



# **Cognitive Behavioral Interventions for Trauma in Schools (CBITS) with Cultural Adaptations (CBITS-CA) Expansion at Echo Glen Children’s Center**

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## **Introduction**

Children’s mental health providers pursue effective treatment for youth exposed to trauma as over half of all youth are exposed to at least one traumatic event. Traumatic events can include child maltreatment, witnessing violence, the unexpected death of someone close, or other terrifying experiences (Felitti, 1998; McLaughlin, 2013). It is not uncommon that some children who have not experienced significant childhood stressors display resiliency after trauma exposure, but most develop short and long-term physical and behavioral health problems (AACAP PTSD PP, 2010). Beyond PTSD symptoms, youth exposed to trauma are also at increased risk for aggression, attention problems, social problems, depressive symptoms, anxiety, somatic complaints, substance use, and academic problems (Dierkhising, 2013). Children and youth who have multiple adverse childhood experiences (ACES) are particularly vulnerable to these symptoms and behaviors. These behaviors exacerbate racial and economic disparities and are a key driver to what is referred to as social capital deficits (Burton and Welsh, 2015). Social capital is defined as deficits in appropriate social skill and a dearth of high-quality, inclusive and constructive relationships. The experience of trauma (untreated) in the context of racial and economic inequities is a significant impediment to a youth developing a robust “account” of social capital.

Youth involved with the juvenile justice system have higher rates of trauma exposure and symptoms than youth in the general population. In one study, over half of detained youth reported exposure to 6 or more traumatic events (Abram, 2004). Another study also found around 90% of youth reported trauma exposure, with over half reporting first trauma exposure before the age of 5 (Dierkhising, 2013). Approximately 70% of juvenile justice system-involved youth meet criteria for a mental health disorder, and about 30% meet criteria for post-traumatic stress disorder (PTSD) (Dierkhising, 2013).

The juvenile justice system puts a heavy emphasis on behavioral health interventions. This is driven by the expectation that youth are to be rehabilitated rather than punished. That said, there



are numerous multilevel barriers to providing effective, particularly trauma treatment in juvenile justice settings. These barriers include, but are not limited to: inadequate screening of trauma exposure and symptoms, inadequate time and resources to properly evaluate and treat youth, under-recognition of trauma etiology in formulating complex presenting problems, staff turnover, workforce inadequately trained in effective treatments, and lack of access to evidence-based supervision.

The treatments with the best empirical support for youth exposed to trauma are individual cognitive-behavioral therapy (CBT) and group CBT. Cognitive-behavioral treatments have more than twice the effect size of non-CBT interventions for post-traumatic stress symptoms, depression, and externalizing behaviors. Common elements of effective trauma treatments are psychoeducation, emotion regulation skills, imaginal or in vivo exposure, cognitive processing, and/or problem solving (Dorsey, 2016). Cognitive Behavioral Interventions for Trauma in Schools (CBITS) has been designated as an “effective” program (highest level of evidence) by the Office of Juvenile Justice and Delinquency Programs (<http://www.ojjdp.gov/mpg/Program>) and the National Child Traumatic Stress Network (NCTSN, <https://www.nctsn.org/treatments-and-practices/trauma-treatments>). CBITS has been shown to be effective for multi-ethnic youth but it has not been specifically tested for its’ effectiveness in a juvenile justice setting. As such, one of the primary aims of this study is to examine whether CBITS may be effectively implemented in a juvenile justice setting.

A secondary aim of this study is to examine the perceptions of racism experienced among youth adjudicated of a crime who have experienced trauma and how it effects social capital. A critical area of concern is the racial and ethnic disparities of youth involved in the juvenile justice system. As released in a report developed by the Sentencing Project in April of 2016, racial disparities have increased in the last decade although youth incarceration has declined. There is an emerging literature that discusses “racial trauma,” specifically arguing that those who have experienced racism are at-risk for mental health issues (Carter, 2007; Chae, Lincoln, & Jackson, 2011). There is also concern that by not considering culture and race, that we are doing a disservice to racially diverse individuals (Malcoun, Williams, & Bahojb-Nouri, 2015). As such, it is vital to increase awareness and build understanding around the impact of race and culture on the lives of the youth within juvenile justice among those who work directly with these youths. It is also imperative to engage in meaningful conversations with the youth around these important, yet challenging topics.

## **Purpose of Study and Report**

This report provides a summary of the results of the project from May of 2018 to October of 2019 that was conducted in collaboration with University of Washington, Department of Psychiatry and Behavioral Sciences, Echo Glen Children’s Center, and Community Passageways. To be explicit, one of the evaluators of this project (Won-Fong Lau Johnson, PhD, is also the CBITS trainer and contributed to the development of the adaptations of this project). The project aimed to answer the following research questions:



1. (a) Can direct care staff effectively implement an evidence-based trauma intervention (Cognitive Behavioral Interventions for Trauma in Schools; CBITS<sup>1</sup>) with Cultural Adaptations (CBITS-CA)? (b) Do direct care staff participants' self-awareness on culture, race, and trauma increase after participation in CBITS-CA implementation?
2. Do CBITS-CA youth participants' anxiety, depression, and trauma-related symptoms decrease from pretest to posttest more than peers in business-as-usual (control) care, and/or do treatment effects differ for subgroups, such as children of color or children with higher or lower initial symptoms?
3. Do CBITS-CA youths' self-awareness on culture, race, and trauma increase from pretest to posttest more than peers receiving control care, and/or do treatment effects depend on youth demographic characteristics?
4. Exploratory: What is the social validity of CBITS-CA for youth who participated in treatment?
5. Exploratory: What is the social validity of CBITS-CA for staff who were trained in CBITS-CA and who implemented CBITS-CA?

## Method

### Participants

There were three types of participants in this project: 1) direct care staff that were trained in CBITS with Cultural Adaptations (CBITS-CA), 2) youth who participated in CBITS-CA (the treatment condition), and 3) youth who did not participate in CBITS-CA (received business as usual; the control condition).

### *Staff Participants*

In terms of the direct care staff, there were eight who participated in the formal, two-day CBITS-CA training and these same participants conducted the groups for CBITS-CA for two cohorts of youth. Each CBITS-CA group included two staff working in pairs, with one pair assigned to each living unit across four living units. Participating staff included five females (57%), three self-identified persons of color (including two African-American and one Mexican-American), and eight (100%) who held a Bachelor's degree (one also had a Juris Doctorate degree). Staff ages ranged from 24 to 58 years old ( $M = 41.71$ ,  $SD = 14.98$ ), and years of experience in

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<sup>1</sup> \* Dr. Lau Johnson, a certified trainer in CBITS, was given permission by the Treatment and Services Adaptation Center (TSA) to examine cultural adaptations to the evidence-based CBITS program to be used for this project. TSA is the entity that organizes and maintains all relevant research and training information related to CBITS, amongst three other evidence-based trauma programs for use with children and adolescents (BounceBack, Psychological First Aid, and SSET).



Juvenile Rehabilitation ranged from 0.75 to 20 years ( $M = 9.50$ ,  $SD = 9.49$ ). Six held positions as a Juvenile Residential Rehabilitation Counselor, one as a Juvenile Rehabilitation Supervisor, and one as a Juvenile Rehabilitation Program Manager. (Information about direct care staff in the control condition is not available.)

### ***Youth Participants***

Two cohorts of youth were recruited and consented to participate in the study (one from January to March, Cohort 1, and one from July to October, Cohort 2). At the beginning of the first cohort, eight living units were randomly assigned to either CBITS-CA or business-as-usual control conditions. Direct care staff trained to implement CBITS-CA were assigned based on logistics constraints to one of the four CBITS treatment units. Control units were staffed by qualified juvenile justice counselors who had not received CBITS-CA training but who were trained in Dialectical Behavior Therapy (DBT) skills training. There were originally 37 CBITS-CA treatment youth and 33 controls. At the end of the study, attrition included 7 CBITS-CA treatment youth and 9 control youth (due to transferring from the facility to a youth home) such that the final sample included  $n = 30$  treatment and  $n = 24$  control youth (i.e., those who completed the pre- and posttest measures, and for treatment youth, the entire CBITS-CA program).

Table 1 (following page) outlines demographic characteristics of the youth who completed the study. As can be seen, approximately 53% of the CBITS-CA treatment youth were persons of color whereas the control group included 75% youth of color. (Although this was not a statistically significant difference, we included this characteristic in all subsequent statistical models comparing treatment and control conditions.) In both conditions, there were more males than females; approximately half the youth in each group were identified for Special Education (SPED) status due to learning disability, etc.; and the majority of both groups were prescribed psychiatric medications and had a length of stay at Echo Glen of less than or equal to six months.

When comparing our study population to the JR population in Washington State, it is comparable. According to the Intensive Parole Services for High-Risk Juvenile Offenders Report from December of 2019 by the Washington State Department of Children, Youth and Families, approximately 38% of youth in JR are White, 20% Hispanic, 17% Black, 4% Native American, 3% Asian, and 4% other. Taken together, approximately 38% are White and 62% are youth of color in the general JR population. In our study, approximately 37% are White and 63% are youth of color. In terms of gender breakdown, approximately 89% are male and 11% are female. In our study, approximately 72% of our participants are male and 28% are female.



## Measures

### *Staff Measures*

***Cognitive Behavioral Intervention for Trauma in Schools-Fidelity Adherence Measure 2.0.*** In order to measure the feasibility of implementation of CBITS among direct care staff, the CBITS fidelity adherence measure was completed by two certified CBITS trainers for group sessions that were implemented in order to assess the adherence to the CBITS model by the direct care staff. Group sessions were audio-recorded and the CBITS raters received the audio files to rate independently. The CBITS 2.0 fidelity check measure version and rater codebook was provided by CBITS to the certified trainer, which has standardized guidelines for raters. The measure examines the extent to which the content was delivered with fidelity. To reduce performance bias, the direct care staff were blind to when the fidelity checks were conducted.

The CBITS 2.0 Fidelity Adherence Measure requires the rater to indicate on a scale of 0-3 the extent to which the trainee delivers the content of the session with fidelity. The ratings are available for each group session and describes in detail the core components expected to be covered in each session. Next to each description, the rater indicated a score between 0-3 to indicate the degree to which that content was delivered with fidelity. A “0” indicates not covered at all, “1” indicates cursory reference to this topic and quick review, “2” indicates group leader clearly covers the topic, with or without cooperation of group members, and “3” indicates group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style (Please see Appendix A for the measure).

***California Brief Multicultural Competence Scale (CBMCS).*** The CBMCS is a self-report questionnaire with 21-questions where participants are asked to rate themselves on a 4-point Likert scale whether they strongly disagree, disagree, agree, or strongly agree to a series of statements related to culture and diversity. There are four domains measured: Cultural Knowledge, Cultural Awareness, Cultural Sensitivity, and Non-Ethnic Skill. A score is provided in each of these domains, as well as an overall total score. The current study particularly examined pretest and posttest scores on the Cultural Awareness and Cultural Sensitivity sub-domains in addition to the total score. Table 2 lists items for each of the sub-domains of interest.



Table 1. Youth Demographic Characteristics

Characteristic	Cohort 1 (n = 34)						Cohort 2 (n = 20)						Combined (n = 54)						
	CBITS-CA		Control		Total		CBITS-CA		Control		Total		CBITS-CA		Control		Total		
	n = 18	n = 16	Total		n = 12	n = 8	Total		n = 30	n = 24	Total								
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
<b>Gender</b>																			
Male	12	67%	11	69%	23	68%	3	25%	7	88%	16	80%	21	70%	18	75%	39	72%	
Female	6	33%	5	31%	11	32%	9	75%	1	13%	4	20%	9	30%	6	25%	15	28%	
<b>Race/Ethnicity</b>																			
White	7	39%	3	19%	10	29%	7	58%	3	38%	10	50%	14	47%	6	25%	20	37%	
Person of Color	11	61%	13	81%	24	71%	5	42%	5	63%	10	50%	16	53%	18	75%	34	63%	
African American	4	22%	3	19%	7	21%	0	0%	0	0%	0	0%	4	13%	3	13%	7	13%	
Asian	0	0%	0	0%	0	0%	0	0%	2	25%	2	10%	0	0%	0	0%	2	4%	
Hispanic	2	11%	2	13%	4	12%	4	33%	2	25%	6	30%	6	20%	4	17%	10	19%	
Mixed	4	22%	6	38%	10	29%	1	8%	1	13%	2	10%	5	17%	7	29%	12	22%	
Native American	1	6%	0	0%	1	3%	0	0%	0	0%	0	0%	1	3%	0	0%	1	2%	
Other	0	0%	2	13%	2	6%	0	0%	0	0%	0	0%	0	0%	2	8%	2	4%	
<b>Special Educ Status</b>																			
Yes	8	44%	9	56%	17	50%	6	50%	4	50%	10	50%	14	47%	13	54%	27	50%	
No	10	56%	7	44%	17	50%	6	50%	4	50%	10	50%	16	53%	11	46%	27	50%	
<b>Length of Stay</b>																			
≤ 6 months	14	78%	9	56%	23	68%	8	67%	7	88%	15	75%	22	73%	16	67%	38	70%	
> 6 months	4	22%	7	44%	11	32%	4	33%	1	13%	5	20%	8	27%	8	33%	16	30%	
<b>Psych Med Status</b>																			
Yes	12	67%	8	50%	20	59%	10	83%	7	88%	17	85%	22	73%	15	63%	37	69%	
No	6	33%	8	50%	14	41%	2	17%	1	13%	3	15%	8	27%	9	38%	17	32%	



Table 2. *CBMCS Sub-Domain Items*

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**Cultural Awareness (1, 8, 10, 11, 14, 16)**

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1. I am aware that being born a minority in this society brings with it certain challenges that the leading majority does not have to face.
8. I am aware that counselors frequently impose their own cultural values upon minority clients.
10. I am aware that being born in the leading majority in this society carries with it certain advantages.
11. I am aware of how my cultural background and experiences have influenced my attitudes about psychological processes
14. I am aware of institutional barriers that may inhibit minorities from using mental health services.
16. I can identify my reactions that are based on stereotypical beliefs about different ethnic groups.

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**Cultural Sensitivity (2, 4, 9)**

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2. I am aware of how my own values might affect my client.
  4. I am aware of institutional barriers that affect the client.
  9. My communication skills are appropriate for my clients.
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**Staff Training Evaluation Form.** The direct care staff were asked to complete an anonymous open-ended training evaluation form at the end of the 2-day live training, and at the conclusion of implementing the CBITS group. This was used to obtain the staff's perspective on their training and consultation experience, as well as feedback on the effectiveness of the CBITS with Cultural Adaptations program.

**Youth Measures**

**Beck Anxiety Inventory-Youth (BAI-Y).** The BAI-Y is a self-report measure of anxiety for children and youth between the ages of 7 and 18. There are total of 20 statements of thoughts, feelings or behaviors associated with anxiety. The scale yields a total T-Score with high T-Scores indicating high levels of distress related to anxiety and low T-Scores indicating lower levels of distress related to anxiety. T-Score of 55-60 indicates mildly elevated, 60-70 indicates at-risk for developing significant anxiety and a T-Score of 70 and over indicates clinically significant symptoms of anxiety.

**Beck Depression Inventory-Youth (BDI-Y).** The BDI-Y is a self-report measure of depression for children and youth between the ages of 7 and 18. There are total of 20 statements of thoughts, feelings or behaviors associated with depression. The scale yields a total T-Score with high T-Scores indicating high levels of distress related to depression and low T-Scores indicating lower levels of distress related to de pression. T-Score of 55-60 indicates mildly elevated, 60-70



indicates at-risk for developing significant depression and a T-Score of 70 and over indicates clinically significant symptoms of depression.

***UCLA PTSD Reaction Index: DSM-V Version.*** The youths' level of trauma-related symptoms was measured using the UCLA PTSD Reaction Index: DSM-V Version. The scale was administered by the on-site Echo Glen staff psychologist at pre-test and by the UW Research Team at post-test. The questions focus on assessing whether the youth would meet the clinical criteria of Post-Traumatic Stress Disorder as outlined by the DSM-V, although a PTSD diagnosis was not required for participation in the group. A standardized trauma screener is required as part of PREA guidelines for juvenile facilities, thus youth that attend Echo Glen Children's Center received this screener as part of their intake process within the program. For this research study, the inclusion criteria were set based off the scores on this measure. To participate, a youth would need to have answered "yes" to at least one event on the UCLA PTSD DSM-V measure, at least a 2 or higher on at least one item in each of the four measured symptom categories, able to attend 10 group sessions, and consent to voluntarily to participate. Treatment youth were required to choose one traumatic experience that was currently still bothering them to process in the CBITS-CA group. Higher scores in each of the categories and the total score indicate higher levels of distress related to trauma and lower scores indicate lower levels of distress related to trauma. The UCLA PTSD DSM-V recommend that a score of 35 or higher indicates a strong likelihood of meeting diagnostic criteria for PTSD in the DSM-V. The current study did not exclude youth who scored lower than 35 and included those below and above 35, as long as they met the above described inclusion criteria.

***Perceptions of Racism in Children and Youth (PRACY).*** The PRACY is a self-report measure of racial discrimination. It is a 10-item questionnaire appropriate for children 8-13 and 14-18 years old. The youth is asked about 10 different situations and asked whether any have happened to them (e.g. "Have you ever had someone be rude to you?" "Have you ever been watched closely or followed around by security guards or store clerks at a store or mall?" "Have you ever been treated unfairly by a police officer?" "Have you ever been accused of something you didn't do at school?"). If they respond yes, then they are asked to answer a series of questions related to this incident such as how often this has happened, why they think it happened, how it made them feel, and how they dealt with the situation. This measure focuses on the respondent's *perception* of racism related to an event. Research has found that the subjective perception of an experience is the factor that drives how that person thinks and feels (Patcher et al. 2009).

***CBITS-CA Group Evaluation Posttest.*** The questionnaire was administered only to the treatment participants at post-intervention and asked youth to choose True or False to the following statements: (1) Before this group I already knew what trauma was; (2) After participating in this group, I have a better understanding of how trauma affects how I think and feel; (3) I feel less stressed after participating in this group; (4) I learned new skills to help me cope with my stress related to the traumatic/stressful event that I experienced; (5) My group leaders were helpful in teaching the skills; and then the following Open-Ended Questions: (1) What are three examples of common reactions to a traumatic or stressful event? (2) What did you enjoy the most about the group? (3) What would you recommend to change about this group to



make it better? (4) What did you enjoy about the group leaders? (5) What would you recommend the group leaders to improve upon in the future? (6) What are some skills you learned in this group? (7) When something bad happens to us, is it better to think about it and talk about it, or to try and avoid it completely? Why? (8) Would you recommend CBITS-CA (racism session)? Why? (See Appendix C for full measure.)

## Procedure

***CBITS: Brief Overview of Curriculum.*** CBITS is a skills-based, group intervention that is aimed at relieving symptoms of Post-Traumatic Stress Disorder (PTSD), depression, and general anxiety among children exposed to trauma. Children learn skills in relaxation, challenging upsetting thoughts, and social problem solving, and children work on processing traumatic memories. These skills are learned through the use of drawings and through talking in both individual and group sessions. Between sessions, children complete assignments and participate in activities that reinforce the skills they've learned. CBITS also includes parent and teacher education sessions (retrieved from CBITS Fact Sheet:

[http://www.nctsn.net/org/nctsn\\_assets/pdfs/CBITSfactsheet.pdf](http://www.nctsn.net/org/nctsn_assets/pdfs/CBITSfactsheet.pdf)).

CBITS is composed of the following:

1. **Ten** child group therapy sessions to address trauma symptoms.
2. **One to Three** individual child sessions for exposure to trauma memory and treatment planning.
3. **Two** parent/caregiver outreach sessions on education about trauma and parenting/caregiver support.
4. **One** teacher session including education about detecting and supporting traumatized students.

***CBITS-CA: Cultural Adaptations.*** Above describes the original CBITS model. A large focus of this project was to examine the effectiveness of CBITS with Cultural Adaptations (CBITS-CA). There were several areas in which this program was adapted. First, all groups combined group session 5 and 6 into one session, this was the group exposure session. The rationale behind this was due to small group sizes. Second, the original group Session 9 was not delivered but instead was replaced by a session developed by the researchers of this project. The adapted Session 9 was titled "Introduction to Race and Links to Traumatic Stress." The focus of this adapted session was for staff to provide a safe space for the youth to discuss what racism is, how it is defined, hear from others' experiences with racism (through a video), how racism contributes to traumatic stress, and how one may apply skills learned from CBITS-CA to cope and combat racism. As such, in this research project, the CBITS-CA program was delivered with **9** child group therapy sessions, **One to Three** individual child sessions and no parent outreach sessions



or teacher sessions were conducted during the project. We did not track the average number of individual sessions the treatment youth received in our study, but each treatment youth received at least one individual session. Those that required additional individual sessions was determined between the staff and the consultant (Dr. Lau Johnson). Parent/caregiver sessions were not conducted due to logistical barriers with the nature of Echo Glen being a juvenile facility far removed from the origins of caregivers of the youths. Caregivers (legal guardians) were sent letters about the project, and the staff facilitators were encouraged to review the contents of the program with parents via telephone. No teacher session was conducted due to logistical barriers.

***Training and Consultation Outline of CBITS.*** The training guidelines for CBITS as outlined by NCTSN and TSA indicates that the most comprehensive training model comprises of completion of a 5-hour web-based course, attendance at a two-day live training, ongoing consultation from a certified CBITS trainer, and for a certified CBITS trainer to review fidelity of implementation and outcomes monitoring for quality assurance and improvement. This most comprehensive training option is typically only possible with dedicated funding (see [https://www.nctsn.org/sites/default/files/interventions/cbits\\_training\\_guidelines.pdf](https://www.nctsn.org/sites/default/files/interventions/cbits_training_guidelines.pdf)). Furthermore, this level of training is deemed appropriate for those clinicians who are often a master's level, licensed clinician, to have experience with the delivery of mental health services, evidence-based practices, cognitive behavioral/trauma-focused therapies, and therapeutic groups with children.

The focus of this project was to both adapt the CBITS curriculum to be applicable in a juvenile justice setting and examine whether direct care staff would be able to successfully deliver the CBITS with Cultural Adaptations (CBITS-CA) program to its highest fidelity. As indicated in the participants section of this report, most of the CBITS-CA direct care staff held at most a bachelor's degree and do not have the level of clinical training as a licensed professional. However, the staff at Echo Glen have training on Dialectical Behavior Therapy (DBT) and have experience running DBT groups as part of their role, and as such, the control condition may be thought of as an intervention primarily composed of skills derived from DBT.

The most comprehensive training model was provided to the staff who participated in this research project, except for requiring staff to complete the 5-hour on-line course. One of the researchers of this project, Dr. Lau Johnson is a certified CBITS trainer and she provided a two-day live training on the CBITS program. In the afternoon of the second day of the training, staff received two hours of training on cultural humility and how to deliver the newly developed session that focused on race and links to traumatic stress. As part of this two-hour training, Dominique Davis, CEO of Community Passageways and 4 youth of color from the organization helped to lead a discussion on both the impact of racism and how to implement the adapted session. The reason for having the youth from Community Passageways help to guide this part of the training was to allow staff to interact with similar-age peers they would be working with at Echo Glen and have a conversation around the impact of racism on their lives. As part of the training, staff were provided with the CBITS 2.0 manual, Adapted Session Workbook on Session 9 "Introduction to Race and Links to Traumatic Stress," with research articles included, and a copy of the book "So You Want to Talk about Race" by Ijeoma Oluo. Staff were instructed to



read a list of selected chapters from the book prior to starting their CBITS-CA group (chapters 2, 4, 6, 8, 12, and 16) and an article by Kenneth Hardy on “Healing the Hidden Wounds of Racial Trauma.” They were also provided 3 additional, optional articles that discuss the research and impact of racism on traumatic stress in their adapted session workbook.

Following the training, formal consultation was provided on a bi-weekly basis via telephone calls by Dr. Lau Johnson. There was a total of eight staff who worked together in pairs from their cottage living units (four cottages were in treatment, with two staff from each living unit working together to run a group). The consultation calls were provided separately to each staff pairing from each unit. Additionally, staff were provided with a phone number and email to contact Dr. Lau Johnson for any questions or concerns at any time.

***Selection of Group Facilitator Trainees.*** Out of eight total cottage living units at the Echo Glen campus, four were randomly selected as “treatment cottages” with the other four assigned as the “business-as-usual” (control) cottages. Once the living units were selected, the administration at Echo Glen selected staff to participate in the training and conduct CBITS-CA groups. The staff were selected based on scheduling availability and consultation from the program managers from those living units. The UW Research Team did not have any involvement in the selection of the staff for this study. There may have been some selection bias in part by the Echo Glen administration for various reasons, but this was not formally evaluated or examined. Further, no demographic information was collected on “business as usual” (control) staff at Echo Glen, thus a comparison group at the staff level was not conducted for the current study.

***Formation of Groups for Participation in CBITS-CA.*** In order to form the groups, a formal screening process was necessary to capture students that would both qualify and benefit from participation in the CBITS-CA group. A standardized trauma screener is required as part of PREA guidelines for juvenile facilities in Washington state, thus youth adjudicated of a crime that attend Echo Glen Children’s Center received a trauma screener (UCLA PTSD Reaction Index-DSM-V) as part of their intake process within the program, in their first seven days of entry from the on-site licensed psychologist. The on-site licensed psychologist provided consultation to the direct care staff on the trauma scores and provided a list with recommendations on which youth would benefit from participation in CBITS-CA based on those with elevated scores. Staff would review the list provided by the on-site licensed psychologist and would meet with the youth on the list, explain the CBITS-CA program to them, and asked if they would be interested in participation. Staff were instructed to be clear that participation in CBITS-CA was voluntary. If a youth agreed, then members from the UW research team would meet individually with each qualified youth and reviewed the purpose of the research program and to obtain consent.

Careful formation of each group was conducted as to avoid placing youth together that may be at-risk for conflict. For example, placing two youth that may have been in conflicting affiliated gangs, would have created a negative group dynamic. As such, staff consultation around this was highly valuable.



In terms of scheduling and logistics, staff from each living unit were given flexibility to conduct groups when it fit their schedule. It was highly recommended in the 2-day live training to conduct groups on a weekly basis and to run them consistently on the same day/time.

## Results

### **RQ1(a). Cognitive Behavioral Intervention for Trauma in Schools with Cultural Adaptations (CBITS-CA) Implementation and Fidelity Adherence Results**

CBITS-CA treatment adherence was assessed using a fidelity checklist form in which each CBIT-CA session's particular elements (4 to 7 elements per session, depending on session) could be rated on a 4-point scale ranging from 0 = *not covered at all* to 3 = *group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style*. Additionally, for any session observed, there were seven global practices that were rated on a 4-point scale ranging from 0 to 3 (criteria depend on practice; see Appendix A for fidelity form).

Interrater reliability was established between two raters (the PI and one of the developers of the CBITS-CA program, a licensed psychologist) on four videotaped sessions, one session per treatment cottage. The four sessions were purposefully selected to best represent unique and varying features of the CBITS-CA treatment: sessions 2, 4, 6-7, and 8. For each of these four sessions, session-specific elements, along with the seven global practices, were rated by each of the two raters simultaneously. Interrater reliability was established by testing the correlation between the two raters across four sessions on session-specific elements, with  $n = 20$  elements rated ( $r = .79, p < .001$ ), and the seven global practices across four sessions ( $n = 28$  practices,  $r = .85, p < .001$ ). Similarly, when we averaged the session-specific practices and the global practices such that there were  $n = 4$  observations per rater, interrater reliability was also good, with  $r = .95$  ( $p = .051$ ) and  $.98$  ( $p = .023$ ), respectively.

The two raters were each randomly assigned to code a set of sessions, with 2 to 4 sessions rated per treatment cottage (recall that each cottage had two counselors; the goal was to attempt to rate both counselors), with two observations per cottage per cohort. All eight CBITS-CA groups completed all nine CBITS-CA sessions; of those, 20 were randomly selected for fidelity observation, with all via audio-recordings. Preliminary tabulations show that Cohort 1 element fidelity averaged  $M = 2.58$  ( $SD = 0.43$ ) on the 0 to 3 scale, and Cohort 2 element fidelity averaged  $M = 2.33$  ( $SD = 0.37$ ) on the 0 to 3 scale. For global practices, the ratings averaged  $M = 2.50$  ( $SD = 0.49$ ). If we translate these means into percentages (mean divided by 3, the maximum score), we find that fidelity averaged 80% or higher.

### **RQ1(b). Staff Culture and Race Awareness Results**

We measured self-awareness on culture, race, and trauma among both direct care staff and youth participants using a mixed-methods approach. For the CBITS-CA direct care staff, we measured this by obtaining the fidelity data on how well they implemented the adapted Session 9, their



scores on the California Brief Multicultural Competence Scale (CBMCS), and their qualitative feedback after the end of the study.

**Fidelity to Session 9.** The analysis of fidelity ratings for just Session 9 observations were modest but promising, with  $M = 2.18$  ( $SD = 0.73$ ) on a 3-point scale; this translates to average fidelity of 72% or higher on Session 9.

**California Brief Multicultural Competence Scale (CBMCS).** Pretest and posttest scores on the CBMCS were collected for seven out of the eight participating treatment staff. (One of the staff no longer worked at the Echo Glen facility at the time posttest data was collected.) The CBMCS provides four sub-scale scores: Cultural Knowledge, Cultural Sensitivity, Cultural Awareness, and Non-Ethnic Skill. The CMBCS also provides a total score.

Table 3 displays descriptive statistics for the CBMCS subscales and total scale at pretest and posttest as well as change scores. Except for non-ethnic skills, on average, increases were observed on all scales. We used a one-group  $t$ -test on pre-post changes (using a null of zero and a 2-tailed alpha level of .05), and although none of the changes were statistically significant, there was a positive trend for a pre-post increase on Cultural Sensitivity ( $d = 0.59$ ,  $p = .172$ ).

Table 3. *Staff Descriptives for the CBMCS*

Scale	Pretest		Posttest		Pre-Post Change	
	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Cultural Knowledge	11.14	(3.48)	11.29	(1.70)	0.14	(2.19)
Cultural Sensitivity	9.86	(1.35)	10.43	(0.79)	0.57	(0.98)
Cultural Awareness	19.57	(2.37)	20.86	(3.02)	1.29	(3.25)
Non-Ethnic Skills	13.43	(3.41)	13.00	(3.87)	-0.43	(3.60)
Total Scale	54.00	(9.17)	55.57	(5.91)	1.57	(7.57)

Note.  $N = 7$  of 8 CBITS-CA treatment staff completed pretest and posttest.

### RQ2-3: Youth Behavioral Health Symptoms and Race and Culture Awareness Results

Here we focus on our statistical model results used to answer our second and third research questions regarding whether CBITS-CA was effective in reducing youth anxiety, depression, and trauma symptoms, and increasing race and culture awareness, compared to care-as-usual (control). We also describe qualitative findings regarding RQ3 (race and culture awareness).

**Behavioral Health Descriptives.** Descriptive statistics for youth behavioral health outcomes, for each group by cohort and combined, are provided in Table 4 on the following page. Recall that the BAI-Y and BDI-Y measure anxiety and depression, respectively, and that higher scores indicate worse symptoms; similarly, the UCLA measures trauma symptoms by category and in total, and that higher scores indicate worse symptoms. As can be seen in the data (Table 4),



treatment youth generally had higher pretest-posttest change than control youth, especially for Cohort 1.

***PRACY Descriptives.*** Table 5 reports descriptive statistics for youth race and culture awareness as measured by PRACY categories. Recall that the PRACY measure presents 10 different scenarios to the respondent and asks whether the respondent perceives they have experienced the respective scenario in the past. If they answered yes, they are then asked a series of follow-up questions to assess from the respondent’s perspective, the reason these situations occurred and how they felt at that time. To analyze this measure, we calculated a total number of scenarios each youth perceived they experienced, and for those scenarios experienced, we calculated the percentage of scenarios perceived to be due to racism or language background, and as well as the percentage of scenarios that elicited a negative feeling or a feeling of resilience (strengthening).

The descriptive statistics (Table 5) generally indicate that, compared to the control youth, treatment youth increased their ability to identify past scenarios as potentially being due to racism. As well, treatment youth increased their ability to identify potential negative feelings (anger, sadness, powerless) associated with these scenarios, as well as an increase in their perception of feeling strengthened compared to the youth in the treatment as usual group.

This said, we note that these percentages were calculated based on different types and numbers of scenarios for different youth, which introduces random noise to the data and can weaken our statistical modeling efforts (discussed next). Additionally, typically the measure is only administered to youth of color (it was developed and standardized among youth of color), whereas we administered it to white youth as well. As such, there were more youth of color who experienced the scenarios than white youth, which in turn induces a correlation in the data between POC status and PRACY outcomes, which can diminish the power to test the interaction between treatment and POC status for this measure in particular. Given these two issues, the forthcoming PRACY model results should be treated as tentative.

***Multilevel Statistical Modeling Approach.*** We conducted multilevel statistical models for the combined cohorts with youth at Level 1, nested within cottages at Level 2, to test: (a) whether all children decreased in their symptoms from pretest to posttest, irrespective of treatment condition, and (b) whether the treatment (at the cottage level) differed from business-as-usual in terms of youth pretest-posttest change, controlling for cohort, age, POC status, and pretest. Further, we also tested (c) whether treatment effects were moderated by covariates.



Table 4. Descriptive Statistics for Behavioral Health Outcomes

Measure	Cohort 1 (n = 34)				Cohort 2 (n = 20)				Combined (n = 54)				CBITS-CA vs. Control <i>d</i>
	CBITS-CA n = 18		Control n = 16		CBITS-CA n = 12		Control n = 8		CBITS-CA n = 30		Control n = 24		
	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	
<b>Pretest</b>													
Age (Years)	15.94	(1.39)	14.75	(1.00)	15.75	(1.71)	15.25	(0.46)	15.87	(1.50)	14.92	(0.88)	0.75
BAI-Y	52.61	(12.37)	55.88	(11.85)	52.08	(11.12)	53.63	(13.59)	52.40	(11.69)	55.13	(12.21)	-0.23
BDI-Y	57.56	(12.07)	56.88	(8.87)	56.42	(15.99)	56.38	(11.77)	57.10	(13.52)	56.71	(9.67)	0.03
UCLA-B	7.67	(5.39)	9.19	(6.46)	8.28	(4.98)	6.13	(4.94)	8.03	(5.16)	8.17	(6.07)	-0.03
UCLA_C	4.06	(2.04)	4.75	(2.67)	4.58	(2.47)	3.38	(1.92)	4.27	(2.20)	4.29	(2.49)	-0.01
UCLA-D	12.83	(6.03)	13.81	(5.26)	12.25	(7.29)	12.88	(6.18)	12.60	(6.45)	13.50	(5.46)	-0.15
UCLA-E	12.56	(5.06)	14.63	(5.69)	13.08	(6.69)	11.00	(3.82)	12.77	(5.66)	13.42	(5.35)	-0.12
UCLA-Total	37.11	(16.77)	42.38	(18.49)	38.50	(16.95)	33.38	(14.86)	37.67	(16.55)	39.38	(17.58)	-0.10
<b>Posttest</b>													
BAI-Y	53.72	(9.52)	55.19	(6.78)	49.17	(10.34)	48.00	(6.61)	51.90	(9.94)	52.79	(7.44)	-0.10
BDI-Y	53.61	(9.22)	57.19	(8.90)	47.33	(6.93)	49.75	(5.09)	51.10	(8.82)	54.71	(8.51)	-0.42
UCLA-B	5.83	(4.81)	8.44	(5.50)	6.00	(6.24)	2.88	(2.36)	5.90	(5.20)	6.58	(5.35)	-0.13
UCLA-C	3.17	(1.92)	4.00	(1.86)	3.42	(2.43)	1.37	(1.69)	3.27	(2.10)	3.13	(2.17)	0.07
UCLA-D	10.83	(6.63)	14.63	(6.19)	10.25	(8.21)	5.13	(3.94)	10.60	(7.17)	11.46	(7.11)	-0.12
UCLA-E	1.22	(4.49)	13.37	(6.09)	9.25	(5.80)	6.88	(4.88)	9.83	(4.98)	11.21	(6.42)	-0.24
UCLA-Total	30.06	(15.37)	40.44	(17.89)	28.92	(20.56)	16.25	(11.00)	29.60	(17.30)	32.38	(19.52)	-0.15
<b>Pre-Post Change</b>													
BAI-Y	1.11	(11.88)	-0.69	(12.04)	-2.92	(17.51)	-5.63	(13.43)	-0.50	(14.25)	-2.33	(12.45)	0.14
BDI-Y	-3.94	(8.26)	0.31	(8.21)	-9.08	(18.69)	-6.63	(11.29)	-6.00	(13.38)	-2.00	(9.69)	-0.34
UCLA-B	-1.83	(4.06)	-0.75	(6.35)	-2.58	(6.56)	-3.25	(3.62)	-2.13	(5.11)	-1.58	(5.63)	-0.10
UCLA-C	-0.89	(2.35)	-0.75	(2.05)	-1.17	(2.29)	-2.00	(1.07)	-1.00	(2.29)	-1.17	(1.86)	0.08
UCLA-D	0.20	(4.56)	0.81	(6.49)	0.20	(4.48)	-7.75	(5.18)	-2.00	(4.45)	-2.04	(7.26)	0.01
UCLA-E	-2.33	(4.77)	-1.25	(7.50)	.3.83	(4.99)	-4.13	(4.42)	-2.93	(4.83)	-2.21	(6.67)	-0.13
UCLA-Total	-7.06	(12.10)	-1.94	(20.75)	-9.58	(14.62)	-17.13	(12.74)	-8.07	(12.98)	-7.00	(19.59)	-0.07



Table 5. Descriptives for the Race and Culture Awareness on PRACY

Measure	Cohort 1 (n = 31)				Cohort 2 (n = 19)				Combined (n = 50)				CBITS-CA vs. Control <i>d</i>
	CBITS-CA n = 17		Control n = 14		CBITS-CA n = 11		Control n = 8		CBITS-CA n = 28		Control n = 22		
	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	
<b>Pretest</b>													
# Scen ID'd (max: 10)	5.71	(2.89)	6.71	(2.16)	5.09	(2.12)	5.38	(1.30)	5.46	(2.58)	6.23	(1.97)	-0.33
% Scen Race	0.35	(0.36)	0.62	(0.34)	0.32	(0.27)	0.57	(0.32)	0.34	(0.32)	0.60	(0.33)	-0.80
% Scen Language	0.10	(0.23)	0.11	(0.19)	0.06	(0.15)	0.10	(0.20)	0.08	(0.20)	0.11	(0.19)	-0.13
% Scen Felt Anger	0.60	(0.28)	0.68	(0.19)	0.72	(0.24)	0.91	(0.18)	0.65	(0.27)	0.77	(0.22)	-0.48
% Scen Felt Hurt	0.67	(0.32)	0.52	(0.31)	0.56	(0.37)	0.81	(0.35)	0.63	(0.34)	0.63	(0.35)	0.00
% Scen Felt Sad	0.21	(0.31)	0.12	(0.19)	0.07	(0.23)	0.25	(0.35)	0.15	(0.29)	0.17	(0.26)	-0.06
% Scen Felt Powerless	0.19	(0.24)	0.33	(0.26)	0.23	(0.32)	0.25	(0.33)	0.21	(0.27)	0.30	(0.28)	-0.35
% Scen Felt Strength	0.07	(0.11)	0.13	(0.22)	0.03	(0.06)	0.19	(0.36)	0.05	(0.09)	0.15	(0.27)	-0.51
<b>Posttest</b>													
# Scen ID'd (max: 10)	4.18	(2.92)	5.64	(2.87)	5.09	(1.97)	4.38	(1.85)	4.54	(2.59)	5.18	(2.58)	-0.25
% Scen Race	0.52	(0.39)	0.69	(0.37)	0.55	(0.36)	0.76	(0.39)	0.53	(0.37)	0.72	(0.37)	-0.49
% Scen Language	0.23	(0.37)	0.35	(0.45)	0.08	(0.15)	0.04	(0.12)	0.17	(0.31)	0.24	(0.39)	-0.18
% Scen Felt Anger	0.70	(0.38)	0.87	(0.24)	0.82	(0.25)	0.92	(0.23)	0.74	(0.34)	0.89	(0.23)	-0.49
% Scen Felt Hurt	0.55	(0.41)	0.54	(0.34)	0.51	(0.26)	0.54	(0.40)	0.53	(0.35)	0.54	(0.35)	-0.02
% Scen Felt Sad	0.12	(0.27)	0.14	(0.22)	0.24	(0.35)	0.18	(0.35)	0.17	(0.30)	0.15	(0.27)	0.05
% Scen Felt Powerless	0.33	(0.54)	0.23	(0.31)	0.40	(0.38)	0.09	(0.14)	0.36	(0.47)	0.18	(0.26)	0.46
% Scen Felt Strength	0.12	(0.26)	0.15	(0.21)	0.17	(0.21)	0.08	(0.15)	0.14	(0.24)	0.12	(0.19)	0.10
<b>Pre-Post Chg</b>													
# Scen ID'd (max: 10)	-1.53	(2.04)	-1.07	(1.69)	0.00	(0.89)	-1.00	(0.93)	-0.93	(1.82)	-1.05	(1.43)	0.07
% Scen Race	0.15	(0.38)	0.04	(0.39)	0.23	(0.26)	0.19	(0.47)	0.18	(0.33)	0.10	(0.42)	0.23
% Scen Language	0.12	(0.21)	0.23	(0.37)	0.03	(0.13)	-0.06	(0.12)	0.09	(0.18)	0.12	(0.33)	-0.14
% Scen Felt Anger	0.12	(0.46)	0.20	(0.27)	0.09	(0.28)	0.01	(0.07)	0.11	(0.39)	0.13	(0.23)	-0.05
% Scen Felt Hurt	-0.10	(0.44)	0.05	(0.29)	-0.05	(0.36)	-0.27	(0.29)	-0.08	(0.40)	-0.07	(0.32)	-0.02
% Scen Felt Sad	-0.10	(0.46)	0.02	(0.14)	0.17	(0.33)	-0.07	(0.11)	0.01	(0.43)	-0.01	(0.13)	0.07
% Scen Felt Powerless	0.13	(0.59)	-0.07	(0.26)	0.17	(0.31)	-0.16	(0.24)	0.14	(0.49)	-0.10	(0.25)	0.61
% Scen Felt Strength	0.05	(0.29)	0.00	(0.23)	0.14	(0.19)	-0.12	(0.32)	0.08	(0.25)	-0.04	(0.27)	0.49



**Multilevel Statistical Modeling Approach (Continued).** Using this approach, we can statistically adjust for potential pre-existing differences among groups on covariates, as well as account for correlations (non-independence) among children living within the same cottage. This latter point is particularly important for maintaining valid statistical inferences. We also note that we analyzed combined rather than separate to maximize statistical power.

Again, with regard to analyses of the PRACY, we note that the data were quite limited (many children did not report having a scenario occur – especially white youth; as such, there was multicollinearity/overlap between these events and whether the child was a person of color), and unevenly measured because some children responses were based on one event and others based on multiple events. Nevertheless, we report the model results for the PRACY along with the behavioral health outcomes in the forthcoming.

**Covariate Selection.** Notably, our choice of covariates was purposeful. Cohort differences were pronounced, Cohort 2 had a more inconsistent implementation timeline (due to external factors) than Cohort 1. There was also an unplanned three-month gap between Cohort 1 and Cohort 2 in terms of the implementation. Age was included for two reasons: first, the only significant difference between CBITS-CA treatment and care-as-usual control youth across demographics and pretests was age: the treatment condition had slightly older youth – as such, we wanted to disentangle age from treatment effects. Person of color (POC) status was included because the treatment was specifically focused on cultural adaptations and we wanted to see if treatment was differentially beneficial for youth of color. Finally, we included pretest as a covariate to control for variation in children’s change due to where they started out – for example, children who start out with higher levels of trauma would likely exhibit greater pretest-posttest decrease in trauma symptoms. For ease of results interpretation and to reduce collinearity, all predictors were either standardized into z-scores (for pretest scores) or effect coded (CBITS-CA treatment = 1, Cohort 1 = 1, POC = yes = 1; otherwise coded -1).

**Understanding Model Results.** In the next subsections, we detail what each part of the model results indicates shown in Table 6. Importantly, some of these results are not part of our research questions – they are simply part of the modeling process. To recap, we tested treatment effects and treatment interactions on pretest-posttest change scores for each of our outcomes, including for the BAI, BDI, UCLA, and PRACY. Although we describe what each part of the model means (including the intercept, which is just mean change), we encourage readers to really focus on Overall Treatment Effects and Treatment Interactions as these address our research questions.

**Overall Pretest-Posttest Change.** Model results for main effects tests showed that all youth (treatment and control) significantly decreased from pretest to posttest (compared to no change) on all behavioral health outcome measures except the BAI (see the column labeled “intercept” in Table 6). On the BDI, the mean decrease was 4.98 points, controlling for all else. On the UCLA total, for example, the mean decrease was 9.75 points, holding all else constant. With regard to the PRACY from pretest to posttest there was a mean decrease of 1.05 scenarios identified as having occurred, and for those scenarios identified, there was a mean increase of 14% in perceptions of racism and an increase of 11% of language was being a reason that the scenarios



they experienced had occurred. Moreover, there was a mean increase of 12% feeling anger as a result of their experiences. No other pretest-posttest changes were significant on the PRACY.

***Overall Treatment Effects on Change.*** In our main effects models (prior to adding interaction terms), we found a positive trend ( $p < .10$ ) for a treatment effect on the BDI. Examining the PRACY, there was a trend for a treatment effect on increased expression of feelings of powerlessness for identified scenarios: youth who participated in CBITS-CA treatment increased by 11% more than the average increase of 5% (for a 16% total increase) from pretest to posttest, whereas youth in the care-as-usual group decreased by 11% compared to average (for a total decrease of 6%), holding all else constant. No other significant differences or trends for significance between treatment and control groups were detected.

***Overall Covariate Effects on Change.*** This section describes both treatment and control youth combined in each cohort. Covariate effects on pretest-posttest change were found with the exception of age. Cohort 1 (both treatment and control) exhibited less change compared to Cohort 2 (both treatment and control) across all of the behavioral health outcomes. For example on the BDI, Cohort 1 was predicted to increase by 3.64 points from pretest to posttest compared to average decrease of 4.98 points (in other words, Cohort 1 was predicted to change by  $-4.98+3.64 = -1.34$  points whereas Cohort 2 was predicted to change by  $-4.98-3.64 = -8.62$  points), all else constant. On the PRACY, Cohort 1 showed a decrease of 0.49 fewer scenarios identified from pretest to posttest compared to average (whereas Cohort 2 showed an increase of 0.49 more), and showed more pretest-posttest increase in percentage of scenarios occurring due to language background by 10% compared to Cohort 2 (which showed a decrease of 10%).

Youth of color (POC) showed a trend ( $p < .10$ ) for having higher pretest-posttest decrease on the BAI by 2.09 points more than the average decrease of 1.62 points (i.e.,  $-1.62-2.09=-3.71$  points) compared to white youth who were predicted to increase by  $-1.62+2.09=0.47$  points. On the PRACY, youth of color identified more scenarios from pretest to posttest (by 0.52 more scenarios), but exhibited a decrease in the percentage of scenarios identified as being due to racism (by 15% more than average). There was also a trend for youth of color to increase reporting feeling angered by the scenarios identified (8% more than average).

In addition, pretest was negatively predictive of change across nearly every measure, with two exceptions and only for the PRACY: number of scenarios identified and perceptions that language was a basis for scenarios occurring. As an example, recalling that pretest was standardized into z-scores, youth who were one standard deviation higher than average at pretest were predicted to have 10.31 more decrease than average decrease on the BAI. This finding is in alignment with our expectations that youth who experienced more depression, anxiety, and trauma would have better room for decreases in those areas from pretest to posttest.



Table 6. Multilevel Statistical Model Results for Behavioral Health and Race and Culture Outcomes

Measure	Intcpt (Pre-Post Chg)			CBITS-CA Treatment			Cohort1 (1=yes)			POC (1=yes)			Age (Z)			Pretest (Z)			Treat*Coh1			Treat*POC			Treat*Age			Treat*Pre		
	Coeff	(SE)	p	Coeff	(SE)	p	Coeff	(SE)	p	Coeff	(SE)	p	Coeff	(SE)	p	Coeff	(SE)	p	Coeff	(SE)	p	Coeff	(SE)	p	Coeff	(SE)	p	Coeff	(SE)	p
Beck Inventory																														
Anxiety BAI-Y	-1.62	(1.29)	.214	-0.12	(1.30)	.927	3.55	(1.10)	.002	-2.09	(1.14)	.072	0.52	(1.44)	.720	-10.31	(1.07)	<.001	-0.46	(1.10)	.676	<b>-1.95</b>	<b>(1.14)</b>	<b>.092</b>	-1.37	(1.44)	.349	-0.12	(1.07)	.913
Depress BDI-Y	-4.98	(1.24)	<.001	-1.56	(1.24)	.213	3.64	(1.03)	<.001	-1.18	(1.07)	.275	0.53	(1.46)	.718	-8.46	(1.18)	<.001	-0.17	(1.03)	.870	-1.34	(1.07)	.213	0.19	(1.46)	.900	-1.10	(1.18)	.353
UCLA Trauma																														
Section B	-2.62	(0.71)	<.001	0.14	(0.71)	.844	1.06	(0.61)	.089	0.28	(0.63)	.662	0.42	(0.80)	.602	-3.09	(0.59)	<.001	<b>-1.04</b>	<b>(0.61)</b>	<b>.095</b>	-0.11	(0.63)	.867	1.02	(0.80)	.211	0.47	(0.59)	.431
Section C	-1.24	(0.28)	<.001	0.18	(0.28)	.519	0.54	(0.24)	.029	-0.27	(0.25)	.280	0.16	(0.31)	.610	-1.29	(0.24)	<.001	<b>-0.52</b>	<b>(0.24)</b>	<b>.035</b>	-0.04	(0.25)	.876	0.17	(0.31)	.588	-0.07	(0.24)	.771
Section D	-3.06	(0.79)	<.001	0.89	(0.79)	.263	2.17	(0.67)	.002	0.25	(0.70)	.725	-0.37	(0.92)	.690	-2.40	(0.71)	.001	<b>-2.21</b>	<b>(0.67)</b>	<b>.002</b>	0.02	(0.70)	.973	0.87	(0.92)	.346	<b>1.54</b>	<b>(0.71)</b>	<b>.035</b>
Section E	-3.22	(0.79)	<.001	0.20	(0.79)	.796	1.70	(0.69)	.017	0.05	(0.70)	.944	-0.93	(0.91)	.310	-3.35	(0.70)	<.001	-0.99	(0.69)	.154	-0.10	(0.70)	.888	0.03	(0.91)	.973	0.03	(0.91)	.973
Total	-9.75	(2.26)	<.001	0.97	(2.25)	.669	5.39	(1.94)	.007	0.13	(2.02)	.949	-0.49	(2.61)	.853	-7.91	(1.92)	<.001	<b>-4.48</b>	<b>(1.94)</b>	<b>.025</b>	0.15	(2.02)	.943	1.98	(2.61)	.450	<b>3.28</b>	<b>(1.92)</b>	<b>.094</b>
PRACY																														
# Scen ID (10)	-1.05	(0.27)	<.001	0.33	(0.27)	.225	-0.49	(0.22)	.028	0.52	(0.22)	.022	-0.19	(0.38)	.626	-0.15	(0.24)	.543	-0.29	(0.22)	.191	-0.05	(0.22)	.803	-0.09	(0.38)	.824	-0.39	(0.24)	.109
% Scen Race	0.14	(0.05)	.012	-0.02	(0.05)	.765	-0.06	(0.04)	.162	-0.15	(0.05)	.007	-0.09	(0.08)	.275	-0.25	(0.05)	<.001	0.01	(0.04)	.874	0.08	(0.05)	.143	0.06	(0.08)	.512	0.03	(0.05)	.559
% Scen Language	0.11	(0.04)	.014	-0.06	(0.04)	.151	0.10	(0.04)	.006	-0.05	(0.04)	.214	0.08	(0.07)	.248	0.02	(0.04)	.561	<b>-0.07</b>	<b>(0.04)</b>	<b>.040</b>	<b>0.07</b>	<b>(0.04)</b>	<b>.098</b>	-0.03	(0.07)	.652	-0.01	(0.04)	.684
% Scen Felt Anger	0.12	(0.05)	.030	0.00	(0.05)	1.000	0.00	(0.04)	.915	0.08	(0.07)	.051	-0.08	(0.07)	.249	-0.14	(0.05)	.013	-0.05	(0.04)	.273	0.05	(0.04)	.211	-0.03	(0.07)	.731	-0.03	(0.05)	.564
% Scen Felt Hurt	-0.03	(0.05)	.548	-0.03	(0.05)	.525	0.08	(0.05)	.099	0.01	(0.05)	.821	0.09	(0.08)	.294	-0.14	(0.05)	.002	-0.07	(0.05)	.134	0.07	(0.05)	.117	-0.14	(0.08)	.105	<b>-0.08</b>	<b>(0.05)</b>	<b>.089</b>
% Scen Felt Sad	0.02	(0.04)	.562	-0.01	(0.04)	.814	-0.01	(0.03)	.726	0.04	(0.04)	.255	0.07	(0.07)	.271	-0.12	(0.03)	.001	<b>-0.06</b>	<b>(0.03)</b>	<b>.078</b>	0.04	(0.04)	.265	-0.10	(0.07)	.131	<b>-0.13</b>	<b>(0.03)</b>	<b>&lt;.001</b>
% Scen Felt Pwrls	0.05	(0.09)	.580	0.11	(0.09)	.228	0.00	(0.04)	.957	0.04	(0.05)	.435	-0.03	(0.09)	.741	-0.14	(0.05)	.006	<b>-0.08</b>	<b>(0.04)</b>	<b>.064</b>	<b>0.10</b>	<b>(0.05)</b>	<b>.056</b>	-0.07	(0.09)	.457	-0.04	(0.05)	.418
% Scen Felt Strmth	0.05	(0.04)	.301	0.00	(0.04)	.952	0.01	(0.03)	.632	-0.01	(0.03)	.714	0.03	(0.06)	.558	-0.15	(0.04)	<.001	-0.04	(0.03)	.173	0.04	(0.03)	.284	-0.01	(0.06)	.895	-0.01	(0.04)	.833

Note. Both cohorts included in all analyses. Each row represents a single model that includes an intercept and each predictor. Items in red are treatment effect trends in the data prior to adding interaction terms; items in blue are treatment effect interaction trends ( $p < .10$ ); items in black are treatment effect interactions that are statistically significant ( $p < .05$ ). All tests 2-tailed.



***Treatment by Cohort Interactions on Change.*** Recall that interactions were modeled to test whether CBITS-CA treatment might have been more or less effective for subgroups of youth. Cohort interactions were found only on the trauma measure. For Cohort 1, treatment youth had higher decreases from pretest to posttest compared to control youth, whereas for Cohort 2, control youth had better decreases. For the PRACY, the results were mixed. On percent of scenarios perceived to be due to language background, control youth showed a higher increase from pretest to posttest compared to CBITS-CA treatment, but this was only true for Cohort 1. On percent of identified scenarios that youth expressed feeling sad or powerless, treatment youth reported a greater pretest-posttest increase compared to control youth, but much more so for Cohort 2. Recall that Cohort 2 experienced a more inconsistent treatment implementation timeline and was conducted three months following Cohort 1, when the original schedule intended for Cohort 2 to start shortly after Cohort 1's completion.

***Treatment by POC Status Interactions on Change.*** With regard to POC status interactions, three trends ( $p < .10$ ) were detected. On the BAI, it appears that the treatment was beneficial in terms of higher pretest-posttest decreases, but only for youth of color (a predicted 5.77-point decrease for youth of color in CBITS-CA compared to a 1.63-point decrease for youth of color in control cottages). The same pattern was found on changes in the percent of youth expressing feeling powerless on PRACY scenarios identified: youth of color in CBITS-CA cottages reported a large increase from pretest to posttest (31% increase) compared to control youth of color (12% decrease). Last, it appears only white youth in CBITS-CA reported an increase in language as the reason for the PRACY scenarios identified compared to white youth in the control group; examining further, white youth further specified "gang language" in their description. Finally, youth of color in treatment and control conditions did not differ in changes to percent of scenarios due to language.

***Treatment by Pretest Interactions on Change.*** There were two significant pretest-by-treatment interactions: the UCLA-D and the PRACY percentage of scenarios in which youth felt hurt; there were trends for UCLA total and PRACY percentage of scenarios in which youth felt sad. On the UCLA-D and total, there was no substantive difference between treatment and control conditions for youth with lower pretest levels (i.e., lower levels of trauma), but for youth with higher initial levels of trauma, control youth made greater decreases from pretest to posttest compared to treatment youth. On the PRACY, youth with higher perceptions of feeling sad or hurt for identified scenarios at pretest, CBITS-CA youth showed greater decreases than control youth from pretest to posttest. For youth with lower perceptions at pretest, CBITS-CA youth showed greater increases than controls (opposite) in feeling sad or hurt by scenarios identified.

In summary, overall treatment effects were found for the BDI, and on the BAI and PRACY expression of feelings for youth of color. For white youth, treatment effects were also observed on PRACY scenarios identified as being based on language, specifically "gang language." Additionally, Cohort 1 demonstrated treatment effects on the trauma measure. We are quite optimistic with these results particularly given our small sample size for testing treatment effects (i.e., with only eight cottages, the tests for treatment effects lack statistical power) as well as limitations with the PRACY measure previously described.



## Group Evaluation after Session 9 (Social Validity)

A survey was administered only to the treatment youth to gather their qualitative feedback on their experience with CBITS-CA. Recall that the adapted Session 9 was *Introduction to Race and Links to Traumatic Stress*. Results from the CBITS-CA survey was examined both quantitatively and qualitatively (see Appendix B for youth responses on the posttest form). Table 7 below displays descriptive statistics. As can be seen, when asked if they would recommend CBITS-CA (including Session 9) to peers, 96% said yes.

When we conducted regression models on the data, we found that whether or not the child was a person of color was not predictive of their responses. Nor was cottage membership or cohort a predictor. Only age appeared to be predictive of older treatment youth having lower stress after CBITS-CA participation. As such, it appears that all participating youth, but particularly older youth, report benefiting from CBITS-CA.

Table 7. *Descriptives for CBITS-CA Youth Survey*

Survey Item	Cohort 1		Cohort 2		Combined	
	CBITS-CA		CBITS-CA		CBITS-CA	
	<i>n</i> = 18		<i>n</i> = 12		<i>n</i> = 30	
	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )
Trauma Known Before Participation	0.87	(0.34)	0.92	(0.29)	0.89	(0.32)
Better Understanding of Trauma Effects	1.00	(0.00)	0.92	(0.29)	0.96	(0.19)
Less Stress after Participation	0.44	(0.51)	0.75	(0.45)	0.57	(0.50)
Coping Skills with Stress/Trauma	0.81	(0.40)	1.00	(0.00)	0.89	(0.32)
Helpful Group Leader	1.00	(0.00)	1.00	(0.00)	1.00	(0.00)
Number of Common Reactions to Trauma	2.94	(0.25)	2.92	(0.29)	2.93	(0.26)
Number of Skills Learned	2.75	(0.58)	3.00	(0.00)	2.86	(0.45)
Better to Talk when Something Happens	0.87	(0.34)	1.00	(0.00)	0.93	(0.27)
Recommend Group	0.94	(0.25)	1.00	(0.00)	0.96	(0.20)

Additionally, 96% of the treatment youth provided positive, qualitative statements on Session 9, indicating that it helped to raise their awareness on race-related issues and the impact on stress. Below are some examples of their responses to the question “Did you find the session on racism and trauma to be helpful?” Please see Appendix B for more detailed responses.

*"Session 9 was helpful and really true. I felt like I learned something. Stuff wasn't true for me, mainly boyfriend & other."*

*"Yes it helped me to identify certain areas that I would need to work on." "Session 9 was good overall, it helped me understand the different terms better."*



*"Yes, I liked the racism session it was helpful to talk about it." "it was helpful to hear other perspectives."*

*"Session 9 was great. The topic was really great. The video was helpful, it was great it was black & white to leave you guessing their race (the people in the video). The issues discussed were really helpful and relatable. the video brought up a lot of great experiences. it was cool that we were able to express our opinions and more people should have the conversation & good to raise awareness that trauma can happen as a result of racism. This should be its own program so it's for everyone." "Didn't expect it to help at first but it did! But I felt empowered & relieved to be able to talk about it. I know when I do talk about it again, I won't be so anxious."*

### **Exploratory RQ5: CBITS-CA Staff Training Evaluation Results (Social Validity)**

The direct care staff completed a training evaluation at two time points: at the end of the 2-day live training (prior to the start of implementing their CBITS-CA group), and then again when they finished implementing their own CBITS-CA group. Insight gained from these open-ended evaluation forms indicated that the two-day live training was a positive experience for all of them. They were asked to rate on a scale of 1 to 5 from strongly disagree to strongly agree on 15 questions. Overall, results indicated a rating of 98% or higher on the training experience. They were asked a number of questions such as: how well the training increased their level of understanding of trauma, how much they believed the training would impact their work with the youth and families at their facility, how likely they would be to share the content learned with their colleagues, how likely they would use what they learned in the training with the youth at their workplace, and how confident they felt implementing CBITS-CA following the training with supervision and consultation. They were also asked to write any additional comments at the end of the form. One participant wrote, *"This training fills a necessary gap and will allow me to better connect with our residents"* and another indicated, *"I hope that CBITS is implemented and continues to be a part of our program."* More detailed responses are provided in Appendix D.

Upon completion of their own CBITS-CA group, the direct care staff were asked to complete a questionnaire with seven open-ended questions: 1) Would you recommend CBITS-CA for youth in Juvenile Justice? Why? Or Why Not? 2) Were the cultural adaptations (discussing race-based stress) useful?; 3) Was a 2-day live training, followed by bi-weekly consultation enough support?; 4) What did you enjoy about implementing CBITS-CA in a Juvenile facility?; 5) What was challenging about implementing CBITS-CA in a Juvenile facility?; 6) Any additional comments. Overall, all respondents indicated that they would recommend CBITS-CA for youth involved in juvenile justice and found the overall experience to be positive and expressed a strong desire for ongoing consultation and support. Of the eight staff, seven completed this questionnaire as one left the Echo Glen facility at the time the post-assessments were administered. Results indicated that 100% reported they would recommend CBITS-CA in Juvenile Justice. One staff member reported, *"I would highly recommend this program for all youth and staff in Juvenile Justice. I feel these conversations need to be had especially with our populations. I feel through these conversations can come much growth, a better understanding of*



*our society, and what can be done to change the way some things are and reduce racism in our world.” Another reported, “Absolutely. Many of the youth I have worked with have had very little to no educational conversations about race, culture, ethnicity, equity, etc. Yet a lot of them have life experiences that have negatively affected them due to their race, culture, ethnicity, etc. They become angry, bitter and vengeful as a coping mechanism for the inequality that they have faced instead of getting help and educated to help them understand what is happening.” More detailed responses are provided in Appendix D.*

## Discussion

Our findings support our hypotheses that direct care staff in this study were motivated to enhance their knowledge and skill around the impact of trauma and racism. They became effective in implementing both the standard modules of CBITS as well as those that focused on the impact of race and discrimination on behaviors that are in part a consequence of trauma. Overall, the findings from this research study indicate that it is feasible to train direct care staff in a juvenile facility to implement CBITS with Cultural Adaptations (CBITS-CA) to youth adjudicated of a crime. Furthermore, the results show that with controlled training guidelines, where ongoing consultation is provided, and necessary adaptations are made to the content, direct care staff are able to implement an evidence-based, group-based, trauma-focused intervention with youth involved in the juvenile justice system with at least 80% fidelity. The results from this study are highly promising. As indicated, the challenging realities of implementing a new intervention in a setting where staff have multiple responsibilities and accountabilities makes our findings quite remarkable even though they are limited.

Quantitative and qualitative results from the culture and race measures indicated that staff overall, increased in their self-awareness on culture, race, and trauma. As indicated in a study by Owen et al. (2016), clients who perceive their therapist as more culturally humble report better therapy outcomes, providing support around the importance of enhancing the level of cultural humility among providers. The CBMCS results indicated that 5 out of 7 of the staff increased their cultural awareness, and 4 out of the 7 staff increased in their cultural sensitivity. Echeverri, Brookover, & Kennedy (2011) highlighted that the CBMCS was developed and standardized for use with majority white mental health providers (Gamst et al., 2004). Echeverri and colleagues (2011) found that using a modified factor structure of the CBMCS with three additional items related to interpersonal and racial dynamics, which includes racial discrimination, white privilege, and power imbalance to fit the data better in their study examining a modified CBMCS tool with a primarily POC provider population. This could shed light into the reason we observed a decrease in scores primarily among staff of color in the two sub-domains described given that the CBMCS does not display measurement invariance across white and people of color providers.

Results on the behavioral health measures indicate treatment effects for depression for all treatment youth. While there is a lack of research on the effectiveness of trauma-focused interventions in the juvenile justice setting, one study conducted by Marrow et al. (2012)



examined a nonrandomized study of a trauma intervention, TARGET, in a juvenile justice setting among a similarly small sample size as the current study. As such, this study serves as a relevant comparison. Marrow et al. (2012) primarily found reductions in depression symptoms for treatment youth, but not trauma. Our current study demonstrates significant reductions in trauma for treatment youth in Cohort 1, but not Cohort 2. Recall that Cohort 2 had a more inconsistent implementation timeline and was conducted three months after the conclusion of Cohort 1. While we did not statistically measure this impact, clinically, it is understood that providing any intervention is best delivered consistently (Breitensten et al., 2010). Furthermore, during the unexpected three-month gap, staff were not implementing groups, no consultation was provided, and there was no review of the CBITS-CA curriculum during this time which may have disrupted the flow of learning for the staff.

For youth of color, treatment effects on anxiety and expression of negative feelings associated with a past event experienced as due to racism were observed. As the current study focused on adapting the CBITS curriculum to fit the needs of youth of color, these results are particularly promising. Additionally, a large focus of the study was to increase awareness among youth regarding the impact of racism on stress, thus the observed increase in negative feelings associated with a past event experienced as due to racism indicates an improved ability to recognize race-related stress. A study conducted by Frisman et al. (2008) examined the TARGET model among a sample of adults with substance-abuse and traumatic stress disorders. While results indicated the treatment participants maintained sobriety self-efficacy at both 6- and 12-month assessments at higher rates compared to treatment as usual participants, the white participants exhibited more improvement compared to their non-white participants. This is one example that indicates a significant need for treatment programs with cultural adaptations, particularly in the juvenile justice system where there are significant racial and ethnic disparities.

Qualitatively, 96% of the youth would recommend the program to their peers, 89% of the treatment youth reported an increase in their ability to *cope* with trauma-related symptoms, and 100% of the youth indicated their group leader was helpful in teaching the skills, as indicated on the group evaluation form post-CBITS. These findings indicate that the youth found the program to be a positive experience, providing support for the social validity of the CBITS-CA program.

## Limitations

As with most “implementation science studies” findings compared to research conducted in more controlled settings have limitations and the outcomes are initially less robust. However, we saw both positive staff and youth outcomes despite the staff challenges and the relatively small sample size.

From a statistical perspective we employed a cluster randomized study (randomization at the cottage level), rather than a randomized trial and the child level, which severely reduces statistical power with only 8 cottages. However, the CBITS treatment was only feasible as a group-level treatment in the juvenile justice setting, so the current study serves as a **First** rigorous attempt at studying CBITS in the setting as intended. Another example that highlights



the complexity of randomizing youth in juvenile justice is the release date from the facility is highly variable among the youth. Given that CBITS is typically a 10-week program, it is emphasized that youth complete it in its entirety due to the sensitivity of the topic and to promote development of a positive and trusting group dynamic. As such, it was critical to select youth to participate together in a group that had a level of certainty the youth would be able to complete the entire CBITS curriculum before exiting the facility.

Future studies would benefit from longitudinal data, specifically following up with both treatment and control youth after the post-test (e.g. 3 – 6 months afterwards) in order to determine the long-term impact of the intervention. Additional measures such as recidivism rates outside of self-report behavioral health measures of depression, anxiety, and trauma, would enhance our understanding of the impact of a trauma-focused intervention such as CBITS in a juvenile justice setting (Tossone, Butcher, & Kretschmar, 2016). Self-report measures are limited in that they primarily consider the reporter’s experience, thus information on how others perceive them is not available. Further analyzing other covariates such as severity of crime committed, as well as numbers of traumas, would be particularly interesting to assess how those with complex and multiple traumas respond compared with those with fewer traumas. Finally, we were not able to obtain information on the treatments those in the control group received. For example, some control youth received Trauma-Focused Cognitive Behavior Therapy (TF-CBT), an evidence-based individual treatment program, or Aggression Reduction Training, but we were unable to control for these variables in our current study.

## **Recommendations**

To address the concerns outlined above, a larger effectiveness study is necessary. Implementing this intervention with additional cottages at Echo Glen and having the program be part of the regular structure of youth activities would be essential. Access to caregiver’s assessment of a youth’s knowledge of trauma and the capacity or evidence of a youth addressing the issue would be an important covariate to measure.

As indicated participation in this study was voluntary for youth. For those who opted out of participation, we did not follow them. In a larger study, it would be recommended to follow-up with youth who opt out of participation to assess whether their PTSD-related symptoms improve or decrease without CBITS.

In addition, follow-up quantitative and qualitative data from line staff, case managers and mental health professionals around youth capacities to utilize skills when addressing trauma would help shed light on how CBITS aligns with targeted treatment goals.

Finally, it is recommended to undergo another iteration of the “Race and Links to Traumatic Stress” module. Feedback from both staff and youth indicated the topic was beneficial and that it would be helpful if it was more than one session. As such, consideration to further develop the content into a separate program or continued as an add-on to a pre-existing evidence-based program such as CBITS is recommended for review.



## Conclusion

Despite these limitations, this study provides preliminary evidence that this was an effective demonstration of the capacity of juvenile justice line staff to rapidly develop a high degree of adherence to implementing an evidence-based trauma intervention in a secure justice setting. Data supported the finding that the CBITS-CA (with the inclusion of the module on trauma and race) implementation was both doable and a positive experience for both the youth and direct care staff. To be clear, however, implementation was doable under tightly controlled, strict training guidelines. Staff were provided the highest quality training model as recommended by NCTSN and CBITS. The challenges faced must be addressed in order to continue to support the program moving forward.

Quantitatively, the youths' scores demonstrated improvement across several behavioral health domains, and qualitatively the youth reported enjoyment from participation in the group and recommend it for others. The direct care staff also all recommended CBITS with Cultural Adaptations for youth in juvenile justice and reported this is a treatment that fills a critical gap in the system. There is a need to better understand the implementation process and service delivery of evidence-based trauma interventions in the juvenile justice population, as well as training staff on how to have conversations with youth adjudicated of a crime on the impact of racism. While there is extensive research that supports the use of trauma-focused intervention, research on the implementation of these evidence-based practices in juvenile facilities among youth adjudicated of a crime are limited, and research on the effectiveness of raising awareness among staff *and* youth on the topic of racism is even more limited. A strong joint effort and relationship between local and state-level stakeholders involved in juvenile justice is essential to continue this work. As leadership and administrators have the power to drive change within the juvenile justice system, which includes how behavioral health programs are implemented, it is critical for individuals both at the local level and state-wide level to collaborate to effect change.

*For more information regarding this report, please contact Won-Fong Lau Johnson, PhD, NCSP, at (fongj8@uw.edu). Thank you.*



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Appendix A. CBITS Fidelity Form

**CLINICIAN:**  
**SESSION:**

**CBITS, Second Edition**

**Adherence & Fidelity Measure**

*PART 1: FOR THE FOLLOWING SECTION COMPLETE THE SCORING FOR THE SESSION YOU ARE REVIEWING. DELETE THE OTHER SESSIONS.*

**Session 1:**

**Did the group leader cover the following elements?**

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**

**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

\_\_\_\_\_ Introduction of group members, confidentiality, and group procedures.

\_\_\_\_\_ Explanation of treatment using stories

\_\_\_\_\_ Discussion of reasons for participation (kinds of stress or trauma).

\_\_\_\_\_ Homework assignment: Goal-setting

**Session 2:**

**Did the group leader cover the following elements?**

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**

**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

\_\_\_\_\_ Homework review: Goal-setting

\_\_\_\_\_ Education about common reactions to stress or trauma

\_\_\_\_\_ Feelings Thermometer

\_\_\_\_\_ Relaxation training to combat anxiety

\_\_\_\_\_ Homework assignment: Review handout with parents, practice relaxation



### Session 3:

**Did the group leader cover the following elements?**

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**

**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

\_\_\_\_\_ Homework review: Review handout with parents, practice relaxation

\_\_\_\_\_ Thoughts and Feelings (Introduction to Cognitive Therapy)

\_\_\_\_\_ Linkage between thoughts and feelings

\_\_\_\_\_ Combating negative thoughts: Alternatives (other ways to think about it)

\_\_\_\_\_ Combating negative thoughts: Implications (what will happen)

\_\_\_\_\_ Homework assignment: Hot Seat worksheet

### Session 4:

**Did the group leader cover the following elements?**

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**

**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

\_\_\_\_\_ Homework review: Hot Seat worksheet

\_\_\_\_\_ Combating negative thoughts: Plan of Attack

\_\_\_\_\_ Combating negative thoughts: Evidence (checking the facts)

\_\_\_\_\_ Practice with the Hot Seat

\_\_\_\_\_ Homework assignment: Hot Seat worksheet

### Session 5:

**Did the group leader cover the following elements?**

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**

**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

\_\_\_\_\_ Homework review: Hot Seat worksheet



- \_\_\_\_\_ Avoidance and coping (Introduction to Real Life Exposure)
- \_\_\_\_\_ Construction of Steps for Facing Your Fears
- \_\_\_\_\_ Alternative coping strategies: thought stopping, distraction, positive imagery
- \_\_\_\_\_ Homework assignment: real-life exposure, practice coping strategies

### Session 6:

Did the group leader cover the following elements?

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**

**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

- \_\_\_\_\_ Homework review: real-life exposure, practice coping strategies
- \_\_\_\_\_ Exposure to stress or trauma memory through imagination/drawing/writing
- \_\_\_\_\_ Providing closure through discussion, summary, next steps
- \_\_\_\_\_ Homework assignment: finish drawing / story, think about it, real-life exposure, hot seat

### Session 7:

Did the group leader cover the following elements?

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**

**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

- \_\_\_\_\_ Homework review: finish drawing / story, think about it, real-life exposure, hot seat
- \_\_\_\_\_ Exposure to stress or trauma memory through imagination/drawing/writing
- \_\_\_\_\_ Providing closure through discussion, summary, next steps
- \_\_\_\_\_ Homework assignment: finish drawing / story, think about it, real-life exposure, hot seat

### Session 8:

Did the group leader cover the following elements?

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**



**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

- Homework review: finish drawing / story, think about it, real-life exposure, hot seat
- Introduction to problem solving
- Negative thoughts & actions
- Brainstorming solutions
- Decision-making: pros and cons
- Homework assignment: problem-solving practice, real-life exposure

**Session 9:**

**Did the group leader cover the following elements?**

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**

**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

- Homework review: problem-solving practice, real-life exposure
- Practice with problem solving
- Practice with the hot seat
- Review of key concepts

**Session 10:**

**Did the group leader cover the following elements?**

**0 – not covered at all**

**1 – cursory reference to this topic and quick review**

**2 – group leader clearly covers the topic, with or without cooperation of group members**

**3 – group leader covers the topic thoroughly, integrating it into the larger context of therapy and in an interactive style)**

- Relapse prevention discussion
- Graduation ceremony



## PART 2: COMPLETE THESE QUESTIONS AS THEY PERTAIN TO THE SESSION YOU REVIEWED

### **Did the therapist ask the group to summarize part of the session, or ask if they understand the material presented?**

- 0: Therapist never asks children if they understand session material, and never asks children to summarize a point that had been discussed or covered in skill training.
- 1: Therapist summarizes a point but does not ask children to do so and does not check-in to assure that children “gets” the point.
- 2: Therapist elicits one or more summaries from the children during session or checks in at end of session by asking children to indicate if they feels work is meeting their needs (e.g., “making sense” to them).
- 3: Therapist meets criteria for 2, above, and weaves summaries or check-ins into session in well-integrated, “natural,” fashion.

### **Did the therapist convey empathy to the children?**

- 0: Major and consistent lack of empathy, e.g., therapist is “reading to” the group, and likely to be missing major cues over entire session; no effort to understand the children
- 1: Although there may be moments of emphatic connection, session as a whole is marked by absence of empathy; therapist clearly annoyed at children, impatient or intolerant of children
- 2: Therapist makes consistent effort to understand children and responds with empathy to the emotions of the children
- 3: Therapist meets criteria for 2, above, and maintains empathic relationship throughout session

### **Did the therapist work within a cognitive-behavioral framework?**

- 0: Session consists entirely of supportive, non-directive therapy, of interpersonal therapy, or of another model of treatment that is not CBT
- 1: Some CBT concepts or techniques are included in session, but out of the context of a CBT model; for example, CBT concepts or techniques serve as an add-on to what the therapist is doing
- 2: The therapist stays within a CBT framework consistently throughout the session, and does not use another treatment model
- 3: The therapist stays within a CBT model, conveys an understanding of that model to the patient and uses the model to deal with the children’s concerns

### **Was the therapist able to manage the group?**

- 0: Not at all: the therapist made multiple attempts to control the group and cover material, but was unsuccessful.
- 1: Some control over the group, though there was still a good deal of cross-talk, joking, and/or non-compliance among group members.
- 2: Moderate control over the group, despite some difficulties.
- 3: Therapist is able to control the group in order to convey the material.

### **What was the overall level of group motivation?**



- 0: Very low.
- 1: Low
- 2: Moderate.
- 3: High

**What was the overall level of comprehension of material in the group?**

- 0: Low for most students
- 1: Low for some students, moderate to high for others
- 2: Moderate to high for most students
- 3: Moderate to high for all students

**What was the overall group participation level?**

- 0: Low, most group members reticent
- 1: Low for some students, moderate to high for others
- 2: Moderate to high for most students
- 3: All students participating actively

Appendix B. Qualitative Responses on Group Posttest Form from Youth

<p><b>What did you enjoy most about group?</b></p>	<p>It was interesting getting to know why I do certain things.</p> <p>When we talked about race and how it affects our life's to be discriminated against.</p> <p>The staircase set up and the skills. Interacting with other residents.</p> <p>Being with staff and sharing my experience &amp; hearing other's experiences</p> <p>"I think I wasn't ready to talk and I kept avoiding it."</p> <p>The party and the stair steps stories</p> <p>Talking to STAFF about the problems because she was very helpful.</p> <p>Feel like it helped me." "The most helpful was the group #6/7 (picture diary)."</p> <p>Learn new things</p> <p>Of course the pizza party but also where I got to talk to STAFF about my trauma and I cried.</p> <p>That we got rewards at the end.</p> <p>Peer Support</p> <p>Learning new things and the party.</p> <p>Hearing other people' stories</p> <p>Learn new things</p>
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<p><b>What would you recommend to change about this group to make it better?</b></p>	<p>For later sessions, do more individual sessions &amp; more talking the trauma event.</p> <p>It was fine!</p> <p>Change the examples in the lessons and Consistency</p> <p>Make it available in different setting instead of the cottage.</p> <p>I don't know</p> <p>More peer conversation,</p> <p>Be more communicative about themselves.</p> <p>Nothing</p> <p>"I wish I could have finished the group." "I wished I could have finished it though b/c it could have helped me." "I think it's important to have a trauma group."</p> <p>Make it longer.</p> <p>Nothing I thought it was good.</p> <p>Maybe make it twice a week. Maybe be a bit more consistent with follow through on the steps ladder.</p> <p>Make it longer, consistency with scheduling</p> <p>Talking about more skills</p>
<p><b>What did you enjoy about the group leaders?</b></p>	<p>They were understanding and supportive.</p> <p>I think they were incredible. I also think they may have had some trauma!</p> <p>They're cool, they don't power-trip</p> <p>That I knew &amp; trusted them.</p> <p>They interacted w/ you &amp; helped w/ whatever you needed help with.</p> <p>Their confident</p>

	<p>They were straight with us, they broke down the hard &amp; made it easy</p> <p>"Staff also weren't doing it consistently, it felt like they were only doing it when they were ready/wanted to."</p> <p>We were involved all at once, it wasn't like they were better than us or something.</p> <p>They did good at leading the group.</p> <p>They listened to me and made me feel heard.</p> <p>They helped me a lot.</p> <p>I knew the staff 1:1</p> <p>Easy to talk to</p> <p>They were nice</p> <p>They did good at leading the group.</p>
<p><b>Did you find the session on racism and trauma to be helpful?</b></p>	<p>"Feel better though b/c I opened the door for the 1st time. So now I feel like I can do more intensive work in the future." "Group helped but was hard to do the individual in a settings like this b/c I was unable to cope the way I normally do (eg. Talk w/ mom, cuddle w/ dog)." "It's a good group." "Session 9 was helpful and really true. I felt like I learned something. Stuff wasn't true for me, mainly boyfriend &amp; other."</p> <p>"yes it helped me to identify certain areas that I would need to work on." "Session 9 was good overall, it helped me understand the different terms better."</p> <p>"Yes, I liked the racism session it was helpful to talk about it." "it was helpful to hear other perspectives."</p> <p>"I think it helped."</p>

"Felt like session 9 was the most helpful and it was where I talked the most. There's a girl I know from the outs that was in my group here and I realized I was discriminating or judging her because she was white. After that group I actually talked to her and apologized b/c I realized that she was actually pretty cool."

"The group should be longer (the sessions)." "Learn new skills that help when you leave. Plus you can handle the stress from trauma."

"I think it helped." "Liked session 9, talked about macroaggressions and all the other stuff & didn't know this before." "The staff were really helpful."

"Helpful overall." "Session 9 was helpful, yes I think we should keep it in there." "Liked all of the sessions."

"I think race is more important for girls to talk about then guys. But I do see racism happens to guys - but more so w/ girls."

"liked all the CBITS sessions." "Wanted the racism session to be longer, it felt too short." "Liked the topic b/c it's truthful. Don't haven't had the opportunity to talk about racism at school."

"Session 9 was helpful, it was seeing others talk about the same things that you go through was helpful." "Everything was good about the group." "Liked the smaller size group (vs. 5)."

"Yes, I think this group helped me cope w/trauma." "The racism session was helpful, I learned more things, liked it exactly the way it was." "I would do it again."

Would recommend CBITS for others with trauma. It's better than nothing at all.

"It helped me a lot, particularly w/ the trauma I had & whenever I think about the trauma to use my relaxing skills." "Session 8 was helpful, liked it, it's just that I have definitely seen it happen to other people but I don't really think it's happened to me - see happen mostly to other people of color." :it's hard to talk about racism, feels like nothing will change, but it taught me some thing." "Would recommend some fidget toys to help us pay attention in session 9."

"Yes, 100% would recommend the group! Others want to get in! We need more groups like this!" "Really loved the group. I think it's great to have here. Honestly wasn't sure @ first b/c didn't know if I

wanted to go through all that. But ended up being really helpful."  
"Session 10 was awesome. We had a BBQ on the patio w/ a few security staff & it was really nice to have that peer support." "I has an individual trauma that was pretty much the same as another peer in group and I was so surprised and felt less alone once I heard his story during group (#6/7) & easier to talk to someone similar."  
"Session 9 was great. The topic was really great. The video was helpful, it was great it was black 7 white to leave you guessing their race (the people in the video). The issues discussed were really helpful and relatable. the video brought up a lot of great experiences. it was cool that we were able to express our opinions and more people should have the conversation & good to raise awareness that trauma can happen as a result of racism. This should be it's own program so it's for everyone." "Didn't expect it to help at first but it did! But I felt empowered & relieved to be able to talk about it. I know when I do talk about it again, I won't be so anxious."

Session 9; liked it, was long (2.5 hours), helped me understand more things about racism; thinks it should continue - session 9." "Group itself was really good."

"Session 9 good but too much information, learned new things."  
"Recommend session 9 to stay in there. CBITS was cool, helped me w/ my trauma. Individual session helped, it was cool. Most helpful thing about CBITS was that I could talk to someone."

"Yes, I think this group helped me cope w/trauma." "The racism session was helpful, I learned more things, liked it exactly the way it was." "I would do it again."



Appendix C. CBITS Posttest for Youth

**CBITS Posttest**

True	False	Statement
<input type="checkbox"/>	<input type="checkbox"/>	1. Before this group, I already knew what trauma was.
<input type="checkbox"/>	<input type="checkbox"/>	2. After participating in this group, I have a better understanding of how trauma affects how I think and feel.
<input type="checkbox"/>	<input type="checkbox"/>	3. I feel less stressed after participating in this group.
<input type="checkbox"/>	<input type="checkbox"/>	4. I learned new skills to help me cope with my stress related to the traumatic/stressful event that I experienced.
<input type="checkbox"/>	<input type="checkbox"/>	5. My group leader(s) were helpful in teaching the skills.

What are three examples of common reactions to a traumatic or stressful event?

- 1.
- 2.
- 3.

What did you enjoy the most about the group?

What would you recommend to change about this group to make it better?

What did you enjoy about the group leader(s)?

What would you recommend the group leader(s) to improve upon in the future?

What are some skills you learned in this group?

- 1.
- 2.
- 3.

When something bad happens to us, is it better to think about it and talk about it, or to try to avoid it completely? Why?

Would you recommend CBITS (with Cultural Adaptations) with the Racism Session to your peers? Yes or no? Why or why not?



Appendix D. Qualitative Responses from Direct Care Staff after Implementation of CBITS Group

<p><b>Would you recommend CBITS with Cultural Adaptations for youth and staff in Juvenile Justice? Why? Or Why Not?</b></p>	<p>YES. The curriculum has spurred healthy discussions amongst staff and residents. It may be helpful for all staff to have exposure to this session material or subject matter prior to youth so that conversations can continue after the session and everyone is adequately informed.</p> <p>I would highly recommend this program for all youth and staff in Juvenile Justice. I feel these conversations need to be had especially with our populations. I feel through these conversations can come much growth, a better understanding of our society, and what can be done to change the way some things are and reduce racism in our world.</p> <p>Cultural awareness and discussion on diversity amongst our population would be greatly supported with proper training.</p> <p>CBITS in general may be facilitated better outside of the cottage.</p> <p>Yes! It leads to very important discussions about being aware of mindsets including your own and how just being aware of that can help to engage in more skillful behaviors.</p> <p>Yes I would recommend this because it helps to have the conversation about racism, prejudice, discrimination and other terms to see how it affects their lives and how they might be helping contribute to it without realizing and how they can help eliminate it.</p>
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	<p>Absolutely. Many of the youth I have worked with have had very little to no educational conversations about race, culture, ethnicity, equity, etc. Yet a lot of them have life experiences that have negatively affected them due to their race, culture, ethnicity, etc. They become angry, bitter and vengeful as a coping mechanism for the inequality that they have faced instead of getting help and educated to help them understand what is happening.</p> <p>Yes I would recommend CBITS for youth and staff in Juvenile Justice because the training and treatment model are more likely to improve: 1) staff understanding of minority youth experiences and the impact upon their mental health; 2) staff awareness of strategies and approaches or skills that are likely to reduce conflict with youth; 3) youth understanding of why they respond as they do in particular situations; 4) youth skills for managing their thoughts and emotions.</p>
<p><b>Were the Cultural Adaptations (discussing race-based stress) useful?</b></p>	<p>Yes, especially with older more mature youth capable of regulating their emotions to sensitive materials.</p> <p>It was a lot of pretty heavy information for our youth in our (cottage) but being able to simplify and discuss examples helped them to comprehend and connect the material. It was very useful and beneficial especially in (our cottage) so that our youth (who are predominately White) get exposed to the reality of what their peers of color experience and live through.</p> <p>Yes I think it was useful because a lot of our kids use and get used to using the “n” word without understanding what they are really saying. We were able to have an open discussion</p>

on experiences they have been through that has caused trauma. Then their peers were able to realize what each other have gone through.

Yes, even if client is not directly effected by racism themselves they are most certainly effected by prejudice for one reason or another and that can be a real vulnerability leading to very unhelpful thoughts. Also, I thought it helped some of the clients to see how their preconceived ideas could lead to thoughts and emotions that can be very unhelpful.

Yes it was helpful to create a validating environment and might be better at a diversity training for entire unit.

They were very useful. It created a safe space to have discussions with staff and youth about race-related stress. Also, it helped start more conversations with youth post sessions about these topics and how it has and currently does effect our youth. I feel it helps youth make more sense of what they have experienced or are currently experiencing in their lives. Also, to find connections between their experiences and maybe not feel so alone in their past or current traumas.

It seemed to be helpful for youth to look back on experiences they have experienced or those in their community have experienced. The discussions, and especially the problem-solving portion seemed to empower the youth to speak up and advocate for change where they can.



**What did you enjoy about implementing CBITS with Cultural Adaptations in a Juvenile facility?**

Providing a safe place for the youth to get support regarding their trauma when they might otherwise not in the traditional DBT treatment.

Also, trust and stronger relationships between the youth and facilitators.

I enjoyed the open and honest conversations. I enjoyed the youth opening up about their past experiences and learning more about our youth and how it opened my eyes to a lot of things going on in our society.

I enjoyed talking to the group about how individually they may be treated differently and actions they can take to improve themselves.

How the boys seemed to open up more and seemed very genuine about their thoughts, feelings, circumstances, history, and were actually vulnerable to the group. It also seemed to help develop a sense of trust in the group. That was cool to witness.

This program gives line staff and counselors a way to target the automatic thoughts that quite a few of these kids have over-learned because of repeated exposure. Once you get the buy-in it has been fairly easy to generalize the skills to help in a lot of different situations.

Sleep is a huge issue we see in our cottage and the relaxation component paired with breathing and some type of mental vacation or imager works wonders for these kids.

I enjoyed hearing the kids' stories and I enjoyed helping educate them on definitions so they increased their understanding.

I love that the group was designed to help our youth cope with their trauma. If there is one crucial training that could benefit our youth, it would be this one. All of the youth I have worked with have experienced some sort of trauma but many of them don't have counseling sessions or groups to help them process their trauma. CBITS is an amazing group that provides skills and exercises to help our youth process and cope with their trauma. While providing them the skills and exercises, it also provides a safe space for our youth. A great



	<p>way to be inclusive and create a sense of community with other peers struggling with the same symptoms of trauma.</p> <p>Hearing the stories from the youth, both their experiences and how they interpreted or received stories told by others was very enlightening.</p>
<p><b>What was challenging about implementing CBITS with Cultural Adaptations in a Juvenile Facility?</b></p>	<p>Presenting the material to younger, less mature population of male youth offenders was very challenging (the race session).</p> <p>Some of the stuff was hard for our (cottage) youth to understand, particularly the race stuff. We were able to make it more concrete for them to understand.</p> <p>Scheduling and finding time to do group was challenging, so more support here would be helpful.</p> <p>It was challenging making sure everyone understood the definition and having them come up with examples in their own lives. Some kids were more responsive than others.</p> <p>The intense emotions of some of the kids as they discussed sensitive topics.</p> <p>Some of the boys feeling as though some of the stuff didn't pertain to them.</p> <p>Scheduling and logistics; need more administrative support.</p> <p>The challenge was when we identified microaggressions and discriminations, but residents felt helpless to change it.</p> <p>CBITS education should be given to all cottage staff.</p> <p>Need more time to review the materials outside of classroom/setting.</p> <p>Need a supports/back-up for co-facilitator, more staff need to be trained.</p>



	<p>It was challenging fitting all of the information into one session (the race-related stress one). I feel it should be split into two different sessions.</p> <p>Having time to follow through with helping the youth with their activities, especially the exposure hierarchy.</p> <p>Keeping a consistent schedule.</p>
<b>Additional comments?</b>	<p>Expand more broad information about trauma and it's effects to staff and residents.</p> <p>Also presenting the cultural adaptations to the campus so everyone is aware that these conversations are occurring.</p> <p>I found the youth panel who came in with Dominique Davis at the 2-day training was very powerful. It would be great if this could be in future trainings. I also feel linking the school to prison pipeline in this program would be useful for youth to link this to racial trauma they may have experienced in school.</p> <p>Having a safe environment for staff and students to debrief and review skills/materials is vital to resident comprehension.</p> <p>The program was useful and Dr. Fong weekly check-ins and co-facilitator was helpful.</p> <p>CBITS handbook was very clear and straightforward</p> <p>On-site psychologist was helpful. Cottage could improve with staffing pairings to ensure group is held weekly.</p> <p>Room size could improve to hold groups in a different location to allow residents to process material.</p> <p>I'd like to know if there is a correlation that can be supported by data between economic stats and the amount of trauma some kids can see.</p>

Also families who deal with drug addictions and the amount of trauma they experience.

Thank you for the opportunity!

I think more examples would be useful so the kids can understand that trauma can be caused by more than just experiences based on race.

I think it would be helpful if more staff were trained up so if one of the facilitators are gone, the group can still be run. We fell behind because of low staffing and the lack of staff trained up.

I hope that CBITS is implemented and continues to be part of our program. I will admit that Session 9 (race session) was one of the more difficult ones to facilitate. It makes it more difficult that it's the last session and we had the training back in January. It might be more helpful to have more training or have it closer to the time we are going to facilitate it.

Dr. Won-Fong was so supportive and insightful. I appreciated how open-minded, validating, and sensitive she was throughout this process. She really brought to light how important it is for our youth to have programs to help to learn, process, and apply trauma-related skills and exercises.

Train more staff.

Provide adherence credit for staff delivering CBITS.

Make the training a mandatory part of the curriculum all staff must know.