

The Impact of Mind Matters

University of Louisville Pilot Study

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Center for Family and Community Well-Being

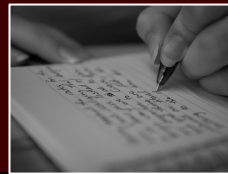
About Us: University of Louisville Center for Family and Community Well-Being

The University of Louisville Center for Family and Community Well-Being is directed by Dr. Becky Antle. Dr. Antle and her team have 17 years of experience and over \$15 million in federal funding for developing and evaluating relationship and mental health curricula for at-risk populations. This team has contributed extensively to the field's understanding of teen pregnancy prevention, dating and intimate partner violence prevention, child abuse prevention, and trauma treatment. As such, they were well positioned to conduct this preliminary evaluation of the Mind Matters trauma resiliency curriculum.

Overview of Mind Matters and UofL Project

Mind Matters: Overcoming Adversity and Building Resilience

Mind Matters is an evidence-informed curriculum for those who have experienced trauma or adversity with two primary goals: 1) understand trauma and its many effects on our lives and 2) build coping skills across multiple domains to promote healing and positive outcomes



Self-Soothing

This initial section of the curriculum teaches self-soothing skills such as breathing techniques, vagus nerve activities such as peripheral vision, mindfulness activities such as 5-4-3-2-1, and others.

Observing Self

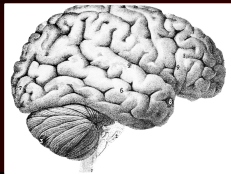
In this section of the curriculum, participants learn how to perform a body scan, as well as how to identify and name feelings and thoughts, differentiate between the two and map the interaction of senses, thoughts, feelings, and behaviors.

Relationship Skills

The relationships skills section of the curriculum helps participants complete a support map and identify a key supporter, builds self- and other- empathy through a loving kindness practice, and learn empathic listening skills.

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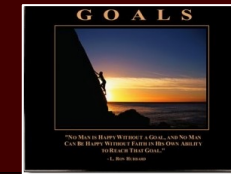
Hijacked Brain

In this module, participants learn about the different types of trauma people experience and the various impacts trauma has on the brain and areas of functioning, record their own trauma histories (ACES) and responses, and the potential for healing of the brain through neuroplasticity and the skills of this program.



Self-Care

In this section of the program, participants continue to build coping and resiliency skills such as music, physical activity, sleep, and tapping.



Intentionality

In the final section of the curriculum, participants develop a road map with goals and core values to guide them into the future and make a plan for continued use of the skills from the program to promote healing.

Overview of Implementation

The UL CFCWB Mind Matters project has partnered with a number of community-based organizations who serve at-risk youth to deliver the Mind Matters curriculum. These agencies offer a variety of services for at-risk youth, ranging from residential treatment for youth in foster care to homeless crisis services to afterschool programs and educational/vocational rehabilitation services. Building upon an infrastructure and long-term partnerships with these agencies for the delivery of other relationship education programs for at-risk youth, our team has developed individualized plans for implementation.

Establishing Infrastructure

The UL CFCWB team partnered with Dibble and the author of the curriculum, Carolyn Curtis, to train 28 professionals in partner agencies in Louisville in October 2019. This two day training equipped facilitators to implement Mind Matters in their agencies. Following training, CFCWB staff have met with each agency to develop individual implementation plans for the study. CFCWB staff are responsible for providing all materials and collecting evaluation data, while the agencies provide space, recruitment, and facilitators.

Delivering Mind Matters

Implementation plans have been developed with partner agencies to best meet the needs and schedules of their youth. Youth in the experimental group receive the 12 modules of the Mind Matters curriculum, while those in the control group receive treatment as usual in the partner agency and complete the evaluation surveys. Once those in the control group have completed the entire round of surveys, they are eligible to participate in the Mind Matters program without completion of the evaluation surveys (waiting list control group). Those who participate and/or complete surveys receive incentives such as gift cards and curriculum-related “swag.” Gift cards and swag individualized by site.

Conducting Evaluation

Youth in each cohort (e.g. cottage in residential treatment; training class at career center) are randomized the experimental (Mind Matters) or control (treatment as usual) group. Youth in both groups complete surveys at four points in time: baseline, endpoint of intervention, 3 months post intervention, and 6 months post-intervention. Surveys are a compilation of standardized scales on multiple trauma, mental health, and relationship outcomes, as well as direct evaluation of Mind Matters including satisfaction, knowledge, and skills gained. CFCWB staff collect all training and outcome data, while the process evaluation is a self-evaluation of the components of fidelity by facilitators at the agency.

Overview of Evaluation

The Mind Matters project at the CFCWB is a randomized controlled trial to study the impact of Mind Matters on high-risk youth in community-based settings. Approximately 200 youth in partner agencies will be randomized to the experimental (Mind Matters) or comparison (treatment as usual) groups over the 12-month study period. Data on trauma, mental health, and relationship outcomes are being collected at baseline, endpoint of intervention, 3 and 6 months follow up.

Training of Facilitators

There was a comprehensive evaluation of the training of facilitators in fall 2019. This evaluation included an assessment of knowledge and satisfaction with the training. The CFCWB team developed a knowledge test based on the Mind Matters curriculum to measure mastery of core content. The Dibble Institute administered a standardized measure of training satisfaction.

Process Evaluation

The CFCWB team developed a fidelity assessment tool that identifies core concepts and activities from each module. This fidelity assessment tool asks facilitators to rate the degree to which each concept was covered on a Likert scale as well as whether each activity was completed on a dichotomous scale. There is also an opportunity for qualitative feedback on implementation/fidelity. Each facilitator completes the tool during each session of Mind Matters.

Outcomes Evaluation

This RCT will compare key trauma, mental health, and relationship outcomes for at-risk youth in the experimental (Mind Matters) and control groups. There are a range of standardized scales being used to evaluate these outcomes (listed on next slide). Participants complete surveys on paper and are given an incentive for research participation. Follow-up data are being collected through multiple means, including data days, electronic surveys, phone calls, and use of collaterals.

Evaluation Measures

Outcome	Scale	Timeframe	Data Collection Method
Program Satisfaction	UL Child Welfare Level 1 Training Satisfaction Scale	Follow up survey	Paper survey
Learning	UL Level 2 Knowledge Test	Baseline and follow up survey	Paper survey
Skill Acquisition	UL Level 3 Behavioral Anchor Scale	Baseline and follow up survey	Paper survey
Fidelity	UL Mind Matters Fidelity Checklist	Every session of Mind Matters	Trainers to complete self-report checklist
Emotional Regulation	Difficulties in Emotion Regulation Scale	Baseline and follow up survey	Paper survey; multi-method for follow up
Well-Being	Pediatric Symptom Checklist	Baseline and follow up survey	Paper survey; multi-method for follow up
Interpersonal Skills	Social Competence Scale for Teenagers	Baseline and follow up survey	Paper survey; multi-method for follow up
Trauma Symptoms	ACES at baseline; UCLA Child/Adolescent PTSD Scale	Baseline and follow up survey	Paper survey; multi-method for follow up
Resiliency	Connor-Davidson Resilience Scale	Baseline and follow up survey	Paper survey; multi-method for follow up

Implementation of Mind Matters

Training of Facilitators

The 28 professionals from partner agencies who participated in the training of facilitators completed training evaluation measures of their mastery of core content and satisfaction with the training/trainers.

Knowledge

A 28 item knowledge test was developed based on the *Mind Matters* curriculum. This knowledge test was administered on the second day of the training of trainers. Scores ranged from 12 to 26 on the knowledge test, with an average 21.63 or 77% correct. The distribution of scores and high and low scoring items are reported on the next slide.

Satisfaction

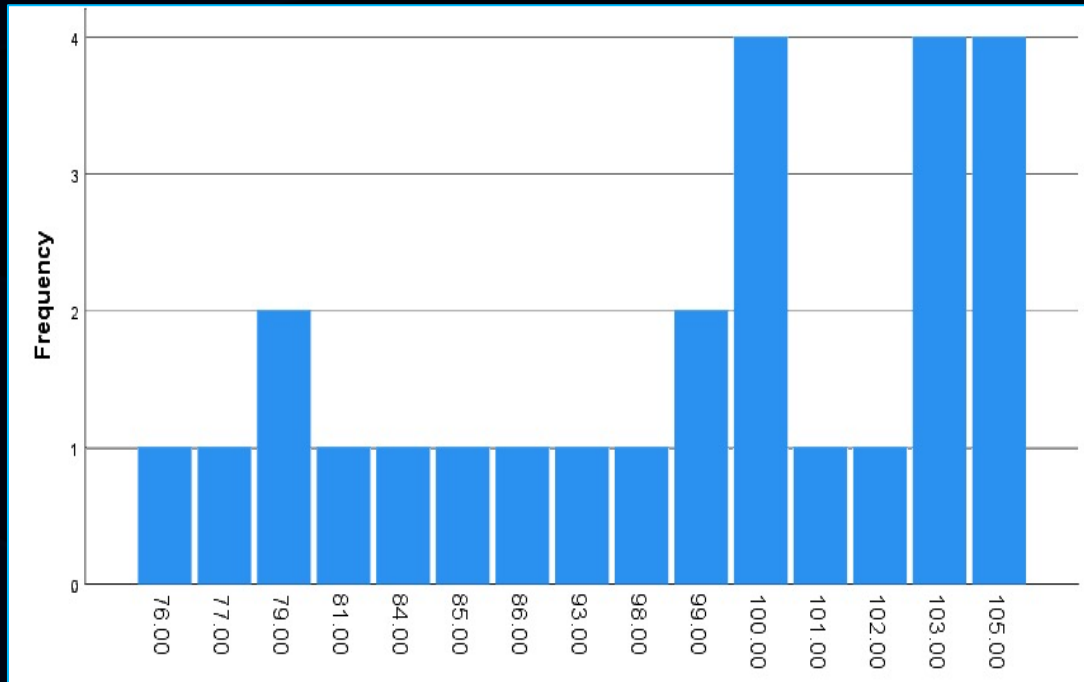
Participants completed a 21 item satisfaction scale that asked them to rate their satisfaction with each trainer and various components of the training on a five point scale. The average satisfaction score was 95.07 and ranged from 76 to 105 out of a total possible score of 105.

Trauma Scores

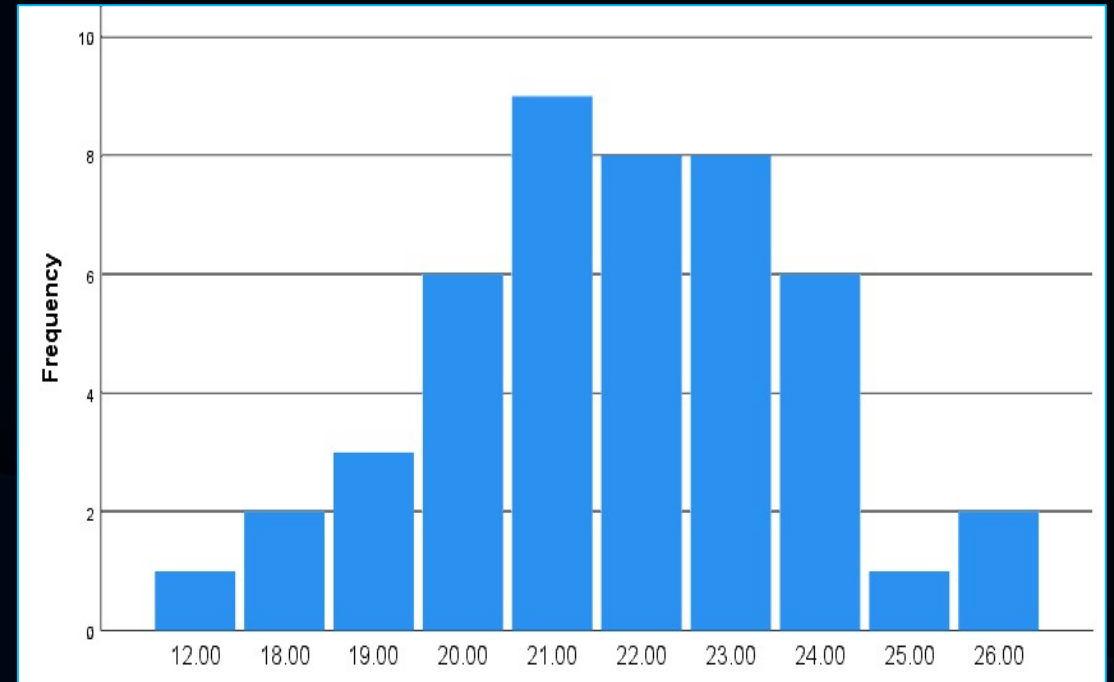
During the training, participants completed the ACES inventory of Adverse Childhood experiences. Scores ranged from 0 to 10, which the most frequently reported ACES score being 4. This finding highlights the importance of attending to the needs of facilitators and potential issues of secondary and vicarious trauma in this work.

Training Evaluation Data

Satisfaction



Knowledge Gain



Areas of Greatest Competence from Training

100%

- Active listening
- Making space
- SMART goals

97.8%

- Peripheral vision technique
- 5-4-3-2-1 mindfulness technique
- Support mapping

93.5%

- ACES
- Tapping
- Importance of sleep and physical exercise
- Loving kindness mantra

Preliminary Implementation Data

The following summarizes numbers enrolled and served to date.

Control

49

Experimental

54

Total

103

103 youth participated in the study; 54 randomized to experimental group and 49 randomized to control group. 42 subjects completed both pre and post surveys. Sample size and follow up data collection were significantly impacted by COVID-19, as the programs closed to program delivery and data collection for much of the study period.

Fidelity Process

Facilitators complete a fidelity self-assessment after each session/module of Mind Matters in which they rate the extent to which core concepts are covered as well as whether or not each activity/exercise is completed.

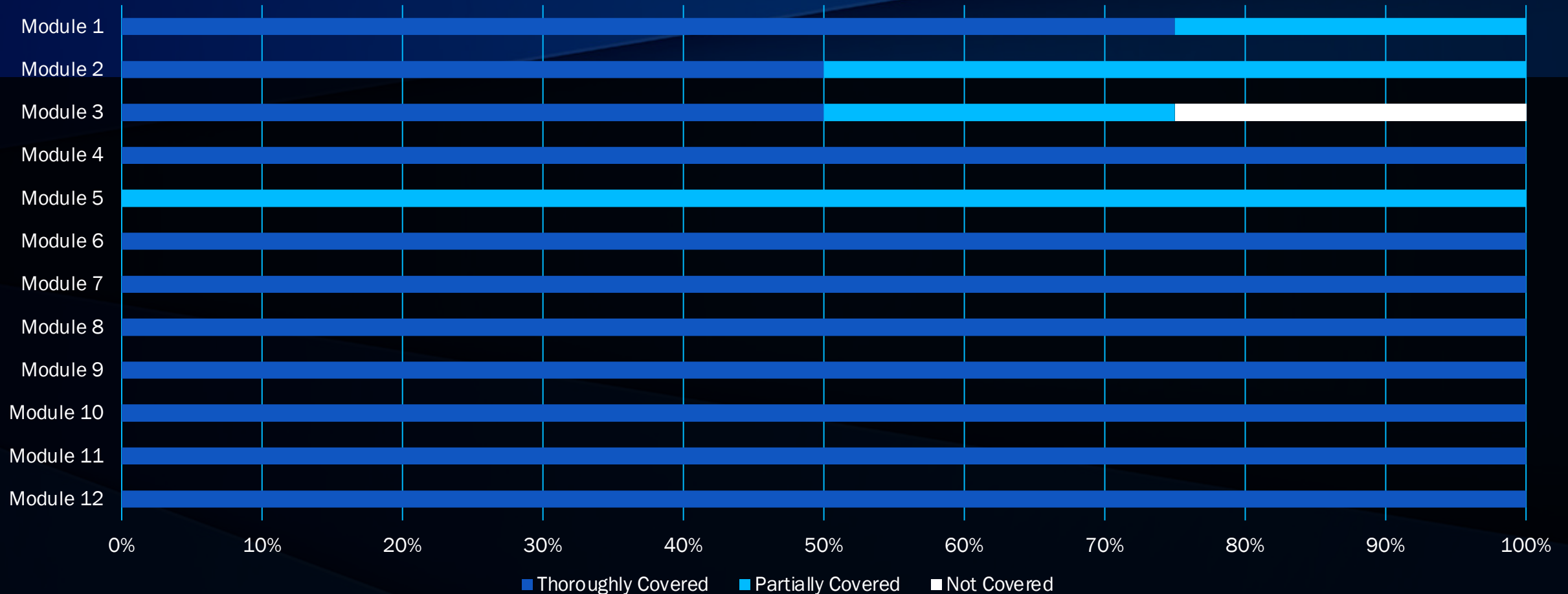
MIND MATTERS FIDELITY CHECKLIST

TEAM LEADER: _____ MEETING DATE: _____ MEETING # (_ OF 12): _____

MIND MATTERS LESSON	1- Not Covered 2- Partially Covered 3- Thoroughly Covered	ACTIVITIES COMPLETED	COMMENTS
Lesson 1- Self-Soothing Why waiting is important and the nervous system	1 2 3	Focused Breathing Peripheral Vision 5-4-3-2-1 Coloring /4	
Lesson 2: Discover Emotions Understanding our body, emotions, and emotional intelligence	1 2 3	Body Scan Discover Emotions <i>Inside Out</i> Discussion Questions When Have You Felt These Emotions? When They Work and When They Don't You and Your Emotions Chart /6	
Lesson 3: The Difference Between Emotion and Thought & The Internal Journal Difference between thoughts and emotions	1 2 3	Three-part Breath Identifying Thoughts and Emotions Emotions or Thoughts Chart Internal Journal /4	
Lesson 4: Building Empathy Building empathy and kindness and Speaker/Listener	1 2 3	Loving Kindness Speaker/Listener /2	

Fidelity Data

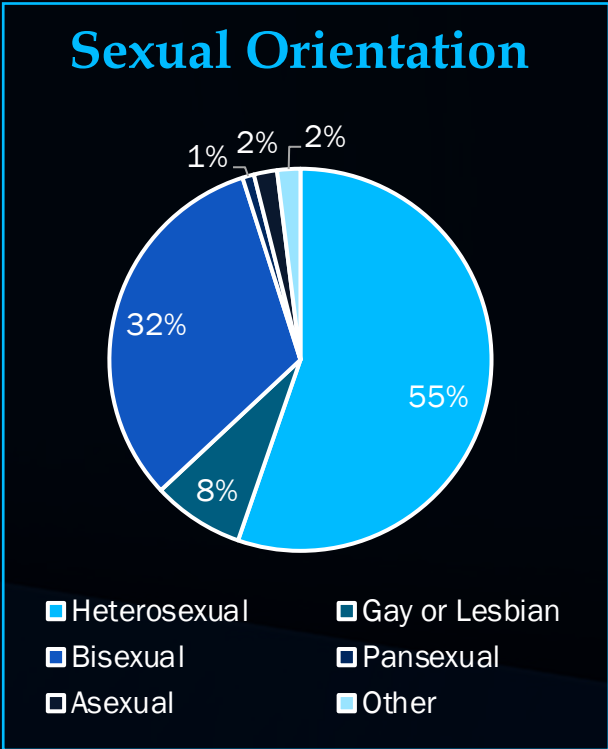
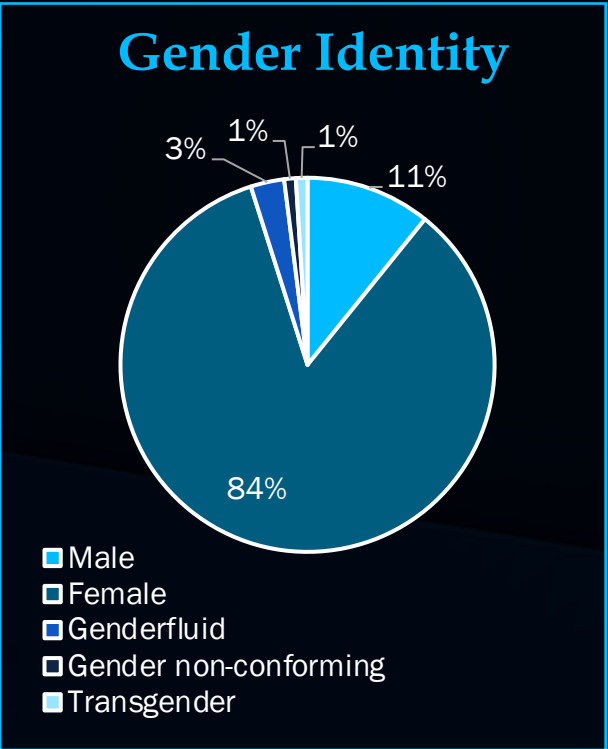
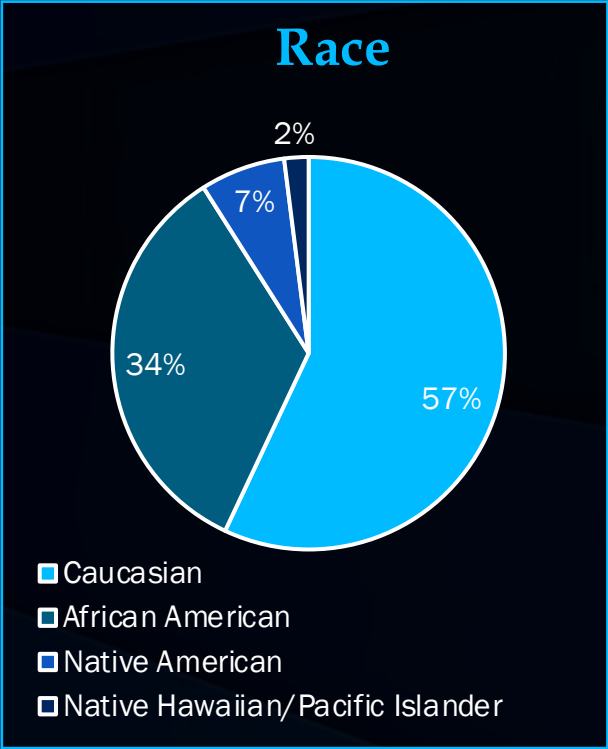
Percentage of Facilitators Covering Each Module



Mind Matters Preliminary Outcomes

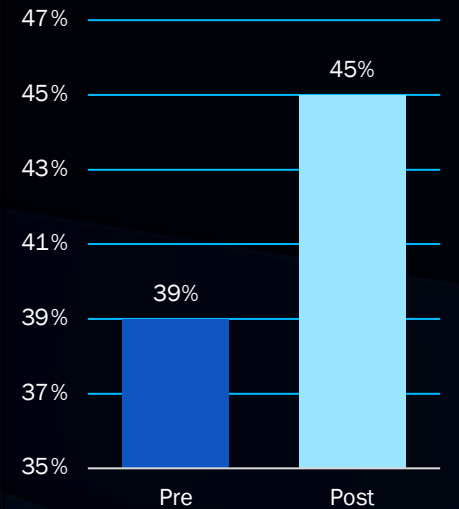
PRELIMINARY DATA

143 participants have completed baseline surveys for Mind Matters. The following summarizes demographic and outcome data on participants. 89% of the participants received Mind Matters in a residential care treatment setting while 11% attended a community youth service center. The average age of participants was 15.81.

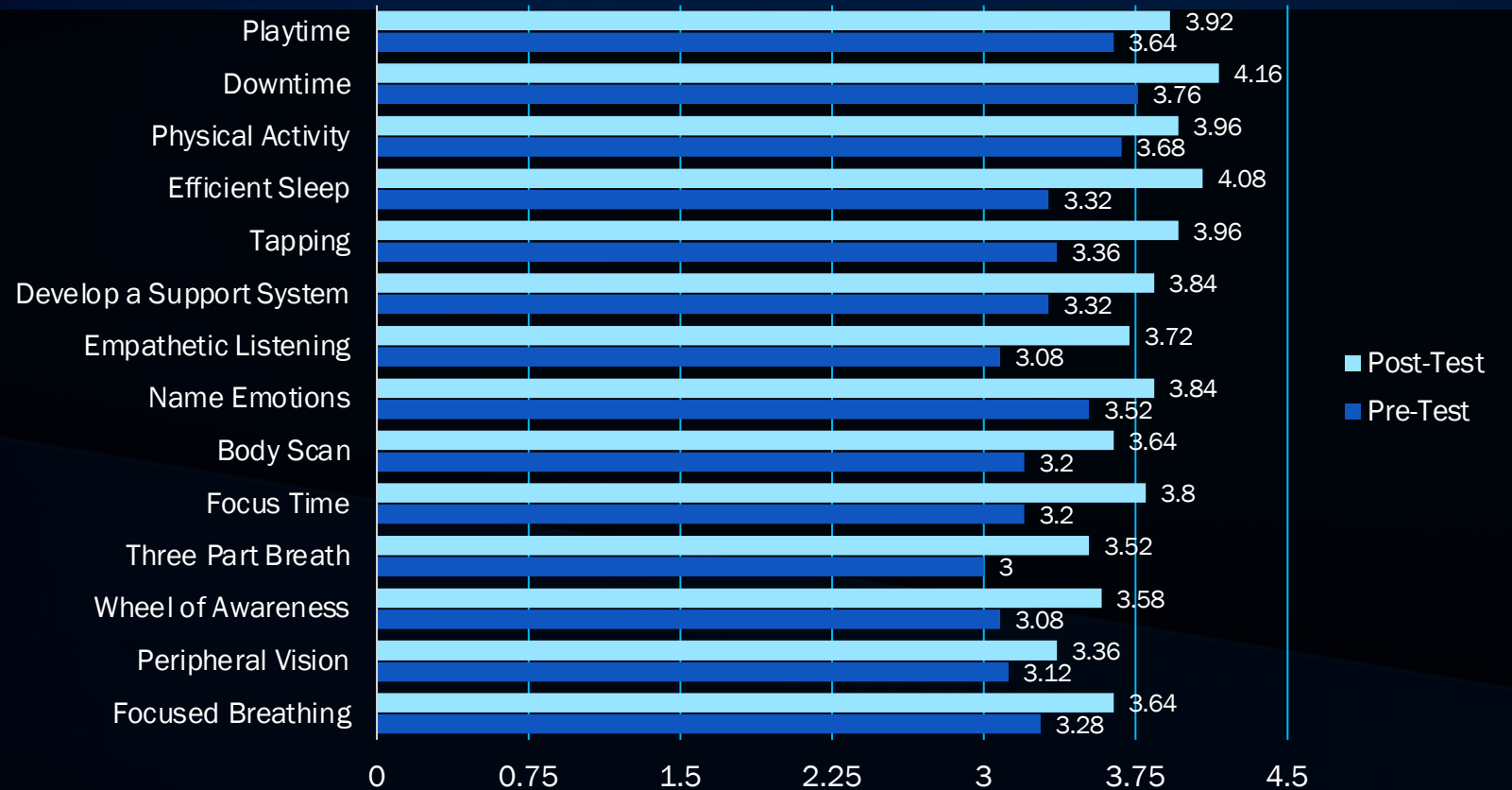


PRELIMINARY DATA

Knowledge Gain

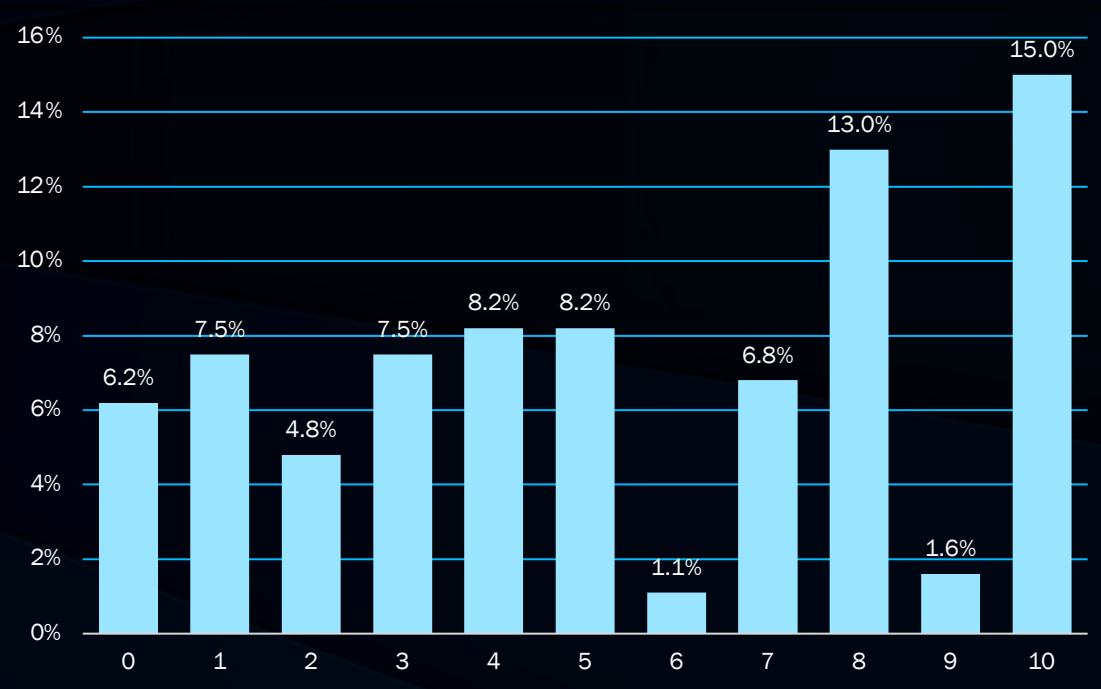


Skill Acquisition



PRELIMINARY DATA

Percentage of ACES Total Score

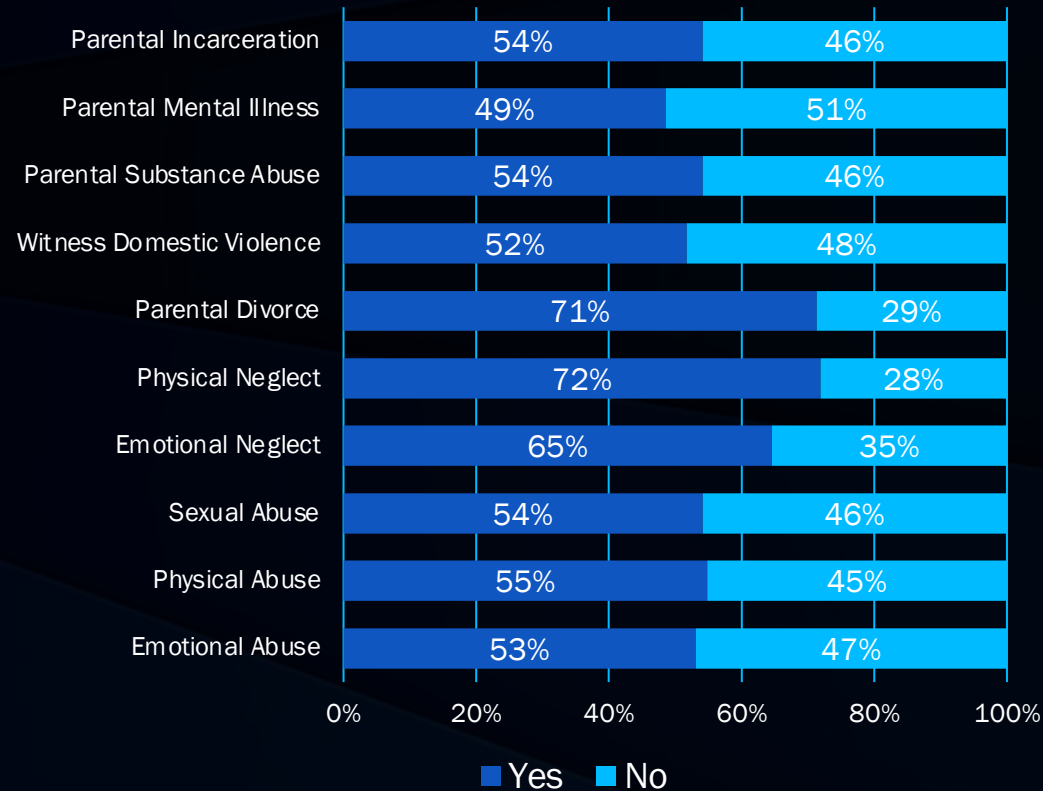


National Distribution of ACES Total Scores

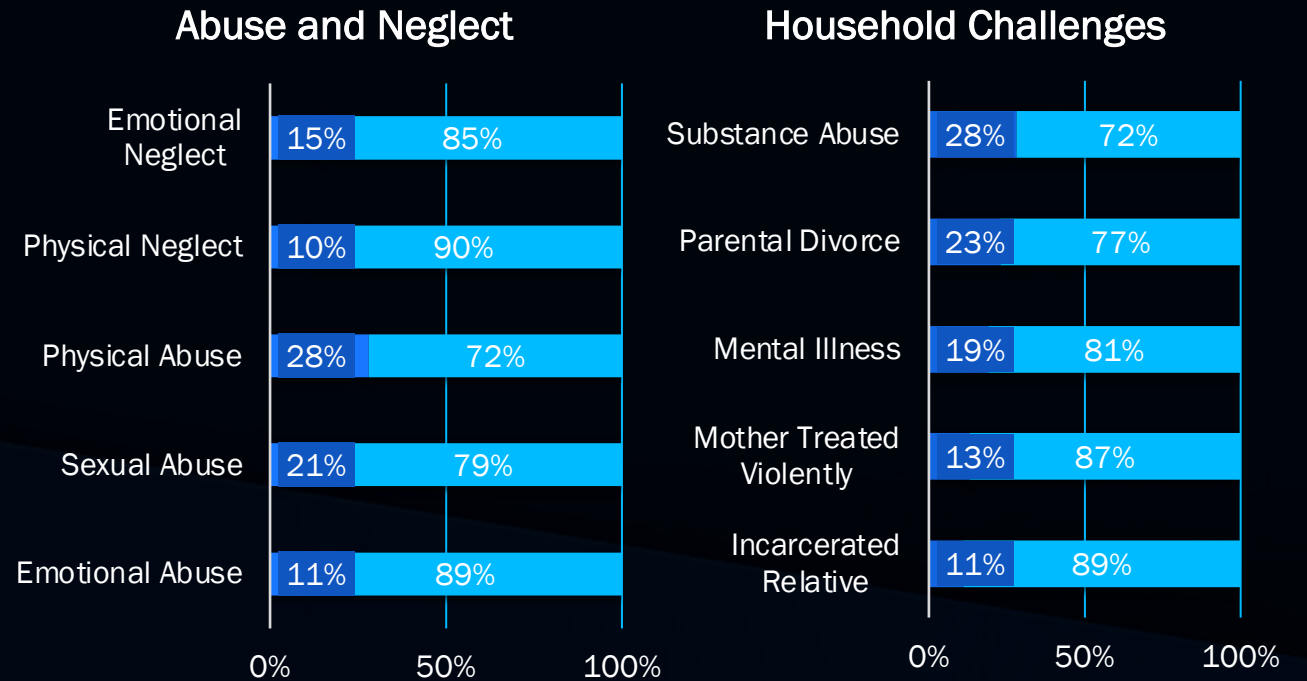
Number of Aversive Childhood Experiences (ACE Score)	Women	Men	Total
0	34.5	38.0	36.1
1	24.5	27.9	26.0
2	15.5	16.4	15.9
3	10.3	8.6	9.5
4 or more	15.2	9.2	12.5

PRELIMINARY DATA

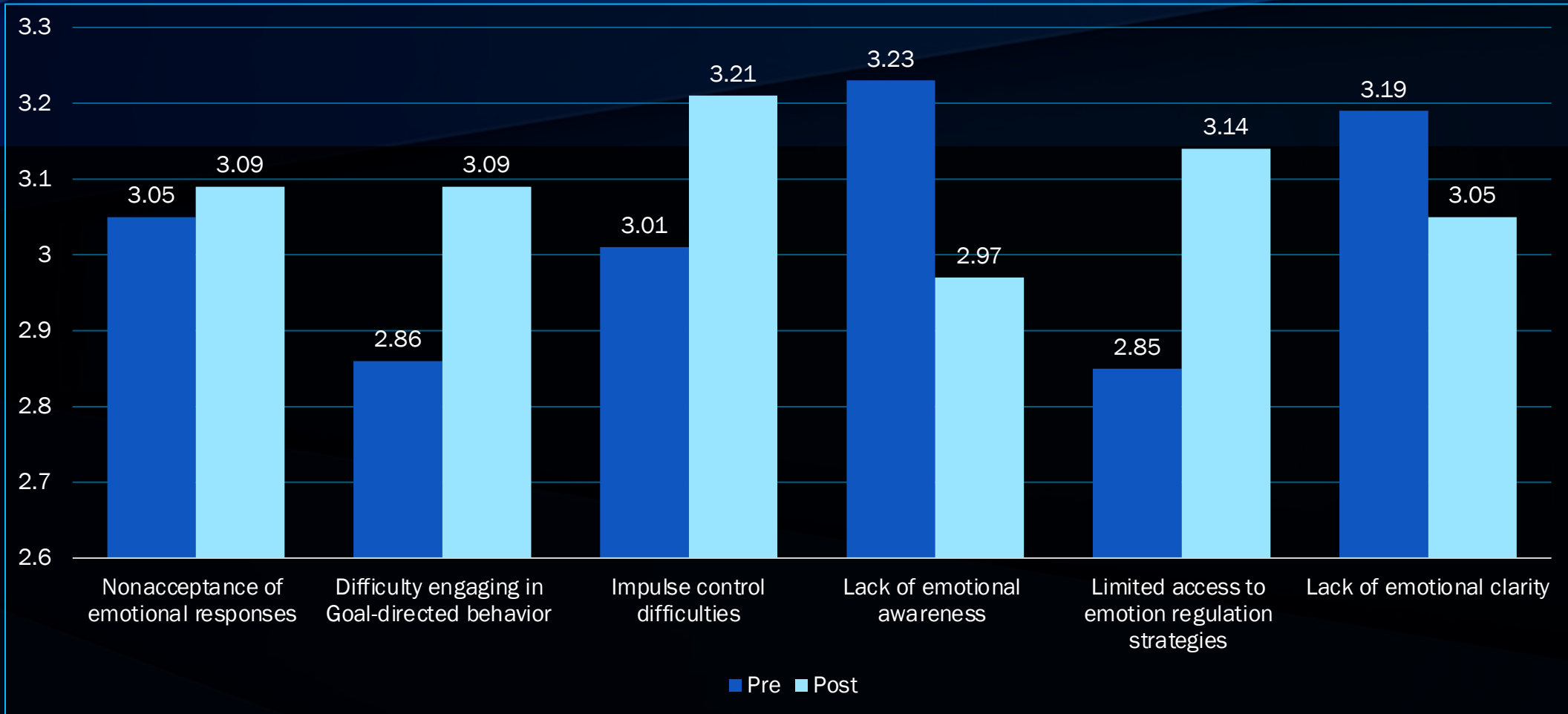
Sample Prevalence of ACEs by Type



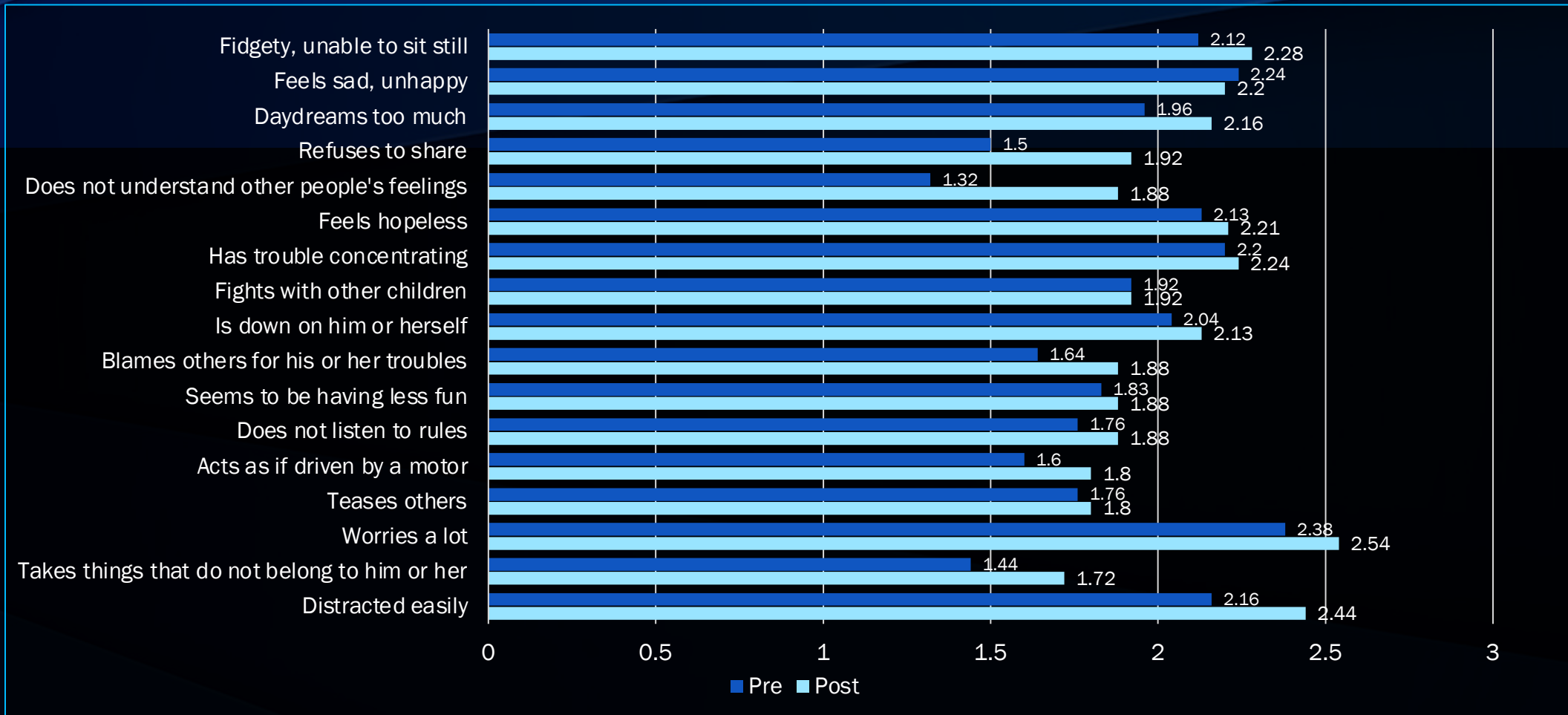
National Prevalence of ACEs by Type



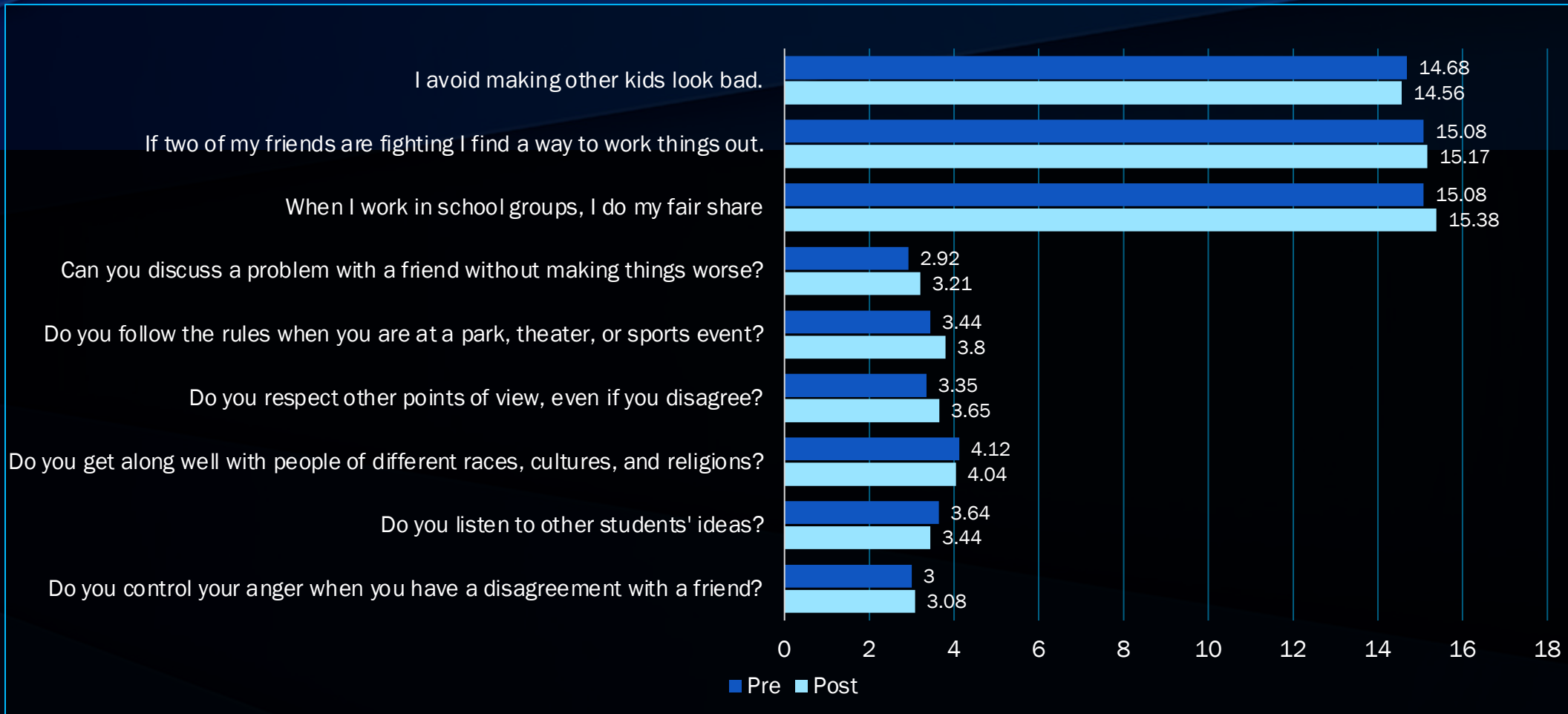
Difficulties in Emotional Regulation



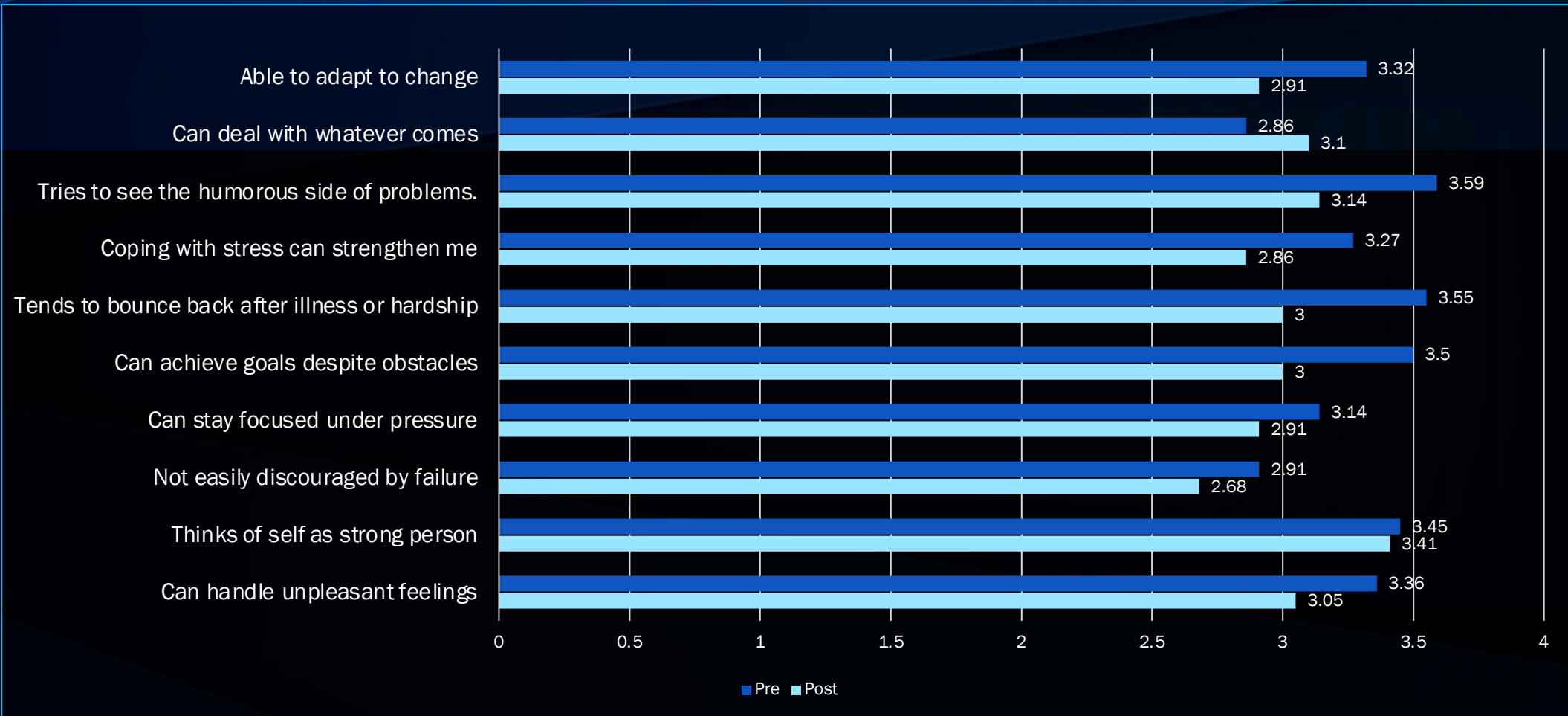
Pediatric Symptom Checklist



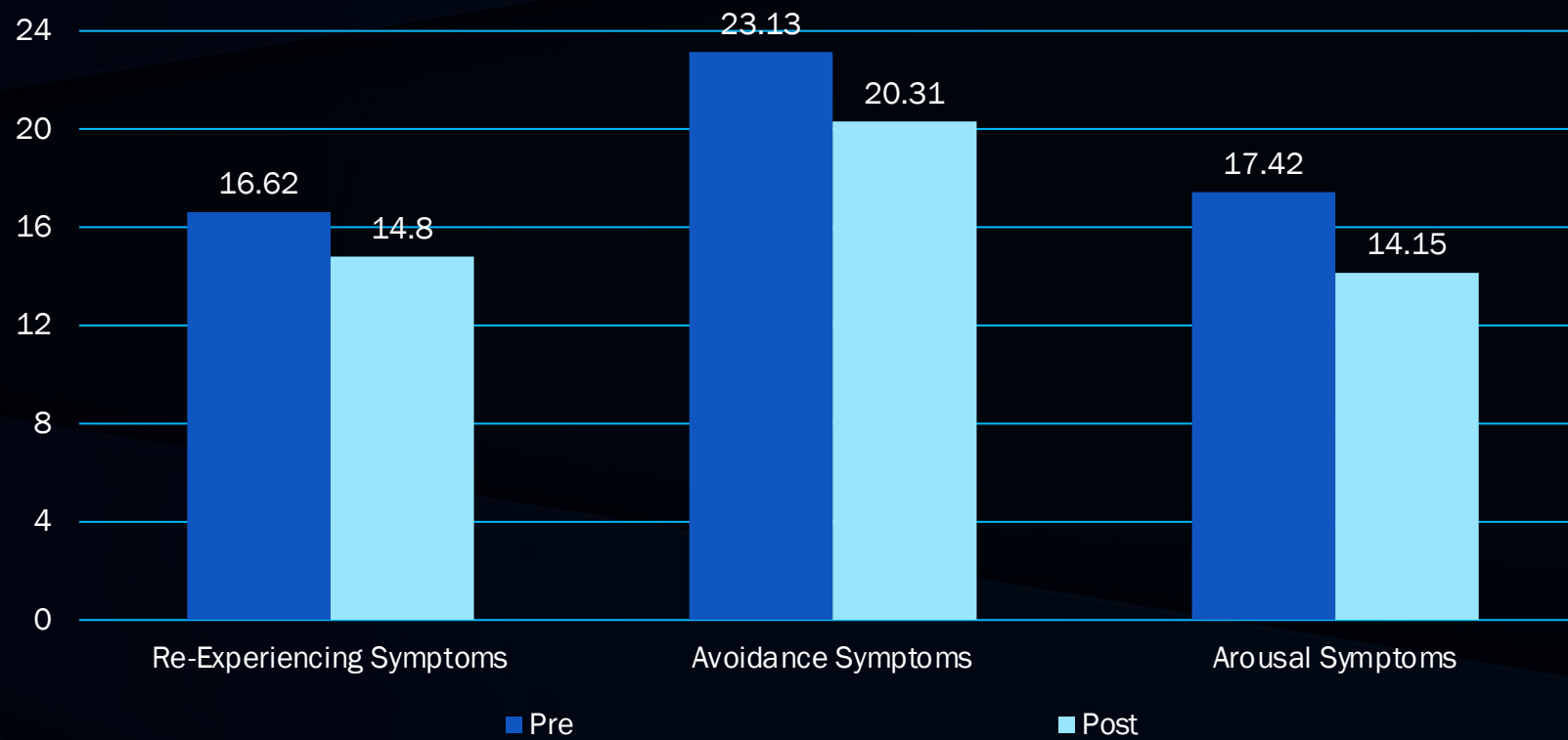
Social Competence



Resiliency



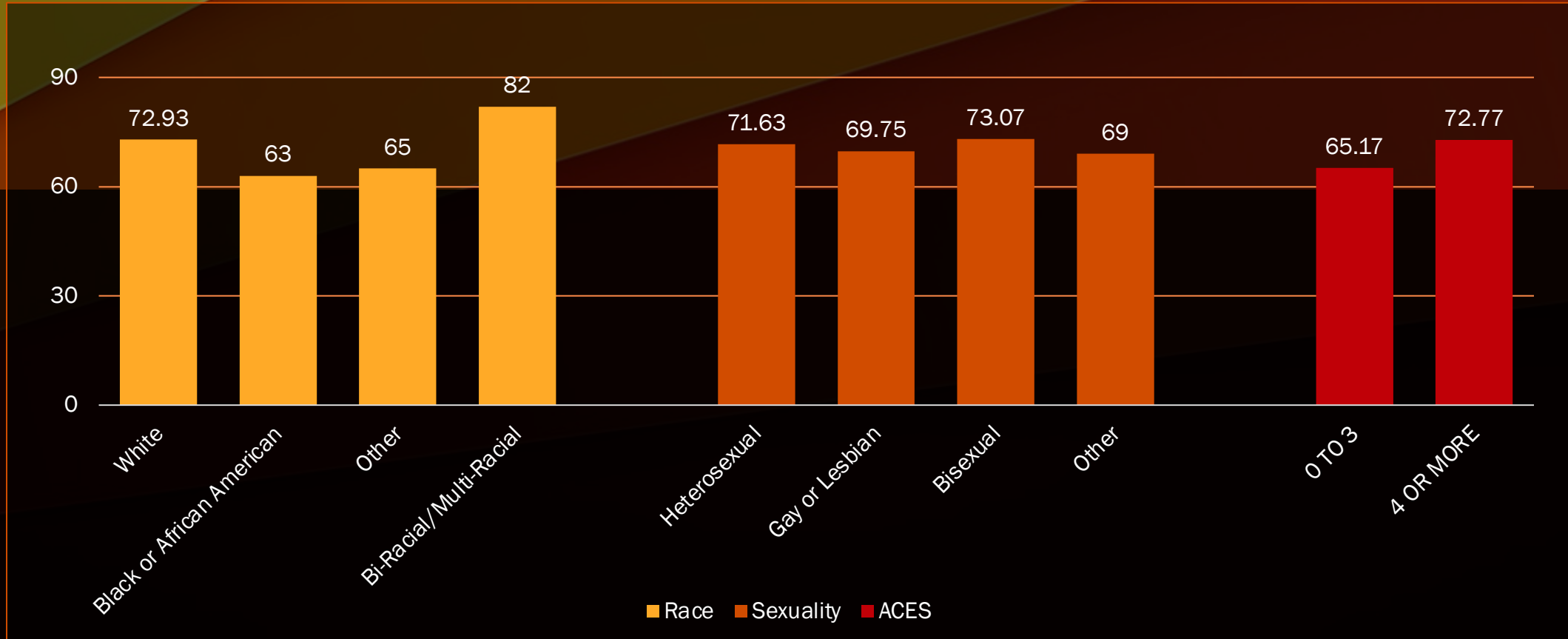
PTSD Symptoms



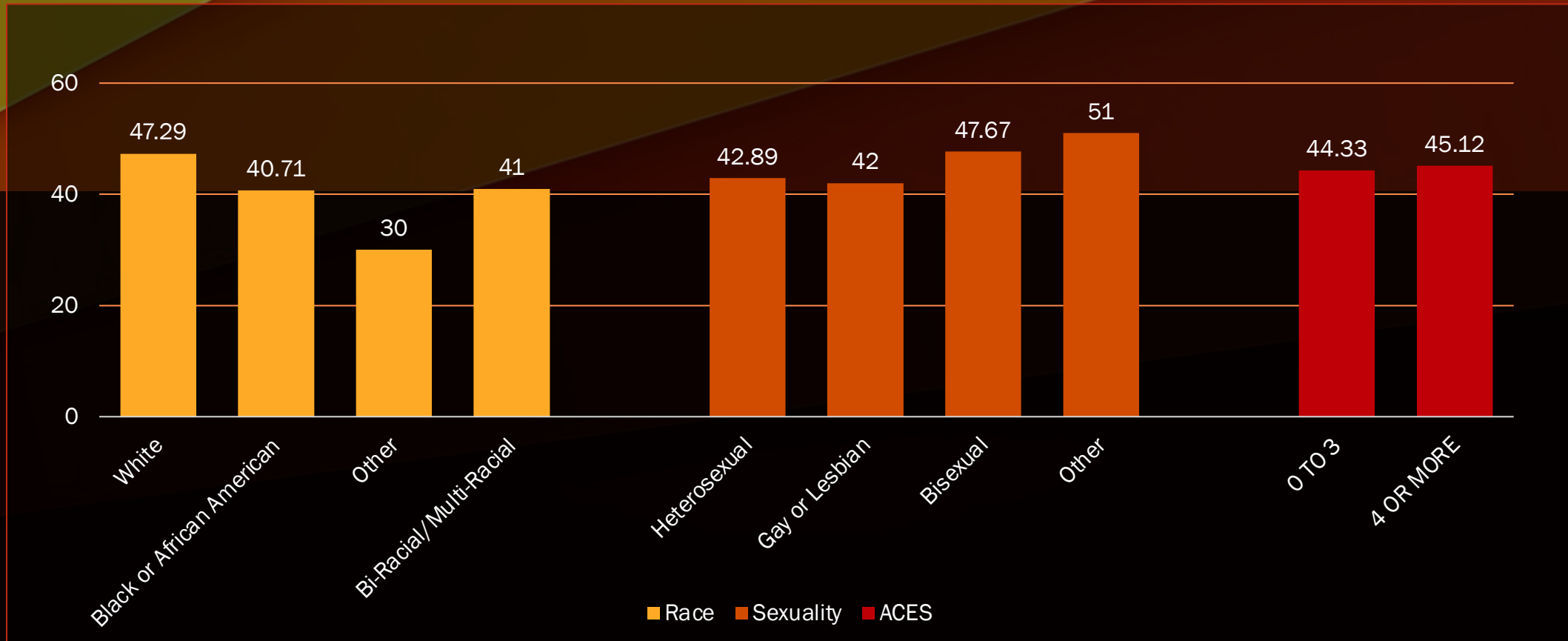


Inferential Data

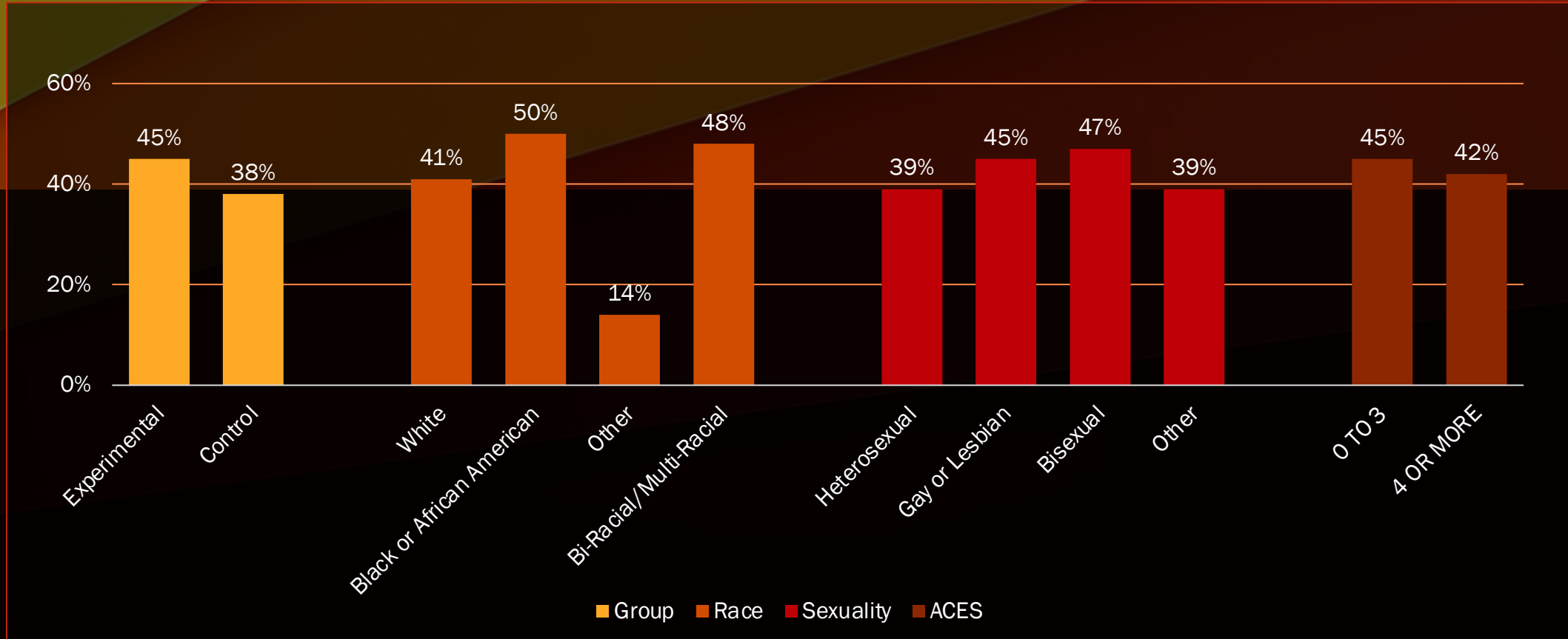
Satisfaction



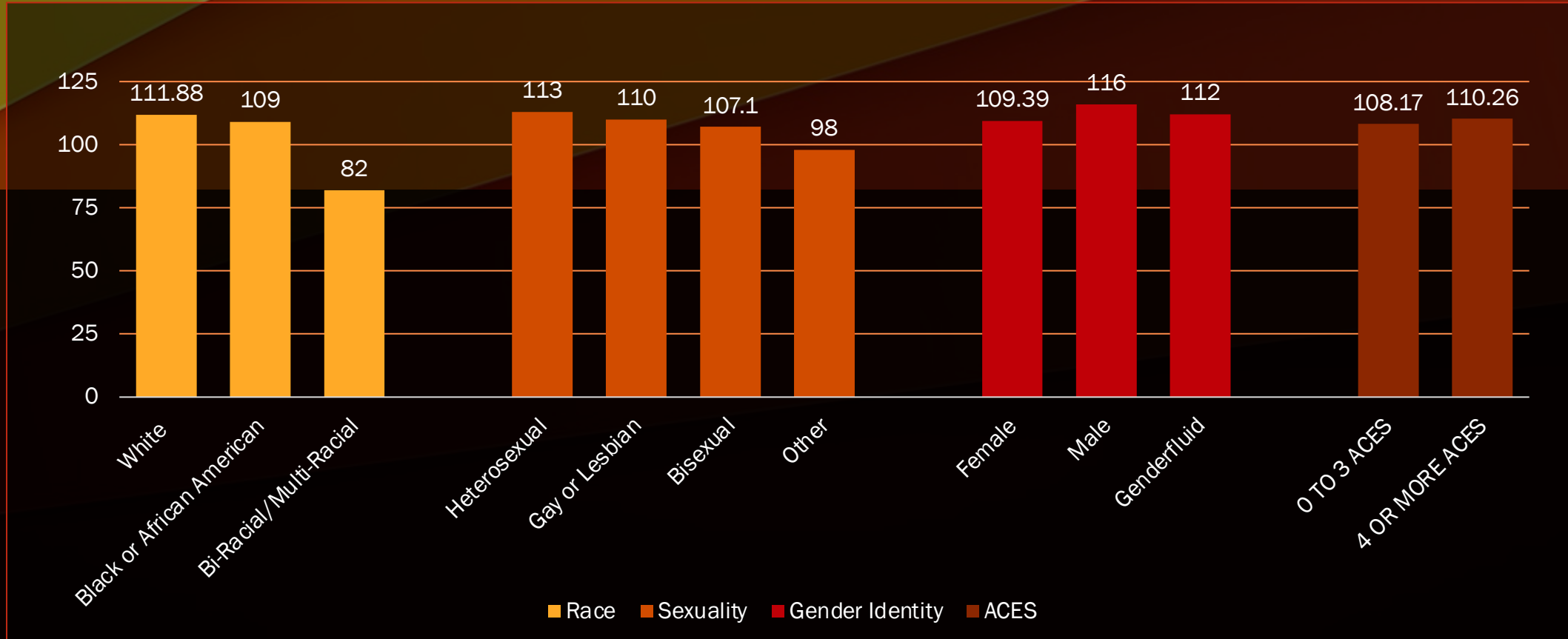
Group Cohesion



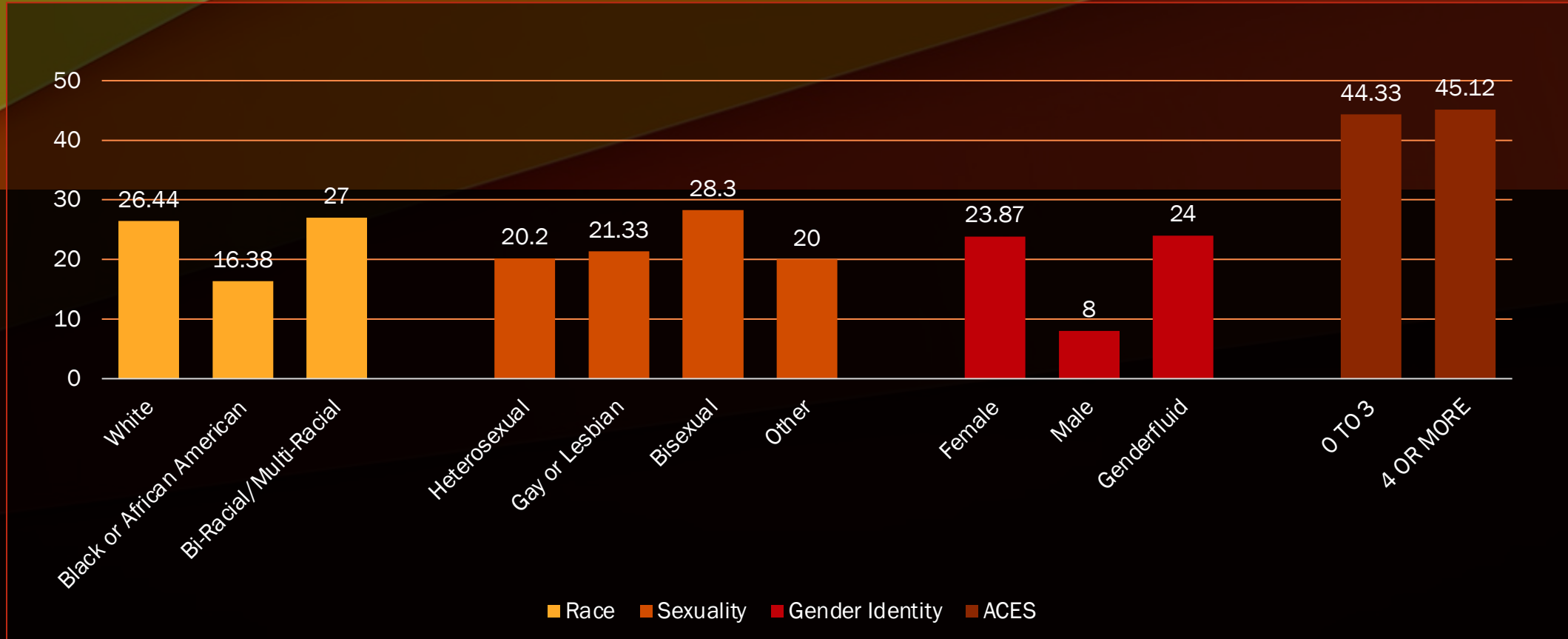
Post Knowledge



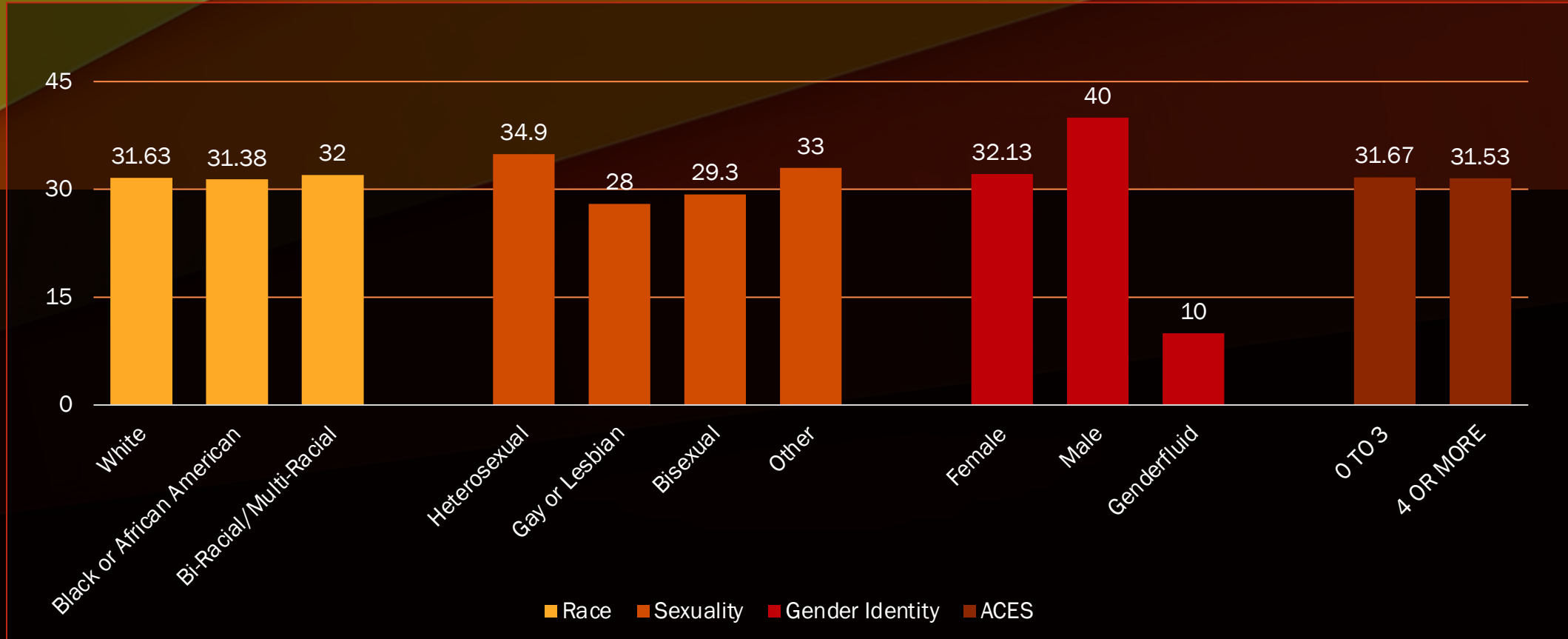
Behavior Change



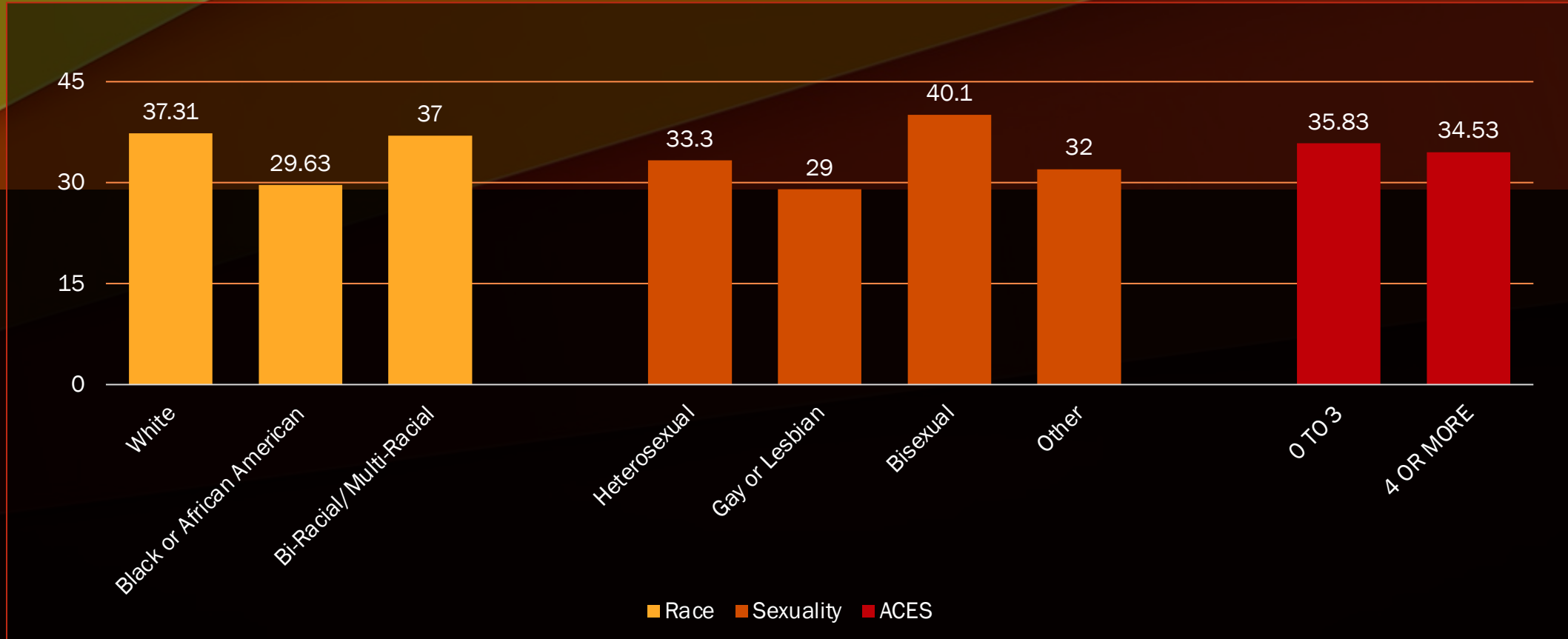
Post PTSD Symptoms



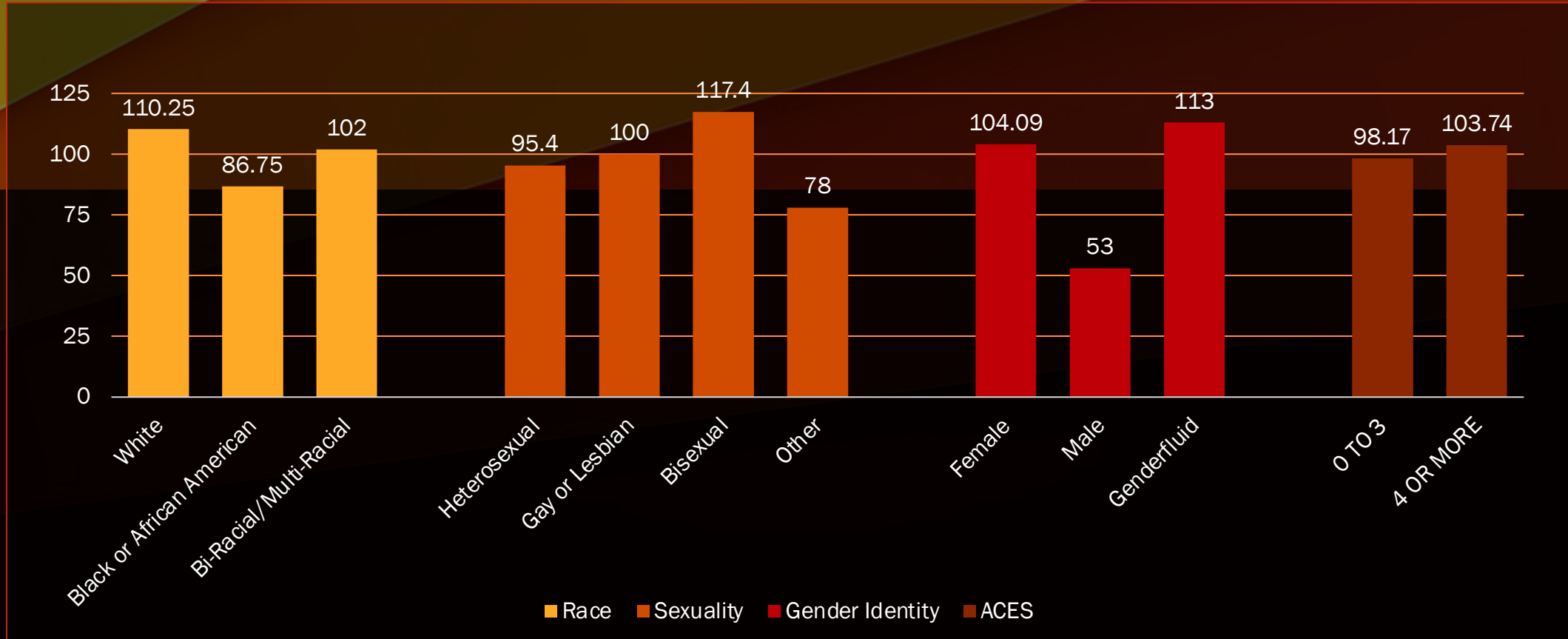
Resiliency



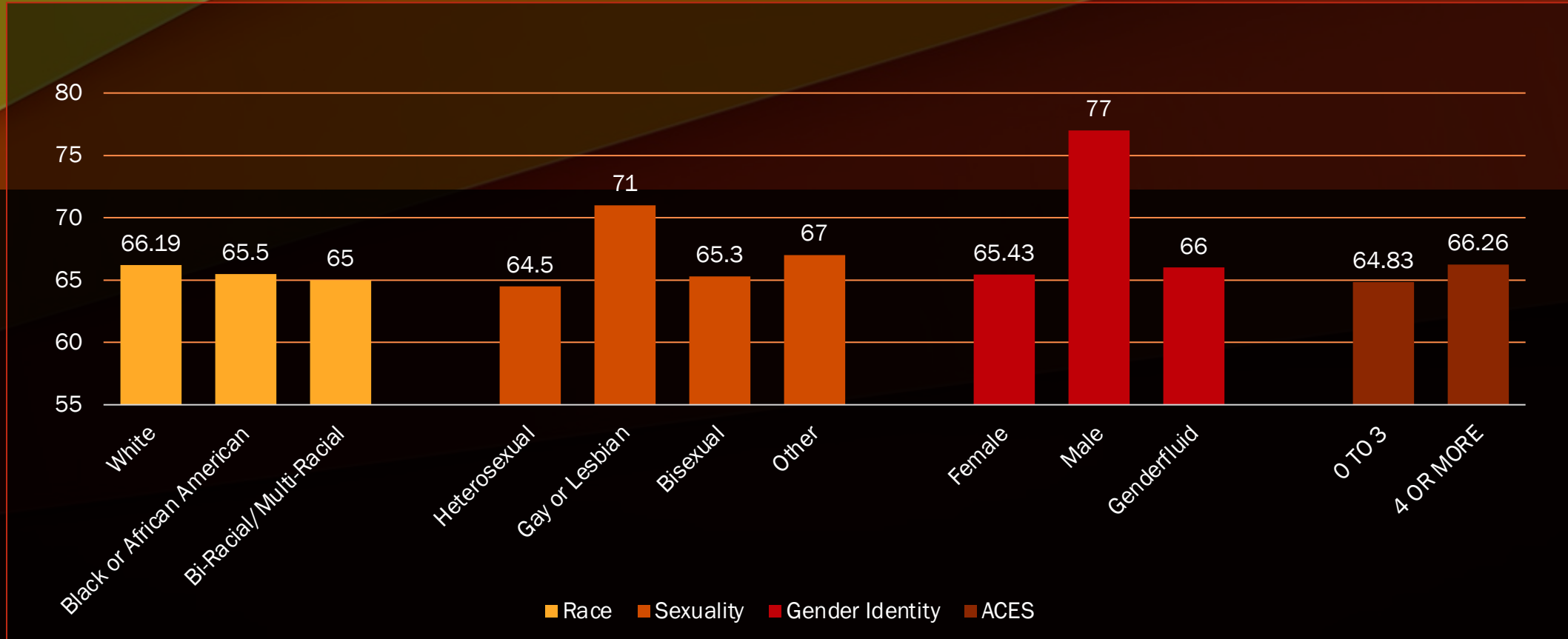
Pediatric Symptom Checklist



Emotional Regulation

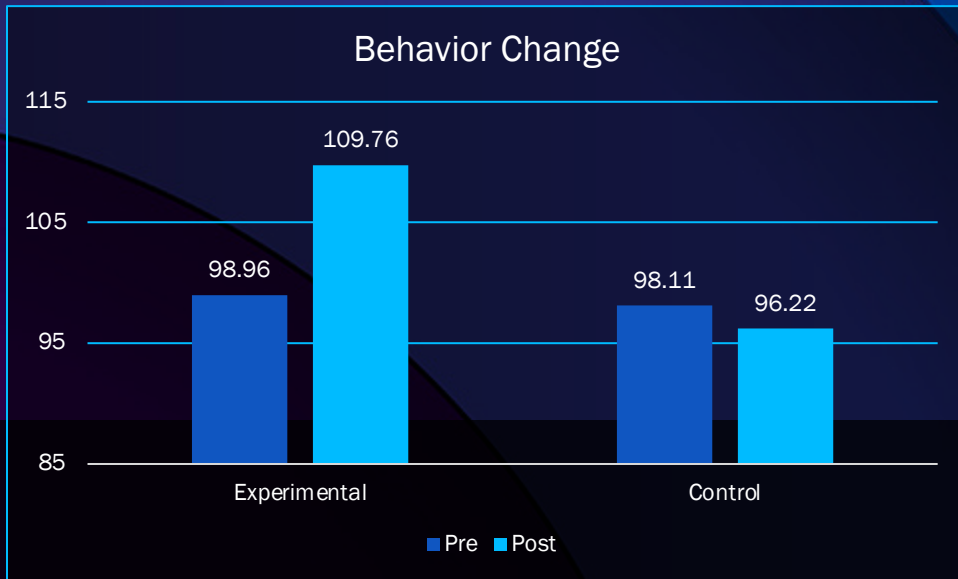


Social Competence

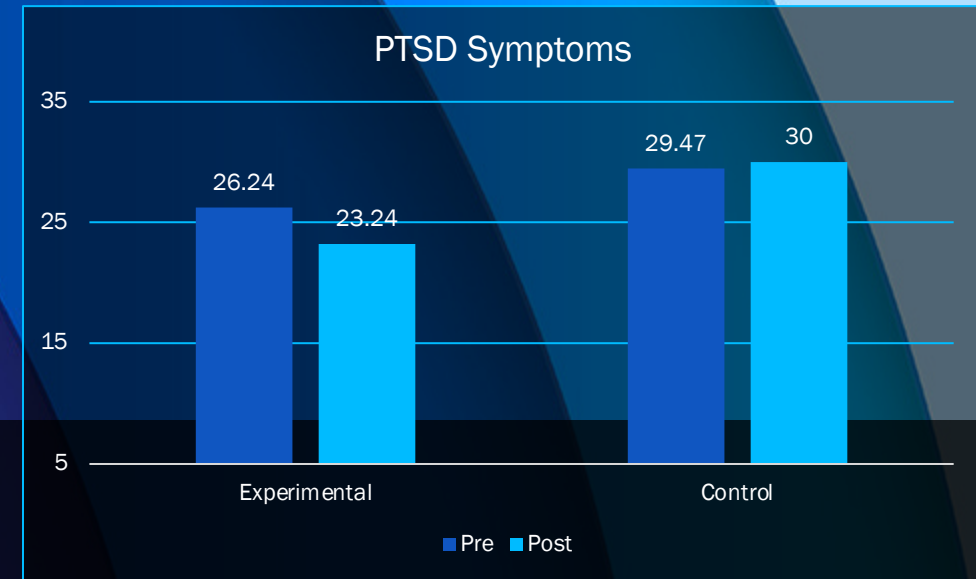


Pre- to Post- Change

Pre- to Post- Change

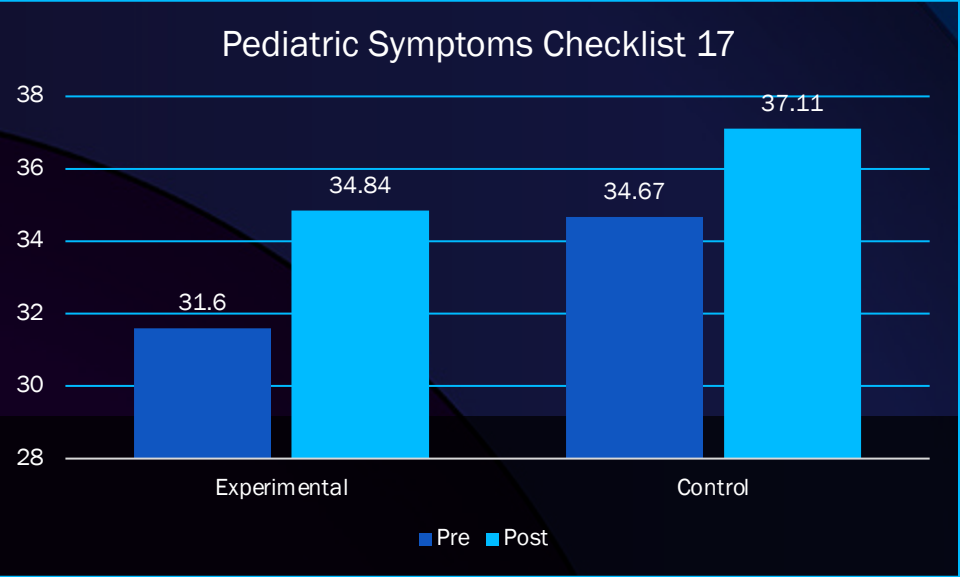


There is a marked increase in behavior change for the experimental group (mean of 98.96 at pre and mean of 109.76 at post) while there is actually a decrease in coping behaviors the control group (mean of 98.11 at pre and mean of 96.22 at post). The difference was not statistically significant due to the small sample size.

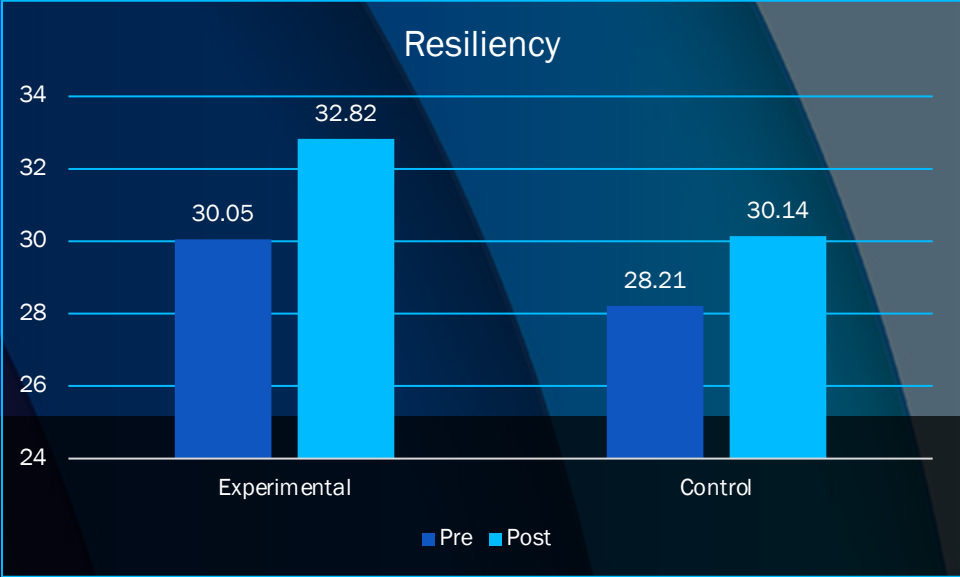


There was a significant improvement (marked in red) in the following PTSD symptoms from pre- to post- for the experimental group: 1) I am on the lookout for danger or things I am afraid of (like looking over my shoulder even when nothing is there); 2) I try not to think about or have feelings about what happened; 3) I have thoughts like "I will never be able to trust other people;" 4) I feel alone even when I am around other people. There was a significant trend (marked in blue) in the following PTSD symptom from pre- to post: I have trouble going to sleep, wake up often, or have trouble getting back to sleep.

Pre- to Post- Change

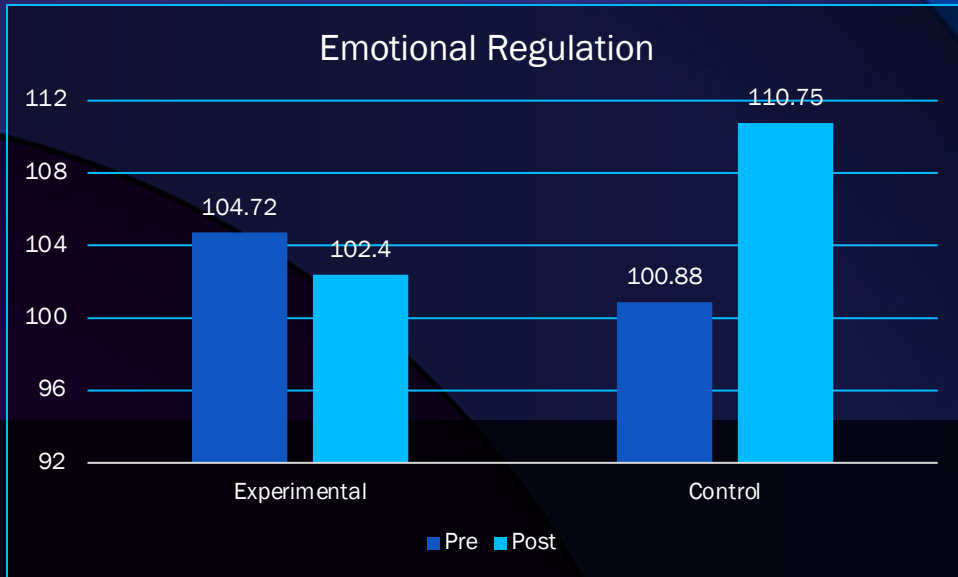


There is an increase in PSC 17 scores for both the experimental and control group, indicating an increase in general symptoms associated with internalizing, externalizing, and attention behaviors. This increase in symptoms may be related to the residential treatment milieu for many of the youth or the impact of placement in out of home care.

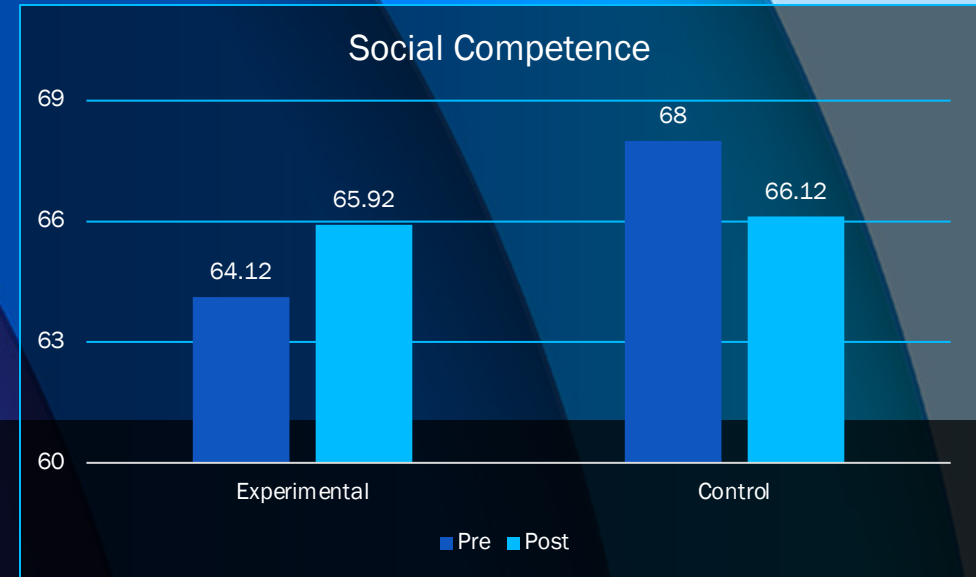


There was an improvement in resiliency scores for both the experimental and control groups as illustrated below. Differences were not statistically significant. This improvement in resiliency scores for both groups may reflect the impact of treatment as usual outside of Mind Matters involvement given that both groups experienced similar improvements.

Pre- to Post- Change



There was no significant change in the emotional regulation scores for either group, although the control group scores increased pre- to post- (100 to 110) while the experimental group scores decreased slightly (104 to 102). This trend is in the desired direction, as higher scores are indicative of more problems with emotional regulation. Those in the Mind Matters group had less difficulty with emotional regulation than those in the control group.



There was a slight increase in social competence for those in the experimental group (64 to 65) from pre to post, while there was a decrease in social competence scores for the control group (68 to 66). Differences were not statistically significant due to small sample size.

Conclusions and Future Implications

Summary of Key Findings: Satisfaction, Knowledge, and Skill

- High levels of satisfaction and moderate levels of group cohesion
- Significant increase in knowledge for the experimental group, and a greater knowledge gain for the experimental versus control group; Differences were explored by key demographic and trauma variables, including race, gender, sexuality, and ACEs scores. Similar patterns were found across outcomes.
- Significant improvement in the trauma coping skills of those in the experimental group from pre- to post-training, including 1) three-part breath; 2) focus time; 3) ACE; 4) efficient sleep; 5) yoga; Significant trend for the following coping skills: 1) focused breathing; 2) empathic listening; 3) downtime.
 - Marked increase in behavior change for the experimental group (mean of 98.96 at pre and mean of 109.76 at post); Decrease in behavior change the control group (mean of 98.11 at pre and mean of 96.22 at post).

Summary of Key Findings: PTSD Symptoms

- Significant difference in PTSD symptoms between the experimental and control group.
- Significant main effect by group but not a significant difference in change over time due to the small sample size. Changes were in the predicted direction, suggesting that the PTSD symptoms for the experimental group decreased while the scores for the control group actually increased slightly.
 - Significant improvement in the following PTSD symptoms from pre- to post- for the experimental group: 1) I am on the lookout for danger or things I am afraid of; 2) I try not to think about or have feelings about what happened; 3) I have thoughts like “I will never be able to trust other people;” 4) I feel alone even when I am around other people.
 - Significant trend in the following PTSD symptom from pre- to post: I have trouble going to sleep, wake up often, or have trouble getting back to sleep.

Summary of Key Findings: Resiliency and Well-Being

- Improvement in resiliency scores for both the experimental and control groups as illustrated below; Differences were not statistically significant. This improvement in resiliency scores for both groups may reflect the impact of treatment as usual outside of Mind Matters involvement given that both groups experienced similar improvements; Although not statistically significant, there was an increase in mean scores for each item on the Connor-Davidson Resiliency Scale (with the exception of one item: “I can deal with whatever comes.”) All other items showed change in the positive direction.
- Many of the symptoms on the PSC 17 showed an increase from pre- to post-Mind Matters for the experimental group, particularly issues with sharing and understanding others' feelings (statistically significant increases). These increases are not necessarily attributable to participation in the program but may instead reflect an escalation of symptoms/behaviors associated with placement in residential care.
 - *There is an increase in PSC 17 scores for both the experimental and control group, indicating an increase in general symptoms associated with internalizing, externalizing, and attention behaviors. This increase in symptoms may be related to the residential treatment milieu for many of the youth or the impact of placement in out of home care.*
 - *Attention sub-scale scores remain approximately the same for both groups. Internalizing scores remained approximately the same for both groups. Externalizing behaviors increased for both the experimental and control groups.*

Summary of Key Findings: Emotional Regulation

- No significant change in the emotional regulation scores for either group, although the control group scores increased pre- to post- (100 to 110) while the experimental group scores decreased slightly (104 to 102). This trend is in the desired direction, as higher scores are indicative of more problems with emotional regulation. Those in the Mind Matters group had less difficulty with emotional regulation than those in the control group.
 - *Significant change in the rating of “I pay attention to how I feel.” There was a significant trend in items: “When upset take time to figure out how I feel” and “When upset I lose control over my behavior.” Based on reverse scoring of items and lower scores being indicative of better emotional regulation, changes were in the desired direction for those receiving Mind Matters on these specific items.*
- Slight increase in social competence for those in the experimental group (64 to 65) from pre to post; Decrease in social competence scores for the control group (68 to 66). Differences were not statistically significant due to small sample size. There were no significant differences or trends in specific dimensions of social competence for the experimental group post-Mind Matters, although most mean scores move slightly toward the desired direction.

Future Implications

1. Continued testing of the program through this rigorous design with:
 - a. *Expansion to other settings;*
 - b. *Addition of longer follow-up data collection period (6-12 months)*
 - c. *Addition to sample size to reach target of at least 200.*
2. Additional research is needed to explore the impact on each of these target outcomes, including differences by key demographic variables and childhood trauma histories.
3. Future studies will be more feasible without the significant constraints of the COVID 19 pandemic on community-based organizations; the pandemic has also added layers of trauma to at-risk youth served by this project that warrant intervention and evaluation.

Thank you!

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