison of Mean Percentages of Sessions by Intervention Types during Treatment Episode for Families Treated by TAC-Trained and Not TAC-Trained Clinicians



Satisfaction with Treatment

Satisfaction with therapy refers to the patient’s positive attitude toward therapy as a whole and encompasses an acceptance of rationale and expectancy of benefit. These concepts have been shown in previous studies to be a good indicator of quality of service delivery, treatment compliance, and to be significantly linked to outcomes, including reduction in emotional difficulties (Wollersheim et al., 1982; Kazdin & Krouse, 1983; Urben et al., 2015). Client satisfaction with treatment was assessed using 13 items from the Mental Health Statistical Improvement Program Family Satisfaction Survey (MHSIP). Items focused on satisfaction with services, with clinician performance, and with outcomes; ratings across all items produced a general satisfaction score. Studies have shown the MHSIP has high levels of validity and reliability as a measure of consumer satisfaction with mental health services (Shafer & Temple, 2013; Shafer & Ang, 2018).

Four dimensions of satisfaction with treatment were examined: 1) satisfaction with services, 2) satisfaction with clinician performance, 3) satisfaction with child and family outcomes, and 4) general satisfaction derived from combining the first three dimensions. Each dimension of satisfaction was calculated by summing the raw scores (Not applicable = 0; Strongly disagree = 1 through Strongly agree = 5) of items specific to that scale, then comparing mean scale scores of the two family groups – those who were treated by TAC-trained clinicians and those treated by comparably qualified not TAC-trained clinicians.

On items measuring satisfaction with services, families treated by TAC-trained clinicians had higher mean scores ($M = 12.83$, $SD = 1.312$) compared to those treated by clinicians not TAC-trained ($M = 8.95$, $SD = 1.852$), a statistically significant difference, $t(229.121) = 20.474$, $p < .001$.

The distribution of ratings is reported in Chart 3. Closer examination reveals that TAC-trained clinicians received almost exclusively positive (strongly agree and agree) ratings of satisfaction with services while ratings from families treated by not TAC-trained clinicians were overwhelmingly neutral with nearly equal positive (agree) and negative (disagree) ratings.

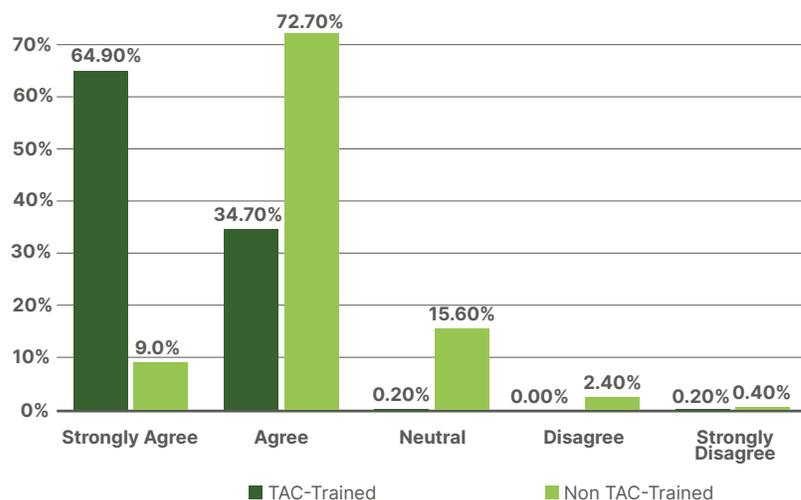


Satisfaction with Clinician Performance

On items measuring **satisfaction with clinician performance**, families treated by TAC-trained clinicians had higher mean scores ($M = 18.59, SD = 1.386$) compared to those treated by clinicians not TAC-trained ($M = 15.48, SD = 1.485$), a statistically significant difference, $t(291) = 18.507, p < .001$.

Tellingly, on the item “I would recommend this therapist to a friend or family member,” ratings from families treated by TAC-trained clinicians were overwhelmingly positive (86.1 percent “strongly agree,” 12.3 percent “agree,” and 0.06 neutral) while ratings of families treated by not TAC-trained clinicians had 0.8 percent “strongly agree” ratings, 39.8 percent “agree,” 48.1 percent “neutral,” 9.8 percent “disagree,” and 1.5 percent “strongly disagree.” The distribution of ratings of satisfaction with clinician performance is reported in Chart 4.

Chart 4. Satisfaction with Clinician Performance

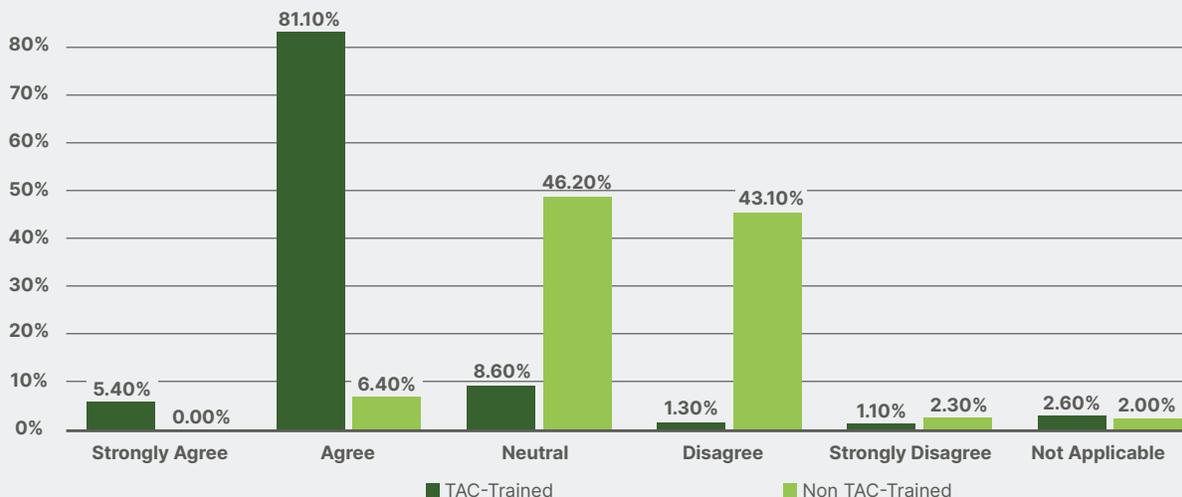


Satisfaction with Child and Family Outcomes

On items measuring **satisfaction with child and family outcomes** families treated by TAC-trained clinicians had higher mean scores ($M = 22.83, SD = 3.042$) compared to those treated by clinicians not TAC-trained ($M = 15.10, SD = 2.281$), a statistically significant difference, $t(289) = 23.734, p < .001$.

Again, the distribution of ratings reported in Chart 5 reflects the highly disproportionate distribution of ratings in favor of satisfaction with outcomes with TAC-trained clinicians.

Chart 5. Satisfaction with Child and Family Outcomes



All satisfaction ratings across the three dimensions assessed were combined to produce a **general satisfaction** score. Families treated by TAC-trained clinicians had higher mean scores ($M = 54.21$, $SD = 4.532$) compared to those treated by clinicians not TAC-trained ($M = 39.69$, $SD = 4.713$), a statistically significant difference, $t(250.850) = 25.995$, $p < .001$.

The distribution of ratings in Chart 6 graphically demonstrate the predominantly positive ratings of general satisfaction with treatment by TAC-trained clinicians and more evenly distributed ratings for clinicians without the TAC.

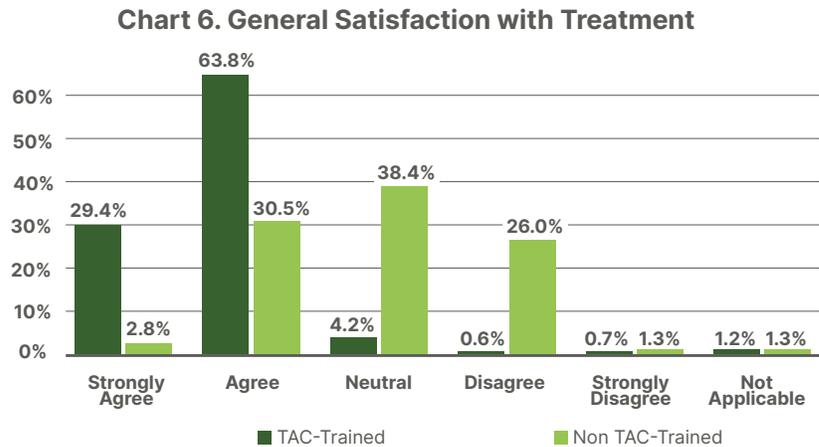


Chart 7 summarizes mean score differences across all four dimensions of satisfaction assessed. Across all dimensions, significantly higher levels of satisfaction were reported by families treated by TAC-trained clinicians.



Table 4 summarizes comparisons of means and levels of significance of differences across all satisfaction measures.

Table 4. Summary of Satisfaction Measures

Variable	Comparison of Means TAC-trained clinician & not TAC-trained clinician	Significance of Difference in TAC-trained clinician & not TAC-trained clinician
Satisfaction with Services	$M = 12.83, SD = 1.312$ vs $M = 8.95, SD = 1.852$	$t(229.121) = 20.474, p < .001$
Satisfaction with Clinician Performance	$M = 18.59, SD = 1.386$ vs $M = 15.48, SD = 1.485$	$t(291) = 18.507, p < .001$
Satisfaction with Child and Family Outcomes	$M = 22.83, SD = 3.042$ vs $M = 15.10, SD = 2.281$	$t(289) = 23.734, p < .001$
General Satisfaction	$M = 54.21, SD = 4.532$ vs $M = 39.69, SD = 4.713$	$t(250.850) = 25.995, p < .001$

Therapeutic Alliance

Therapeutic alliance refers to the quality of relationship between clients and their clinicians. According to Accurso et al. (2013), “. . . a strong therapeutic alliance may be crucial for client motivation to attend sessions and engage in the work of therapy, and for positive client outcomes (e.g., Binder & Strupp, 1997; Brent & Kolko, 1998; Follette, Naugle, & Callaghan, 1996; Horvath & Luborsky, 1993; Raue & Goldfried, 1994; Webster-Stratton & Herbert, 1993). A majority of practicing clinicians also report that the alliance is one of the most important variables influencing therapeutic outcomes (Bickman et al., 2000; Kazdin, Siegal, & Bass, 1990).”

Therapeutic alliance was assessed using the Therapeutic Alliance Scale for Caregivers (TASCP), a standardized instrument that assesses affective bond and client-clinician collaboration on therapeutic tasks and goals. Studies have supported reliability, temporal stability, convergent validity, and discriminate validity of scores on the TASCP and it has additionally been found to have strong predictive value. Stronger caregiver-reported alliance was found to be associated with more sessions attended, greater satisfaction with perceived improvement, and less drop-out (Hawley & Weisz, 2005; Accurso et al., 2013).

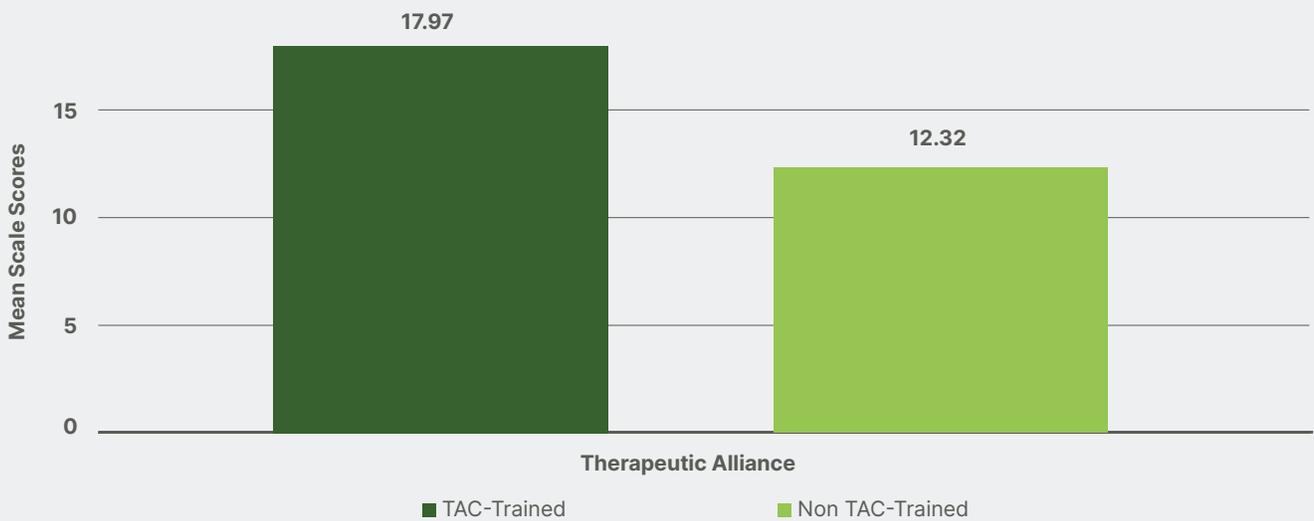
Alliance was calculated by summing the raw scores for all items, then comparing mean scale scores of the two family groups – those treated by TAC-trained clinicians and those treated by not TAC-trained clinicians. Families treated by TAC-trained clinicians had higher mean scores of therapeutic alliance ($M = 17.97, SD = 1.816$) compared to those treated by clinicians not TAC-trained ($M = 12.32, SD = 2.467$). Again, this difference was statistically significant, $t(237.522) = 22.152, p < .001$.

The distribution of ratings reported in Chart 8 show the strongly positive ratings of therapeutic alliance with TAC-trained clinicians and more moderate ratings with clinicians not TAC-trained. Chart 9 shows differences in mean scale scores for therapeutic alliance. Scores reflect significantly higher levels of alliance with TAC-trained clinicians.

Chart 8. Therapeutic Alliance



Chart 9. Comparisons of Mean Scale Scores for Therapeutic Alliance in Treatment for Treatment by TAC-Trained and Not TAC-Trained Clinicians



Adoption Relevance of Treatment

Adoption relevance of treatment was measured using the Adoption Relevance and Outcomes Scale (AROS), a 22-item instrument designed for the study. The AROS underwent reliability testing (n=249 cases) and Cronbach's alpha was calculated to be 0.952 indicating excellent reliability, meaning that items are highly correlated and consistently measure the same concept with minimal measurement error.

Items are keyed to adoption-related therapeutic tasks and outcomes strongly associated with adoption competent practice, supported by research, and reinforced in the TAC. They align with C.A.S.E.'s validated Principles of Adoption Competent Practice and are also consistent with practices that the TAC participants most frequently report influenced by what they learn in the TAC (Brodzinsky, 2008; Atkinson et al., 2013 & 2017; Smith, 2014; Brodzinsky & Smith, 2018; Roszia & Maxon, 2019; Atkinson, 2020; Riley & Singer, 2020). Items assess for the presence of clinical practices that include psychoeducation and adoptive parenting skills with a focus on normalization, trauma/attachment, loss and grief, understanding the child's unique history, adoptive identity development, communicative openness, family cohesion and attunement, and parent self-care. Specific items are listed in Table 5.

Table 5. AROS Items Assessing Adoption Relevance of Treatment

AROS Items Assessing Adoption Relevance

1. My/our therapist helped us learn about common experiences of adoptive parents and children/youth
2. My/our therapist helped us better understand emotions that are part of being part of an adoptive family
3. My/our therapist helped us learn about the unique challenges that adoptive families face
4. My/our therapist educated us about the way experiences occurring before the adoption can impact a child's physical development, adjustment, and attachment
5. My/our therapist helped us learn about ways trauma in early years can affect attachments
6. My/our therapist helped us to understand ways loss and grief may affect our family members
7. My/our therapist helped us gain a better understanding of the importance of my child's understanding his/her identity
8. My/our therapist encouraged me to provide my child with as much information about his/her background as we can, in an age appropriate way
9. My/our therapist encouraged us to communicate openly about adoption
10. My/our therapist helped my child explore feelings about his/her adoption
11. My/our therapist talked about adoption being an important part of our family for our entire lives
12. Time in sessions was devoted to talking about my strengths
13. My/our therapist helped me resolve feelings about aspects of my child's adoption that are emotionally stressful
14. My/our therapist educated us that it is normal for my child to have interest in his/her birth parents
15. My/our therapist helped me understand that in adolescence, adoptees develop identities that are both connected to and separate from adoptive and birth parents
16. My/our therapist helped us gain a better understanding of the lasting influence of birth parents
17. My/our therapist helped me/us learn better strategies for understanding and dealing with our child's behavior
18. My/our therapist helped me/us learn about and use parenting strategies that promote closer relationships
19. My/our therapist helped me/us learn about and use strategies that help my/our child gain a sense of control and competence
20. When needed, my/our therapist worked with other professionals in our lives such as teachers and doctors
21. When needed, my/our therapist connected us to helpful resources
22. Compared to prior therapists, my/our therapist was more effective in helping us deal with problems we brought

Families treated by TAC-trained clinicians had higher mean scores on adoption relevance ($M = 90.85$, $SD = 13.122$) compared to those treated by clinicians not TAC-trained ($M = 61.66$, $SD = 11.226$), a statistically significant difference, $t(132) = 13.611$, $p < .001$. The distribution of ratings reported in Chart 10 clearly demonstrates the strongly positive ratings of adoption relevance by families treated by TAC-trained clinicians and the much more balanced range of ratings by families who saw clinicians who were not TAC trained. Chart 11 shows differences in mean scale scores for adoption relevance of treatment. Scores clearly reflect the significantly higher adoption relevance of treatment by TAC-trained clinicians.

Chart 10. Adoption Relevance of Treatment

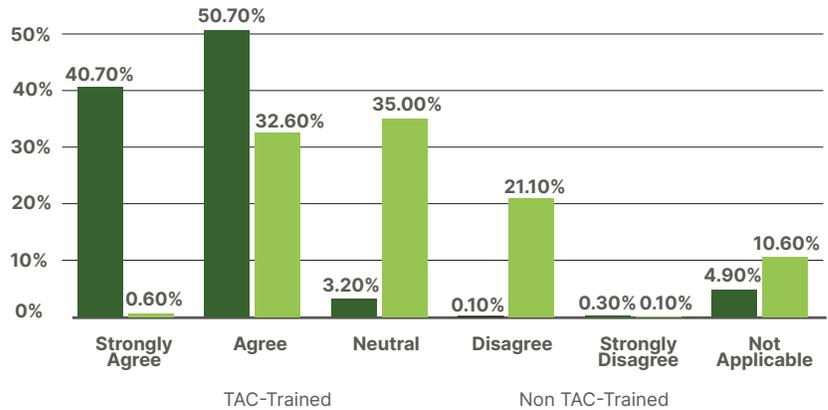
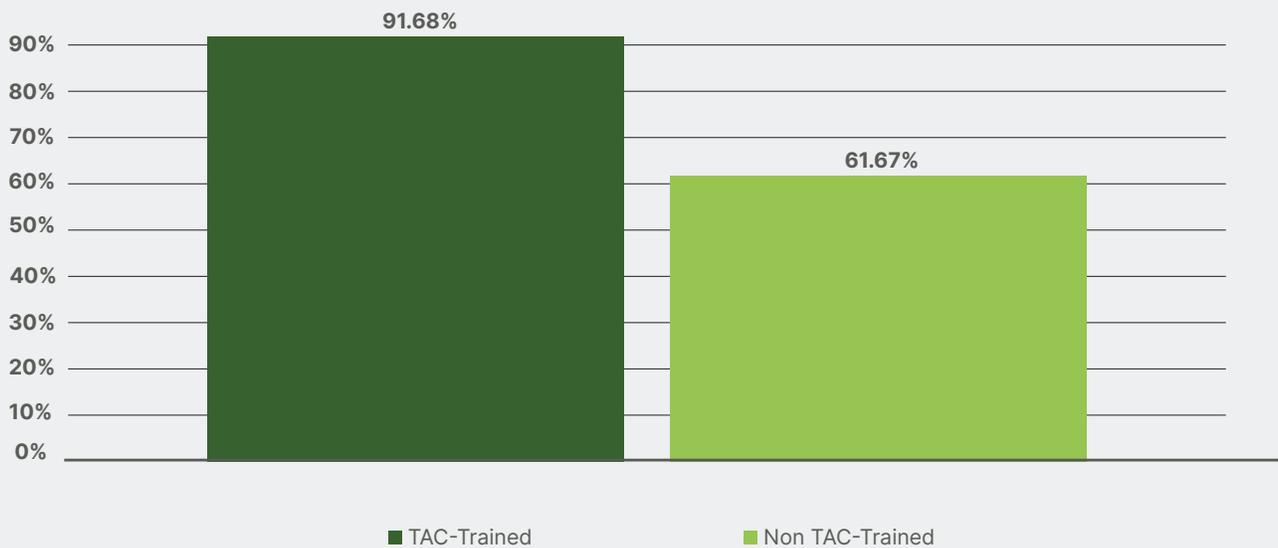


Chart 11. Comparisons of Mean Scale Scores of Adoption Relevance of Treatment by TAC-Trained and Not TAC-Trained Clinicians



Treatment Outcomes

Family outcomes were assessed using five outcomes-oriented items from the AROS and six items from the MHSIP Family Satisfaction Survey. The items focused on family well-being and child/youth emotional/behavioral/social functioning. Specific items are reported in Table 6.

Table 6. Items from AROS and MHSIP Assessing Treatment Outcomes

Items Assessing Treatment Outcomes	
From AROS After working with my/our therapist,	From MHSIP
1. My/our family talks more openly about adoption	1. My child is better at handling daily life
2. We feel closer as a family	2. My child gets along better with family members
3. I/we better understand my child's feelings about adoption	3. My child gets along better with friends and other people outside the family
4. I/we have parenting strategies that are better for my/our child	4. My child is doing better in school and/or work
5. I/we are more comfortable talking about my/our feelings about our family's adoption	5. My child is better able to cope when things go wrong
	6. I am satisfied with our family life right now

Families treated by TAC-trained clinicians had higher (more favorable) ratings of family outcomes ($M = 20.54$, $SD = 2,091$) compared to those treated by clinicians not TAC-trained ($M = 13.80$, $SD = 2.485$), a statistically significant difference, $t(254.218) = 24.759$, $p < .001$. The distribution of ratings is reported in Chart 12 that demonstrates the strongly positive ratings of families treated by TAC-trained clinicians and somewhat negative ratings of outcomes for families treated by clinicians without the TAC. Chart 13 shows differences in mean scale scores for family outcomes. Scores reflect significantly more positive outcomes with TAC-trained clinicians.

Chart 12. Family Outcomes

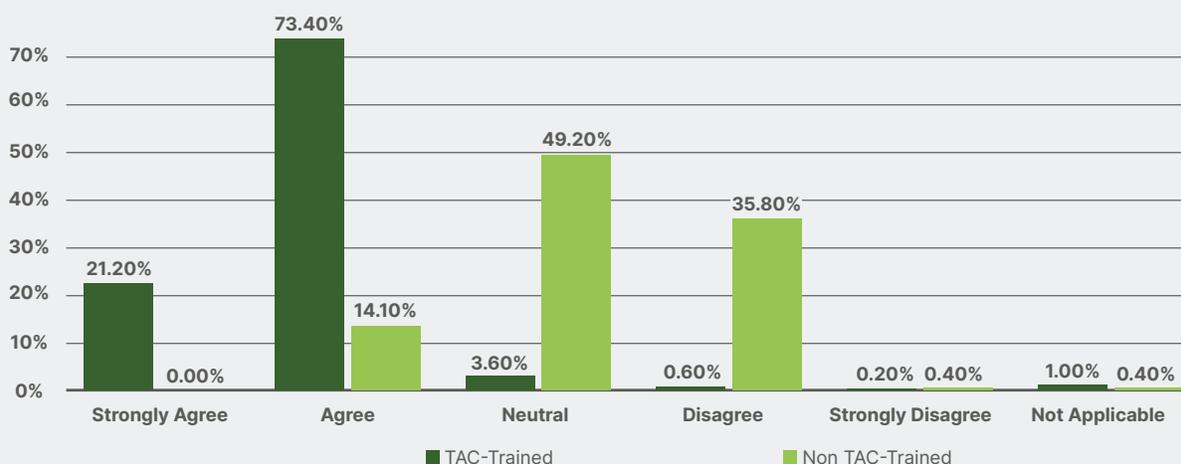


Chart 13. Comparisons of Mean Scale Scores of Family Outcomes of Treatment by TAC-Trained and Not TAC-Trained Clinicians



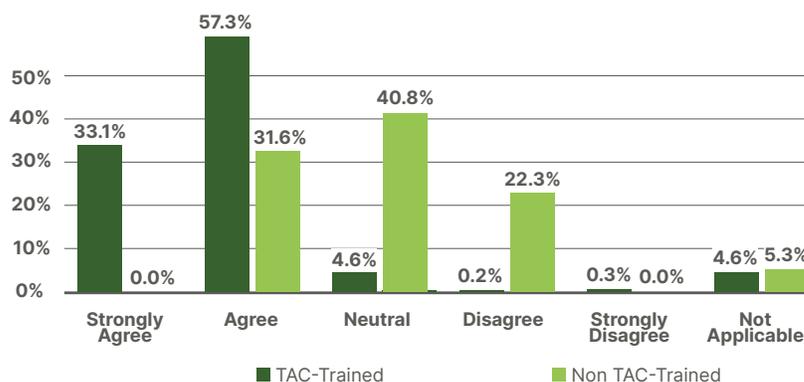
Focus of Therapeutic Intervention

The foci of therapeutic intervention were also explored. The ongoing TAC evaluation has collected a substantial body of data on the clinical practices with adoptive families and nature of changes in practices influenced by training (Atkinson, 2020). These data as well as relevant practice literature and research suggest the value of focusing on particular adoption-relevant issues. Using selected relevant items from the AROS, the degree to which families with TAC-trained clinicians and clinicians not TAC-trained perceive their clinicians focusing on selected issues within the context of the therapeutic intervention were compared. Reported here are findings from comparisons of the degrees of focus on normalization, trauma/attachment, loss and grief, discovering each child’s unique history and identity development, communicative openness, family cohesion and attunement, and parent support and self-care.

Focus on Normalization

Families treated by TAC-trained clinicians had higher mean scores on normalization focus ($M = 24.52$, $SD = 4.442$) compared to those treated by clinicians not TAC-trained ($M = 17.50$, $SD = 3.535$), a statistically significant difference, $t(290) = 14.545$, $p < .001$. Chart 14 reports the distribution of ratings, reflecting significantly stronger focus on normalization by TAC-trained clinicians.

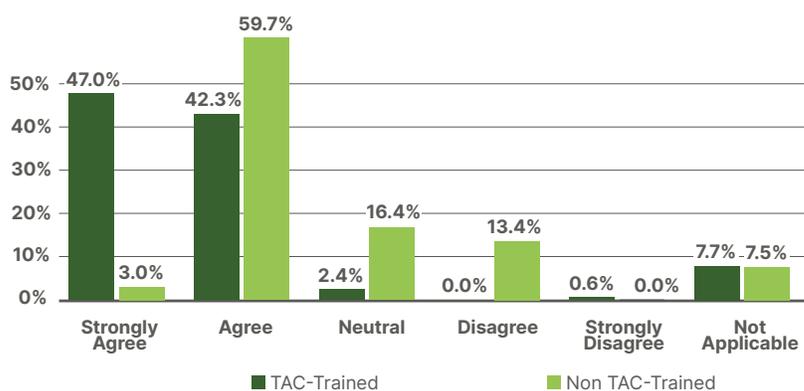
Chart 14. Therapeutic Focus on Normalization



Focus on Trauma and Attachment

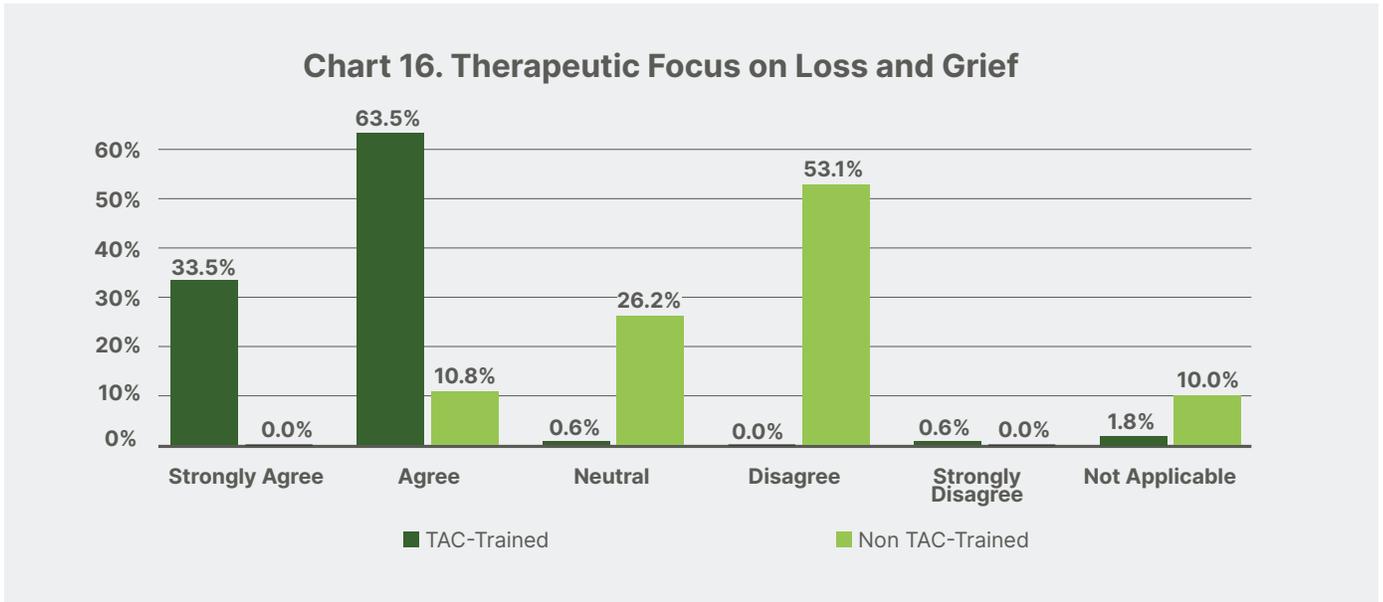
Families treated by TAC-trained clinicians had higher mean scores on trauma/attachment focus ($M = 4.12$, $SD = 1.335$) compared to those treated by clinicians not TAC-trained ($M = 3.30$, $SD = 1.202$), a statistically significant difference, $t(300) = 5.545$, $p < .001$. Chart 15 reports the distribution of ratings, reflecting significantly stronger focus on trauma and attachment by TAC-trained clinicians.

Chart 15. Therapeutic Focus on Trauma and Attachment



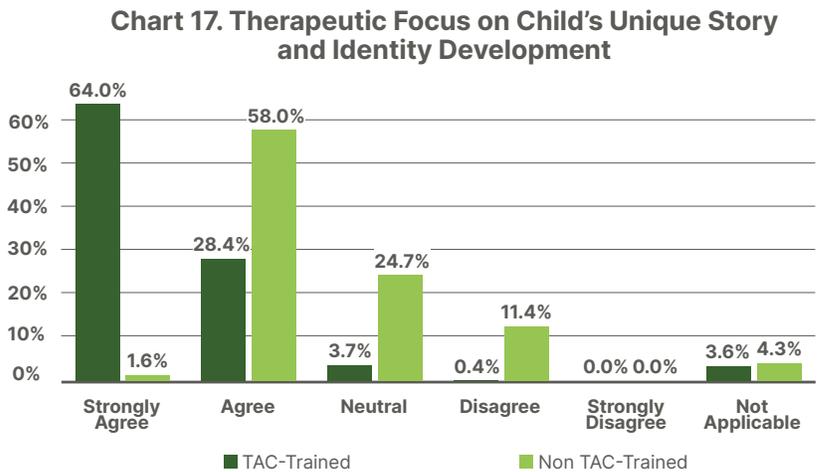
Focus on Loss and Grief

Families treated by TAC-trained clinicians had higher mean scores on loss and grief focus ($M = 4.24, SD = 0.793$) compared to those treated by clinicians not TAC-trained ($M = 2.28, SD = 1.012$), a statistically significant difference, $t(239.381) = 18.191, p < .001$. Chart 16 reports the distribution of ratings, reflecting significantly stronger focus on loss and grief by TAC-trained clinicians.



Focus on Child’s Unique Story and Identity Development

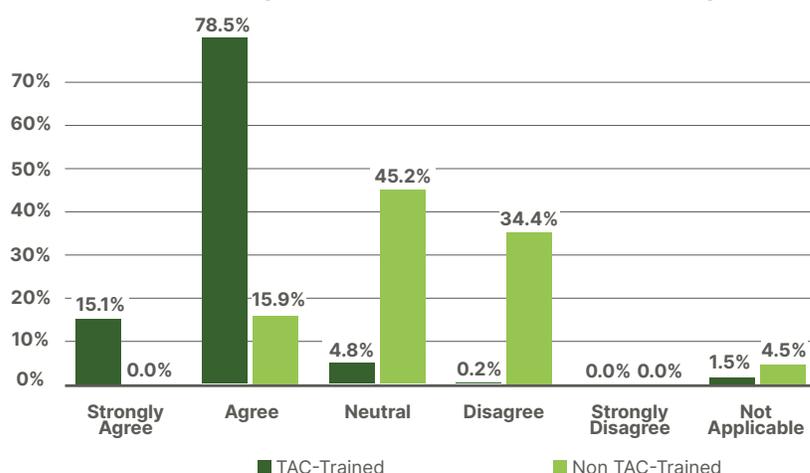
Families treated by TAC-trained clinicians had higher mean scores on child’s story/identity focus ($M = 26.71, SD = 3.684$) compared to those treated by clinicians not TAC-trained ($M = 20.35, SD = 3.625$), a statistically significant difference, $t(288) = 14.616, p < .001$. Chart 17 reports the distribution of ratings, reflecting a significantly stronger focus on the child’s unique story and identity formation by TAC-trained clinicians.



Focus on Communicative Openness

Families treated by TAC-trained clinicians had higher mean scores on communicative openness focus ($M = 16.14, SD = 1.836$) compared to those treated by clinicians not TAC-trained ($M = 10.77, SD = 2.368$), a statistically significant difference, $t(232.886) = 21.039, p < .001$. Chart 18 reports the distribution of ratings, reflecting a significantly stronger focus on communicative openness by TAC-trained clinicians.

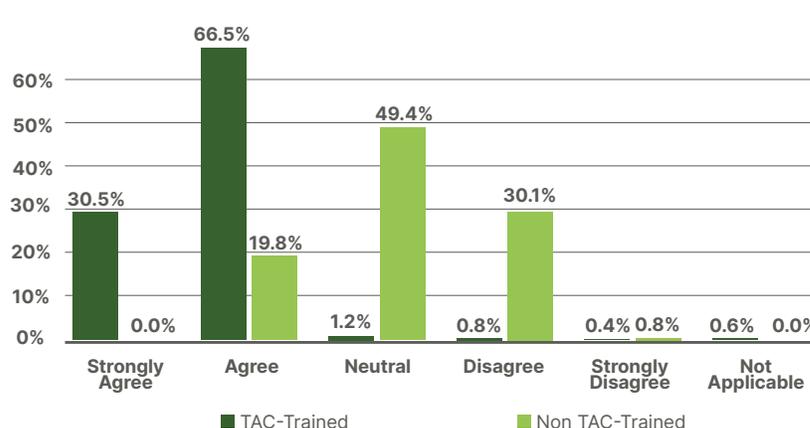
Chart 18. Therapeutic Focus on Communicative Openness



Focus on Family Cohesion and Attunement

Families treated by TAC-trained clinicians had higher mean scores on cohesion/attunement focus ($M = 12.70, SD = 1.331$) compared to those treated by clinicians not TAC-trained ($M = 8.64, SD = 1.674$), a statistically significant difference, $t(244.447) = 22.665, p < .001$. Chart 19 reports the distribution of ratings, reflecting a significantly stronger focus on family cohesion and attunement by TAC-trained clinicians.

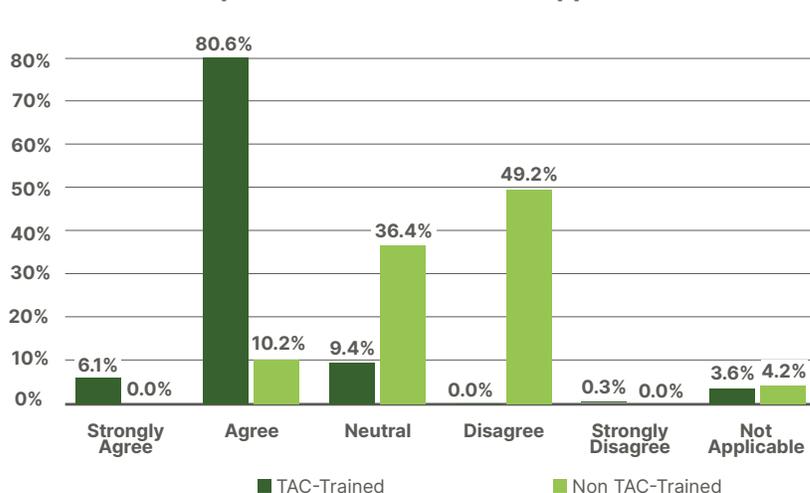
Chart 19. Therapeutic Focus on Family Cohesion and Attunement



Focus on Parent Support and Self-Care

Families treated by TAC-trained clinicians had higher mean scores on parent support/self care focus ($M = 7.60, SD = 1.651$) compared to those treated by clinicians not TAC-trained ($M = 4.98, SD = 1.315$), a statistically significant difference, $t(290) = 14.776, p < .001$. Chart 20 reports the distribution of ratings, clearly demonstrating a much stronger focus on these issues by TAC-trained clinicians.

Chart 20. Therapeutic Focus on Parent Support and Self-Care



Summary of Findings on Therapeutic Foci

Table 7 summarizes the significance of differences across all treatment foci variables – all significant at the $p=.001$ level. Chart 21 reports differences in mean scale scores for therapeutic foci, demonstrating stronger focus by TAC-trained clinicians on each of the adoption-relevant issues examined.

Table 7. Summary of Therapeutic Foci

Variable	Comparison of Means TAC-trained clinician & not TAC-trained clinician	Significance of Difference in TAC-trained clinician & not TAC-trained clinician
Normalization	$M = 24.52, SD = 4.442$ vs $M = 17.50, SD = 3.535$	$t(290) = 14.545, p < .001$
Trauma and attachment	$M = 4.12, SD = 1.335$ vs $M = 3.30, SD = 1.202$	$t(300) = 5.545, p < .001$
Loss and grief	$M = 4.24, SD = 0.793$ vs $M = 2.28, SD = 1.012$	$t(239.381) = 18.191, p < .001$
Child's unique story/identity development	$M = 26.71, SD = 3.684$ vs $M = 20.35, SD = 3.625$	$t(288) = 14.616, p < .001$
Communicative openness	$M = 16.14, SD = 1.836$ vs $M = 10.77, SD = 2.368$	$t(232.886) = 21.039, p < .001$
Family cohesion and attunement	$M = 12.70, SD = 1.331$ vs $M = 8.64, SD = 1.674$	$t(244.447) = 22.665, p < .001$
Parent support and self-care	$M = 7.60, SD = 1.651$ vs $M = 4.98, SD = 1.315$	$t(290) = 14.776, p < .001$

Chart 21. Comparisons of Mean Scale Scores for Therapeutic Foci of Treatment by TAC-Trained and Not TAC-Trained Clinicians



Therapeutic Methods

Use of selected therapeutic methods was also explored. The ongoing TAC evaluation has collected a substantial body of data on the clinical practices with adoptive families and nature of changes in practices influenced by training (Atkinson, 2020). The data suggest that use of both psychoeducation and strategies that support parental skills development increase as a result of what clinicians learn through the TAC. Using selected relevant items from the AROS shown in Table 8, the degree to which families with TAC-trained and not TAC-trained perceive their clinicians employing the methods within the context of the therapeutic intervention were compared.

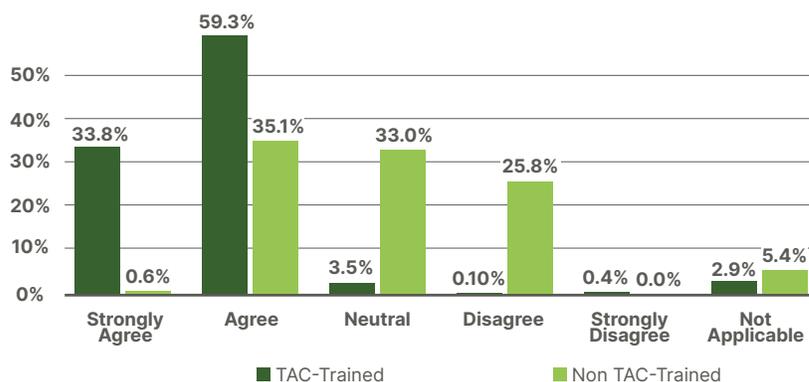
Table 8. Items from AROS Assessing Therapeutic Methods

Items Assessing Treatment Outcomes	
Psychoeducation	Parent Skills Development
1. My/our therapist helped us learn about common experiences of adoptive parents and children/youth	1. My/our therapist encouraged me to provide my child with as much information about his/her background as we can, in an age appropriate way
2. My/our therapist helped us better understand emotions that are part of being part of an adoptive family	2. My/our therapist encouraged us to communicate openly about adoption
3. My/our therapist helped us learn about the unique challenges that adoptive families face	3. My/our therapist helped my child explore feelings about his/her adoption
4. My/our therapist educated us about the way experiences occurring before the adoption can impact a child's physical development, adjustment, and attachment	4. My/our therapist talked about adoption being an important part of our family for our entire lives
5. My/our therapist helped us learn about ways trauma in early years can affect attachments	5. Time in sessions was devoted to talking about my strengths
6. My/our therapist helped us to understand ways loss and grief may affect our family members	6. My therapist helped me resolve feelings about aspects of my child's adoption that are emotionally stressful
7. My/our therapist helped us gain a better understanding of the importance of my child's understanding his/her identity	7. My/our therapist educated us that it is normal for my child to have interest in his/her birth parents
	8. My/our therapist helped me understand that in adolescence, adoptees develop identities that are both connected to and separate from adoptive and birth parents
	9. My/our therapist helped us gain a better understanding of the lasting influence of birth parents
	10. My/our therapist helped me/us learn better strategies for understanding and dealing with our child's behavior
	11. My/our therapist helped me/us learn about and use parenting strategies that promote closer relationships
	12. My/our therapist helped me/us learn about and use strategies that help my/our child gain a sense of control and competence

Psychoeducation

Families treated by TAC-trained clinicians had higher mean scores on use of psychoeducational items ($M = 29.20$, $SD = 4.049$) compared to those treated by clinicians not TAC-trained ($M = 20.45$, $SD = 4.378$), a statistically significant difference, $t(246.401) = 17.273$, $p < .001$. Chart 22 reports the distribution of ratings, demonstrating significantly greater use of psychoeducation by TAC-trained clinicians.

Chart 22. Presence of Psychoeducation Methods



Adoptive Parenting Skills Development

Families treated by TAC-trained clinicians had higher mean scores on use of adoptive parenting skills development ($M = 51.15$, $SD = 5.981$) compared to those treated by clinicians not TAC-trained ($M = 36.41$, $SD = 5.964$), a statistically significant difference, $t(237.262) = 19.966$, $p < .001$. Chart 23 reports the distribution of ratings, demonstrating significantly greater use of strategies to strengthen adoptive parenting skills by TAC-trained clinicians.

Chart 23. Presence of Adoptive Parenting Skills Development

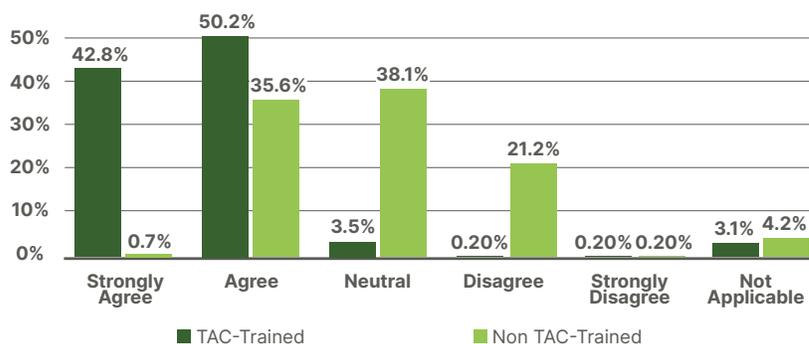
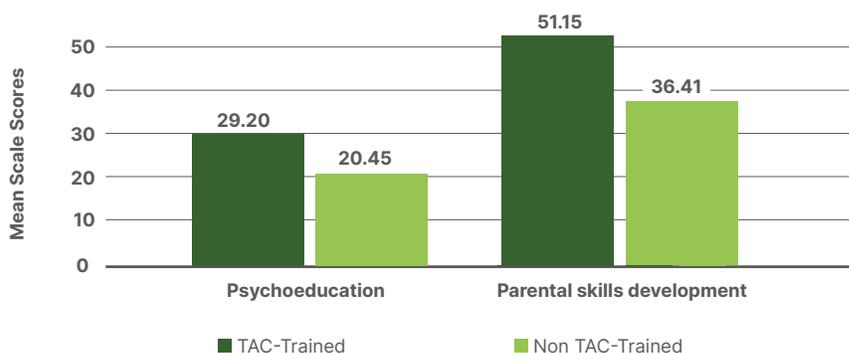


Chart 24 shows differences in mean scale scores for psychoeducation and for adoptive parenting skills development as therapeutic methods. Scores reflect greater use of both therapeutic methods by TAC-trained clinicians.

Chart 24. Comparisons of Mean Scale Scores for Psychoeducation and Parenting Skills Development as Therapeutic Methods Used by TAC-Trained and Not TAC-Trained Clinicians



III. Effect Size Comparisons

The the TAC effectiveness studies encompass an initial study (Study 1) conducted in one state and a replication of the study (Study 2) that recruited clinicians and adoptive families in four additional states. While the overall direction and consistency of findings from both the initial and replication studies follow the same patterns, clearly demonstrating more positive treatment experiences and outcomes for families treated by TAC-trained clinicians, some variations were observed. An effective method for more closely examining differences is effect size comparison.

Effect size comparisons provide a standardized way to quantify the magnitude and direction of relationships or differences across studies, enabling researchers to synthesize findings, compare results, and draw broader conclusions. Beyond finding statistical significance which may or may not equate to practical significance, effect size comparisons reduce reliance on p-values and indicate practical significance in more real-world terms, serving as a better indicator of whether an intervention is substantively important (Borstein et al., 2009).

Table 9 presents effect size comparisons using Hedges' g for various satisfaction measures between therapists trained in the TAC and those not trained in the TAC across Study 1, Study 2, and a combined analysis. All comparisons yielded statistically significant t-tests ($p < .001$), indicating robust differences favoring the TAC-trained group.

For general satisfaction, Study 1 showed a Hedges' g of 4.07 [95% CI: 3.49, 4.65], reflecting an exceptionally large effect where TAC-trained clinicians outperformed the not TAC-trained group. In Study 2, the effect was similarly substantial at $g = 2.62$ [95% CI: 2.17, 3.07], with TAC-trained participants exceeding the control. The combined analysis reinforced this pattern, underscoring a consistently large advantage for TAC-trained clinicians.

Satisfaction with services also demonstrated strong effects. In Study 1, $g = 3.28$ [95% CI: 2.81, 3.76], $t(92.429) = 18.968$, with higher scores for TAC-trained clinicians versus not TAC-trained. Study 2 yielded $g = 1.97$ [95% CI: 1.57, 2.37], $t(127.680) = 11.641$, favoring TAC-trained clinicians over controls. Combined analysis found large practical significance.

For satisfaction with therapist performance, Study 1 reported $g = 1.98$ [95% CI: 1.59, 2.37], $t(150) = 12.187$, with TAC-trained clinician means surpassing not TAC-trained. Study 2 showed an even larger $g = 2.44$ [95% CI: 2.01, 2.88], $t(138.752) = 14.810$, for TAC-Trained compared to controls. The combined analysis confirmed substantial benefits.

Satisfaction with child and family outcomes exhibited the largest effects in Study 1 at $g = 4.00$ [95% CI: 3.44, 4.56], $t(147) = 24.087$, where TAC-trained clinicians greatly exceeded not TAC-trained. Study 2's $g = 2.20$ [95% CI: 1.79, 2.62], $t(140) = 13.121$, similarly favored TAC-Trained over controls. Combined analysis confirmed profound differences.

Table 9. Effect Size Comparisons for Satisfaction Measures

Satisfaction Type	Study	TAC-Trained	n	M	SD	t(df)	p	Hedges' g [95%CI]
General Satisfaction	Study 1	Y	85	53.86	2.752	21.668 (81.385)	< .001	4.07 [3.49, 4.65]
		N	57	38.79	4.742			
	Study 2	Y	77	54.60	5.903	15.513 (138)	< .001	2.62 [2.17, 3.07]
		N	63	40.51	4.572			
	Combined	Y	162	54.21	4.532	25.995 (250.850)	< .001	3.16 [2.81, 3.51]
		N	120	39.59	4.713			
Satisfaction with services	Study 1	Y	89	12.70	0.817	18.968 (92.429)	< .001	3.28 [2.81, 3.76]
		N	69	8.49	1.694			
	Study 2	Y	79	12.99	1.698	11.641 (127.680)	< .001	1.97 [1.57, 2.37]
		N	64	9.44	1.901			
	Combined	Y	168	12.83	1.312	20.474 (229.121)	< .001	2.46 [2.16, 2.76]
		N	133	8.95	1.852			
Satisfaction with therapist performance	Study 1	Y	85	18.47	1.377	12.187 (150)	< .001	1.98 [1.59, 2.37]
		N	67	15.36	1.773			
	Study 2	Y	77	18.73	1.392	14.810 (138.752)	< .001	2.44 [2.01, 2.88]
		N	64	15.61	1.107			
	Combined	Y	162	18.59	1.386	18.507 (291)	< .001	2.17 [1.88, 2.46]
		N	131	15.48	1.485			
Satisfaction with child & family outcomes	Study 1	Y	89	22.76	1.977	24.087 (147)	< .001	4 [3.44, 4.56]
		N	60	14.67	2.064			
	Study 2	Y	79	22.91	3.923	13.121 (140)	< .001	2.2 [1.79, 2.62]
		N	63	15.51	2.415			
	Combined	Y	168	22.83	3.042	23.734 (289)	< .001	2.81 [2.48, 3.13]
		N	123	15.10	2.281			

Table 10 details Hedges' *g* comparisons for therapeutic alliance, revealing significant advantages ($p < .001$) for TAC-trained clinicians across both studies and combined. This measure assesses the collaborative bond between therapist and client, with large effect sizes indicating meaningful enhancements from the TAC. In Study 1, $g = 3.64$ [95% CI: 3.13, 4.14], $t(157) = 22.854$, as TAC-trained clinicians scored markedly higher than not TAC-trained clinicians. Study 2 showed $g = 2.09$ [95% CI: 1.68, 2.50], $t(117.088) = 12.170$, favoring TAC-trained clinicians over not TAC-trained clinicians. The combined analysis demonstrated a large, consistent effect that underscores the TAC's role in strengthening therapeutic relationships.

Table 10. Effect Size Comparisons for Therapeutic Alliance

	Study	TAC-Trained	n	M	SD	t(df)	p	Hedges' <i>g</i> [95%CI]
Therapeutic Alliance	Study 1	Y	89	17.79	1.577	22.854 (157)	<.001	3.64 [3.13, 4.14]
		N	70	11.43	1.93			
	Study 2	Y	79	18.18	2.043	12.170 (117.088)	<.001	2.09 [1.68, 2.5]
		N	64	13.30	2.629			
	Combined	Y	168	17.97	1.816	22.152 (237.522)	<.001	2.65 [2.34, 2.96]
		N	134	12.32	2.467			

Table 11 examines adoption relevance, reflecting the perceived applicability of therapeutic approaches to adoption-related contexts. All t-tests were highly significant ($p < .001$), with Hedges' *g* values indicating very large effects favoring those seen by TAC-trained clinicians. Study 1 reported $g = 4.54$ [95% CI: 3.86, 5.23], $t(56.161) = 20.670$, where TAC-trained clinicians ($M = 92.44$, $SD = 5.648$) far outperformed those not TAC-trained ($M = 61.68$, $SD = 8.547$). In Study 2, $g = 2.35$ [95% CI: 1.91, 2.80], $t(132) = 13.611$, for TAC-trained clinicians ($M = 90.85$, $SD = 13.122$) versus not TAC-trained clinicians ($M = 61.66$, $SD = 11.226$). Combined, $g = 2.98$ [95% CI: 2.62, 3.34], $t(204.801) = 23.179$, affirming substantial relevance gains from the TAC.

Table 11. Effect Size Comparisons for Adoption Relevance

	Study	TAC-Trained	n	M	SD	t(df)	p	Hedges' <i>g</i> [95%CI]
Adoption Relevance	Study 1	Y	82	92.44	5.648	20.670 (56.161)	<.001	4.54 [3.86, 5.23]
		N	40	61.68	8.547			
	Study 2	Y	75	90.85	13.122	13.611 (132)	<.001	2.35 [1.91, 2.8]
		N	59	61.66	11.226			
	Combined	Y	157	91.68	9.943	23.179 (204.801)	<.001	2.98 [2.62, 3.34]
		N	99	61.67	10.181			

Table 12 presents Hedges' *g* for family treatment outcomes, encompassing broader familial improvements post-therapy. Significant differences ($p < .001$) were observed, with exceptionally large effects across analyses. In Study 1, $g = 5.50$ [95% CI: 4.78, 6.22], $t(87.608) = 29.784$, as TAC-trained clinicians ($M = 43.59$, $SD = 2.264$) exceeded those with not-TAC-trained ($M = 28.04$, $SD = 3.479$). Study 2 yielded $g = 2.64$ [95% CI: 2.19, 3.09], $t(138) = 15.632$, favoring TAC-trained clinicians ($M = 43.30$, $SD = 5.758$) over not TAC-trained clinicians ($M = 29.73$, $SD = 4.178$). The combined effect was $g = 3.50$ [95% CI: 3.12, 3.87], $t(267.234) = 29.494$, indicating profound outcome enhancements.

Table 12. Effect Size Comparisons for Family Treatment Outcomes

	Study	TAC-Trained	n	M	SD	t(df)	p	Hedges' g [95%CI]
Family Treatment Outcomes	Study 1	Y	85	43.59	2.264	29.784 (87.608)	<.001	5.5 [4.78, 6.22]
		N	57	28.04	3.479			
	Study 2	Y	77	43.30	5.758	15.632 (138)	<.001	2.64 [2.19, 3.09]
		N	63	29.73	4.178			
	Combined	Y	162	43.45	4.284	29.494 (267.234)	<.001	3.5 [3.12, 3.87]
		N	134	12.32	2.467			

In summary, across all measures, Hedges' *g* comparisons consistently demonstrate large to very large effect sizes (ranging from 1.97 to 5.50) favoring clinicians trained in the TAC over comparably qualified clinicians who have not completed the TAC, with all *p*-values below .001 and non-overlapping 95% confidence intervals excluding zero. These findings highlight the substantial impact of the TAC training on satisfaction metrics, therapeutic alliance, adoption relevance, and family outcomes, with combined analyses providing robust evidence of generalizability across studies.

IV. Discussion

Differences in Therapeutic Experiences

Families treated by TAC-trained clinicians sustained engagement in treatment over a significantly higher numbers of sessions than families treated by not TAC-trained clinicians. They also experienced a lower percentage of “child only” sessions, higher percentage of family sessions, and a broader array of therapeutic services that included parent groups and child/teen groups. These findings confirm that treatment with TAC-trained clinicians differed from that with clinicians who were not TAC-trained, featuring greater parent involvement in treatment, less child-only intervention, and use of a broader range of therapeutic interventions. Greater parent involvement in treatment is consistent with principles of adoption competent practice that feature family-based approaches, view their role as critical in facilitating the child’s adjustment and healthy identity formation, and engage parents as partners in the therapeutic process.

Adoptive Parent Satisfaction

Families treated by TAC-trained clinicians reported significantly higher levels of satisfaction (all at the $p = .001$ level) across all dimensions of satisfaction measured. Satisfaction with services, clinician performance, and outcomes have all been shown to be good indicators of quality of service delivery and treatment compliance, and all have been linked to improved treatment outcomes, including reduction in emotional difficulties (Wollersheim et al., 1982; Kazdin & Krouse, 1983; Urben et al., 2015). The strength and consistency of the higher satisfaction mean scores across four dimensions add to confidence in findings and suggest a qualitative difference in treatment by TAC-trained clinicians that adoptive parents view favorably.

Therapeutic Alliance

Therapeutic alliance was markedly stronger in families seen by TAC-trained clinicians,

indicating higher levels of collaboration, trust, and empowerment. A strong therapeutic alliance is considered to be crucial for client motivation and engagement and one of the most important variables influencing therapeutic outcomes (Accurso et al, 2013; Bickman et al., 2000). Again, the strength and consistency of higher therapeutic alliance scores add to confidence in findings. Findings of greater engagement in treatment, satisfaction, and therapeutic alliance provide substantial evidence of a more positive treatment experience with TAC-trained clinicians.

Treatment Outcomes

Treatment outcomes focused on family well-being and child/youth emotional, behavioral, and social functioning. Families treated by TAC-trained clinicians reported significantly better outcomes in both studies at the $p = .001$ levels. They reported feeling closer as a family, talking more openly about adoption, having a better understanding of the child’s feelings and needs, enhanced parenting strategies, and positive child behaviors (e.g., coping, social interactions, school performance). These self-reported gains suggest treatment with TAC-trained clinicians fosters improvements consistent with those identified in research as important to adoption stability and post-adoption support (Brodzinsky & Smith, 2018; Smith, 2014).

Adoption Relevance of Treatment

Treatment by TAC-trained clinicians was perceived by adoptive parents as significantly more relevant to adoption-specific challenges. Items used to assess adoption relevance are keyed to recognized best practices and principles of adoption competent practice (Roszia & Maxon, 2019; Pinderhughes & Brodzinsky, 2019; Atkinson, 2020); therefore, findings produce insights into methods and focus of treatment by TAC-trained clinicians when compared to that by comparably qualified clinicians who are not TAC-trained. These studies found that treatment by TAC-trained clinicians features significantly greater use of

psychoeducation and adoptive parenting skills development. TAC-trained clinicians also focus significantly more on normalization of adoption experiences, trauma and attachment, loss and grief, uncovering the child's unique story and adoptive identity, supporting communicative openness, family cohesion and attunement, and parent support and self-care.

The strength and consistency of findings across all domains examined add to confidence in findings and provide evidence of treatment practices better aligned with family needs. Importantly, the greater focus on adoption core issues and on adoptive family developmental issues further confirms these as distinguishing features of adoption competent clinical practice.

Effect Size Comparisons

Effect size comparisons were calculated to quantify the magnitude and direction of relationships or differences across the two studies and to go beyond findings of statistical significance to examine practical significance in more real-world terms (Borstein et al., 2009). Across all measures, Hedges' *g* comparisons consistently demonstrate large to very large effect sizes (ranging from 1.97 to 5.50). Findings represent evidence of substantial impact of the TAC training on satisfaction metrics, therapeutic alliance, adoption relevance, and family outcomes. The combined analyses represent robust evidence of generalizability across studies that supports further replication in additional, diverse clinical settings. The larger effects in Study 1 merit further examination of sample and contextual differences.

Study Strengths

The TAC effectiveness studies represent the first attempt to examine the effects of adoption competency training on the treatment experiences and outcomes for adoptive families in real-world outpatient mental health settings. They have produced evidence of superior treatment experiences and outcomes and have illuminated important differences in the focus of and methods used in adoption competent practice. Importantly,

the foci and methods of treatment, already supported by theory and in practice literature, were independently observed and confirmed by families and associated with superior treatment outcomes. Further analyses of existing data and replications of the studies are merited.

Study strengths include replication across two studies with large, geographically diverse samples and use of validated measures (e.g., MHSIP, TASCP) and a study-specific measure with excellent reliability (AROS). The combined dataset enhanced generalizability.

The strong and consistent findings of both Study 1 and replication Study 2 as well as effect size comparisons add to the weight of evidence that TAC-trained clinicians deliver more effective treatment with adoptive families and provide basis for greater confidence in findings.

The development and successful use of the Adoption Relevance and Outcomes Scale (AROS) addressed the lack of an instrument for measuring the adoption relevance of treatment. The AROS underwent reliability testing (n=249 cases) and Cronbach's alpha was calculated to be 0.952 indicating excellent reliability, meaning that items are highly correlated and consistently measure the same concept with minimal measurement error. Although used successfully in these studies, confidence in its findings would be increased by additional items measuring several important constructs (e.g., loss and grief focus, multi-systems intervention). The AROS will be further refined and will be available for use by other researchers wishing to measure adoption relevance of treatment.

Finally, the two studies produced sufficient data to allow deeper analyses to identify variables that are predictive of treatment outcomes (via regression analysis) and an empirically based

theory of change for adoption competent practice (via structural equation modeling). These analyses have been conducted and have produced evidence supporting an empirically based theory of change. Findings from these analyses are available in a separate report.

Study Limitations

Although substantial comparability of family samples and diverse geographic representation were achieved, the samples recruited to the study were not nationally representative, limiting the degree to which findings are generalizable. Randomized selection of families would have strengthened the study design but was not feasible given obstacles related to confidentiality, the study-related burdens on multiple agencies and practices, and budget parameters.

The study relied on parent self-reporting that could not be independently verified and had to be accepted at face value. The consistency and credibility of reporting, however, increase confidence in findings.

Clinician groups differed in ways that may have affected their performance and, therefore, study findings. Although they were largely comparable in demographics, including race/ethnicity, highest education degree, profession, and years' professional experience, significant differences were found in three areas: personal connection to adoption, primary theoretical orientation, and hours of adoption-specific clinical training. While nearly half the clinicians who were not TAC-trained had a personal connection to adoption, 77 percent of TAC-trained clinicians reported a connection. TAC-trained clinicians strongly favored a family systems orientation that is especially compatible with adoption competent practice and clinicians not TAC-trained favored other orientations with cognitive behavioral orientation most frequently reported. Although clinicians who were not TAC-trained were more likely to have doctorates (all psychologists), the TAC-trained clinicians reported 4.5 times more hours of adoption-specific training (28.7 hrs. vs 6.4 hrs.) even after disregarding

the 72-hour TAC program. Strong personal interest in adoption is known to be a motivating factor in the TAC enrollment; it is plausible that it prompts enrollment in other adoption-related training and also serves to strengthen capacity to treat adoptive families effectively. These serve as confounding variables that merit further investigation in studies with greater control over sampling.

Resource limitations precluded the collection of extensive narrative data. The brief, optional comments collected led to several interesting observations. For example, all families with kinship adoptions reported prior relationships with the birth mother, all remained in contact, and all had TAC-trained clinicians. Also, four families reported they terminated treatment due to disagreement with a clinician who was urging medication; all these clinicians were not TAC-trained. Collecting additional narrative data would likely have better illuminated reasons behind ratings and produced greater insight into numerical findings; collection of additional narrative data is strongly recommended in subsequent replications of the studies.

V. Conclusions and Implications

Conclusions from Effectiveness Studies

The combined analyses of data from TAC Effectiveness Studies 1 and 2 provide robust evidence of the effectiveness of TAC in enhancing outpatient mental health services for adoptive families. It is noteworthy that conclusions are supported by high statistical significance ($p < .001$) for most comparisons. Key conclusions include:

- **Superior Treatment Experiences:** Families treated by TAC-trained clinicians sustained engagement in treatment over significantly more sessions, engaged in more family sessions and fewer child-only sessions, and experienced a broader array of services, including groups.
- **Higher Satisfaction and Stronger Therapeutic Alliance:** Adoptive parents expressed significantly higher satisfaction across all dimensions (i.e., services, clinician performance, outcomes, and general satisfaction) when treated by TAC-trained clinicians. They also formed stronger therapeutic alliance featuring greater collaboration, trust, and empowerment.
- **More Adoption Relevant Intervention:** Treatment by TAC-trained clinicians was perceived as more relevant to adoption-specific challenges, with greater use of psychoeducation and strategies to strengthen adoptive parenting skills and greater emphasis on normalization, trauma/attachment, loss/grief, child identity development, communicative openness, family cohesion, and parent self-care.
- **Improved Outcomes:** Families treated by TAC-trained clinicians reported significantly better post-treatment outcomes, including enhanced family well-being, closer family bonds, improved understanding of the child's needs, better parenting strategies, and positive changes in child emotional, behavioral, and social functioning.

- **Confirmation of Adoption Competent Practices in Real-World Settings:** Studies provided the opportunity for practices encouraged/taught in the TAC and known to be theoretically sound and supported in practice literature to be independently observed by adoptive parents in the context of treatment in real-world settings. Findings confirm that TAC-trained clinicians do make greater use of psychoeducation and strategies to strengthen adoptive parenting skills and they do place greater emphasis on normalization, trauma/attachment, loss/grief, child identity development, communicative openness, family cohesion, and parent self-care. Importantly, families that experienced elevated levels of these practices also had better treatment outcomes.
- **Large Effect Sizes:** Across all measures (satisfaction, alliance, relevance, and outcomes), effect sizes (Hedges' g ranging from 1.97 to 5.50) were large to very large, indicating not only statistical significance but also substantial practical impact, with consistent patterns across both studies.

Implications

The findings have far-reaching implications for enhancing mental health support for adoptive families, who often face unique challenges yet encounter barriers to competent care.

Implications for Practice

- Clinicians who treat adoptive, foster or kinship families with complex needs should prioritize adoption competency training to improve effectiveness in work with these families. Practices should reflect an integration of principles of adoption competent practice, emphasizing family-based, strengths-based, trauma-informed, attachment-oriented approaches and making greater use of psychoeducation and adoptive parenting skills development.

Treatment should systematically assess for and address, as needed, adoption core issues and be responsive to normative adoptive family challenges.

- Mental health agencies and private practices should recognize the complexities inherent in adoption and ensure through their hiring and training practices that there are a sufficient number of clinicians in their organizations that are trained in adoption competency to provide appropriate assessment and effective treatment for adoptive families.
- Adoption services providers, including child welfare agencies, which refer families for mental health assessment and intervention should recognize those who have completed adoption competency training as preferred providers and establish contracting and referral policies that give preference to providers who have completed adoption competency training.
- Online registries listing clinicians who have completed adoption competency training should be highly accessible to adoptive families seeking services and to referring entities who link families with qualified providers. C.A.S.E. sponsors such a registry and additional state- or area-specific listings could further strengthen linkages and increase access for families.

Implications for Policy

- Policymakers should fund the expansion of adoption competency training and require training for clinicians serving particularly vulnerable populations (e.g., children and youth adopted from foster care).
- Behavioral health policies should incentivize adoption-competent care via reimbursement models that reward evidence-based practices, such as those demonstrated here, and support recruitment of clinicians who have demonstrated adoption competencies.
- National standards for practice with adoptive families are needed to facilitate the recognition of this area of clinical practice as a sub-specialty. Recognition and more formal

credentialing would ensure that those who claim adoption competency meet established standards and that adoptive families, as consumers of mental health services, can have greater confidence in seeking such services.

Implications for Research

- There is a great deal more to learn; these studies represent a beginning. Additional replications of the research are encouraged, and the investigators stand ready to support replication efforts. Replications would yield larger samples that would allow for deeper examination of sub-populations (e.g., differences by adoption type, by frequency of birth family contact, foster or kinship families) not feasible in these initial studies.
- Further analyses of existing data are likely to yield even greater insights into variables associated with families' treatment experiences and outcomes. To that end, data from these studies are being made available to other qualified researchers for further exploratory analyses.
- Future studies that examine treatment experiences and outcomes should, to the degree feasible, employ randomized controlled designs and, ideally, longitudinal tracking to confirm causality and long-term impacts, including child-reported outcomes and stability of adoptions.
- Additional research is needed to more deeply understand and articulate relationships between practices associated with adoption competency and better family treatment experiences and outcomes. Deeper insights are needed into the connections between therapeutic approaches (and their underlying assumptions), specific intervention methods and foci, and outcomes for family members. These can contribute further to the specification of effective practices and potential development of treatment protocols that can strengthen the effectiveness of the next generation of clinicians that seek to support adoption.

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Appendix A. Study Instruments and Constructs

Instruments used for both Study 1 and Study 2

Summary of Measures

Measure (Construct)	Number of items	Parent Completes	Clinician Completes
Satisfaction with Treatment			
Mental Health Statistical Improvement Project (MHSIP) Family Satisfaction Survey (Satisfaction with clinician/ services)	13	✓	
Alliance with Clinician			
Therapeutic Alliance Scale for Caregivers (TASCP) (Affective bond, parent client-clinician collaboration on therapeutic tasks & goals)	5	✓	
Adoption Relevance and Related Outcomes			
Adoption Relevance and Outcomes Scale (AROS): Parent/ Family Questionnaire (Parent assessment of adoption relevance of therapeutic work; outcomes related to openness of adoption-related communication, family cohesion, relationships, and functioning)	27	✓	
Demographic Data			
Clinician demographics questionnaire	10		✓
Adoptive family demographics questionnaire	15	✓	
	Total items	55	10

Mental Health Statistical Improvement Project (MHSIP) Family Satisfaction Survey

Items with constructs examined

Item	Agreement scale: SA/A/N/D/SD/NA	Constructs Assessed	
		Primary Analyses	Secondary Analyses
S1	Overall, I am satisfied with the services my child/our family received	Satisfaction – General	Satisfaction w services
S2	The services my child and/or family received were right for us	Satisfaction – General	Satisfaction w services
S3	My family got the help we wanted for our child	Satisfaction – General	Satisfaction w services
S4	The therapist treated me with respect	Satisfaction – General	Services w therapist performance
S5	The therapist spoke with me in a way that I understood	Satisfaction – General	Services w therapist performance
S6	The therapist was sensitive to my cultural and ethnic background	Satisfaction – General	Services w therapist performance
S7	My child is better at handling daily life	Satisfaction – General	Satisfaction w child outcome – functioning; treatment outcome
S8	My child gets along better with family members	Satisfaction – General	Satisfaction w child outcome – relationships; treatment outcome
S9	My child gets along better with friends and other people outside the family	Satisfaction – General	Satisfaction w child outcome – relationships; treatment outcome
S10	My child is doing better in school and/or work	Satisfaction – General	Satisfaction w child outcome – functioning; treatment outcome
S11	My child is better able to cope when things go wrong	Satisfaction – General	Satisfaction w child outcome – functioning; treatment outcome
S12	I am satisfied with our family life right now	Satisfaction – General	Satisfaction w child outcome – functioning; treatment outcome
S13	I would recommend this therapist to a friend or family member	Satisfaction – General	Satisfaction w therapist performance

Therapeutic Alliance Scale for Caregivers (TASCP)

Item	Scale: Not at all true; somewhat true; mostly true; very much true	Constructs Assessed
		Primary Analyses
A1	I like spending time with my/my child's therapist	Alliance
A2	I feel like my/my child's therapist is on my side and tries to help me	Alliance
A3	I look forward to meeting with my/my child's therapist	Alliance
A4	I like my/my child's therapist	Alliance
A5	I think my/my child's therapist and I work well together on dealing with problems	Alliance

Adoption Relevance and Outcomes Scale (AROS)

Item	Agreement scale: SA/A/N/D/SD/NA	Constructs Assessed		
		Primary Analyses	Intervention Methods	Focus of Intervention
AR1	My/our therapist helped us learn about common experiences of adoptive parents and children/youth	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – Normalizing (goal)
AR2	My/our therapist helped us better understand emotions that are part of being part of an adoptive family	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – Normalizing (goal)
AR3	My/our therapist helped us learn about the unique challenges that adoptive families face	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – Normalizing (goal)
AR4	My/our therapist educated us about the way experiences occurring before the adoption can impact a child's physical development, adjustment, and attachment	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – biopsychosocial/ child's story/identity (goal)
AR5	My/our therapist helped us learn about ways trauma in early years can affect attachments	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – trauma/ attachment (goal)

AR6	My/our therapist helped us to understand ways loss and grief may affect our family members	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – loss & grief (goal)
AR7	My/our therapist helped us gain a better understanding of the importance of my child’s understanding his/her identity	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – identity/ child’s story (goal)
AR8	My/our therapist encouraged me to provide my child with as much information about his/her background as we can, in an age appropriate way	Adoption Relevance – General	Adoption Relevance – parenting skills development (method)	Adoption Relevance –communicative openness (goal)
AR9	My/our therapist encouraged us to communicate openly about adoption	Adoption Relevance – General	Adoption Relevance – parenting skills development (method)	Adoption Relevance – communicative openness (goal)
AR10	My/our therapist helped my child explore feelings about his/her adoption	Adoption Relevance – General	Adoption Relevance – parenting skills development (method)	Adoption Relevance – communicative openness (goal)
AR11	My/our therapist talked about adoption being an important part of our family for our entire lives	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – communicative openness (goal)
AR12	Time in sessions was devoted to talking about my strengths	Adoption Relevance – General	Adoption Relevance – parenting skills development (method)	Adoption Relevance – support/ self-care (goal)
AR13	My therapist helped me resolve feelings about aspects of my child’s adoption that are emotionally stressful	Adoption Relevance – General	Adoption Relevance – parenting skills development (method)	Adoption Relevance – support/ self-care (goal)
AR14	My/our therapist educated us that it is normal for my child to have interest in his/her birth parents	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – Normalizing (goal)
AR15	My/our therapist helped me understand that in adolescence, adoptees develop identities that are both connected to and separate from adoptive and birth parents	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – Normalizing (goal)
AR16	My/our therapist helped us gain a better understanding of the lasting influence of birth parents	Adoption Relevance – General	Adoption Relevance – Psychoeducation (method)	Adoption Relevance – Normalizing (goal)

AR17	My/our therapist helped me/us learn better strategies for understanding and dealing with our child's behavior	Adoption Relevance – General	Adoption Relevance – parenting skills development (method)	
AR18	My/our therapist helped me/us learn about and use parenting strategies that promote closer relationships	Adoption Relevance – General	Adoption Relevance – parenting skills development (method)	
AR19	My/our therapist helped me/us learn about and use strategies that help my/our child gain a sense of control and competence	Adoption Relevance – General	Adoption Relevance – parenting skills development (method)	Adoption Relevance – behavioral regulation (goal)
AR20	When needed, my/our therapist worked with other professionals in our lives such as teachers and doctors	Adoption Relevance – therapist performance – multi-system	Adoption Relevance – therapist performance	Adoption relevance – therapist multi-systems work
AR21	When needed, my/our therapist connected us to helpful resources	Adoption Relevance – General	Adoption Relevance – therapist performance	Adoption relevance – therapist multi-systems work
AR22	Compared to prior therapists, my therapist was more effective in helping us deal with problems we brought	Adoption Relevance – General	Adoption Relevance – therapist performance	
After working with my/our therapist,				
AR23	My/our family talks more openly about adoption	Outcomes – General	Outcomes – family outcome (outcome domain)	Outcomes – communicative openness (goal)
AR24	We feel closer as a family	Outcomes – General	Outcomes – family outcome (outcome domain)	Outcomes – relationships (goal)
AR25	I/we better understand my child's feelings about adoption	Outcomes – General	Outcomes – parent outcome (outcome domain)	Outcomes – adoption knowledge (goal)
AR26	I/we have parenting strategies that are better for my/our child	Outcomes – General	Outcomes – parent outcome (outcome domain)	Outcomes – parenting skills (goal)
AR27	I/we are more comfortable talking about my/our feelings about our family's adoption	Outcomes – General	Outcomes – family outcome (outcome domain)	Outcomes – communicative openness (goal)

Adoptive Family Demographic Questionnaire

1. Race/Ethnicity of Parents (check all that apply for both parents)

- American Indian/Native Alaskan
- Asian
- Black/African American
- Hawaiian/Pacific Islander
- Hispanic/Latino Origin
- Multi-race
- White/Caucasian
- Other – Specify other

2. Educational level (Please select the level of education of the parent with the highest level)

- High school/GED or less
- Trade or technical school/some college
- Associate degree
- Bachelor's degree
- Graduate degree (Masters or Doctorate)

3. Family income (Study 2, 2024)

- Less than \$50,000 annually
- \$50,000 to \$75,000 annually
- \$75,000 to \$100,000 annually
- More than \$100,000 annually
- I decline to answer this question

Family income (Study 1, 2020)

- Less than 30,000 annually
- \$30,000 to \$60,000 annually
- \$60,000 to \$90,000 annually
- More than \$90,000 annually
- I decline to answer this question

4. Type of adoption

Note: If you have adopted multiple children, please focus on the primary child about whom you sought mental health services. If there was not a primary child, please focus on the oldest child.

- Domestic private (for example, adoption of an infant from a birth parent, in some cases, facilitated by agency/attorney)
- Domestic/public (for example, adoption of a child from foster care)
- Inter-country If inter-country country of origin: _____

About your child

5. Current age of your child in years: _____

6. Gender of your child at birth: F/M

7. Race/ethnicity of child

- American Indian/Native Alaskan
- Asian
- Black/African
- American Hawaiian/Pacific Islander
- Hispanic/Latino Origin
- Multi-race
- White/Caucasian
- Other – Specify other _____

8. Is your adoption transracial or transcultural in any way? Y/N

9. Age at adoption

- Birth to 11 months
- 12 months to 3 years
- 4 to 7 years
- 8 to 11 years
- 12 to 15 years
- 16 years or older

10. Age of your child when therapy about which we are inquiring began?

- Younger than 4
- Age 4 to 7
- 8 to 11 years
- 12 to 15 years
- 16 years or older

Please estimate many other mental health therapists you/your family/your child saw in the past: ____ (numerical)

11. Since adoptive placement with your family, how frequently has your child had contact with either of his/her birth parents?

- No contact since adoptive placement
- Rarely (1 to several times across multiple years)
- Infrequently (1 or 2 times a year)
- Regular (every few months)
- More frequent than once a month
- Comment on parent contact (optional) _____

12. Since adoptive placement with your family, how frequently has your child had contact with birth relatives (other than birth parents)?

- No contact since adoptive placement
- Rarely (1 to several times across multiple years)
- Infrequently (1 or 2 times a year)
- Monthly (about 1 time a month)
- More frequent than once a month
- Comment on birth relative contact (optional) _____

13. Types of therapy your family received. Please report your best estimate of the number of sessions of each type therapy

Type of service	estimated # sessions
Individual sessions – only child was seen; no meaningful communication with parent	_____
Individual sessions – only parent was seen; no meaningful work with child	_____
Family sessions – both child and parent had a meaningful communication with therapist	_____
Parent group or other activity designed especially for adoptive parents	_____
Child/youth group or activity designed especially for adoptive children/youth	_____

14. How many other mental health therapists have you/your family/your child seen in the past to address concerns?

15. Additional comments about your family or child are welcome

Clinician Demographic Questionnaire

1. Gender

- Female
 Male

Identify as other

2. Race/Ethnicity

- American Indian/ Native Alaskan
 Asian
 Black/African
 American Hawaiian /Pacific Islander

- Hispanic/ Latino Origin
 Bi-/Multi-race
 White/Caucasian
Other – Specify other: _____

3. Highest educational degree

- Masters
 Doctorate
Other – Specify other: _____

4. Primary clinical license

- Licensed Professional Counselor (LPC)
 Licensed Clinical Social Worker (LCSW)
 Clinical Psychologist

- Marriage and Family Therapist (MFT)
Other – Specify other: _____

5. Professional Experience:

- Total # years working with families and children in any professional capacity (clinical and non-clinical):

Total # years working with families and children in a clinical role: _____

6. What theoretical orientation(s) most inform your clinical work? Rate as #1 the single most influential orientation. If there are others that influence your practice, rate as #2. For those that have little/no influence on your clinical work, rate #0.

- Cognitive-Behavioral
 Family Systems
 Holistic/Integrative
 Humanistic/Person-centered
 Psychodynamic/Psychoanalytic
Other: Specify other: _____

7. In what type of setting do you currently work? Please check all that apply.

- Adoption-specialty agency/organization
 Mental health agency – public or private
 Private clinical practice
 Family service agency - private, non-profit
 Hospital/medical-affiliated service/clinic
Other (please specify): _____

8. Do you have a personal connection to adoption? Please check all that apply

- No connection
 I am adoptive parent
 I am adopted person
 A close family member is adopted
 A close friend or family member has adopted a child

9. Please estimate the number of hours of training you have completed that focused on adoption-specific clinical issues and related assessment and intervention approaches and strategies?

10. Have you completed Training for Adoption Competency (TAC)?

Yes/No





Adoption Competent Practice: Toward an Empirically-Based Theory of Change

Summary of Findings from
Regression Analyses and
Structural Equation Modeling of
TAC Effectiveness Study Datasets



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Study 1

Funded by the Annie E. Casey Foundation Grant awarded to the Center for Adoption Support and Education, Burtonsville, MD - www.adoptionsupport.org

IRB Approved Study Protocol: Solutions IRB # 2019/02/17

Study 2

Funded by the Dave Thomas Foundation for Adoption. Awarded to the Center for Adoption Support and Education, Burtonsville, MD - www.adoptionsupport.org

IRB Approved Study Protocol: Solutions IRB – Protocol ID: 533 2024/05/24

Analyses of Combined Datasets from Studies #1 and #2

Funded by the Dave Thomas Foundation for Adoption. Grant awarded to the Center for Adoption Support and Education, Burtonsville, MD – www.adoptionsupport.org

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Executive Summary

Introduction and Analytic Process

This is the report of findings from analyses of data from the Training for Adoption Competency (TAC) Effectiveness Studies in pursuit of empirical validation for an adoption competent practice theory of change. Regression analysis and structural equation modeling (SEM) were employed in sequential steps to first identify variables that are predictive for outcomes, then using SEM, to test hypothesized structural pathways to outcomes.

Regression analysis estimates the strength, direction, and significance of relationships (Montgomery et al., 2012) and in this study served as the initial, exploratory method to quantify the extent to which key variables (predictor or independent variables) are associated with outcomes (dependent variables). The analyses provided insights into which variables are strong predictors and which are weak or non-significant predictors that could justifiably be set aside in building a robust, empirically based theory of change. The exploratory phase using regression analysis was crucial in going beyond theory to ground the analyses in data-driven insights. Regression provided empirical clues for theorized relationships in the theory of change; the iterative process helped ensure that the most robust variables were used in SEM.

Thirty-two (32) combinations of variables were subjected to regression analyses. However, only variables with the strongest evidence of predictive value were included in SEM. Variables found through regression analyses to have the strongest evidence of predictive value for treatment outcomes were adoption relevance, the TAC training, family systems orientation, satisfaction, and personal connection to adoption. The hypothesized relationships were then arranged into a structural equation model and the relative strength of each connection was tested when considered as a whole. Key variables that

were retained and tested were the TAC training, connection to adoption (therapist's personal tie to adoption), family systems approach, therapeutic alliance, adoption relevance of treatment, general satisfaction (with treatment services, clinician performance and outcomes), and all outcomes (includes measures of child and family functioning and well-being outcomes).

Discussion

The findings from this study provide empirical support for a theory of change in adoption-competent mental health practice, highlighting the pivotal role of specialized training in enhancing treatment effectiveness for adoptive families. Through sequential regression analyses and structural equation modeling (SEM), the TAC training emerged as a foundational exogenous variable, exerting strong direct effects on adoption-relevant treatment practices and therapeutic alliance while also promoting a family systems orientation. These results align with prior evidence from the TAC Effectiveness Studies, which demonstrated that TAC-trained clinicians deliver more satisfying, alliance-strengthening, and adoption-sensitive interventions, yielding superior outcomes in family well-being and child functioning compared to comparably qualified clinicians without adoption competency training.

Central to the theory of change is the mediating role of adoption relevance, which explained up to 73.2% of variance in treatment outcomes in regression models and showed a significant direct path to all outcomes in SEM. This construct, encompassing targeted methods (e.g., psychoeducation, parenting skills development, multi-systems interventions) and foci (e.g., normalization, communicative openness, identity, trauma, loss and grief, family cohesion), appears to be the primary mechanism through which adoption competency training translates into tangible benefits. The strong covariance between adoption relevance and therapeutic alliance further suggests a synergistic relationship, where adoption-relevant

practices reinforce the clinician-family bond, indirectly bolstering outcomes. These patterns corroborate adoption competency research, which posits that attuned, evidence-based interventions addressing the unique dynamics of adoptive families—such as attachment disruptions and identity formation—outperform generic approaches (Pinderhughes & Brodzinsky, 2019).

Interestingly, while adoption competency training demonstrated robust predictive power, its direct effect on outcomes was marginal, underscoring the importance of intermediary variables like adoption relevance. This finding challenges simplistic assumptions that training alone suffices, emphasizing instead the need for training to manifest in observable practice changes. Variables such as clinicians' personal connection to adoption and family systems orientation, though theoretically relevant, exhibited limited downstream impacts. For instance, personal connection enhanced therapeutic alliance but not adoption relevance or outcomes, suggesting that experiential ties may foster empathy without necessarily driving competency-specific behaviors. Similarly, family systems orientation, while predicted by adoption competency training, lacked significant paths to alliance, satisfaction, or outcomes, possibly due to its broader applicability beyond adoption contexts. General satisfaction, explored as a potential mediator, showed no significant inputs but mediated the adoption relevance-outcomes link, indicating it captures perceptual aspects of treatment efficacy rather than core mechanisms.

The exploratory regression phase was instrumental in refining the model, revealing that clinician experience and treatment dosage had minimal or nonlinear predictive value, justifying their exclusion from SEM to maintain parsimony.

Limitations

Limitations must be acknowledged. The sample, drawn from five states, may not fully generalize to diverse cultural or international contexts, where adoption dynamics vary. Self-reported measures, while reliable (e.g., AROS, MHSIP), could introduce bias, and the cross-sectional design limits causal inferences despite SEM's directional modeling.

Collinearity and residual issues in some regressions necessitated variable pruning, potentially overlooking nuanced interactions. Future research should employ longitudinal designs to track pathways over time, incorporate objective outcome measures (e.g., behavioral observations), and test moderators like family demographics or child age. Expanding to key sub-groups (e.g., transracial adoptions; types of adoption) could refine the theory.

Conclusions and Implications

This study advances an empirically based theory of change for adoption competent practice, demonstrating that adoption competency training drives adoption-relevant interventions and strong therapeutic alliances, which in turn promote superior treatment outcomes for adoptive families. Integrating regression and SEM provides robust evidence that adoption relevance serves as the core mediator, with large effect sizes underscoring the generalizability of these pathways. These findings affirm the efficacy of adoption competency training in improving treatment experiences and outcomes for adoptive families. Ultimately, investing in such training holds promise for effectively supporting the long-term permanency and well-being of adoptive families, with broader implications for child welfare systems.

The high variance explained by the final regression model (95.0%) and the SEM's holistic fit reinforce the model's validity, with effect sizes comparable to or exceeding those in prior studies of competency-based trainings in child welfare (e.g., large to very large effects favoring adoption competency-trained clinicians). These results extend the literature by moving beyond descriptive comparisons to a testable structural framework, addressing calls for empirically grounded theories in adoption mental health (Smith et al., 2018).

Implications for practice are profound: mental health providers serving adoptive families should prioritize adoption competency training to embed adoption-relevant methods and foci into their work. Policymakers and agencies could mandate such training for community-based clinicians, potentially improving service equity and reducing long-term family distress.

Adoption Competent Practice: Toward an Empirically Based Theory of Change

Introduction

This is the report of findings from deeper analyses of data from the Training for Adoption Competency (TAC) Effectiveness Studies in pursuit of empirical validation for an adoption competent practice theory of change. The TAC Effectiveness Studies assessed the effects of the TAC on the quality and effectiveness of community-based outpatient mental health services with adoptive families and produced evidence that adoption competent practices produce better treatment experiences and outcomes for adoptive families.

Methods

These analyses employ regression analysis and structural equation modeling (SEM) in sequential steps. Regression analysis is better used with more simple models with observed variables and exploratory analyses; whereas SEM is particularly well-suited for more confirmatory research where a theoretical model is specified. First, regression was used to identify variables that are predictive for outcomes. Then, SEM was used to test the structural pathways to outcomes.

Regression Analysis

Regression analysis estimates the strength, direction, and significance of relationships (Montgomery et al., 2012). In this study, regression analysis served as the initial, exploratory method to quantify the extent to which key variables (predictor or independent variables) are associated with outcomes (dependent variables). The analyses provided insights into which variables are strong predictors and which are weak or non-significant predictors that could justifiably be set aside in building a robust, empirically-based theory of change. Regression analyses also tested assumptions like multicollinearity (i.e., high correlation among predictors) and the normality of residuals.

→ **Collinearity** occurs when two or more predictor variables in a regression analysis are highly correlated with each other. When there is high correlation, it becomes difficult to isolate the contribution of each predictor to the outcome, potentially leading to incorrect conclusions about their importance. The Durbin-Watson (DW) statistic is used to test autocorrelation in the residuals of a regression model; DW ranges from 0 to 4; a value of 2 is ideal (indicating no autocorrelation); values < 2 suggest positive autocorrelation; values > 2 suggest negative autocorrelation. In general, a DW value between 1.5 and 2.5 is considered acceptable; values outside this range warrant caution in drawing conclusions. While collinearity complicates predictor effects, the Durbin-Watson statistic ensures residuals are random – both critical for valid regression (and SEM) results.

→ **Normality of residuals** refers to the assumption that the differences between observed and predictive values in a regression analysis follow a normal distribution. Normality of residuals is typically detected visually using a histogram or density plot: residuals should be symmetrically distributed around zero with few extremes. A bell-shaped curve suggests normality, while skewness or multiple peaks indicate deviation. Normality ensures the regression (and SEM) model aligns with theoretical assumptions, making results trustworthy for predicting outcomes.

The exploratory phase using regression analysis was crucial in going beyond theory to ground the analyses in data-driven insights. Regression provided empirical clues for theorized relationships in the theory of change and helped define the structural paths by helping identify significant predictors to become candidate exogenous (independent) or endogenous (dependent/intermediate) variables in the SEM diagram.

This iterative process helped ensure the SEM model is both parsimonious and theoretically sound and that the most robust variables were used in SEM. SEM extends the regression by allowing simultaneous estimation of multiple relationships that can test a theory of change by modeling directed paths (e.g., intervention through mediator to outcome) and assess overall model fit to data.

Structural Equation Modeling

While regression analyses typically model one dependent variable at a time and can oversimplify complex systems, SEM can test the full theoretical structure, providing stronger evidence than regression alone by evaluating holistic fit and indirect effects. SEM allows for the simultaneous estimation of multiple relationships, including direct and indirect effects, mediating variables, and latent constructs (Bollen, 1989).

In this study, SEM provided empirical validation for the theory of change. While a broad range of variables were examined using regression analyses, only variables with the strongest evidence of predictive value were included in SEM. Those with collinearity issues and/or excessive deviation from normality were excluded from SEM. However, findings from 32 combinations of variables subjected to regression analyses are reported in Appendix A and organized from most to least predictive strength.

Table 1. Variables Defined

Variables	Definition	Measures*
Outcomes	Treatment outcomes	AR23-AR27; MHSIP S7-S12
Clinician Variables		
TAC-trained/not trained	Clinician training status	CDQ, item #10
Experience	Years professional experience; all & clinical	CDQ, item #5
Orientation	Primary theoretical orientation; family systems/not family systems	CDQ, item #6
Connection to adoption	Whether clinician has a personal connection to adoption; no/any connection and no/close (e.g. adoptive parent or adoptee)	CDQ, item #8
Therapeutic alliance	Therapeutic alliance	TASCP, items A1-A5
Satisfaction	Satisfaction with services, clinician performance, & outcomes; general based on combination of all	MHSIP, items S1-S12
Adoption relevance	Adoption relevance of treatment	AROS, AR1-AR27
Methods	Use of psychoeducation, parenting skills development, and multi-systems work	AR1-AR21
Foci	Normalization, communicative openness, identity development, trauma & attachment, loss & grief, family cohesion & attunement.	AR1-26
Aggregate sessions	# of treatment sessions of all types reported by families; serves as proxy for treatment dosage	AFDQ, item #13

*CDQ = Clinician Demographic Questionnaire AROS = Adoption Relevance and Outcomes Scale TASCP = Therapeutic Alliance Scale for Caregivers AFDQ = Adoptive Family Demographic Questionnaire MHSIP = Mental Health Statistical Improvement Project Family Satisfaction Survey

Findings

Findings from Regression Analysis

The primary interest was in determining variables that most strongly and directly predicted overall treatment outcomes. Clinician-related predictive variables examined were adoption competency training, experience (clinical and non-clinical), family systems orientation, and having a personal connection to adoption. Treatment-related variables examined were aggregate number of treatment sessions, adoption relevance of treatment, an aggregate of treatment foci, treatment methods, and multi-systems approach, all of which hypothetically contributed to better treatment outcomes. During this exploratory step, satisfaction, therapeutic alliance, and adoption relevance were explored as both dependent (outcomes) and independent (contributing) variables. Outcomes was an aggregate of child, parent, and family outcomes and each of the three outcome subsets was also explored. Findings from exploratory analyses of 32 combinations of variables are reported and organized from most to least predictive value in Appendix A.

Variables with strongest evidence of predictive value

Variables found through regression analyses to have the strongest evidence of predictive value for treatment outcomes were adoption relevance of treatment, the TAC training, family systems/not orientation, satisfaction, and personal connection to adoption.

When examined individually, adoption relevance explained 73.2 percent of the variance in treatment outcomes. Further, collinearity issues were minimal and analysis of residuals was great – both serving to increase confidence in the significance of this predictor.

→ Treatment outcomes (all) as a function of adoption relevance

- A statistically significant regression model, $F(1,241) = 662.061, p < .001$

- 73.2% of variance in treatment outcomes explained by adoption relevance
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.912; ideally near 2.0)
- With one predictor, this is equivalent to a correlation of 0.856, also statistically significant, $p < .001$
- Analysis of residuals are great

Exploring the components of adoption relevance separately (i.e., treatment methods, foci, and multi-systems approach) all demonstrate strong predictive value and at least acceptable collinearity and analysis of residuals. This would suggest a combined influence, not strongly favoring methods, foci, or approach.

→ Treatment outcomes (all) as a function of methods

- A statistically significant regression model, $F(3,240) = 226.069, p < .001$
- 73.5% of variance in treatment outcomes explained by methods (psychoeducation, parenting, and multi-systems)
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.935; ideally near 2.0)
- Analysis of residuals are great

→ Treatment outcomes (all) as a function of foci

- A statistically significant regression model, $F(6,253) = 260.447, p < .001$
- 85.7% of variance in treatment outcomes explained by foci (normalization, communicative openness, identity, trauma, loss & grief, and family cohesion & attunement)
- Durbin-Watson = 1.888; which is very good, but VIFs (variance inflation factors) are somewhat elevated, likely due to repeated use of AR15 as a predictor
- Analysis of residuals are acceptable

→ Treatment outcomes (all) as a function of multi-systems

- A statistically significant regression model, $F(1,278) = 276.129$, $p < .001$
- 49.7% of variance in treatment outcomes explained by multi-systems
- Collinearity issues are okay (Durbin-Watson = 1.749; ideally near 2.0)
- Analysis of residuals are acceptable

When examined individually, the TAC training explained 75.1 percent of the variance in treatment outcomes. Although the level of variance is higher than for adoption relevance (73.2 percent) and significance remains at the $< .001$ level, issues with collinearity indicate correlation with additional variables that make it difficult to isolate the contribution of training alone to outcomes. Poor analysis of residuals further weaken confidence in training alone producing the treatment outcomes. Exploratory analyses such as these suggest that in a theory of change chart adoption relevance will likely have a more direct causal pathway to treatment outcomes than training.

→ Treatment outcomes (all) as a function of training

- A statistically significant regression model, $F(1,280) = 848.387$, $p < .001$
- 75.1% of variance in treatment outcomes explained by training
- Collinearity issues are present (Durbin-Watson = 1.218; ideally near 2.0)
- Analysis of residuals is not good

Examining the relationship of adoption relevance and the TAC training, it was found that training explained 68 percent of the variance in adoption relevance; minimal collinearity suggests a rather direct relationship between training and adoption relevant practices that is not confounded by strong relationships to other variables.

→ Adoption relevance outcome as a function of training

- A statistically significant regression model, $F(1,254) = 543.082$, $p < .001$
- 68% of variance in adoption relevance explained by training
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.825; ideally near 2.0)
- With one predictor, this is equivalent to a correlation of 0.825, also statistically significant, $p < .001$

Adding variables that should theoretically enhance understandings of adoption, such as clinician experience and personal connection to adoption, however, did not strengthen the predictive value of training. The combination, however, was found to actually reduce the predictive value of training from 68 percent to 67.6 percent of variance. Exploratory analyses such as these served as additional indicators that clinician experience and personal connection to adoption play a lesser role in clinicians' engagement in adoption relevant treatment. They may still contribute positively to treatment outcomes but their pathway is not through enhancing the effects of training.

→ Adoption relevance as a function of training, both measures of experience, and personal connection to adoption

- A statistically significant regression model, $F(4,246) = 131.489$, $p < .001$
- 67.6% of variance in relevance explained by training, experience, and personal connection to adoption
- Collinearity issues are minimal (Durbin-Watson = 1.711; ideally near 2.0)
- Analysis of residuals is okay

Following analyses of 32 combinations of variables, the six variables that had demonstrated the strongest predictive value were analyzed together and it was found that they explained 95 percent of variance with minimal collinearity and strong analysis of residuals. All coefficients are reported in Table 2.

→ **Treatment outcomes (all) as a function of training, adoption relevance, satisfaction, therapeutic alliance, family systems, and personal connection to adoption**

- A statistically significant regression model, $F(6,225) = 735.384$, $p < .001$
- 95.0% of variance in treatment outcomes explained by adoption relevance, satisfaction, therapeutic alliance, family systems, and personal connection to adoption
- Collinearity issues are minimal: Durbin-Watson = 1.828 (ideally near 2.0); all variance inflation factors are under 10
- Analysis of residuals are great

Table 2. Results of Regression Analyses

Predictors	Estimate	SE	95% CI		p
			LL	UL	
TAC training	1.016	.520	-.009	2.041	.052
Adoption relevance	.105	.013	.080	.131	<.001
Satisfaction	.783	.032	.720	.846	<.001
Therapeutic alliance	-.268	.070	-.406	-.131	<.001
Family systems	.529	.299	-.060	1.118	.078
Personal connection to adoption	-.676	.330	-1.325	-.026	.042
(Constant)	-5.184	1.092	-7.336	-3.031	<.001

Examples of variables with little or complicated predictive value

Several variables that at least theoretically should have contributed to better treatment outcomes were omitted from further analyses as the result of findings from regression analysis. One such variable was clinician experience in working with families. Examined alone, clinical and total years' experience explained only 3.4 percent of treatment outcomes. When analyzed in addition to training, clinical experience increased variance by only 0.4 percent and total experience actually reduced variance by 0.1 percent. Another example was aggregate number of treatment sessions which served as a proxy for level of treatment "dosage." Although aggregate sessions performed well in combination with other variables in predicting treatment outcomes, its non-linear distribution was determined to be problematic for further analysis. That is, with more sessions (higher dosage), outcomes improve, but only to a point. For some families, very high numbers of sessions corresponded with lower treatment outcomes, suggesting an inverted U relationship. For this reason, aggregate number of sessions was dropped from consideration in the subsequent SEMs. Family systems theoretical orientation had mixed results in the regression analyses. When combined with other predictors, the overall model did well, but the relative contribution of this variable was not statistically significant. Family systems orientation was retained in the subsequent SEMs due to its strong association with adoption competent practice, but was expected to have a weaker influence on treatment outcomes relative to other variables retained.

Findings from SEM

Variables found through regression analyses to have the strongest evidence of predictive value for treatment outcomes were adoption relevance, training, family systems orientation, satisfaction, and personal connection to adoption.

Statistical results of the SEM reported out by hypothesized paths are reported in Table 3 that provides estimates (strength and direction of relationships, positive or negative), standard errors (SE, precision of estimates), 95% confidence intervals (CI, range where the true value likely lies), and p-values ($p < .05$ indicates statistical significance, meaning the effect is reliable).

The hypothesized relationships (based on theory of change and regression findings) were then arranged into a structural equation model and the relative strength of each connection was tested when considered as a whole. A simplified version of the model with hypothesized paths tested is shown in Figure 1. The figure visually maps these relationships, with arrows showing hypothesized paths (H01–H18) and their strength. Solid lines indicate statistically significant relationships; dash lines denote relationships that exist but are not statistically significant.

Key variables retained and tested were the TAC training, connection to adoption (therapist's personal tie to adoption), family systems approach, therapeutic alliance, adoption relevance of treatment, general satisfaction (with treatment services, clinician performance and outcomes), and all outcomes (includes measures of child and family functioning and well-being outcomes).

The TAC Training

The TAC training is a foundational variable showing arrows to multiple variables, reflecting its broad influence. The TAC training strongly predicts adoption relevance (H07; estimate = 29.881, $p < .001$); the large estimate and tight confidence interval (27.221 to 32.541) suggest robust effect. The TAC training also strongly predicts therapeutic alliance (H10; estimate = 5.145, $p < .001$) and positively predicts a family systems orientation (H12; estimate = 0.569, $p < .001$).

The TAC training also has a marginal direct effect on all outcomes (H04; estimate = 4.062, $p = .059$), suggesting a positive contribution to treatment outcomes but with borderline significance. Similarly, the TAC training contributes to satisfaction but falls short of significant effect (H15; estimate = 0.343, $p = .380$).

Connection to Adoption

Connection to adoption plays a more limited role in producing treatment outcomes compared to the TAC training and adoption relevance. Connection does positively predict therapeutic alliance (H11; estimate = 0.982, $p = .003$), improving the clinician-client bond. However, it has no significant effect on adoption relevance (H08; estimate = 1.823, $p = .268$), on satisfaction (H16; estimate = 0.363, $p = .253$), or on outcomes (H05; estimate = -1.992, $p = .217$).

Family Systems Orientation

Although influenced by the TAC training, family systems approach shows little downstream effects. It is strongly predicted by the TAC training (H12; estimate = 0.569, $p < .001$). It may contribute to but has no significant effect on therapeutic alliance (H09; estimate = 0.447, $p = .115$), on general satisfaction (H17; estimate = -0.139, $p = .605$), or on outcomes (H03; estimate = 0.970, $p = .422$).

Adoption Relevance

Adoption relevance is a central variable with both incoming and outgoing arrows. Adoption relevance is strongly predicted by the TAC training (H07; estimate = 29.881, $p < .001$); connection to adoption may have an effect on adoption relevance but it is not significant (H08; estimate = 1.823, $p = .268$). Adoption relevance positively predicts all treatment outcomes (H01; estimate = 0.184, $p = .002$). It also has a strong positive covariance with therapeutic alliance (H18; estimate = 7.667, $p < .001$) meaning that they vary together. It appears to have an effect but not a significant one on general satisfaction (H13; estimate = -0.011, $p = .264$). In sum, adoption relevance directly improves all outcomes and serves as a key link from the TAC training to treatment success.

Therapeutic Alliance

Therapeutic alliance is influenced by multiple inputs. The TAC training is the strongest predictor of therapeutic alliance (H10; estimate = 5.145, $p < .001$) followed by connection to adoption (H11; estimate = 0.982, $p = .003$). Family systems orientation also contributes but not at a significant level (H09; estimate = 0.447, $p = .115$). As noted above, there is strong covariance with adoption relevance (H18; estimate = 7.667, $p < .001$). Therapeutic alliance contributes to but has not significant effect on general satisfaction (H14; estimate = 0.011, $p = .780$) and on all outcomes (H02; estimate = 0.937, $p = .198$). Therapeutic alliance has no reliable direct effect but may contribute indirectly via its covariance with adoption relevance, as shown in the chart.

General Satisfaction

General satisfaction is influenced by multiple inputs but none are significant. These include adoption relevance (H13; estimate = -0.011, $p = .264$); therapeutic alliance (H14; estimate = 0.011, $p = .780$); The TAC training (H15; estimate = 0.343, $p = .380$); connection to adoption (H16; estimate = 0.363, $p = .253$); and family systems orientation (H17; estimate = -0.139, $p = .605$). General satisfaction's primary role is as a mediator between adoption relevance and all outcomes (H06), explaining part of the relationship between adoption relevance and all outcomes.

Figure 1. Model Based on Structural Equation Tests of Hypothesized Relationships

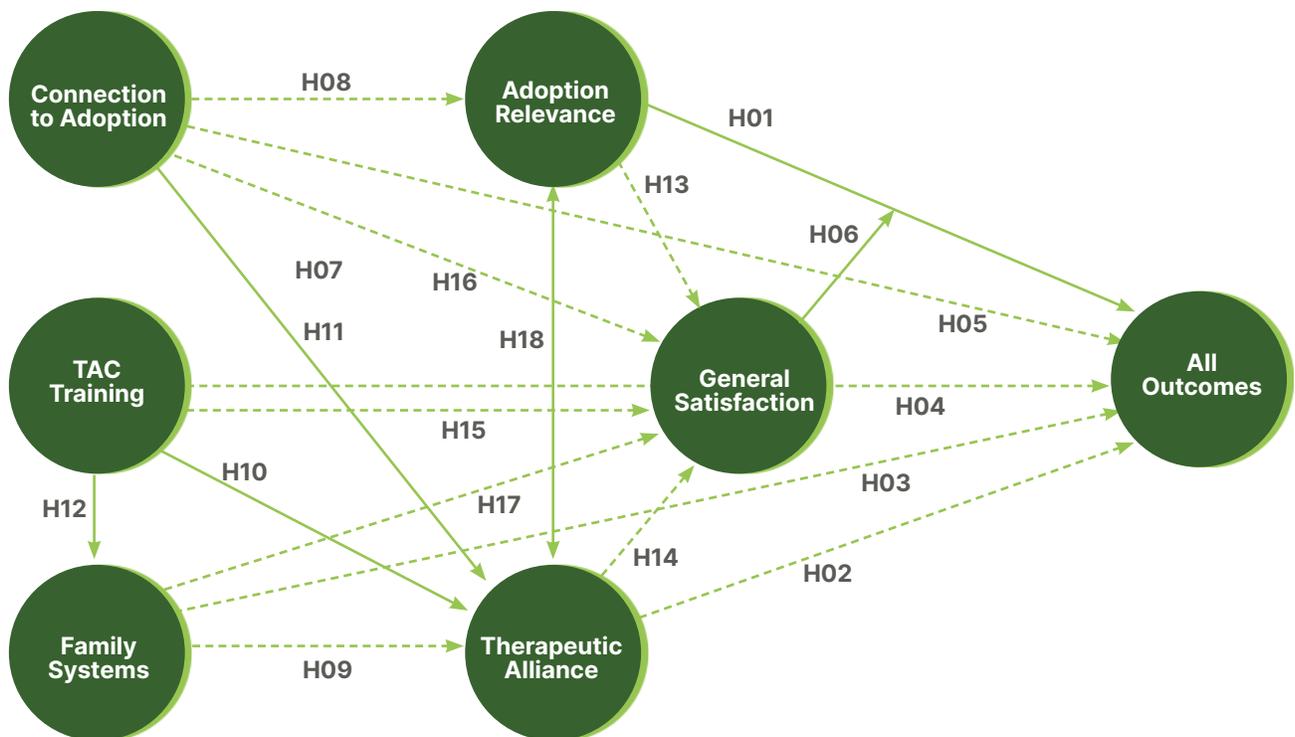


Table 3. Results of SEM by Hypothesized Paths

Hypothesized path	95% CI				
	Estimate	SE	LL	UL	p
H01. Adoption relevance → All outcomes	0.184	0.058	0.071	0.298	.002
H02. Therapeutic alliance → All outcomes	0.937	0.728	-0.490	2.364	.198
H03. Family systems → All outcomes	0.970	1.209	-1.400	3.340	.422
H04. TAC training → All outcomes	4.062	2.151	-0.154	8.279	.059
H05. Connection to adoption → All outcomes	-1.992	1.613	-5.152	1.169	.217
H06. General satisfaction → H01	-0.139	0.018	-0.175	-0.103	< .001
H07. TAC training → Adoption relevance	29.881	1.357	27.221	32.541	< .001
H08. Connection to adoption → Adoption relevance	1.823	1.646	-1.403	5.048	.268
H09. Family systems → Therapeutic alliance	0.447	0.283	-0.108	1.002	.115
H10. TAC training → Therapeutic alliance	5.145	0.312	4.533	5.757	< .001
H11. Connection to adoption → Therapeutic alliance	0.982	0.333	0.329	1.636	.003
H12. TAC training → Family systems	0.569	0.048	0.474	0.663	< .001
H13. Adoption relevance → General satisfaction	-0.011	0.010	-0.031	0.009	.264
H14. Therapeutic alliance → General satisfaction	0.011	0.040	-0.066	0.089	.780
H15. TAC training → General satisfaction	0.343	0.390	-0.422	1.107	.380
H16. Connection to adoption → General satisfaction	0.363	0.318	-0.260	0.985	.253
H17. Family systems → General satisfaction	-0.139	0.269	-0.666	0.388	.605
H18. Covariance between Adoption relevance and Therapeutic alliance	7.667	1.367	4.988	10.346	< .001

Discussion

The findings from this study provide empirical support for a theory of change in adoption-competent mental health practice, highlighting the pivotal role of specialized training in enhancing treatment effectiveness for adoptive families. Through sequential regression analyses and structural equation modeling (SEM), we identified key pathways linking clinician training in adoption competency to improved family outcomes. Notably, the TAC training emerged as a foundational exogenous variable, exerting strong direct effects on adoption-relevant treatment practices (estimate = 29.881, $p < .001$) and therapeutic alliance (estimate = 5.145, $p < .001$), while also promoting a family systems orientation (estimate = 0.569, $p < .001$). These results align with prior evidence from the TAC Effectiveness Studies, which demonstrated that TAC-trained clinicians deliver more satisfying, alliance-strengthening, and adoption-sensitive interventions, yielding superior outcomes in family well-being and child functioning compared to comparably qualified clinicians without adoption competency training.

Central to the theory of change is the mediating role of adoption relevance, which explained up to 73.2% of variance in treatment outcomes in regression models and showed a significant direct path to all outcomes in SEM (H01: estimate = 0.184, $p = .002$). This construct, encompassing targeted methods (e.g., psychoeducation, parenting skills development, multi-systems interventions) and foci (e.g., normalization, communicative openness, identity, trauma, loss and grief, family cohesion), appears to be the primary mechanism through which adoption competency training translates into tangible benefits. The strong covariance between adoption relevance and therapeutic alliance (H18: estimate = 7.667, $p < .001$) further suggests a synergistic relationship, where adoption-sensitive practices reinforce the clinician-family bond, indirectly bolstering outcomes. These patterns corroborate adoption competency research, which posits that attuned, evidence-based interventions addressing the unique dynamics of adoptive

families—such as attachment disruptions and identity formation—outperform generic approaches (Pinderhughes & Brodzinsky, 2019).

Interestingly, while adoption competency training demonstrated robust predictive power, its direct effect on outcomes was marginal (H04: estimate = 4.062, $p = .059$), underscoring the importance of intermediary variables like adoption relevance. This finding challenges simplistic assumptions that training alone suffices, emphasizing instead the need for training to manifest in observable practice changes. Variables such as clinicians' personal connection to adoption and family systems orientation, though theoretically relevant, exhibited limited downstream impacts. For instance, personal connection enhanced therapeutic alliance (H11: estimate = 0.982, $p = .003$) but not adoption relevance or outcomes, suggesting that experiential ties may foster empathy without necessarily driving competency-specific behaviors. Similarly, family systems orientation, while predicted by adoption competency training, lacked significant paths to alliance, satisfaction, or outcomes, possibly due to its broader applicability beyond adoption contexts. General satisfaction, explored as a potential mediator, showed no significant inputs but mediated the adoption relevance-outcomes link (H06: estimate = -0.139, $p < .001$), indicating it captures perceptual aspects of treatment efficacy rather than core mechanisms.

The exploratory regression phase was instrumental in refining the model, revealing that clinician experience and treatment dosage (aggregate sessions) had minimal or nonlinear predictive value, justifying their exclusion from SEM to maintain parsimony.

Limitations

Limitations must be acknowledged. The sample, drawn from five states, may not fully generalize to diverse cultural or international contexts, where adoption dynamics vary. Self-reported measures, while reliable (e.g., AROS, MHSIP), could introduce bias, and the cross-sectional design limits causal inferences despite SEM's directional modeling.

Collinearity and residual issues in some regressions necessitated variable pruning, potentially overlooking nuanced interactions. Future research should employ longitudinal designs to track pathways over time, incorporate objective outcome measures (e.g., behavioral observations), and test moderators like family demographics or child age. Expanding to key sub-groups (e.g., transracial adoptions; types of adoption) could refine the theory.

Conclusions

This study advances an empirically based theory of change for adoption competent practice, demonstrating that adoption competency training drives adoption-relevant interventions and strong therapeutic alliances, which in turn promote superior treatment outcomes for adoptive families. Integrating regression and SEM provides robust evidence that adoption relevance serves as the core mediator, with large effect sizes underscoring the generalizability of these pathways. These findings affirm the efficacy of adoption competency training in improving treatment experiences and outcomes for adoptive families. Ultimately, investing in such training holds promise for effectively supporting the long-term permanency and well-being of adoptive families, with broader implications for child welfare systems and mental health systems.

The high variance explained by the final regression model (95.0%) and the SEM's holistic fit reinforce the model's validity, with effect sizes comparable to or exceeding those in prior studies of competency-based trainings in child welfare (e.g., large to very large effects favoring adoption competency-trained clinicians). These results extend the literature by moving beyond descriptive comparisons to a testable structural framework, addressing calls for empirically grounded theories in adoption mental health (Smith et al., 2018).

Implications for practice are profound: mental health providers serving adoptive families should prioritize adoption competency training to embed adoption-relevant methods and foci into their work. Policymakers and agencies could mandate such training for community-based clinicians, potentially improving service equity and reducing long-term family distress.

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Appendix B. Results of Regression Analyses

Variables with Strongest Predictive Value

All Treatment Outcomes

→ Treatment outcomes (all) as a function of adoption relevance

- A statistically significant regression model, $F(1,241) = 662.061$, $p < .001$
- 73.2% of variance in treatment outcomes explained by adoption relevance
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.912; ideally near 2.0)
- With one predictor, this is equivalent to a correlation of 0.856, also statistically significant, $p < .001$
- Analysis of residuals are great

→ Treatment outcomes (all) as a function of methods

- A statistically significant regression model, $F(3,240) = 226.069$, $p < .001$
- 73.5% of variance in treatment outcomes explained by methods (psychoeducation, parenting, and multi-systems)
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.935; ideally near 2.0)
- Analysis of residuals are great

→ Treatment outcomes (all) as a function of foci

- A statistically significant regression model, $F(6,253) = 260.447$, $p < .001$
- 85.7% of variance in treatment outcomes explained by foci (normalization, communicative openness, identity, trauma, loss & grief, and family cohesion & attunement)
- Durbin-Watson = 1.888; which is very good, but VIFs (variance inflation factors) are somewhat elevated, likely due to repeated use of AR15 as a predictor
- Analysis of residuals are acceptable

→ Treatment outcomes (all) as a function of multi-systems

- A statistically significant regression model, $F(1,278) = 276.129$, $p < .001$
- 49.7% of variance in treatment outcomes explained by multi-systems
- Collinearity issues are okay (Durbin-Watson = 1.749; ideally near 2.0)
- Analysis of residuals are acceptable

→ All treatment outcomes as a function of training, both measures of experience, aggregate sessions, family systems/not, alliance (A1-5), satisfaction (only S1-6), relevance (AR1-22), and personal connection to adoption (y/n)

- A statistically significant regression model, $F(9,228) = 156.407$, $p < .001$
- 85.5% of variance in treatment outcomes explained by training, experience, sessions, family systems/not orientation, alliance, satisfaction (limited), relevance, and personal connection to adoption
- Collinearity issues are minimal (Durbin-Watson = 2.122; ideally near 2.0)
- Analysis of residuals are very good

Satisfaction

→ Satisfaction (S1-13) as a function of training, both measures of experience, family systems/not orientation, and relevance (AR1-22)

- A statistically significant regression model, $F(5,233) = 131.288$, $p < .001$
- 73.2% of variance in satisfaction explained by training, experience, family systems/not orientation, and relevance
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 2.094; ideally near 2.0)
- Analysis of residuals is very good

Parent Outcomes

→ Parent outcomes as a function of adoption relevance

- A statistically significant regression model, $F(1,250) = 584.937, p < .001$
- 69.9% of variance in parent outcomes explained by adoption relevance
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.884; ideally near 2.0)
- Analysis of residuals are good

Parent outcomes as a function of methods

- A statistically significant regression model, $F(3,249) = 195.905, p < .001$
- 69.9% of variance in parent outcomes explained by methods (psychoeducation, parenting, and multi-systems)
- Collinearity issues are minimal (Durbin-Watson = 1.892; ideally near 2.0)
- Analysis of residuals are good

→ Parent outcomes as a function of training and total years of experience

- A statistically significant regression model, $F(2,286) = 222.534, p < .001$
- 60.6% of variance in parent outcomes explained by training and total years of experience
- Collinearity issues are nonexistent (Durbin-Watson = 1.908; ideally near 2.0)
- Analysis of residuals is okay

→ Parent outcomes as a function of training and years of only clinical experience

- A statistically significant regression model, $F(2,286) = 230.123, p < .001$
- 61.4% of variance in parent outcomes explained by training and years of only clinical experience
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.949; ideally near 2.0)
- Analysis of residuals is okay

Child Outcomes

→ Child outcomes as a function of adoption relevance

- A statistically significant regression model, $F(1,249) = 261.734, p < .001$
- 51.1% of variance in child outcomes explained by adoption relevance
- Collinearity issues are nonexistent (Durbin-Watson = 1.991; ideally near 2.0)
- Analysis of residuals are okay/good

→ Child outcomes as a function of methods

- A statistically significant regression model, $F(3,248) = 87.648, p < .001$
- 50.9% of variance in child outcomes explained by methods (psychoeducation, parenting, and multi-systems)
- Collinearity issues are nonexistent (Durbin-Watson = 2.010; ideally near 2.0)
- Analysis of residuals are okay/good

→ Child outcomes as a function of multi-systems

- A statistically significant regression model, $F(1,288) = 166.618, p < .001$
- 36.4% of variance in child outcomes explained by multi-systems
- Collinearity issues are okay (Durbin-Watson = 1.734; ideally near 2.0)
- Analysis of residuals are good

Adoption relevance

→ Adoption relevance outcome as a function of training

- A statistically significant regression model, $F(1,254) = 543.082, p < .001$
- 68% of variance in adoption relevance explained by training
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.825; ideally near 2.0)
- With one predictor, this is equivalent to a correlation of 0.825, also statistically significant, $p < .001$

→ **Relevance (AR1-22) as a function of training, both measures of experience, and personal connection to adoption (y/n)**

- A statistically significant regression model, $F(4,246) = 131.489, p < .001$
- 67.6% of variance in relevance explained by training, experience, and personal connection to adoption
- Collinearity issues are minimal (Durbin-Watson = 1.711; ideally near 2.0)
- Analysis of residuals is okay

Variables with Some Predictive Value

Treatment Outcomes

Treatment outcomes (all) as a function of training

- A statistically significant regression model, $F(1,280) = 848.387, p < .001$
- 75.1% of variance in treatment outcomes explained by training
- Collinearity issues are present (Durbin-Watson = 1.218; ideally near 2.0)
- Analysis of residuals is not good

→ **Treatment outcomes (all) as a function of training and years of only clinical experience**

- A statistically significant regression model, $F(2,272) = 420.634, p < .001$
- 75.4% of variance in treatment outcomes explained by training and years of only clinical experience
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.889; ideally near 2.0)
- Analysis of residuals is not good

→ **Treatment outcomes (all) as a function of training and total years of experience**

- A statistically significant regression model, $F(2,272) = 412.783, p < .001$
- 75.0% of variance in treatment outcomes explained by training and total years of experience

- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.867; ideally near 2.0)
- Analysis of residuals is not good

Therapist Ratings

→ **Summative therapist items (S13, AR22) as a function of training, both measures of experience, and family systems/not orientation (primary only)**

- A statistically significant regression model, $F(4,280) = 102.953, p < .001$
- 58.9% of variance in summative therapist items explained by training, experience, and family systems/not orientation
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.863; ideally near 2.0)
- Analysis of residuals is not good

Family Outcomes

→ **Family outcomes as a function of foci**

- A statistically significant regression model, $F(6,257) = 350.343, p < .001$
- 88.9% of variance in family outcomes explained by foci (normalization, communicative openness, identity, trauma, loss & grief, and family cohesion & attunement)
- Durbin-Watson = 2.144; which is very good, but VIFs (variance inflation factors) are somewhat elevated, likely due to repeated use of AR15 and AR25 as predictors
- Analysis of residuals is not good

→ **Family outcomes as a function of training**

- A statistically significant regression model, $F(1,293) = 706.298, p < .001$
- 70.6% of variance in family outcomes explained by training
- Collinearity issues are present (Durbin-Watson = 1.414; ideally near 2.0)
- Analysis of residuals is not good

→ **Family outcomes as a function of multi-systems**

- A statistically significant regression model, $F(1,290) = 252.837, p < .001$
- 46.4% of variance in family outcomes explained by multi-systems
- Collinearity issues are not good/okay (Durbin-Watson = 1.501; ideally near 2.0)
- Analysis of residuals is not good

→ **Family outcomes as a function of training and total years of experience**

- A statistically significant regression model, $F(2,285) = 343.045, p < .001$
- 70.4% of variance in family outcomes explained by training and total years of experience
- Collinearity issues are minimal (Durbin-Watson = 1.791; ideally near 2.0)
- Analysis of residuals is bad

→ **Family outcomes as a function of training and years of only clinical experience**

- A statistically significant regression model, $F(2,285) = 347.887, p < .001$
- 70.7% of variance in family outcomes explained by training and years of only clinical experience
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.798; ideally near 2.0)
- Analysis of residuals is bad

Parent Outcomes

→ **Parent outcomes as a function of training**

- A statistically significant regression model, $F(1,294) = 432.784, p < .001$
- 59.4% of variance in family outcomes explained by training
- Collinearity issues are somewhat present (Durbin-Watson = 1.706; ideally near 2.0)
- Analysis of residuals is not good
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→ **Parent outcomes as a function of foci**

- A statistically significant regression model, $F(6,259) = 886.494, p < .001$
- 95.2% of variance in parent outcomes explained by foci (normalization, communicative openness, identity, trauma, loss & grief, and family cohesion & attunement)
- Durbin-Watson = 1.922; which is very good, but VIFs (variance inflation factors) are somewhat elevated, likely due to repeated use of AR15 as a predictor
- Analysis of residuals are not good

→ **Parent outcomes as a function of multi-systems**

- A statistically significant regression model, $F(1,291) = 261.554, p < .001$
- 47.2% of variance in parent outcomes explained by multi-systems
- Collinearity issues are not good/okay (Durbin-Watson = 1.499; ideally near 2.0)
- analysis of residuals are not good

Child Outcomes

→ **Child outcomes as a function of training**

- A statistically significant regression model, $F(1,293) = 471.509, p < .001$
- 61.8% of variance in family outcomes explained by training
- Collinearity issues are present (Durbin-Watson = 1.492; ideally near 2.0)
- Analysis of residuals is not good

→ **Child outcomes as a function of foci**

- A statistically significant regression model, $F(6,254) = 59.368, p < .001$
- 57.4% of variance in child outcomes explained by foci (normalization, communicative openness, identity, trauma, loss & grief, and family cohesion & attunement)
- Durbin-Watson = 1.955; which is very good, but VIFs (variance inflation factors) are somewhat elevated, likely due to repeated use of AR15 as a predictor
- Analysis of residuals are not good

→ **Child outcomes as a function of training and total years of experience**

- A statistically significant regression model, $F(2,282) = 227.924, p < .001$
- 61.5% of variance in child outcomes explained by training and total years of experience
- Collinearity issues are nonexistent (Durbin-Watson = 1.981; ideally near 2.0)
- Analysis of residuals is very bad

→ **Child outcomes as a function of training and years of only clinical experience**

- A statistically significant regression model, $F(2,282) = 229.423, p < .001$
- 61.7% of variance in child outcomes explained by training and years of only clinical experience
- Collinearity issues are minimal or nonexistent (Durbin-Watson = 1.986; ideally near 2.0)
- Analysis of residuals is very bad

Variables with Weak Predictive Value

All Treatment Outcomes

→ **Treatment outcomes (all) as a function of both type of experience**

- A statistically significant regression model, $F(1,280) = 391.292, p = .003$
- 3.4% of variance in treatment outcomes explained by years experience
- Collinearity issues are present (Durbin-Watson = 0.796; ideally near 2.0)
- Analysis of residuals is not good

