CENTER FOR FAMILY & COMMUNITY WELL-BEING

RCT ON EFFECTIVENESS OF MIND MATTERS PSYCHOEDUCATION PROGRAM FOR TRAUMA RELATED OUTCOMES AMONG AT-RISK YOUTH

Report by Becky Antle, PhD, MSSW, LMFT, Sam Cooper, MSSW, & Ashley Logsdon, MSSW

PROGRAM OVERVIEW

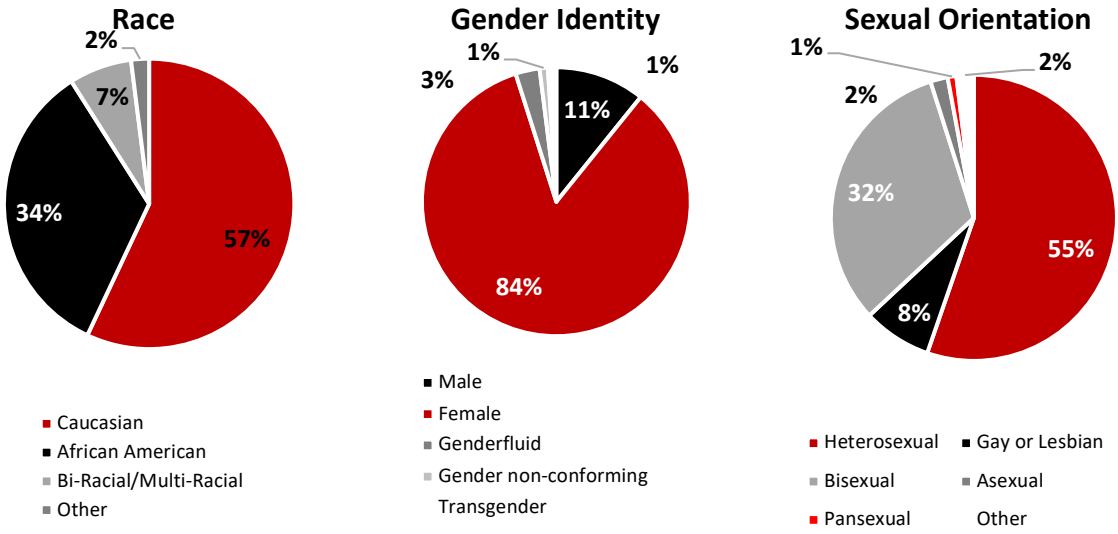
- Randomized controlled trial (RCT) on *Mind Matters*, trauma coping and resiliency psychoeducation program for youth
- Programs consists of 12 modules that teach a variety of coping skills, brain science and trauma concepts, and future planning activities
- Program includes coverage of the following skills:
    - Self-Soothing Skills: 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 Skills: 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
    - Understanding Skills: 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 Skills: In this section of the program, participants continue to build coping and resiliency skills such as music, physical activity, sleep, and tapping.
    - Intentionality Skills: 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.

STUDY DESIGN

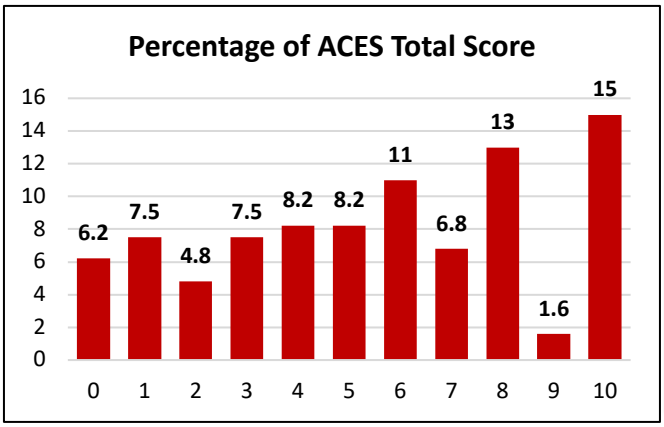
- Of two community based organizations, one was residential facility for girls and the other was an alternative educational/vocational center for at-risk youth
- 103 youth participated in the study; 54 randomized to experimental group and 49 randomized to control group. 42 subjects completed both pre 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.
- Participants completed pre- and three month post-test measures on wide range of outcomes including satisfaction, group cohesion, knowledge gain, skill gain, trauma symptoms, resiliency, emotional regulation, general well-being, and social competency.

For more information contact: Dr. Becky Antle
Becky.antle@louisville.edu - 502.852.2917

- Demographics on the group show racial, gender, and sexual diversity of the group, as well as an extremely high number of ACES (Adverse Childhood Experiences). Average ACES score was 5.56 with 74% of the sample falling into the 4+ ACES category, significantly higher than the national average of 12.5%.



% of Study Participants by Total ACES Score

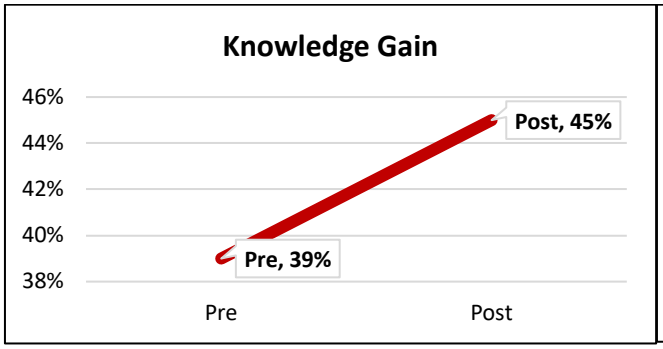


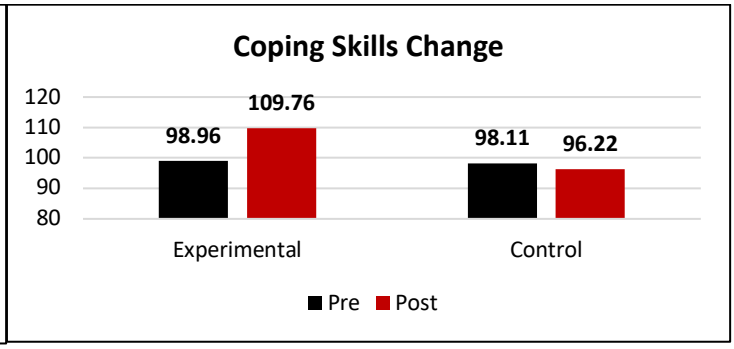
National Prevalence by Total ACES Score

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

PROGRAM SPECIFIC OUTCOMES: KNOWLEDGE AND SKILL GAIN

- Participants reported high levels of satisfaction and moderate levels of group cohesion. Differences were explored by key demographic and trauma variables, including race, gender, sexuality, and ACES scores. Similar patterns were found across outcomes.
- There was a significant increase in knowledge for the experimental group, and a greater knowledge gain for the experimental versus control group.





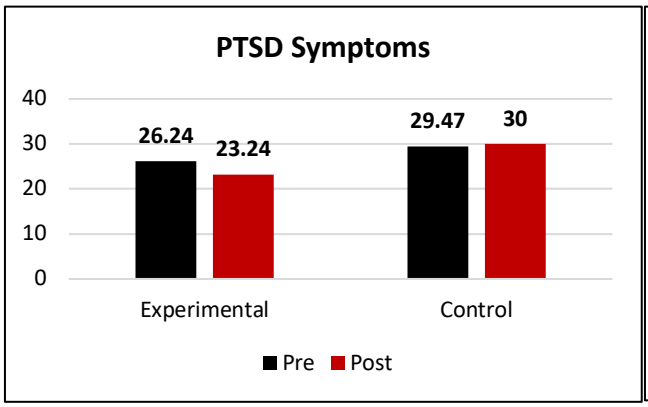
CENTER FOR FAMILY & COMMUNITY WELL-BEING

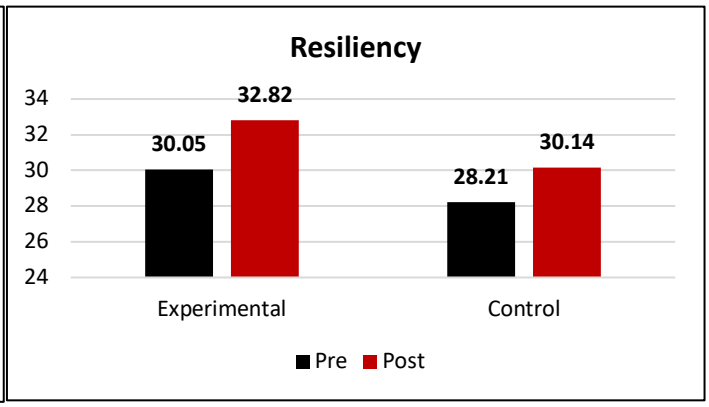
For more information contact: Dr. Becky Antle
Becky.antle@louisville.edu - 502.852.2917

- There was a 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. There was a significant trend for the following coping skills: 1) focused breathing; 2) empathic listening; 3) downtime. There is a marked increase in coping behaviors 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).

FUNCTIONAL OUTCOMES: TRAUMA, RESILIENCY, AND OTHER AREAS OF WELL-BEING

- There was a significant difference in PTSD symptoms between the experimental and control group. There was a significant main effect by group but not a significant difference in change over time due to the small sample size. However, the changes were in the predicted direction, with the mean pre-score for the experimental group of 26.24 and mean post-score of 23.24; the mean pre-score for the control group was 29.47 and the mean post-score was 30.00, suggesting that the PTSD symptoms for the experimental group decreased while the scores for the control group actually increased slightly. There was a 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 (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 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.

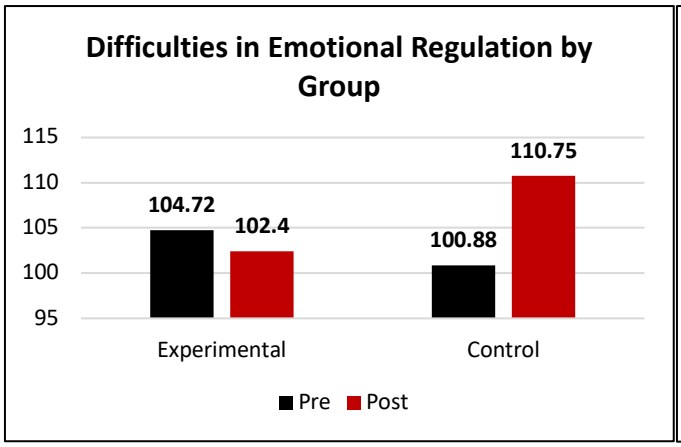


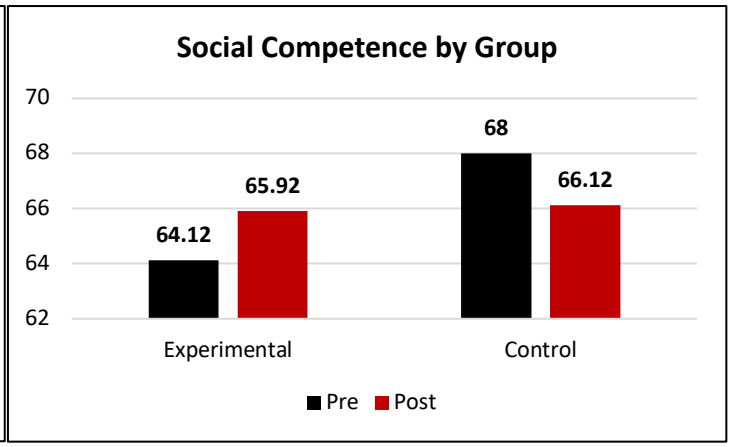


- There was an improvement in resiliency scores for both the experimental and control groups as illustrated below. Differences were not statistically significant. This improvement in resiliency scores for both groups may reflect the impact of treatment as usual outside of Mind Matters involvement given that both groups experienced similar improvements. Although not statistically significant, there was an increase in mean scores for each item on the Connor-Davidson Resiliency Scale as illustrated below for those in the Mind Matters group (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.

For more information contact: Dr. Becky Antle
Becky.antle@louisville.edu - 502.852.2917

- 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 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.
- 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. 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.





CONCLUSIONS AND FUTURE RECOMMENDATIONS

- In a particularly high risk and diverse sample of youth with trauma histories greatly exceeding national averages, the *Mind Matters* program resulted in a significant increase in coping skills and decrease in PTSD symptoms for the experimental group. There was an increase in resiliency and social competence for both groups, suggesting that the program and general treatment setting may both have contributed to improvements over time.
- Future recommendations include 1) continued testing of the program through this rigorous design with a) expansion to other treatment settings (eg. schools, court based programs, community settings and populations (young adults, rural communities, athletes, justice involved youth); b) addition of longer follow-up data collection period (6-12 months); and c) addition to sample size to reach target of at least 200.

CENTER FOR FAMILY & COMMUNITY WELL-BEING

For more information contact: Dr. Becky Antle
Becky.antle@louisville.edu - 502.852.2917