

Florida International University  
**FIU Digital Commons**

---

FIU Electronic Theses and Dissertations

University Graduate School

---


5-30-2019

## **Poly-strengths Skill Building for Urban Teens at High-risk for Violence Exposure: Leveraging Community After-school Programs to Promote Youth**

Kelly D. Cromer M.S.

*Florida International University*, [kcromer@fiu.edu](mailto:kcromer@fiu.edu)

Follow this and additional works at: <https://digitalcommons.fiu.edu/etd>

 Part of the [Child Psychology Commons](#), [Clinical Psychology Commons](#), and the [Community Psychology Commons](#)

---

### **Recommended Citation**

Cromer, Kelly D. M.S., "Poly-strengths Skill Building for Urban Teens at High-risk for Violence Exposure: Leveraging Community After-school Programs to Promote Youth" (2019). *FIU Electronic Theses and Dissertations*. 4537.

<https://digitalcommons.fiu.edu/etd/4537>

This work is brought to you for free and open access by the University Graduate School at FIU Digital Commons. It has been accepted for inclusion in FIU Electronic Theses and Dissertations by an authorized administrator of FIU Digital Commons. For more information, please contact [dcc@fiu.edu](mailto:dcc@fiu.edu).

FLORIDA INTERNATIONAL UNIVERSITY

Miami Florida

POLY-STRENGTHS SKILL BUILDING FOR URBAN TEENS AT HIGH-RISK FOR  
VIOLENCE EXPOSURE: LEVERAGING COMMUNITY AFTER-SCHOOL  
PROGRAMS TO PROMOTE YOUTH RESILIENCE

A dissertation submitted in partial fulfillment of the

requirements for the degree of

DOCTOR OF PHILOSOPHY

in

PSYCHOLOGY

by

Kelly D. Cromer

2020

To: Dean Michael R. Heithaus  
College of Arts, Sciences and Education

This dissertation, written by Kelly D. Cromer, and entitled Poly-Strengths Skill Building for Urban Teens at High-Risk for Violence Exposure: Leveraging Community After-School Programs to Promote Youth Resilience, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

---

Nicole Fava

---

Dana McMakin

---

Justin Parent

---

Stacy L. Frazier, Major Professor

Date of Defense: May 30, 2020

The dissertation of Kelly D. Cromer is approved.

---

Dean Michael R. Heithaus  
College of Arts, Sciences and Education

---

Andrés G. Gil  
Vice President for Research and Economic Development  
and Dean of the University Graduate School

Florida International University, 2020

© Copyright 2020 by Kelly D. Cromer

All rights reserved.

## DEDICATION

I dedicate this dissertation to my parents, who instilled within me a lifelong love of learning and supported me throughout my education. You are my role models and my best friends. Also, to my darling son Elias. You are my constant source of inspiration. I pray that we always pursue our dreams with childlike optimism and curiosity and never give up.

## ACKNOWLEDGMENTS

I would like to thank the Miami-Dade Parks Recreation and Open Spaces administrators and staff, who allowed me to develop my community research expertise by partnering with them in our shared goal of promoting youth resilience. Most of all, I thank the genuinely amazing teen interns for guiding me in the development of mental health promotion tools with the potential to reach countless other youth facing similar life challenges. Finally, I would like to express sincere gratitude to my mentor, Dr. Stacy Frazier, whose unwavering faith in my potential to succeed helped me find the confidence to continue my journey towards becoming a clinical scientist.

ABSTRACT OF THE DISSERTATION  
POLY-STRENGTHS SKILL BUILDING FOR URBAN TEENS AT HIGH-RISK FOR  
VIOLENCE EXPOSURE: LEVERAGING COMMUNITY AFTER-SCHOOL  
PROGRAMS TO PROMOTE YOUTH RESILIENCE

by

Kelly D. Cromer

Florida International University, 2020

Miami, Florida

Professor Stacy L. Frazier, Major Professor

Violence exposure increases teens' risk for emotion dysregulation, anxiety, depression, and aggression towards peers. Urban teens are disproportionately more likely to be exposed to violence and less likely to receive mental health services. Community after-school programs can help to reduce these disparities by offering opportunities for skills development and mental health promotion to mitigate risk associated with violence exposure.

The current study examined the implementation and promise of brief meditation and sleep health journaling activities infused within a pre-existing parks-based after-school program for black and Latinx teens. Data include pre-/post-measures of violent and non-violent adversity, emotion regulation, anxiety, depression, and self-efficacy to manage peer conflict. Teens also completed anonymous feedback forms after each activity. Teens with more violence exposure at time 1 reported reductions in anxiety at time 2. Teens with more overall adversity reported reductions in anxiety and

improvements in self-efficacy to resolve peer conflict. Strong evidence for fidelity and teen enthusiasm (adherence, utility, and generalizability) were found. Overall, findings indicate poly-strengths training may be infused within community after-school programs to promote resilience among urban teens at high-risk for violence exposure.



TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION TO THE RESEARCH.....	1
II. AFTER-SCHOOL POLY-STRENGTHS PROGRAMMING FOR URBAN TEENS AT HIGH-RISK FOR VIOLENCE EXPOSURE .....	4
Abstract.....	5
Introduction.....	6
Method .....	10
Results.....	19
Discussion.....	21
III. MEDITATION AND SLEEP HEALTH KERNELS FOR TEENS AT HIGH-RISK FOR VIOLENCE EXPOSURE .....	26
Abstract.....	27
Introduction.....	28
Method .....	35
Results.....	43
Discussion.....	47
IV. FIELD STATEMENT .....	56
REFERENCES .....	58
APPENDIX.....	65
VITA.....	108

## **I. INTRODUCTION TO THE RESEARCH**

My research utilizes collaborative partnerships with community agencies to bring poly-strengths skill-building opportunities to teens at high-risk for violence exposure in under-resourced, urban settings. I am building a program of research that: (a) promotes resilience among youth at risk for mental health problems; (b) develops evidence-based kernels that are feasible and acceptable for implementation in accessible community settings; and (c) closely aligns clinical interventions with the goals and cultural values of diverse community partners and intervention participants.

### **Rationale for Research**

The National Survey of Children's Exposure to Violence (NatSCEV) revealed that 67.5% of youth between the ages 10-17 have experienced at least one form of direct or witnessed violence during the past year (Finkelhor, Turner, Shattuck, & Hamby, 2015). Violence exposure is often disruptive to youth development, and is empirically linked to internalizing psychopathology (Cromer & Villodas, 2017a; 2017b), emotion regulation problems (Merikangas et al., 2010; Jaffee, 2017), and aggression towards peers (Black et al., 2015; Low & Espelage, 2014). Teens of color are at disproportionate risk for violence exposure, and yet are less likely than their white peers to seek and receive mental health services, reflecting widely cited concerns about financial barriers to health care and stigma against traditional mental health services (Costello, He, Sampson, Kessler, & Merikangas, 2014; Merikangas et al., 2011). Resilience research suggests poly-strengths promotion, which aims to build skills across multiple domains of functioning, can help to restore and maintain teen mental wellness and prevent revictimization and violence perpetration

(Hamby et al., 2018). Meditation and sleep health interventions are gaining empirical support in the treatment of internalizing and emotion regulation problems for teens (Blake, Sheeber, Youssef, Raniti, & Allen, 2018; Hesse, Holmes, Kennedy-Overfelt, Kerr & Giles, 2015; Chadi et al., 2018; Fung et al., 2019). Meditation and sleep health interventions represent low-cost, brief evidence-based kernels (Embry & Biglan, 2008) with the potential to impact teen health on a large-scale if infused within existing community settings that are easily accessible to urban teens.

### **Presentation of Research Findings**

This dissertation examines the feasibility, acceptability, utility, generalizability, and promise of brief, low-cost meditation and sleep health interventions infused within a community after-school internship program to promote resilience and reduce internalizing problems for urban teens at high-risk for violence exposure. The research is described in two separate manuscripts. Chapter two examines the promise of the meditation and sleep health interventions, in conjunction with other poly-strengths skill building activities targeting academic achievement and life skills, through an open trial. Leveraging the knowledge, experience, and existing resources of our community partners at the Miami-Dade Parks Recreation and Open Spaces (MDPROS) department, we designed and implemented poly-strengths training opportunities during regularly scheduled after-school enrichment time for teen interns selected from Miami area neighborhoods with the highest rates of violent crime. We conducted an exploratory analysis to examine whether teens reported maintenance, increases, or decreases in emotion regulation, anxiety, depression, and self-efficacy to resolve peer conflict without

violence. We explored clinical severity, violence exposure, and number of violent and non-violent adverse experiences as moderators without a directional prediction.

Chapter three describes the implementation of the brief meditation and sleep health journaling activities with regard to feasibility and youth enthusiasm (acceptability, utility, and generalizability) as reported by the MDPROS staff and teen interns. We examine three sources of data: (1) recorded meditations delivered by program staff; (2) anonymous feedback surveys submitted by teens following meditations; and (3) weekly sleep health journal entries coded for content and quality. We made three predictions: (1) program staff would adhere closely to meditation scripts (content, tone, and duration); (2) teens would report high enthusiasm regarding the acceptability, utility, and generalizability of meditations; and (3) sleep health journals would reveal high utility for sleep planning activity.

II. AFTER-SCHOOL POLY-STRENGTHS PROGRAMMING FOR URBAN TEENS  
AT HIGH-RISK FOR VIOLENCE EXPOSURE

*This manuscript is currently in press in Translational Behavioral Medicine.*

Cromer, K.D., D'Agostino, E. M., Hansen, E., Alfonso, C., & Frasier, S. (2019) After-school poly-strengths programming for urban teens at high-risk for violence exposure. *Translational Behavioral Medicine (in press)*.

## Abstract

**Background:** Violence exposure increases teens' risk for emotion dysregulation, anxiety, depression, and aggression towards peers. Teens of color are disproportionately more likely to be exposed to violence and less likely to receive mental health services.

Community after-school programs can help to reduce disparities by offering opportunities for skills development and mental health promotion to mitigate risk associated with violence exposure. **Purpose:** The present study explores the promise of a parks-based after-school paid internship program for black and Latinx teens with weekly, group-based enrichment to promote educational attainment, job skills, and health behaviors. **Method:** University and park administrators collaborated to design a program comprised of paid work (10 hrs./week at \$9.05/hr.) and weekly 2-hour enrichment (e.g., job skills, meditation, sleep health psychoeducation). The sample includes 38 youth ( $n = 38$ ; 15-17 years old [ $M = 16.26$ ,  $SD = .73$ ]; 42.1% female; 95.2% non-Latinx black, 4.8% Latinx white). Data analyses include pre-/post-measures of violent and non-violent adversity, emotion regulation, anxiety, depression, and self-efficacy to manage peer conflict.

**Results:** There were no significant changes from Time 1 (T1) to Time 2 (T2) in teen reported cognitive reappraisal, emotion suppression, anxiety, depression, or self-efficacy to resolve peer conflict. Teens with more violence exposure at T1 reported significant reductions in anxiety at T2. Teens with more overall adversity reported significant reductions in anxiety and improvements in self-efficacy to resolve peer conflict.

**Conclusions.** Findings indicate that after-school programs infused with poly-strengths programming can benefit diverse teens at high-risk for violence exposure.

Keywords: Teen resilience, mental health promotion, after-school enrichment, poly-strengths, and community-partnered research.

## After-School Poly-Strengths Programming for Urban Teens at High-Risk for Violence

### Exposure

### Introduction

National survey data indicate that 67.5% of youth ages 10-17 report having experienced some form of direct or witnessed violence in the past year (Finkelhor, Turner, Shattuck, & Hamby, 2015). Violence exposure disrupts developmental trajectories and increases vulnerability for internalizing problems, emotion dysregulation, and aggression (Cromer & Villodas, 2017; Jaffee, 2017). Black and Latinx adolescents are disproportionately more likely to be exposed to violence and less likely to receive services for internalizing disorders than white teens, which reflects widely cited concerns about stigma, lack of culturally-competent services, and financial barriers (Costello, He, Sampson, Kessler, & Merikangas, 2014). Resiliency research suggests that poly-strengths development is best suited to help teens restore mental wellness and prevent revictimization and perpetration (Hamby et al., 2018). Recent studies show promise for low-cost, high-reach, evidence-based tools such as meditation and sleep health education to reduce internalizing symptoms for teens (Blake et al., 2017; Fung et al., 2018). Community after-school programs can help reduce disparities by offering opportunities for skill development and mental health promotion to mitigate risk associated with violence exposure (Frazier et al., 2015). The present study examines via open trial a

parks-based after-school internship program with weekly job and life skills enrichment for black and Latinx teens at high-risk for violence exposure.

### **Poly-Victimization Contributes to Teen Internalizing Problems**

Teens are among those most vulnerable to violence exposure due to their dependence on others for protection, limited choice in home and school settings, and age normative risk-taking and exploration (Romer, Reyna, & Satterthwaite, 2017). Nearly all forms of violence are interconnected, such that youth who experience one form of violence are 2 to 3 times more likely to experience other forms of violence (i.e., poly-victimization; Finkelhor, Turner, Ormrod, & Hamby, 2009). Poly-victimization predicts a host of adverse developmental outcomes (e.g., depression, anxiety; Cromer & Villodas, 2017), and there is little evidence that particular adverse outcomes are unique to any one form of violence (Hamby, Grych, & Banyard, 2018). Further research is needed to inform effective mental health promoting systems and services for psychological distress associated with poly-victimization (Hamby et al., 2018).

The World Health Organization reports that the prevalence of anxiety disorders (i.e., generalized anxiety disorder, panic disorder, post-traumatic stress disorder) and mood disorders (e.g., depression) increases noticeably during the early teen years and into adulthood (Kessler et al., 2007). Developmental trauma theory posits that exposure to violence disrupts important developmental processes, increasing risk for anxiety and depression (Toth & Cicchetti, 2013). Decades of research have documented a bidirectional relationship between anxiety and depression resulting in high rates of comorbidity (Cummings, Caporino, & Kendall, 2014).



A recent systematic review suggests that both anxiety and depression are associated with transdiagnostic impairments in emotion regulation (Dryman & Heimberg, 2018). Emotion regulation refers to trainable strategies used to process, modify, and respond to emotional experiences and emotion-eliciting events. Two primary components of emotion regulation are cognitive reappraisal and emotion suppression. Cognitive reappraisal can involve changing thoughts associated with an emotion or an emotional stimulus, or taking perspective to become more or less detached from the emotional stimulus. Emotion suppression can involve efforts to avoid internally experiencing, externally expressing, or thinking about an emotion or emotion-eliciting event. Further research is needed to examine interventions that may decrease internalizing problems via increased cognitive reappraisal and reduced emotion suppression for teens exposed to violence.

### **Mental Health Interventions Mitigate Risk for Teens**

Meditation is gaining popularity as a mental health promotion tool for youth. Several styles of meditation reduce stress and internalizing symptoms for youth, including mindfulness (Zoogman, Goldberg, & Hoyt, 2014), compassion (Bach & Guse, 2015), relaxation (Manzoni et al., 2008), and guided imagery (Flynn, Jones, & Ausderau, 2016). Three meta-analyses of youth mindfulness interventions revealed moderate effect sizes for reductions in anxiety and depression, moderate effects for improving stress resilience, and small effects for emotion and behavior regulation (Klingbeil et al., 2017; Zenner, Herrnleben-Kurz, & Walach, 2014; Zoogman et al., 2014). Although less is known about compassion-based interventions, associations between self-compassion and

anxiety, depression, and stress among teens suggest its potential (Bluth et al., 2017; Marsh, Chan, & MacBeth, 2017).

Teens are particularly prone to sleep difficulties due to factors such as caffeine consumption, excessive use of electronics, pubertal changes, competing social and academic priorities, and a natural shift in circadian rhythm functioning (i.e., sleep phase delay; Patel, Bruzzese, & Sockrider, 2017). Research is underway to examine sleep health interventions to promote mental wellness in teens at-risk for internalizing problems (Blake et al., 2017). The SENSE study utilized cognitive behavioral and mindfulness techniques in group formats with high school students who reported heightened anxiety during screening. Results showed reductions in pre-sleep cognitive and somatic hyperarousal and small effects for reduced anxiety.

### **After-School Programs Facilitate Resilience Via Poly-Strengths Model**

After-school programs are a vital community resource for educational support, job skills, and evidence-based mental health promotion for diverse teens (Frazier, Cappella, & Atkins, 2007). Organized programs use sports, arts, recreation, and civic engagement to facilitate cognitive growth and skill building with the support of responsible adult recreation leaders, providing a powerful context for promoting youth resilience (Morgan, Sibthorp, Wells, 2014). Resiliency reflects a combination of protective skill sets that insulate youth from adverse outcomes (Hamby, Grych, & Banyard, 2018). Resiliency researchers recently have called for research to examine poly-strengths interventions for youth to recover from victimization experiences and halt the cycle of revictimization, with the understanding that prevention programs often reach youth that have already experienced violence (Hamby et al., 2018). A growing area of

literature demonstrates benefits for infusing socioemotional skills (i.e., problem-solving, communication, emotion regulation) within after-school programs that also provide other enrichment (e.g., academic assistance, safe spaces for recreation, mentoring; Boustani et al., 2015; Frazier et al., 2015). The present study explores the potential of after-school poly-strengths programming to build resilience toward mental wellness for youth exposed to violence.

### **Present Study**

The present study examines the Park Internship Program (PIP), a collaborative partnership of Miami-Dade Parks Recreation and Open Spaces (MDPROS) Department, MDC Juvenile Services Department, MDC Public Schools, and Florida International University. PIP provides paid internship work and 2 hours of weekly after-school enrichment designed to promote educational achievement, job skills, and life skills (e.g., communication, problem-solving, and emotion regulation). In an open trial design, we used paired t-tests to compare teen self-report data at the start and end of the program year. We conducted an exploratory analysis to examine whether teens reported maintenance, increases, or decreases in emotion regulation, anxiety, depression, and self-efficacy to resolve peer conflict without violence. We explored clinical severity, violence exposure, and number of violent and non-violent adverse experiences as moderators without a directional prediction.

### **Method**

**Collaboration.** The present study reflects a 3-year community partnership focused on after-school program development, implementation, and examination. In 2015, the Miami-Dade County Mayor allocated \$3 million for MDPROS to design and

deliver youth violence prevention programs in neighborhoods where youth are at highest risk for experiencing or engaging in violence. Stakeholders assembled bi-weekly to create Fit2Lead (F2L), comprising two programs: (1) *Youth Enrichment and Sports (YES)*: a free daily after-school program with academic support and life skills infused sports and recreation for youth ages 12-14; and (2) *Parks Internship Program (PIP)*: an internship program with paid work experience (10 hrs./week at \$9.05/hr.) and 2-hour weekly enrichment for teens ages 15-17. Teens attended one of four group enrichment sessions offered per week (approx. 18 youth per session). University collaborators focused on infusing socio-emotional learning into enrichment activities. The goal was to develop, iteratively refine, and study the impact of programming on youth academic and health outcomes. The present study examines the PIP program exclusively.

**Setting.** MDPROS is the third largest county park system in the U.S., and strives to create a healthy, livable community by providing year-round recreation programs for youth. Thirty-seven park locations serve 4,752 youth per year via after-school and summer recreation programs. Two parks offered PIP enrichment in communities considered high-risk for violent crime and economic disadvantage. Both have indoor and outdoor facilities for youth programs.

**Park #1.** The first park is located in northern Miami in a historically important black community developed during the 1920s by black Americans. During the 1940s and 1950s this city thrived as a safe community for black residents who were prohibited from visiting other parts of Miami due to segregation laws. However, gentrification beginning in the 1960s created an influx of people with less economic resources, which contributed to increasing rates of poverty and job scarcity. The city has made news several times this

year for youth killed by gun violence, including a high school honors student familiar to the PIP teens. This area has one of the highest concentrations of gunshot injuries in the county (Zebib, Stoler, & Zakrison, 2017).

**Park #2.** The second park is located in a densely populated area of southern Miami. In 1992 the city suffered severe damage following Hurricane Andrew, which engendered widespread property abandonment and vacancy (Zhang, 2012). While many families with higher incomes relocated, families with fewer financial resources had less choice to relocate and remained in the area despite damages. This community is also known for its relatively high rates of violent crimes and gang violence. Due to threats of local gang violence, including direct threats towards a PIP intern, after-school enrichment activities often took place indoors.

**Participants.** Initially, 72 teens enrolled in PIP and completed data collection (T1). Considerable attrition resulted in 38 teens that participated in all scheduled enrichment activities and completed data collection at program's end (T2). Teens reported leaving the program for several reasons including finding employment with more hours or higher pay and competing priorities (e.g., school sports). There were no differences in violence exposure, ACEs, anxiety, depression, cognitive reappraisal, or self-efficacy for managing teen conflict between youth who remained in PIP or left the program. Teens who left reported lower rates of emotion suppression,  $t(68) = -.47, p = .05$ , with a moderate effect size ( $d = -.47$ ), suggesting that youth who remained in the program may have had a greater need for the emotion regulation enrichment activities.

Analyses included only youth who participated in both T1 and T2 ( $n = 38$ ; 15-17 years old [ $M = 16.26, SD = .73$ ]; 42.1% female; 95.2% non-Latinx black, 4.8% Latinx

white; 92.1% heterosexual). Caregivers ( $n = 21$ ; 95.2% female; 95.2% non-Latinx black, 4.8% Latinx white, 42.86% single-parent households) provided demographic information at T1, including several proxies for economic disadvantage. While 85% of caregivers reported that they were employed at least part-time, 40% of annual household incomes fell below \$20,000. With regard to education, 4.76% of caregivers did not complete high school, 52.38% earned a high school diploma, 23.81% earned a degree or certificate below bachelor's level, 14.29% earned bachelor's degree, and 4.76% earned a degree or certificate higher than bachelor's level.

### **Measures**

Measures were strategically selected to be brief, free of cost (for MDPROS' ongoing use to evaluate program benefits), and used previously with ethnically and racially diverse teens.

**Adverse Childhood Experiences Questionnaire (Finkelhor, Shattuck, Turner, & Hamby, 2015).** Teens reported total lifetime history of adverse childhood experiences (ACEs) using dichotomous yes or no responses for 20 items involving physical, sexual, and emotional abuse, family and community violence exposure, parental separation or divorce, caregiver mental illness and imprisonment, neglect, and economic hardship. An index of violence exposure was calculated by including the 20 items related only to direct or witnessed violence. An open-ended question was included to capture other lived experiences that teens found personally traumatic, but no additional violence was reported. Internal consistency was high ( $\alpha$  pre = .89;  $\alpha$  post = .90).

**Screen for Child Anxiety and Related Emotional Disorders (SCARED; Birmaher et al., 1999).** Teens reported anxiety symptoms (e.g., "People tell me I worry

too much,” “I am shy”) over the past 3 months (0 = *not true or hardly ever true*, 1 = *sometimes true*, 2 = *very true or often true*) with a 5-item version of the Screen for Child Anxiety Related Emotional Disorders (SCARED) that demonstrated good internal consistency and discriminant validity within anxiety disorders and between anxiety and depressive/disruptive disorders. Items were based on factor analysis that identified panic/somatic, generalized anxiety, separation anxiety, social phobia, and school phobia as main factors in the original 41-item measure. Internal consistency was poor ( $\alpha$  pre = .64;  $\alpha$  post = .36), reflecting the 5 items belong to different factor subscales.

**Short Mood and Feelings Questionnaire (SMFQ; Angold et al., 1995; Messer et al., 1995).** Teens reported feelings of core depressive symptoms (e.g., “I felt lonely,” “I didn’t enjoy anything at all”) over the past 2 weeks (0 = *not true*, 1 = *sometimes true*, 2 = *true*) with a 13-item version of the Mood and Feelings Questionnaire. The short version shows strong discriminant validity between clinically-referred psychiatric patients and pediatric control participants, and high internal consistency on a unifactorial scale of depressive symptoms (Angold et al., 1995). Internal consistency for the present sample was high ( $\alpha$  pre = .88;  $\alpha$  post = .91).

**Emotion Regulation Questionnaire (ERQ; Gross & John, 2003).** Teens reported their perceived utilization (*strongly disagree, disagree, neutral, agree, strongly agree*) of two emotion regulation processes, cognitive reappraisal (6 items; e.g., “I control my emotions by changing the way I think about the situation I’m in.”) and emotion suppression (4 items; e.g., “When I am feeling negative emotions, I make sure not to express them.”). This measure is widely used and has evidence of strong internal consistency, test-retest reliability, and discriminant validity (Gross & John, 2003).

Internal consistency for the present sample was moderate (cognitive reappraisal:  $\alpha$  pre = .70,  $\alpha$  post = .79; emotion suppression:  $\alpha$  pre = .77,  $\alpha$  post = .69).

**Self-Efficacy for Teen Conflict (Bosworth & Espelage, 1995).** Teens reported confidence (4-point scale) in their ability to manage conflict with other teens (e.g., “Stay out of fights,” “Talk out a disagreement”) on a 5-item modified subscale of the Beliefs Supportive of Violence Scale (Dahlberg et al., 1998). The original scale demonstrated good internal consistency for middle school students and strong reliability ( $\alpha$  = .85; Bosworth et al., 2000). Internal consistency for the present sample was high to moderate ( $\alpha$  pre = .84;  $\alpha$  post = .78).

## **Procedure**

This study was conducted in accordance with APA ethical guidelines and with approval from Sterling IRB for MDPROS to direct recruitment and informed consent/assent procedures, and to manage data collection and storage.

**Recruitment.** Referrals to the program come from three sources: (1) MDC Juvenile Services Department case managers refer through their pre-trial diversion program; (2) MDC Public School counselors recommend participation based on poor school attendance and behavior problems; and (3) park managers invite youth from local communities.

**Data collection.** MDPROS health and wellness staff collected data at the beginning (T1; October) and end (T2; May) of the program year. During program orientation (with light refreshments but no compensation) caregivers were invited to provide permission (n=38) and demographic information (n=21). Teens completed surveys in groups during regularly scheduled enrichment at their assigned park, with



assistance from park staff as needed, and received compensation at their typical hourly internship rate (\$9.05/hour). Teens who left the program were not contacted for T2 data due to time and resource constraints of the lead agency.

**Curriculum development and implementation.** In accordance with our goal to provide a diverse set of user-informed poly-strengths training opportunities during PIP enrichment, we conducted informal focus groups with PIP teens and staff in spring 2017 which revealed high enthusiasm for activities that prioritized professional development, general life skills, communication, and emotion regulation. In particular, both teens and staff expressed a specific need for anger management and relaxation. Park partners developed modules related to professional development (e.g., mock interviews, resume writing) and basic life skills (e.g., financial literacy, purchasing a vehicle). Academic partners searched for brief, low-cost, empirically-supported tools for mental health and wellness (e.g., meditation, sleep health). We were limited to interventions lasting 15 minutes or less, easily implemented in a group setting by staff who may not have prior mental health training, and with few material requirements.

Content to promote mental wellness prioritized skills common to prevention programming (Boustani et al., 2015). Curriculum evolved over the program year with iterative feedback from frontline staff and youth regarding acceptability, fit, and benefit. Priority was placed on meditation and sleep health journaling to promote emotion awareness and regulation. Meditation began with the Transformative Life Skills (TLS) curriculum (Bose, Ancin, Frank, & Malik, 2017), a combination of yoga and mindfulness meditation, and a good fit for its low-cost, flexibility for group settings, and empirical support for use with diverse youth (Frank, Bose, & Schrobrenhauser-Clonan,

2014). We adapted the original TLS curriculum to create 36, 15-minute sessions with psychoeducation, meditation with yoga, and closing group reflections. After two weeks (8 group sessions; 2 sessions per teen), low enthusiasm from teens (e.g., discomfort trying yoga poses in front of peers, boredom with pure mindfulness) and staff (e.g., lack of teen engagement) led to a replacement of TLS with 5-minute guided imagery scripts, selected by the PIP director, and delivered over 3 weeks (12 group sessions; 3 sessions per teen). Increased enthusiasm by teens and staff led to the development of ten more 5-minute guided imagery scripts derived in part from evidence-based materials implemented in urban after-school programs for youth at-risk for violence exposure (Frazier et al., 2015). Scripts were infused with mindfulness, compassion, progressive relaxation, and relaxation techniques. Several of the scripts encourage youth to imagine a safe, relaxing place in their mind where they can rest and focus on using diaphragm breathing techniques to calm their emotions. Others encourage youth to envision their success in academic and professional settings, with the intention of building self-confidence and motivation to set and reach their personal goals. These scripts were implemented by PIP staff during the last 7 weeks of programming (21 group sessions; 5-6 sessions per teen), and both staff and teens reported high enthusiasm.

Sleep health journaling emerged out of interest by the PIP coordinator for teens to practice writing and learn about mental wellness together, and consisted of seven 10-minute activities comprised of brief psychoeducation (e.g., exercise during the morning or early afternoon, limit caffeine after 2pm) read aloud to the group by a participating teen, and independent written responses to sleep planning prompts. Instructions specified there are no right or wrong answers – just write what is true for you – and then youth

answered questions designed to promote goal-setting and problem-solving (e.g., “My sleep goals for this week are...” and “What can you do to remember your sleep goals?”). The sleep health journaling materials and the final ten 5-minute meditation scripts will be made available at no cost upon request.

**Staff credentials, training, fidelity, and supervision.** Four PIP staff members (50% female; 50% Latinx white, 25% non-Latinx black, 25% Native American and white) facilitated enrichment. Of these, three had completed B.A. degrees (social work, recreation and sports management, and psychology), one was pursuing a B.A. in early childhood education, and two were pursuing advanced training in social work and counseling. The PIP coordinator was a non-Latinx white woman with an MSW. PIP staff met bi-weekly to review and practice activities. Three 1-hour trainings led by the university partner included engaging teens, trauma-informed care, meditation delivery, sleep health benefits, and suicide risk assessment.

### **Data Analytic Plan**

Paired *t*-tests and Cohen’s *d* effect sizes were used to examine changes over time from T1 to T2 for teens with and without elevated T1 clinical symptoms of anxiety and depression, and for teens with different levels of T1 exposure to violence (i.e., no violence exposures; 1 or more violence exposures) and ACEs (i.e., 0-1 ACEs; 2 or more ACEs). Given the small sample design and lack of control group, we calculated the reliable change index (RCI; Jacobson & Truax, 1991) to test for clinically significant change for each participant, as has been done in previous pilot work (Frazier et al., 2015). An RCI greater than or equal to 1.96 represents a reliable change at  $\alpha = .05$ . RCI data

were computed for youth ( $n = 38$ ) with T1 and T2 data and are summarized as the percentage of youth with improvement, deterioration, and no change.

## **Results**

### **Mental Health Need**

T1 data revealed 84.21% of teens reported experiencing one or more adverse childhood experiences (ACEs; violent and non-violent adversity), and 47.37% reported at least one form of violence exposure. By T2 51.43% of teens reported exposure to new adverse events during the program year, and 34.38% reported exposure to new violence. Hence, teens were at high-risk for violence exposure and other forms of adversity (e.g., poverty, abuse). T1 screening for internalizing symptoms indicated 31.58% of teens may have been suffering a clinical anxiety disorder (3 or higher on the SCARED;  $M = 1.95$ ;  $SD = 2.04$ ), and 10.53% may have been suffering clinical depression (12 or higher on the SMFQ;  $M = 3.68$ ;  $SD = 4.79$ ).

### **Program Effects**

There were no significant changes from T1 to T2 in teen reported cognitive reappraisal, emotion suppression, anxiety, depression, or self-efficacy to resolve peer conflicts ( $ts$  ranged from  $-1.36$  to  $.48$ , n.s.; see Table 1). Likewise, there were no changes over time for youth with ( $ts$  ranged from  $-1.00$  to  $1.19$ , n.s.) or without ( $ts$  ranged from  $-1.24$  to  $1.17$ , n.s.) clinically elevated T1 symptoms of anxiety or for youth with ( $ts$  ranged from  $-2.64$  to  $.80$ , n.s.) or without ( $ts$  ranged from  $-1.60$  to  $.15$ , n.s.) clinically elevated T1 symptoms of depression.

### **Outcomes Differ by Rates of Violent and Non-Violent Adversity**

For teens who reported violence exposure at T1, there were no changes over time in cognitive reappraisal, emotion suppression, or depression ( $ts$  ranged from  $-1.44$  to  $.39$ , n.s.); however, there was a significant reduction in anxiety:  $t(17) = -2.41$ ,  $p = .03$ ,  $d = .57$ , with a medium effect size. RCI analyses revealed that 16.7% of teens reported significant improvement in anxiety and the rest exhibited no change. Furthermore, teens who reported violence exposure at T1 exhibited improvement over time in self-efficacy to resolve peer conflicts that approached significance:  $t(16) = 2.10$ ,  $p = .05$ ,  $d = -.51$ , with a medium Cohen's  $d$  effect size. RCI analyses indicate 23.5% of these teens exhibited significant improvement in self-efficacy to manage teen conflict, while the remaining teens reported no change. Teens with no previous violence exposure at T1 exhibited no change over time in cognitive reappraisal, emotion suppression, anxiety, depression, or self-efficacy to resolve peer conflicts ( $ts$  ranged from  $-1.33$  to  $.64$ , n.s.).

Teens who reported two or more ACEs at T1 did not change with regard to symptoms of cognitive reappraisal, emotion suppression, or depression ( $ts$  ranged from  $-.34$  to  $.43$ , n.s.). However, they did report significantly reduced anxiety:  $t(19) = -2.50$ ,  $p = .02$ ,  $d = .56$ , with a medium Cohen's  $d$  effect size. RCI analyses revealed that 20% of these teens reported significant improvement in anxiety and the rest exhibited no change. Teens also reported significant increases in self-efficacy to resolve peer conflicts:  $t(18) = 2.63$ ,  $p = .02$ ,  $d = -.60$ , with a medium Cohen's  $d$  effect size. RCI analyses revealed that 21.2% of these teens reported significant improvement in anxiety and the rest exhibited no change. Teens who reported one or no ACEs at T1 reported no significant changes in cognitive reappraisal, emotion suppression, anxiety, depression, or self-efficacy to resolve peer conflicts ( $ts$  ranged from  $-1.40$  to  $1.83$ , n.s.).

## **Discussion**

Reflecting a poly-strengths framework, we developed and examined a paid after-school internship program with job and life skills enrichment to promote mental health for diverse teens at high-risk for violence exposure. Findings are promising to sustain and promote teen mental health, as indicated by stable reports of emotion regulation, internalizing symptoms, and self-efficacy to manage peer conflict despite relatively high rates of past and present violence exposure. Teens who reported higher rates of overall adversity and violence exposure before the internship began reported fewer symptoms of anxiety and improved self-efficacy to manage peer conflict without violence at end of the program year. Of particular import, none of the youth showed deterioration; even teens with highest anxiety, depression, and adversity at T1 evidenced no worsening of symptoms by T2, despite elevated risk associated with ongoing violence exposure. Fit2Lead's poly-strengths program continues to expand, indicative of sustained enthusiasm among county funders, community stakeholders, park programmers, and families.

### **Benefits of Poly-Strengths Enrichment in After-School Settings**

Resilience relies on diverse skills and protective factors (Hamby, Grych, & Banyard, 2018). Violence prevention programs may best promote resilience among at-risk teens by providing skills practice in multiple domains (Hamby et al., 2018). PIP included job skills (e.g., resume writing, interviewing), general life skills (e.g., financial literacy, safe driving), and socioemotional learning (e.g., problem-solving, communication, emotion regulation). Findings illustrate a poly-strengths program model infused with evidence-based mental health promotion tools. Mental health improvements

are especially promising for youth with highest rates of exposure to violent and non-violent trauma. Further research is needed to examine generalizability of skills to other settings (e.g., home, school) and relationships.

Youth who experience violence are at increased risk for internalizing problems (e.g., Cromer & Villodas, 2017). Black teens are less likely than white teens to receive services in traditional specialty settings and more likely to receive services in community educational settings (CBHSQ, 2015). Thus, after-school programs may be especially beneficial for black teens who experience violence, highlighting findings related to anxiety reduction among youth with prior violence exposure. Infusing evidence-based mental health promotion tools into after-school routines can help increase the reach of empirical knowledge to underserved populations.

Community-partnered research can reduce power imbalances inherent to traditional clinical research by actively involving community partners in every stage of the research process and creating a reciprocal exchange of local and empirical knowledge (Wallerstein & Duran, 2010). For youth who have experienced high rates of trauma, we have prioritized feelings of safety and comfort over strict adherence to manualized programs. Thus, following negative feedback by staff and teens, we discontinued yoga despite promising empirical evidence for use with diverse teens (e.g., Transformative Life Skills; Bose, Ancin, Frank, & Malik, 2017). We have found this flexibility and responsiveness imperative to demonstrate respect for partners and participants. Ultimately, PIP youth and staff communicated high enthusiasm for the poly-strengths curriculum and MDPROS is expanding the internship program to reach more youth.

Poly-strengths programming requires researchers to become knowledgeable about a variety of empirically-supported tools, including those that stretch their expertise and extend beyond familiar literatures, and to be creative in adapting activities to fit the needs of the partnering agency. Often community partners seek mental health promotion activities that are low-cost, brief, and delivered easily in group formats by youth care workers with varying levels of education, training, and work experience, limited time for additional training, and high rates of turnover. The 5-minute meditation scripts and 10-minute sleep health journaling activities are examples of low-cost mental health promoting tools with potential for high reach and high impact. They fit seamlessly into PIP and were received with high enthusiasm by teens, staff, and park administrators who see their potential for impact, generalizability and sustainability.

### **Limitations**

The absence of a control group reflects county priority to extend programming to all eligible youth. Our research collaborative agreed that withholding evidence-informed health and wellness tools from vulnerable teens at high-risk for violence exposure would violate our collective ethical standards. Instead, we used an open trial research design and tested both statistical and clinical significance. Second, outcomes consisted solely of youth self-report measures. Although taken with caution, findings suggest promise for poly-strengths enrichment to maintain and improve the mental health of teens at-risk for violent and non-violent adversity. Third, teens in this sample were referred to PIP by a number of sources (parks, schools, juvenile services), but those data were not systematically recorded and thus we could not examine referral source as a potential moderator. Finally, 47% of youth enrolled in PIP during fall left the program, primarily



due to competing job opportunities or school or family obligations. In the absence of resources to obtain T2 data from these youth, we are unable to compare their outcomes with those of teens who completed the planned poly-strengths enrichment activities.

### **Conclusions**

Violence exposure increases teens' risk for emotion dysregulation, anxiety, depression, and aggression. Teens of color are disproportionately more likely to be exposed to violence and less likely to receive mental health services. The present study explored the promise of a parks-based after-school paid internship program to deliver poly-strengths programming to black and Latinx teens who reside in neighborhoods characterized by poverty and violence. Program effects indicate overall maintenance of mental health outcomes, and a unique benefit of decreased anxiety and increased self-efficacy to manage peer conflict among teens at highest risk for violent and non-violent adversity. These findings encourage increased efforts to implement and disseminate poly-strengths mental health promoting tools within community after-school enrichment programs that serve diverse teens at high-risk for violence exposure.

Table 1. *T*-test results for change over time (T1 to T2) in youth outcomes.

	<i>t</i> -test	<i>p</i> -value		<i>t</i> -test	<i>p</i> -value
<u>ACEs</u>			<u>Anxiety</u>		
Full sample	1.53	<i>ns</i>	Full sample	-1.36	<i>ns</i>
			No VE at T1	0.44	<i>ns</i>
<u>Violence Exposure (VE)</u>			VE at T1	-2.41*	.027
Full sample	0.60	<i>ns</i>	≤ 1 ACE	1.69	<i>ns</i>
			≥ 2 ACEs	-2.50*	.022
<u>Cognitive Reappraisal</u>			<u>Depression</u>		
Full Sample	-0.64	<i>ns</i>	Full sample	0.48	<i>ns</i>
No VE at T1	-1.33	<i>ns</i>	No VE at T1	0.64	<i>ns</i>
VE at T1	0.39	<i>ns</i>	VE at T1	0.13	<i>ns</i>
≤ 1 ACE	-1.40	<i>ns</i>	≤ 1 ACE	1.83	<i>ns</i>
≥ 2 ACEs	0.43	<i>ns</i>	≥ 2 ACEs	-0.23	<i>ns</i>
<u>Emotion Suppression</u>			<u>Self-Efficacy</u>		
Full sample	-0.40	<i>ns</i>	Full sample	0.37	<i>ns</i>
No VE at T1	0.55	<i>ns</i>	No VE at T1	-0.67	<i>ns</i>
VE at T1	-1.44	<i>ns</i>	VE at T1	2.10	.052
≤ 1 ACE	-0.26	<i>ns</i>	≤ 1 ACE	-0.94	<i>ns</i>
≥ 2 ACEs	-0.34	<i>ns</i>	≥ 2 ACEs	2.63*	0.02

III. MEDITATION AND SLEEP HEALTH KERNELS FOR TEENS AT HIGH-RISK  
FOR VIOLENCE EXPOSURE

*This manuscript will be submitted to the Journal of Youth and Adolescence, and thus adheres to its use of APA 6<sup>th</sup> Edition formatting guidelines.*

Cromer, K.D., Moses, J., D'Agostino, E. M., Hansen, E., Alfonso, C., & Frazier, S. L. (in preparation). Meditation and sleep health kernels for teens at high-risk for violence exposure.

## Abstract

**Objective:** After-school settings hold significant potential for high reach and high impact interventions for diverse teens in urban communities characterized by poverty and violence. Evidence-based kernels are brief, low-cost interventions that can be implemented within existing community programs to promote poly-strengths skill-building (Hamby et al., 2018). The present study examined feasibility of and enthusiasm for meditation and sleep health kernels implemented within a Park Internship Program (PIP) for urban teens at high-risk for violence exposure. **Method:** Teens provided quantitative and qualitative feedback for meditation and sleep health activities via anonymous surveys and permanent product data. Community partners provided information on quality of adherence to the brief meditation scripts via audio recordings. **Results:** Strong evidence was revealed for feasibility (staff adherence, teen participation) and enthusiasm (acceptability, utility, and generalizability). **Conclusions:** Findings indicate that evidence-based meditation and sleep health kernels can be meaningfully integrated into community programs accessible to urban teens at-risk for violence exposure.

**Keywords:** Poly-strengths, evidence-based kernels, resilience, meditation, and sleep health.

## Meditation and Sleep Health Kernels for Teens at High-Risk for Violence Exposure

### Introduction

The National Survey of Children’s Exposure to Violence (NatSCEV) revealed that 67.5% of youth ages 10-17 report having experienced some form of direct or witnessed violence in the past year alone (Finkelhor, Turner, Shattuck, & Hamby, 2015). Violence exposure disrupts youth development, in part reflecting its association with internalizing problems (Cromer & Villodas, 2017a; 2017b), emotion dysregulation (Merikangas et al., 2010; Jaffee, 2017), and peer-directed aggression (Black et al., 2015; Low & Espelage, 2014). Black and Latinx teens are at disproportionate risk for violence exposure but less likely than white teens to seek or receive mental health services, reflecting oft-cited concerns about cost, stigma, and cultural sensitivity (Costello, He, Sampson, Kessler, & Merikangas, 2014; Merikangas et al., 2011). Resilience research suggests poly-strengths interventions, which aim to build skills across multiple domains of functioning, can help to restore and maintain teen mental wellness and prevent revictimization (Hamby et al., 2018). Meditation and sleep health interventions are gaining empirical support in the treatment of depression and anxiety for teens (Blake, Sheeber, Youssef, Raniti, & Allen, 2018; Hesse, Holmes, Kennedy-Overfelt, Kerr & Giles, 2015; Chadi et al., 2018; Fung et al., 2019). Emerging research suggests that meditation and sleep health promotion, in conjunction with other poly-strengths training activities, can help to reduce anxiety and increase non-violent conflict resolution among diverse teens exposed to violence (Cromer et al., 2019). Meditation and sleep health interventions represent low-cost, brief evidence-based kernels (Embry & Biglan, 2008) with potential to impact teen health on a large-scale if infused within existing community settings that are easily accessible to urban teens at-

risk for violence exposure. The present study examines the infusion of meditation and sleep health kernels into a community after-school internship program for urban teens at high-risk for violence exposure.

### **Poly-Strengths Training Mitigates Risk for Teens with Violence Exposure**

Teens are among those most vulnerable to violence exposure due to their dependence on others for protection, limited choice in home and school settings, and age normative risk-taking and exploration (Finkelhor & Dzuiba-Leatherman, 1994; Romer, Reyna, & Satterthwaite, 2017). Youth who experience one form of violence are two to three times more likely to experience other forms of violence (Finkelhor, Turner, Ormrod, & Hamby, 2009). Polyvictimization, or exposure to multiple forms of violence, predicts elevated risk for depression, anxiety, and aggression towards peers (Black et al., 2015; Cromer & Villodas, 2017a; Dierkhising, Ford, Branson, Grasso, & Lee, 2019; Low & Espelage, 2014; Turner Shattuck, Finkelhor, & Hamby, 2017). Prominent violence and resiliency researchers have called for the examination of interventions that instill a diverse set of skills (i.e., poly-strengths) that youth can draw upon to recover from victimization experiences and halt the cycle of revictimization, with the understanding that prevention programs often reach youth that already have experienced violence (Hamby et al., 2018). Resiliency among youth exposed to violence reflects a combination of protective skill sets – rather than any single skill or resource – that insulate youth from adverse developmental outcomes (Hamby, Grych, & Banyard, 2018). Further research is needed to identify evidence-based poly-strengths interventions that are feasible for implementation in urban, community settings where youth are at especially high-risk for violence exposure.

## **Evidence-Based Kernels Increase the Reach of Mental Health Interventions**

Mental wellness promotion in the form of brief, low-cost intervention activities align well with current efforts to support youth at-risk for violence with poly-strengths enrichment programming (Hamby et al., 2018). In 2008, Embry and Biglan introduced the concept of evidence-based kernels to describe units of behavioral change that contain the essential components of evidence-based interventions in a brief, simplified manner. Any components of interventions that do not contribute to behavioral change are discarded, and what remains are the *core mechanisms of behavioral change*. For example, belly breathing is an evidence-based kernel in which a person relaxes their diaphragm muscles and engages in deep, full inhales and slow, gentle exhales (Smith, Lyons, & Esat, 2019). This technique can be used to reduce stress, manage symptoms of anxiety, and lower blood pressure (Paul, Elam, & Verhulst, 2007; Stuts & Schreiber, 2017). It can be implemented in any setting to help a person calm their body and mind, and to modify emotions towards a state of greater well-being.

We may reduce the unmet mental health burden associated with exposure to violence by identifying evidence-based kernels that can be adopted and sustained within community settings accessible to urban teens. Furthermore, existing prevention and intervention efforts can be augmented with kernels to increase program quality or enhance poly-strengths training. Ultimately, teens who have been exposed to violence may benefit most from a combination of evidence-based kernels to equip themselves with rich skill sets that together enhance mental wellness and build psychological resilience. Manualized interventions may require substantial time and financial investments, and extensive training and support for effective implementation, creating burden for

community staff already endorsing high rates of stress and burnout. On the other hand, evidence-based kernels can be disseminated more easily to a greater variety of settings, including under-resourced settings with transient staff, to improve intervention reach.

### **Meditation and Sleep Health Kernels May Benefit Youth Exposed to Violence**

Meditation is gaining popularity and scientific support as a mental health promotion tool for teens to reduce stress and manage emotional difficulties. Potential for high reach reflects the diverse array of evidence-based techniques which qualify under the umbrella term of meditation, such as mindfulness meditation (Black, Milan, & Sussman, 2009; Zoogman, Goldberg, & Hoyt, 2014), compassion-based meditation (Bach & Guse, 2015), relaxation (Manzoni, Pagnini, Castelnuovo, & Molinari, 2008), progressive muscle relaxation (Embry & Biglan, 2008), guided imagery (Flynn, Jones, & Ausderau, 2016), and belly breathing (Paul, Elam, & Verhulst, 2007; Stuts & Schreiber, 2017). Three meta-analyses of mindfulness interventions for youth found moderate effect sizes for reductions in anxiety and depression (Klingbeil et al., 2017; Zoogman, Goldberg & Hoyt, 2014), moderate effects for improving stress resilience within school settings (Zenner, Herrleben-Kurz, & Walach, 2014), and small effects for emotion and behavior regulation (Klingbeil et al., 2017). Although less research is available for compassion-based interventions, the strong association between self-compassion and symptoms of anxiety, depression, and general stress among teens suggest that compassion may be an important intervention target (Bluth, Campo, Futch, & Gaylord, 2016; Marsh, Chan, & MacBeth, 2017). One 8-week meditation intervention that combined self-compassion and mindfulness techniques found a reduction in self-reported perceived stress and increased resilience within a predominantly white sample of teens in the southeastern United States



(Bluth & Eisenlohr-Moul, 2017). A recent systematic review of meditation interventions found that only 12.5% of studies offered culturally adapted interventions and very few studies involved diverse samples (DeLuca, Kelman, & Waelde, 2018). Further research is needed to distill meditation interventions into their evidence-based kernels that are acceptable to diverse teens and feasible to implement in community settings accessible to youth at-risk for violence exposure.

Teens are particularly vulnerable to the onset of sleep health problems due to factors such as increased caffeine consumption, excessive electronics usage, natural hormonal changes, academic demands, social priorities, and natural shifts in circadian rhythm functioning (i.e., sleep phase delay; Patel, 2017; McMakin & Alfano, 2015). While difficulty initiating and maintaining sleep are common symptoms of internalizing disorders, there is now evidence that sleep problems precede the development of depression and anxiety for teenagers (Leahy & Gradisar, 2012; Lovato & Gradisar, 2014). Prominent researchers suggest that sleep health interventions are especially important for youth at-risk for internalizing problems (Blake et al., 2017; Paavonen, Huurre, Tilli, Kiviruuu, & Partonen, 2016). While sleep psychoeducation programs appear to meet the need for promoting community awareness of sleep health information, few sleep health education programs include motivational or planned strategy components to effectively facilitate behavior change (Blunden, Chapman, & Rigney, 2012). Motivational interviewing is a recognized evidence-based kernel that has been shown to increase sleep health knowledge in school-based psychoeducation efforts (Cain, Gradisar, & Moseley, 2011; Embry & Biglan, 2008). However, the behavior change literature suggests both motivation and planned behavior activities are necessary to

actualize behavior change (Blunden, Chapman, & Rigney, 2012). Further research is needed to develop evidence-based kernels that pair widely-used sleep health psychoeducation efforts with brief motivational and sleep planning activities to increase intervention impact for teens at-risk for violence exposure.

### **After-school Settings are Fertile Ground to Plant Kernels**

Community after-school programs hold unique value in their potential for high reach and high impact via dissemination of poly-strengths training to diverse teens in urban communities characterized by poverty and violence (Frazier, Dinizulu, Rusch, Boustani, Mehta, & Reitz, 2015; Boustani et al., 2015). Implementation research is needed to examine the transportability of evidence-based kernels in smaller, existing youth-service programs. Such initiatives could greatly benefit urban youth at-risk for violence exposure by helping them develop poly-strengths skill sets to increase their resilience within accessible community settings. For example, the Good Behavior Game is a group-wide, contingency-based behavior management kernel that has been implemented successfully to improve the quality of after-school programs for urban youth (Frazier, Cappella, & Atkins, 2007; Smith, Osgood, Oh, & Caldwell, 2018). Other studies infused Peer Assisted Social Learning (PASL), a set of brief, structured recreational activities that provide opportunities for peer-guided problem solving, within urban after-school programs to assist youth in building social skills and improving their behavior (Frazier, Chacko, Van Gessel, O'Boyle, & Pelham, 2012; Helseth & Frazier, 2018). Further implementation and effectiveness research is needed to facilitate the identification of evidence-based kernels that are flexible and effective enough to be disseminated to diverse, at-risk populations.

## Present Study

The present study examined feasibility of and teen enthusiasm for meditation and sleep health kernels implemented within the Park Internship Program (PIP) for urban teens at high-risk for violence exposure. PIP is a collaborative partnership of Miami-Dade Parks Recreation and Open Spaces (MDPROS) Department, MDC Juvenile Services Department, MDC Public Schools, the University of Miami, and Florida International University. PIP provides paid internship work and 2 hours of weekly after-school enrichment designed to promote educational achievement, job skills, and life skills (e.g., communication, problem-solving, and emotion regulation). Self-reported pre to post changes in teens' anxiety and depression, cognitive reappraisal, emotion suppression, and self-efficacy to manage peer conflicts without violence were previously reported (citation masked for review). The poly-strengths approach to enrichment, though, precludes the empirical examination of individual program components, their impact on specific psychological and behavioral outcomes, or the unique or incremental benefit of mental health kernels to other enrichment activities or paid intern rotations. Thus, the purpose of this study was to examine quality of implementation adherence and teen receptivity to brief meditation and sleep health kernels infused during regularly scheduled weekly enrichment. We believe the rich literature supporting the value of meditation and sleep health activities – *in particular for youth at high-risk for exposure to violence and internalizing problems* – warrants close study of their infusion into urban community programs. We examine three sources of data: (1) recorded meditations delivered by program staff; (2) anonymous feedback surveys submitted by teens following meditations; and (3) weekly sleep health journal entries coded for content and quality.

We made three predictions: (1) program staff would adhere closely to meditation scripts (content, tone, and duration); (2) teens would report high enthusiasm regarding the acceptability, utility, and generalizability of meditations; and (3) teens would complete the sleep health journaling activities and adhere closely to their sleep plans.

### **Method**

This study was conducted in accordance with APA ethical guidelines and with approval from the community (i.e., Sterling IRB) and university IRB for recruitment, informed parent permission and teen assent, and data collections procedures. Details of program and methods are abbreviated for the present study and readers are directed to (citation masked for review) for more information.

### **Community-Academic Partnership**

The present study reflects a long-standing and ongoing collaboration between the university and Miami-Dade Parks Recreation and Open Spaces (MDPROS) Department focused on after-school youth program development, implementation, and examination. In 2015, the Miami-Dade County Mayor allocated \$3 million of annual violence prevention funds for MDPROS to design and deliver youth violence prevention programs targeting neighborhoods where youth are at highest risk for experiencing or engaging in violence. A larger collaborative assembled that includes MDPROS, Miami-Dade Department of Juvenile Services, Miami-Dade County Public Schools, and two local universities. Designates from these organizations met weekly for several months, and then bi-weekly to create Fit2Lead (F2L), comprising two programs: (1) Youth Enrichment and Sports (YES): a free daily after-school program (transportation provided) with academic support and life skills infused sports and recreation for youth ages 12-14;

and (2) Parks Internship Program (PIP): an internship program with paid work experience (10 hrs./week at \$9.05/hr.) and 2-hour weekly job and life skills training for teens ages 15-17. Teens attended one of four group enrichment sessions offered per week (approx. 18 youth per session). University collaborators focused on infusing socio-emotional content into recreation and enrichment. The overarching goals of the collaboration are to develop, iteratively refine, and study the impact of programming on proximal academic and health outcomes and distal graduation, employment and earnings trajectories. The present study represents shared decision making by university and community partners, regarding program development and evaluation, and examines the PIP program exclusively.

### **Community Setting**

MDPROS is the third largest county park system in the U.S., and strives to create a healthy, livable community by providing year-round recreation programs for youth. Thirty-seven park locations offer after-school and summer programs for 4,500 – 5,000 youth annually. Two parks offered PIP in communities selected for high rates of violent crime and economic disadvantage (Bunting et al., 2018). Both have indoor and outdoor facilities for youth programs, including meeting rooms, gymnasiums, outdoor pools, and athletic fields.

**Park #1.** The first park site is located in northern Miami in a historically important black community which was developed during the 1920s by black Americans and was authorized for construction during the 1930s by President Roosevelt. During the 1940s and 1950s this city thrived as a safe community space for black residents who were prohibited from visiting Miami neighborhoods due to discriminatory segregation laws.

Beginning in the 1960s, gentrification surrounding areas of Miami created an influx of people with less economic resources into this city, which contributed over time to increasing rates of poverty, job scarcity, and violent crime. The city made news several times within the present study's program year for children killed in drive-by shootings, including a high school honors student known to the PIP interns. Geo-demographic data indicates this area has one of the highest concentrations of gunshot wound injuries in Miami-Dade County (Zebib, Stoler, & Zakrison, 2017).

**Park #2.** The second park site is located in a densely populated town in southern Miami that is especially prone to flooding. In 1992 the city suffered severe damage following Hurricane Andrew, which engendered widespread property abandonment, vacancy, and neighborhood decline (Zhang, 2012). While many families with higher incomes relocated to other cities, families with more limited financial resources had less choice in whether to relocate or remain in the area despite damages. This community is also known for its relatively high rates of violent crimes and gang violence. Due to threats of local gang violence, including direct threats towards a PIP intern, after-school enrichment activities often took place indoors at this location. **Participants**

Initially, 72 teens enrolled in PIP and completed data collection at the beginning of the program year (15-17 years old [ $M = 16.4$ ,  $SD = .77$ ]; 53.8% female; 94.9% Black, 5.1% Latinx). Referrals to the program came from three sources: (1) MDC Juvenile Services Department case managers referred through their pre-trial diversion program; (2) MDC Public School counselors recommended participation based on poor school attendance and behavior problems; and (3) park managers invited youth from local communities (number referrals by each source was not tracked systematically). Baseline

data revealed that 84.21% of teens reported having experienced one or more adverse childhood experiences (i.e., violent and nonviolent adversity), and 47.37% reported at least one form of violence exposure (citation masked for review). Thus, PIP did recruit their target population of teens at high-risk for violence exposure. Also, 31.58% of teens reported elevated anxiety (3 or higher on the Screen for Child Anxiety and Related Emotional Disorders [SCARED];  $M = 1.95$ ;  $SD = 2.04$ ), and 10.53% reported elevated depression (12 or higher on the Short Mood and Feelings Questionnaire [SMFQ];  $M = 3.68$ ;  $SD = 4.79$ ). Hence, the decision to infuse kernels empirically linked to improved emotion regulation was strategic for the needs of this sample.

Considerable attrition from PIP reduced the sample to 46 teens that participated in all scheduled enrichment activities. Teens reported leaving the program for several reasons including finding employment with more hours or higher pay, and competing priorities (e.g., school sports and extracurricular activities). Teens who left the program (provided baseline data only) did not differ from teens who completed the program year (provided baseline and end-of-year data) with regard to violence exposure, adverse childhood experiences, anxiety, depression, cognitive reappraisal, or self-efficacy for managing teen conflict (Cromer et al., 2019). Teens who left the program before the end of the program year did report lower rates of emotion suppression,  $t(68) = -.47$ ,  $p = .05$ , with a moderate Cohen's  $d$  effect size ( $d = -.47$ ), suggesting that youth who remained in the program may stand to benefit even more from meditation and sleep health kernels. However, meditation feedback and sleep health journals were collected as part of regular programming and analyzed herein as permanent by-product; hence data were anonymous and not linked to participant identification numbers in any way that would permit

systematic examination of which youth were most engaged in or impacted by specific enrichment activities.

Caregivers ( $n = 21$ ; 95.2% female; 95.2% non-Latinx black, 4.8% Latinx white, 42.86% single-parent households) provided demographic information at the beginning of the program year, including several proxies for economic disadvantage. While 85% of caregivers reported they were employed at least part-time, 40% of annual household incomes fell below \$20,000. Regarding education, 4.76% of caregivers did not complete high school, 52.38% earned a high school diploma, 23.81% earned a degree or certificate below bachelor's level, 14.29% earned a bachelor's degree, and 4.76% earned a degree or certificate higher than bachelor's level.

### **Mental Health Kernels**

Informal focus groups with teens and staff in spring 2017 (pilot program implementation) revealed interest in anger management and relaxation. Academic-community partners agreed to place priority on providing evidence-based kernels – meditation and sleep health journals – to promote emotion awareness, expression and regulation, reflecting skills underlying risk and resilience pathways and common to prevention programming (Boustani et al., 2015). Meditation began with the Transformative Life Skills (TLS) curriculum (Bose, Ancin, Frank, & Malik, 2017), a combination of yoga and mindfulness meditation, and a good fit for its low-cost, flexibility for use in group settings, and empirical support for use with diverse youth (Frank, Bose, & Schrobenhauser-Clonan, 2014). We adapted the original TLS curriculum to create 36, 15-minute sessions with brief psychoeducation, meditation with yoga, and closing group reflections. After two weeks (8 group sessions; 2 sessions per teen), low



enthusiasm from teens (e.g., discomfort trying yoga poses in front of peers, boredom with pure mindfulness) and staff (e.g., lack of teen engagement) led to replacing TLS with five-minute guided imagery scripts, selected by the program director, and delivered over three weeks (12 group sessions; 3 sessions per teen). Increased enthusiasm by teens and staff led to development of 10 more five-minute guided imagery scripts (available upon request) derived in part from evidence-based materials implemented in urban after-school programs for youth at-risk for violence exposure (see figure 1; Frazier et al., 2015).

Scripts were strategically infused with mindfulness, compassion, progressive relaxation, or relaxation breathing techniques. Several of the scripts encourage youth to imagine a safe, relaxing place where they can rest and focus on using diaphragm breathing to calm their emotions. Others encourage youth to envision their success in academic or professional settings, with the intention of building self-confidence and motivation to set and reach their personal goals. Scripts were implemented by PIP staff during the last seven weeks of programming (21 group sessions; 5-6 sessions per teen).

Sleep health journaling emerged out of interest by the program supervisor for teens to practice writing and mental wellness together. The initial sleep health journals consisted of seven 10-minute psychoeducation activities, facilitated by a teen volunteer, and adapted from National Sleep Health Foundation recommendations for teens (see Figures 2 and 3; National Sleep Health Foundation, 2017). For example, first a teen volunteer read aloud a 2-minute script with sleep health tips for teens. Next the teens worked independently for 8 minutes to respond to written sleep planning prompts. Instructions specified that there are no right or wrong answers — just write what is true for you — and then they answered questions designed to promote goal-setting and

problem-solving (e.g., *My sleep goals for this week are:*, *What can you do to remember your sleep goals?*). The last two journal activities consisted of time for youth to review sleep health tips, reflect upon their sleep health plans, and revise or replace goals for ongoing use. The staff implemented only the 6<sup>th</sup> journal activity and did not repeat this reflection and revision activity. The omission was strategic to reduce overall intervention time, consistent with evidence-based kernel theory. Any abbreviation to planned activities that does not remove an essential component of the intervention in theory strengthens the utility of the evidence-based kernel (Embry & Biglan, 2008).

### **Staff Credentials, Training, and Supervision**

Four PIP staff members (50% female; 50% Latinx white, 25% non-Latinx black, 25% Native American and white) facilitated enrichment. Of these, three had completed B.A. degrees (social work, recreation and sports management, and psychology), one was pursuing a B.A. in early childhood education, and two were pursuing advanced training in social work and counseling. The PIP coordinator was a non-Latinx white woman with an MSW. PIP staff met bi-weekly to review and practice activities. Three one-hour trainings by the first-author included engaging teens, trauma-informed care, meditation delivery, sleep health benefits, and suicide risk assessment.

### **Measures**

Measures included permanent data by-products from the kernel interventions were implemented to reduce cost to the partnering agency and maximize feasibility and sustainability.

**Adherence.** Staff recorded their readings of all meditation scripts on handheld recording devices. Each recording was transcribed and analyzed for content, tone, and duration.

**Teen Enthusiasm.** Youth completed brief surveys immediately following each weekly meditation to elicit feedback on intervention acceptability, utility, and generalizability. Five items were designed for this study (4-point Likert scales; i.e., NO = 0, no = 1, yes = 2, YES = 3) to assess: (1) Acceptability (i.e., *I enjoyed this activity; I would like to do this activity again*); (2) Utility (i.e., *I see a benefit or value in doing this activity, This activity was relaxing*); and (3) Generalizability (i.e., *This activity would be easy to use by myself*). Internal consistency for items ranged from moderate to strong (i.e., meditation 1:  $\alpha = .68$ ; meditation 2:  $\alpha = .88$ ; meditation 3:  $\alpha = .88$ ; meditation 4:  $\alpha = .87$ ; meditation 5:  $\alpha = .88$ ; meditation 6:  $\alpha = .83$ ; meditation 7:  $\alpha = .93$ ; meditation 8:  $\alpha = .97$ ; meditation 9:  $\alpha = .92$ ; meditation 10:  $\alpha = .92$ ). Teens then responded to a single open-ended question: *What do you think of this activity? (write whatever comes to mind)*.

The sleep health journals primarily contained motivational interviewing questions meant to encourage critical thinking with regard to behavior change. Youth provided feedback on a single question (yes, no, neutral) in the last sleep health journal (a self-administered check on the sleep planning): *Has your sleep plan been helpful?* followed by an open-ended *Why or why not?* Youth responded directly in their journals. Lastly, youth were offered the option to continue or modify their sleep plans. A dichotomous variable (yes/no) was created to indicate whether or not youth continued their sleep planning efforts.

## **Data Analytic Plan**

Staff adherence data are described for recorded meditations (i.e., content, tone, and duration). Youth enthusiasm data are summarized from feedback on 10 meditations (i.e., acceptability, utility, generalizability) and sleep health journals (i.e., utility).

Thematic analyses were used to classify and organize open-ended feedback based on key themes using an inductive analysis to capture and represent the full variety of youth responses (Braun & Clarke, 2006). For meditations, two researchers double-coded all responses separately. For the meditation feedback, the two raters initially reached 90.74% inter-rater reliability, and, after meeting again to resolve discrepancies, raters achieved 100% inter-rater reliability. For the sleep health feedback, the two raters achieved 100% inter-rater reliability in consensus among qualitative statement categories after the initial separate coding sessions.

## **Results**

### **Adherence**

All four of the PIP staff members and the PIP coordinator attended each of the three planned one-hour training sessions on topics of engaging teens, trauma-informed care, meditation delivery, sleep health benefits, and suicide risk assessment, as well as their bi-weekly supervision with the PIP coordinator. Audio transcriptions revealed that meditation scripts were delivered with close adherence to content (occasional deviations included transposition of words, contractions, repetitions), tone, and duration (Range = 3 minutes 48 seconds to 6 minutes 24 seconds;  $M = 4$  minutes 48.44 seconds;  $SD = 37.26$  seconds).

## Teen Enthusiasm

**Meditation kernels.** Of the 46 teen interns who completed the PIP program, an average of 37.8 (82.17%) youth completed weekly feedback following meditation (i.e., Med1 = 37 teens; Med2 = 38 teens; Med3 = 34 teens; Med4 = 37 teens; Med5 = 37 teens; Med6 = 43 teens; Med7 = 37 teens; Med8 = 33 teens; Med9 = 36 teens; and Med10 = 46 teens). Feedback data indicated high acceptability, perceived utility, and generalizability for all 10 brief meditations (see Table 1). Overall the ratings were very consistent and positive on all categories of youth enthusiasm.

Feedback to the open-ended question, “*What do you think of this activity? (write whatever comes to mind)*” revealed seven primary themes (n = 442 responses across 46 youth and 10 meditations), labeled and ordered by frequency of appearance. The most popular theme (n = 195 mentions, 44.12% of total mentions) was labeled, ***Relaxation***. Responses in this category were fairly straightforward and easily grouped. For example, one teen wrote, “It’s very relaxing and helps me calm down.” Another teen stated, “This activity is a very good relaxing activity.” The second most frequent theme (104 mentions, 23.53% of total mentions) was, ***Enthusiasm***. Responses in this category were often vague or contained mentions of value that did not fit well within other themes. For instance, one teen indicated enthusiasm by writing, “It is very helpful!” Another wrote, “It was cool,” and drew a thumbs up picture. One teen wrote, “It’s good for gaining swag.” While all of these teens used different wording, the positive connotation indicating benefit or value tied the responses together.

The third most frequent theme (41 mentions, 9.28% of total mentions) was, ***Emotion Regulation***. This theme contains many mentions of becoming or staying calm,

and some statements indicating meditation helps youth deal with anger. For example, one student wrote, “This activity is very useful for getting calm.” Another wrote, “I think this activity can help you release stress and anger.” The fourth most frequent theme (29 mentions, 6.56% of total mentions) was *Enjoyment*. For instance, one teen wrote, “I like to do this.” Another intern wrote, “I love it and I feel like we should always do it.” The fifth most popular theme (28 mentions, 6.33% of total mentions) involved *Negative Feedback*. Some students in this category indicated they did not enjoy the meditations. For example, one teen stated, “Makes me restless.” Another teen wrote, “I’m not feeling well right now, so it was bad for me.” However, several teens complained that the meditations were too brief. One teen wrote, “I need more time during activity.” Another wrote, “It was too quick.”

The sixth most frequent theme (26 mentions, 5.88% of total mentions) was *Cognitive Improvements*. These responses were linked by references to managing cognition. For example, one teen wrote, “It helps me keep my mind off the negative things.” Another wrote, “It was a great activity to gain a positive mindset.” Finally, the seventh and final theme (19 mentions, 4.30% of total mentions) was *Sleep*. This category was fairly straightforward in that all of the responses were very similar. One teen wrote, “I think it will help me sleep.” Another wrote, “It makes me sleepy.” Altogether, feedback reflected very high enthusiasm and supported the Likert scale evidence of acceptability, utility, and generalizability for brief meditation.

**Sleep health kernels.** All entries were carefully reviewed and found to contain on-topic responses, indicating the teens were participating with adequate engagement to process the psychoeducation material, motivational interviewing, goal setting, and sleep

planning components. Of note, some youth arrived to enrichment sessions late and were unable to participate in a journaling activity. Of the 46 teen interns who completed the PIP program, 37 teens (80.43%) completed sleep health journals, and of these, 16 (43.24%) teens indicated that the sleep plans were helpful, 17 (45.95%) teens indicated that the sleep plans were not helpful, and 4 (10.81%) teens did not indicate whether or not they found the plans helpful.

Perceptions of utility were also derived from written responses to the follow-up question, *Why or why not?* A thematic analysis of the data revealed six themes. The most prevalent theme with 13 responses (35.14%) was, *Improved Sleep Quality*. This theme contains feedback that reveals a variety of ways that teens reported sleep planning improved the quality of their lives. For example, one teen wrote, “It has been helpful because I now fall asleep very easily.” Another teen responded, “My sleep plan is very helpful, because I can now sleep better and faster.” Yet another teen stated, “Yes, because I’ve been going to sleep early.”

The second most frequent theme comprised of 10 responses was *Irregular Sleep Routines*. This theme is comprised of responses that indicate the teens are having trouble with sleep health due to erratic or poor sleep habits. One such teen responded, “I barely get any sleep, but I run well off a few hours of sleep. That’s why it hasn’t been helpful.” Another stated, “My sleep schedule is always messed up. One night I’ll go to sleep at 12 or 1, then the next night I’ll go to sleep early. So my sleeping is horrible.” Six responses (16.22%) comprise the third most popular theme, *Competing Priorities*. The teens reported that activities such as work, school, electronics, and socializing with friends interfere with sleep routines. For example, one teen responded, “I still can’t sleep. The

phone and game system always keep me up.” Another teen stated, “I have so much to do with school, so I am coming home late.” Another wrote, “I work and be tired as hell.” The fourth theme was present in 4 (10.81%) of the responses, *Did Not Use Sleep Plan*. This category was fairly straightforward. For instance, one teen wrote, “Honestly, I’ve never used the sleep plan.” The fifth theme, *Tired During Daytime*, was also reported by two teens (5.41%). One teen reported, “I get very sleepy in class.” The sixth and final theme, *Improved Daytime Functioning*, was also reported by two teens (5.41%). One teen wrote, “Yes, because I feel well rested during the day.” Overall, the findings indicate that while some teens found the sleep journaling activity helpful, others encountered barriers to implementing their sleep plans on a regular basis.

### **Discussion**

Reflecting a poly-strengths framework, we explored the implementation of evidence-based meditation and sleep health kernels as low-cost, brief interventions within a community Park Internship Program (PIP) accessible to teens at high-risk for violence exposure. Feedback from community partners was overwhelmingly positive with regard to feasibility of delivery during routine enrichment with minimal training required. Indeed, adherence findings suggest that front-line internship staff implemented all activities as intended, and data from teens suggested high acceptability, utility, and generalizability. Both interventions are now contained within the PIP poly-strengths enrichment manual, pointing to opportunities for sustainability without further implementation support from university partners. Overall results suggest that meditation and sleep health kernels are effective options for bringing evidence-based mental health promotion to community after-school settings.



## **Expanding the Reach of Evidence-Based Kernels for Urban Teens**

Evidence-based kernels are by definition simple to administer, tested for immediate results, and low-cost (Embry & Biglan, 2008). Kernels are perhaps the most concise approach to providing support for meaningful growth in mental well-being to populations that reside in under-resourced urban settings. Particularly for urban teens, low-cost interventions such as the meditation and sleep health kernels implemented in the present study serve as effective, easily transportable means of increasing resilience to mitigate the deleterious effects of violence exposure. Further research is needed to increase the repository of evidence-based kernels available to teens. Our community-academic research collaborative agreed to make the complete content of our ten brief meditation scripts and seven sleep health journaling activities available to interested readers upon request (masked for review).

Bringing evidence-based kernels to teens in accessible settings reflects goals inherent to youth mental health services research (Frazier, Cappella, & Atkins, 2007; Frazier, Formoso, Birman, & Atkins, 2008). Specifically, supporting community youth-care providers to infuse evidence-based kernels within natural routines increases the reach of mental health promotion to urban teens with greater feasibility than disruptive, resource-intensive interventions (Frazier et al., 2019). For example, we chose to infuse these evidence-based kernels within a setting where teens were already monetarily incentivized to attend enrichment sessions, because it was part of their paid internship experience. The internship is designed as an after-school enrichment program, which we were able to strengthen by infusing evidence-based poly-strengths skill building activities to increase youth resilience. We formatted these evidence-based kernels for delivery in

group settings to maximize teen participation and minimize staff burden. Frequent communication enabled the research team to receive feedback, modify accordingly (e.g., eliminate yoga movement which teens indicated made them feel uncomfortable and vulnerable in front of peers), respond to preferences, and thereby increase acceptability and perceived utility of intervention content.

### **Community-Partnered Research Maximizes Implementation Success**

Community-academic research partnerships can reduce power imbalances and communication barriers inherent to traditional clinical research by actively involving local stakeholders in each stage of the research process (Wallerstein & Duran, 2010). Maintaining open communication with our park and program partners helped to ensure that mindfulness and sleep health activities were implemented with adherence and success. Lastly, the research team approached this partnership to support and respect the community partner's vision, while maintaining careful regard for advancing science. The well-being of the teen participants is always our top priority, with a strong concurrent focus on strategic by-product data collection to maximize learning and minimize burden, and to disseminate findings to a broad audience of researchers, youth-care providers, and families.

### **Meditation and Sleep Health Kernels Benefit Urban Teens**

Consistent with previous literature (Blake, Sheeber, Youssef, Raniti, & Allen, 2018; Hesse, Holmes, Kennedy-Overfelt, Kerr & Giles, 2015; Chadi et al., 2018; Fung et al., 2019), teens reported that both meditation and sleep health interventions improved their coping by helping them to regulate difficult emotional experiences. Our efforts to modify the interventions to match the identified needs and values of our teen sample

reflect cultural adaptations common to few studies in the literature (i.e., 12.5%; DeLuca, Kelman, & Waelde, 2018). However, while teens indicated that meditations would be easy to use, they expressed difficulty enacting their sleep plans due to competing priorities such as electronics, academic demands, social priorities, and difficulty regulating their sleep cycles, which is consistent with the current sleep health literature (Patel, 2017; McMakin & Alfano, 2015). Though we added motivational interviewing and planning components to psychoeducation, sleep health journaling activities may further require opportunities for problem-solving early in sleep plan development (Blunden, Chapman, & Rigney, 2012; Cain, Gradisar, & Moseley, 2011; Embry & Biglan, 2008). Altogether these findings indicate that evidence-based meditation and sleep health kernels are acceptable to diverse teens and are feasible to implement in community settings accessible to teens at-risk for violence exposure.

### **Limitations**

In the interest of promoting long-term intervention sustainability, the research team utilized only the resources regularly available to the partnering agency for intervention delivery and by-product data collection. Unfortunately, there was no funding available to conduct exit interviews with youth who left PIP prior to the end of the program year. While staff reported that some teens mentioned leaving the program to focus on school, extracurricular activities, and sports, the reasons for attrition were not systematically documented. Also, attendance data were not available; thus, we were unable to link meditation feedback and sleep health journals to individual interns.

## **Conclusions**

Poly-strengths skill-building increases resilience to mitigate the risks to negative psychological adjustment for teens who experience violence exposure. We designed and implemented brief meditation and sleep health interventions in the form of evidence-based kernels to infuse within an existing community program for teens at high-risk for violence exposure. Whereas delivering traditional manualized programs often requires extensive staff training and financial resources, evidence-based kernels are simple to deliver, low-cost, and high-reach. Infusing evidence-based kernels within existing community youth-service agencies increases the quality of programming provided to urban teens at high-risk for violence exposure. Further research is needed to identify additional evidence-based kernels for teens to target skill-building across multiple domains in accordance with the poly-strengths framework.

Table 1. *Teen ratings of acceptability, utility, and generalizability for 10 brief meditation scripts.*

Script	1	2	3	4	5	6	7	8	9	10
<hr/>										
I enjoyed this activity. (acceptability)										
M[SD]	2.46[.65]	2.32[.66]	2.59[.56]	2.57[.50]	2.46[.61]	2.42[.59]	2.54[.56]	2.55[.67]	2.56[.50]	2.61[.49]
I would like to do this activity again. (acceptability)										
M[SD]	2.27[.84]	2.26[.64]	2.44[.66]	2.59[.50]	2.54[.61]	2.40[.58]	2.49[.61]	2.52[.71]	2.56[.56]	2.60[.58]
I see a benefit or value in doing this activity. (utility)										
M[SD]	2.16[.73]	2.35[.63]	2.50[.66]	2.43[.69]	2.46[.65]	2.28[.63]	2.41[.72]	2.48[.71]	2.50[.56]	2.57[.50]
This activity was relaxing. (utility)										
M[SD]	2.68[.53]	2.42[.60]	2.62[.55]	2.35[.72]	2.22[.85]	2.21[.80]	2.32[.75]	2.42[.83]	2.31[.82]	2.67[.47]
This activity would be easy to use by myself. (generalizability)										
M[SD]	1.86[.98]	2.22[.67]	2.21[.77]	2.57[.55]	2.62[.55]	2.44[.63]	2.62[.59]	2.55[.67]	2.56[.50]	2.48[.66]
<hr/>										

Figure 1. *Meditation kernel (adapted from Frazier et al., 2015).*

### **Floating on a Cloud**

Find a comfortable seated position. If you would like, rest your head on your hands. Allow your eyes to close, or look towards the ground. Take a couple of slow, gentle breaths as you begin to relax.

(pause for 1 slow breath)

As you inhale, gently let your lungs fill all the way up. Then slowly release all of the air from your lungs. Try to let your exhales last longer than your inhales.

(pause for 1 slow breath)

Now imagine you are floating on a soft, fluffy cloud. Feel the surface beneath you becoming softer... more like a cloud. Feel the cloud rising out of the surface you are on... surrounding you in its protective support. Soon you are floating on just the cloud.

(pause for 1 slow breath)

As you relax on the cloud, we'll try a breathing technique to help you relax more. It's called the 4 to 8 breath. We will inhale for 4 seconds, and exhale for 8 seconds. With each exhale, you can let go of any tension or discomfort in your body. Go ahead and release all of the air from your lungs. Inhale for 1, 2, 3, 4. Exhale for 1, 2, 3, 4, 5, 6, 7, 8. Inhale for 1, 2, 3, 4. Exhale for 1, 2, 3, 4, 5, 6, 7, 8. Continue this slow, relaxing breath... Relaxing into your cloud more with each exhale.

(pause for 1 slow breath)

Imagine the cloud beneath you rises slightly higher. As you relax, your body feels heavier. The cloud is like a soft blanket holding you... protecting you. Visualize the wall and ceiling around you disappear. See the sky above you and around you. Perhaps it's a beautiful, sunny day. Or maybe a peaceful, starry night. See the sky expand around you, and create a place in your mind where you feel calm... safe... content.

(pause for 1 slow breath)

Continue floating on your cloud... relaxing. Imagine wherever it is you would like to go. Your cloud can take you there. Maybe you want to float above the mountains, drifting above their rocky peaks. Or perhaps you would like to drift along the coast of the ocean, watching waves roll onto the shore. You can travel anywhere you wish. Enjoy the peaceful journey you have created in your mind.

(pause for 2 slow breaths)

Whenever you need to relax, you can take a few breaths and come back to this peaceful cloud. It will be here for you when you want it. Now we will come back to the present moment, but keep the relaxation we feel now. When you are ready, open your eyes.

Figure 2. *Sleep health kernel (adapted from National Sleep Health Foundation, 2017).*

## **Journal 6: 1st Sleep Plan Check-In**

### **Psychoeducation: What You Need to Know (2 minutes)**

Before we discussed the importance of sleep and how to create sleep plans to improve our sleep habits. We completed a 4-step process to develop individual sleep plans for each of us. Step 1 was to Observe our sleep habits. Step 2 was to Set Goals. Step 3 was to Revise Goals, and Step 4 was to Make a Sleep Plan.

Today we're going to use this journaling time to check in and see how our sleep plans are working out. You can use this time to think about the goals in your sleep plan, and revise or replace them if you would like. Remember sometimes you may have a goal that you really want to use, but something is getting in the way of you reaching that goal. For example, I have a sleep goal of relaxing with a few minutes of mindful breathing before I go to sleep. The biggest barrier to this is I just forget to do it. I want to keep mindful breathing as a goal in my sleep plan, so I'm going to put a timer in my phone to remind me when it's time for me to do the relaxation.

On the other hand, there are some problems that don't have an easy solution. Like I want to buy a more comfortable bed, but I don't have extra money for that right now. In this case I'm putting that goal on hold and replacing it with a goal that I can really make happen.

You may remember a lot of tips for healthy sleep routines that we learned at the beginning of the year. I'm going to give you the full list again just in case there are some goals you don't remember. Also, in your journals you will find your sleep plans that you made at the beginning of the year. Today you will use your journaling activity to think about how helpful your first sleep plan has been, and change or replace any goals that aren't working for you.

### **Journal Activity (8 minutes)**

*Answer the following questions in your own words honestly. There are no right or wrong answers. Just write what is true for you.*

- 1) Has your sleep plan been helpful? Why or why not?
- 2) What are the sleep goals you want to include in your new, updated sleep plan? List at least 3 goals, or more if you would like.

Figure 3. *Sleep health handout (adapted from National Sleep Health Foundation, 2017).*

- 1) Get about 9 hours of sleep each night.
- 2) Limit naps to 30 or 45 minutes at most, and only before 4pm.
- 3) Avoid exciting or highly stimulating activities before sleep. This includes violent or exciting TV, movies, video games, and heavy studying, etc.
- 4) Avoid alcohol & drugs.
- 5) Avoid caffeine after 2-4pm. This includes coffee, tea, soda, chocolate, etc.
- 6) Practice mindfulness relaxation such as progressive relaxation before bed.
- 7) Avoid electronics right before bed. Keep your cell phone, laptop, and other electronics out of reach of your bed at night.
- 8) If you do use electronics in bed, use your settings to dim the lights on your phone, TV, or computer. Some phones have a setting to reduce blue light.
- 9) Take a warm bath or shower a couple of hours before bed.
- 10) Eat your last large meal at least a couple of hours before it's time to sleep. Large meals and spicy foods too close to bedtime makes your digestive system work too hard while you're trying to sleep.
- 11) Maintain a regular sleep routine. For example, go to bed at 9pm each night and wake up at 6am every day.
- 12) On the weekends, wake up within at least 2 hours of when you would normally wake up on weekdays (to keep a steady sleep-wake balance).
- 13) Turn down the lights and close your blinds or curtains in the evenings.
- 14) Exercise during the morning or the early afternoon.
- 15) Keep your room temperature low at night.
- 16) Turn off all lights before going to bed.
- 17) Wear socks if your feet get too cold to improve circulation while you sleep.
- 18) Allow yourself to stop e-mails and texting at least an hour before bed.
- 19) If you wake up during the night, don't use any electronics.
- 20) If you find yourself checking the time at night, hide any clocks before bed.
- 21) Turn off the TV or any extra noise that may disrupt your sleep. If you need background noise, use a fan, white noise, or relaxing instrumental music without lyrics instead.
- 22) *If you have trouble falling asleep at night:* 1) get up when you think it has been about 20 minutes. Don't watch the clock though; 2) Go somewhere quiet, peaceful and dimly lit and do something relaxing (e.g., look at a magazine, write about something inspiring or peaceful, listen to chill music); 3) Return to bed when sleepy; 4) Repeat steps 1-3 until you fall asleep.



#### IV. FIELD STATEMENT

Black and Latinx youth living in under-resourced, urban neighborhoods are among those most vulnerable to experience violence and develop psychopathology, and are less likely to seek or receive mental health services than their white peers. This dissertation reflects a larger movement in clinical science to partner with community youth-care providers to bring affordable, accessible mental health interventions to urban youth. Community after-school programs provide an ideal setting for the infusion of low-cost, brief mental health kernels that facilitate poly-strength skill building to promote youth resilience. The studies presented in chapters two and three provide evidence for integrating meditation and sleep health journaling activities into the pre-existing after-school routines of urban teens at high-risk for violence exposure, indicating high levels of feasibility, teen enthusiasm, reduced anxiety, and increased ability to resolve conflict with peers in a non-violent manner.

What are the next steps? Findings from these studies support the call for increased poly-strengths skill-building initiatives to promote youth resilience to violence exposure (Hamby et al., 2018). In order to effectively address the great unmet mental health need of these youth, clinical scientists must partner with community agencies and diverse youth to design and implement interventions that are low-cost, time-efficient, and can be delivered by youth care professionals at all levels of educational attainment. The interventions must be flexible enough to match the expressed values and goals of our community stakeholders. Most of our current evidence-based mental health services were designed for implementation in highly resourced university or private practice settings to be delivered by mental health professionals with advanced degrees to affluent

populations. In order to increase the reach and impact of mental health services to those in greatest need, we need equitable participation from community partners at all stages of the research process. Leveraging the knowledge, experiences, and natural resources of community stakeholders elevates clinical science to a new level of rigor and relevance for diverse youth at high-risk for violence exposure.

## References

- Angold, A., Costello, E. J., Messer, S. C., Pickles, A., Winder, F., & Silver, D. (1995). The development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research*, *5*, 237 - 249.
- Bach, J. M., & Guse, T. (2015). The effect of contemplation and meditation on ‘great compassion’ on the psychological well-being of adolescents. *The Journal of Positive Psychology*, *10*(4), 359-369. doi: 10.1080/17439760.2014.965268
- Birmaher, B., Brent, D. A., Chiappetta, L., Bridge, J., Monga, S., & Baugher, M. (1999). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED): A replication study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *38*(10), 1230-1236.
- Black, B. M., Chido, L. M., Preble, K. M., Weisz, A. N., Yoon, J. S., Delaney-Black, V., ... & Lewandowski, L. (2015). Violence exposure and teen dating violence among African American youth. *Journal of Interpersonal Violence*, *30*(12), 2174-2195. doi: 10.1177/0886260514552271
- Blake, M. J., Blake, L. M., Schwartz, O., Raniti, M., Waloszek, J. M., Murray, G., ... & Dudgeon, P. (2018). Who benefits from adolescent sleep interventions? Moderators of treatment efficacy in a randomized controlled trial of a cognitive-behavioral and mindfulness-based group sleep intervention for at-risk adolescents. *Journal of Child Psychology and Psychiatry*, *59*(6), 637-649. doi: 10.1111/jcpp.12842
- Blake, M. J., Sheeber, L. B., Youssef, G. J., Raniti, M. B., & Allen, N. B. (2017). Systematic review and meta-analysis of adolescent cognitive-behavioral sleep interventions. *Clinical Child and Family Psychology Review*, *20*(3), 227-249. doi: 10.1007/s10567-017-0234-5
- Blunden, S. L., Chapman, J., & Rigney, G. A. (2012). Are sleep education programs successful? The case for improved and consistent research efforts. *Sleep Medicine Reviews*, *16*(4), 355-370. doi: 10.1016/j.smrv.2011.08.002
- Bluth, K., Campo, R. A., Futch, W. S., & Gaylord, S. A. (2017). Age and gender differences in the associations of self-compassion and emotional well-being in a large adolescent sample. *Journal of Youth and Adolescence*, *46*(4), 840-853. doi: 10.1007/s10964-016-0567-2
- Boustani, M. M., Frazier, S. L., Becker, K. D., Bechor, M., Dinizulu, S. M., Hedemann, E. R., ... Pasalich, D. S. (2015). Common elements of adolescent prevention programs: Minimizing burden while maximizing reach. *Administration and*

*Policy in Mental Health and Mental Health Services Research*, 42(2), 209-219.  
doi: 10.1007/s10488-014-0541-9

- Bose, B., Ancin, D., Frank, J., & Malik, A. (2017). *Teaching transformative life skills to students: A comprehensive dynamic mindfulness curriculum*. New York, NY: W. W. Norton & Company, Inc. 44. ISBN-10: 0393711927
- Bosworth K., & Espelage D. *Teen Conflict Survey*. Bloomington, IN: Center for Adolescent Studies, Indiana University, 1995. (Unpublished)
- Bosworth, K., Espelage, D., DuBay, T., Daytner, G., & Karageorge, K. (2000). Preliminary evaluation of a multimedia violence prevention program for adolescents. *American Journal of Health Behavior*, 24(4), 268-280. doi: 10.5993/AJHB.24.4.3
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi: 10.1191/1478088706qp063oa
- Cain, N., Gradisar, M., & Moseley, L. (2011). A motivational school-based intervention for adolescent sleep problems. *Sleep Medicine*, 12(3), 246-251. doi: 10.1016/j.sleep.2010.06.008
- Center for Behavioral Health Statistics and Quality. (2015). *Behavioral health trends in the United States: Results from the 2014 National Survey on Drug Use and Health* (HHS Publication No. SMA 15-4927, NSDUH Series H-50). Retrieved from <http://www.samhsa.gov/data/>
- Chadi, N., Kaufman, M., Weisbaum, E., Malboeuf-Hurtubise, C., Kohut, S. A., Locke, J., & Vo, D. X. (2018). Comparison of an in-person vs. ehealth mindfulness meditation-based intervention for adolescents with chronic medical conditions: A mixed methods study. *Journal of Adolescent Health*, 62(2), S12. doi: 10.1016/j.jadohealth.2017.11.026
- Costello, E. J., He, J. P., Sampson, N. A., Kessler, R. C., & Merikangas, K. R. (2014). Services for adolescents with psychiatric disorders: 12-month data from the National Comorbidity Survey–Adolescent. *Psychiatric Services*, 65(3), 359-366. doi: 10.1176/appi.ps.201100518
- Cromer, K.D., D’Agostino, E. M., Hansen, E., Alfonso, C., & Frasier, S. (2019) After-school poly-strengths programming for urban teens at high-risk for violence exposure. *Translational Behavioral Medicine (in press)*.
- Cromer, K. D., & Villodas, M. T. (2017a). Post-traumatic stress as a pathway to psychopathology among adolescents at high-risk for victimization. *Child Abuse & Neglect*, 67, 182-192. doi: 10.1016/j.chiabu.2017.02.025

- Cromer, K. D., & Villodas, M. T. (2017b). The role of posttraumatic stress as a pathway to psychopathology among youth at high-risk for victimization. *Psychology of Violence*, 7(1), 12-21. doi: 10.1037/vio0000034
- Cummings, C. M., Caporino, N. E., & Kendall, P. C. (2014). Comorbidity of anxiety and depression in children and adolescents: 20 years after. *Psychological Bulletin*, 140(3), 816-845. doi: 10.1037/a0034733
- Bosworth K, Espelage D. Teen Conflict Survey. Bloomington, IN: Center for Adolescent Studies, Indiana University, 1995.
- Dahlberg, L. L., Toal, S. B., & Behrens, C. B. (1998). *Measuring violence-related attitudes, beliefs, and behaviors among youths: A compendium of assessment tools*. Atlanta, GA: Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Dierkhising, C. B., Ford, J. D., Branson, C., Grasso, D. J., & Lee, R. (2018). Developmental timing of polyvictimization: Continuity, change, and association with adverse outcomes in adolescence. *Child Abuse & Neglect*, 87, 40-50. doi: 10.1016/j.chiabu.2018.07.022
- Dryman, M. T., & Heimberg, R. G. (2018). Emotion regulation in social anxiety and depression: a systematic review of expressive suppression and cognitive reappraisal. *Clinical Psychology Review*, 65, 17-42. doi: 10.1016/j.cpr.2018.07.004
- Embry, D. D., & Biglan, A. (2008). Evidence-based kernels: Fundamental units of behavioral influence. *Clinical Child and Family Psychology Review*, 11(3), 75-113. doi: 10.1007/s10567-008-0036-x
- Finkelhor, D., & Dzuiba-Leatherman, J. (1994). Victimization of children. *American Psychologist*, 49(3), 173-183. doi: 10.1037/0003-066X.49.3.173
- Finkelhor, D., Shattuck, A., Turner, H., & Hamby, S. (2015). A revised inventory of adverse childhood experiences. *Child Abuse & Neglect*, 48, 13-21. doi: 10.1016/j.chiabu.2015.07.011
- Finkelhor, D., Turner, H., Ormrod, R., & Hamby, S. L. (2009). Violence, abuse, and crime exposure in a national sample of children and youth. *Pediatrics*, 124(5), 1411-1423. doi: 10.1542/peds.2009-0467
- Finkelhor, D., Turner, H. A., Shattuck, A., & Hamby, S. L. (2015). Prevalence of childhood exposure to violence, crime, and abuse: Results from the national survey of children's exposure to violence. *JAMA Pediatrics*, 169(8), 746-754. doi: 10.1001/jamapediatrics.2015.0676

- Flynn, T. A., Jones, B. A., & Ausderau, K. K. (2016). Guided imagery and stress in pregnant adolescents. *American Journal of Occupational Therapy, 70*(5), 1-7. doi: 10.5014/ajot.2016.019315
- Frank, J. L., Bose, B., & Schrobenhauser-Clonan, A. (2014). Effectiveness of a school-based yoga program on adolescent mental health, stress coping strategies, and attitudes toward violence: Findings from a high-risk sample. *Journal of Applied School Psychology, 30*(1), 29-49. doi: 10.1080/15377903.2013.863259
- Frazier, S. L., Cappella, E., & Atkins, M. S. (2007). Linking mental health and after school systems for children in urban poverty: Preventing problems, promoting possibilities. *Administration and Policy in Mental Health and Mental Health Services Research, 34*(4), 389-399. doi: 10.1007/s10488-007-0118-y
- Frazier, S. L., Chacko, A., Van Gessel, C., O'Boyle, C., & Pelham, W. E. (2012). The summer treatment program meets the south side of Chicago: Bridging science and service in urban after-school programs. *Child and Adolescent Mental Health, 17*(2), 86-92. doi: 10.1111%2Fj.1475-3588.2011.00614.x
- Frazier, S., Chou, T., Ouellette, R. R., Helseth, S., Hedemann, E., & Cromer, K. D. (2019). Workforce support for urban after-school programs: Turning obstacles into opportunities. *American Journal of Community Psychology (in press)*.
- Frazier, S. L., Dinizulu, S. M., Rusch, D., Boustani, M. M., Mehta, T. G., & Reitz, K. (2015). Building resilience after school for early adolescents in urban poverty: Open trial of leaders @ play. *Administration and Policy in Mental Health and Mental Health Services Research, 42*(6), 723-736. doi: 10.1007/s10488-014-0608-7
- Frazier, S. L., Formoso, D., Birman, D., & Atkins, M. S. (2008). Closing the research to practice gap: Redefining feasibility. *Clinical Psychology: Science and Practice, 15*(2), 125-129. doi: 10.1111/j.1468-2850.2008.00120.x
- Fung, J., Kim, J. J., Jin, J., Chen, G., Bear, L., & Lau, A. S. (2018). A randomized trial evaluating school-based mindfulness intervention for ethnic minority youth: Exploring mediators and moderators of intervention effects. *Journal of Abnormal Child Psychology, 1-19*. doi: 10.1007/s10802-018-0425-7
- Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348-362. doi: 10.1037/0022-3514.85.2.348

- Hamby, S., Grych, J., & Banyard, V. (2018). Resilience portfolios and poly-strengths: Identifying protective factors associated with thriving after adversity. *Psychology of Violence*, 8(2), 172-183. doi:10.1037/vio0000135
- Hamby, S., Taylor, E., Jones, L., Mitchell, K. J., Turner, H. A., & Newlin, C. (2018). From poly-victimization to poly-strengths: Understanding the web of violence can transform research on youth violence and illuminate the path to prevention and resilience. *Journal of Interpersonal Violence*, 33(5), 719-739. doi: 10.1177/0886205174847
- Helseth, S. A., & Frazier, S. L. (2018). Peer-assisted social learning for diverse and low-income youth: Infusing mental health promotion into urban after-school programs. *Administration and Policy in Mental Health and Mental Health Services Research*, 45(2), 286-301. doi: 10.1007/s10488-017-0823-0
- Hesse, T., Holmes, L. G., Kennedy-Overfelt, V., Kerr, L. M., & Giles, L. L. (2015). Mindfulness-based intervention for adolescents with recurrent headaches: A pilot feasibility study. *Evidence-Based Complementary and Alternative Medicine*, 2015, 1-9. doi: 10.1155/2015/508958
- Jacobson, N.S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting & Clinical Psychology*, 59, 12–19. doi: 10.1037/0022-006X.59.1.12
- Jaffee, S. R. (2017). Child maltreatment and risk for psychopathology in childhood and adulthood. *Annual Review of Clinical Psychology*, 13, 525-551. doi:10.1146/annurev-clinpsy-032816-045005
- Kessler, R. C., Angermeyer, M., Anthony, J. C., De Graaf, R. O. N., Demyttenaere, K., Gasquet, I., ... & Kawakami, N. (2007). Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry*, 6(3), 168. PMID: 18188442
- Klingbeil, D. A., Renshaw, T. L., Willenbrink, J. B., Copek, R. A., Chan, K. T., Haddock, A., ... & Clifton, J. (2017). Mindfulness-based interventions with youth: A comprehensive meta-analysis of group-design studies. *Journal of School Psychology*, 63, 77-103. doi: 10.1016/j.jsp.2017.03.006
- Low, S., & Espelage, D. (2014). Conduits from community violence exposure to peer aggression and victimization: Contributions of parental monitoring, impulsivity, and deviancy. *Journal of Counseling Psychology*, 61(2), 221. doi: 10.1037/a0035207

- Manzoni, G., Pagnini, F., Castelnuovo, G., & Molinari, E. (2008). Relaxation training for anxiety: A ten-years systematic review with meta-analysis. *British Medical Central Psychiatry*, 8, 41–53. doi: 10.1186/1471-244X-8-41
- Merikangas, K. R., He, J., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., & ... Swendsen, J. (2010). Lifetime prevalence of mental disorders in U.S. adolescents: Results from the National Comorbidity Survey Replication-Adolescent Supplement (NCS-A). *Journal of The American Academy of Child & Adolescent Psychiatry*, 49(10), 980-989. doi:10.1016/j.jaac.2010.05.017
- Merikangas, K. R., He, J. P., Burstein, M., Swendsen, J., Avenevoli, S., Case, B., ... & Olfson, M. (2011). Service utilization for lifetime mental disorders in US adolescents: results of the National Comorbidity Survey–Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*, 50(1), 32-45. doi: 10.1016/j.jaac.2010.10.006
- Messer, S. C., Angold, A., Costello, E.J., Loeber, R., Van Kammen, W., & Stouthamer-Loeber, M. (1995). Development of a short questionnaire for use in epidemiological studies of depression in children and adolescents: Factor composition and structure across development. *International Journal of Methods in Psychiatric Research*, 5, 251-262.
- Morgan, C., Sibthorp, J., & Wells, M. S. (2014). Fun, activities, and social context: Leveraging key elements of recreation programs to foster self-regulation in youth. *Journal of Park & Recreation Administration*, 32(3), 74-91.
- National Sleep Health Foundation [Teens and Sleep] (2017). Retrieved from <https://www.sleepfoundation.org/articles/teens-and-sleep>.
- Nilsen, P. (2015). Making sense of implementation theories, models and frameworks. *Implementation Science*, 10(53), 1-13. doi: 10.1186/s13012-015-0242-0
- Patel, A., Bruzzese, J., & Sockrider, M. (2017). Healthy Sleep in Teens. *American Journal of Respiratory and Critical Care Medicine*, 195(1), 1-2. doi: 10.1164/rccm.1951P1
- Paul, G., Elam, B., & Verhulst, S. J. (2007). A longitudinal study of students' perceptions of using deep breathing meditation to reduce testing stresses. *Teaching and Learning in Medicine*, 19(3), 287-292. doi: 10.1080/10401330701366754
- Quigley, M. (2013). Nudging for health: On public policy and designing choice architecture. *Medical Law Review*, 21(4), 588-621. doi: 10.1093/medlaw/fwt022



- Romer, D., Reyna, V. F., & Satterthwaite, T. D. (2017). Beyond stereotypes of adolescent risk taking: Placing the adolescent brain in developmental context. *Developmental Cognitive Neuroscience*, 27, 19-34. doi: 10.1016/j.dcn.2017.07.007
- Smith, E. P., Osgood, D. W., Oh, Y., & Caldwell, L. C. (2018). Promoting afterschool quality and positive youth development: Cluster randomized trial of the PAX Good Behavior Game. *Prevention Science*, 19(2), 159-173. doi: 10.1007/s11121-017-0820-2
- Smith, B. H., Lyons, M. D., & Esat, G. (2018). Yoga kernels: A public health model for developing and disseminating evidence-based yoga practices. *International Journal of Yoga Therapy (in press)*. doi: 10.17761/2019-00024
- Stutz, R., & Schreiber, D. (2017). The effectiveness of occidental breathing therapy methods: A systematic review. *Complementary Medicine Research*, 24(6), 371–379. doi: 10.1159/000464341
- Toth, S. L., & Cicchetti, D. (2013). A developmental psychopathology perspective on child maltreatment. *Child Maltreatment*, 18(3), 135–139. doi: 10.1177/1077559513500380
- Turner, H. A., Shattuck, A., Finkelhor, D., & Hamby, S. (2017). Effects of poly-victimization on adolescent social support, self-concept, and psychological distress. *Journal of Interpersonal Violence*, 32(5), 755-780. doi: 10.1177/0886260515586376
- Wallerstein, N., & Duran, B. (2010). Community-based participatory research contributions to intervention research: The intersection of science and practice to improve health equity. *American Journal of Public Health*, 100(1), 40-46. doi: 10.2105/AJPH.2009.184036
- Zebib, L., Stoler, J., & Zakrisson, T. L. (2017). Geo-demographics of gunshot wound injuries in Miami-Dade County (2002-2012). *BMC Public Health*, 17(174), 1-10. doi: 10.1186/s12889-017-4086-1
- Zhang, Y. (2012). Will natural disasters accelerate neighborhood decline? A discrete-time hazard analysis of residential property vacancy and abandonment before and after hurricane Andrew in Miami-Dade County (1991-2000). *Environment and Planning B*, 39(6), 1084-1104. doi: 10.1068/b37121

**APPENDIX**

Appendix A: Mental health promotion kernels .....66  
    A.1 – Meditation scripts.....66  
    A.2 –Sleep health journaling activities .....87  
Appendix B: Research Measures .....102  
    B.1 – Meditation Feedback Form .....102  
    B.2 – Adverse Childhood Experiences Questionnaire.....103  
    B.3 – Screen for Child Anxiety and Related Emotional Disorders .....104  
    B.4 – Short Mood and Feelings Questionnaire .....105  
    B.5 – Emotion Regulation Questionnaire .....106  
    B.6 – Self-Efficacy for Teen Conflict.....107

### A.1 Guide to Meditation Scripts

Title:	Components:	Program Goal:
1. High School Graduation	Guided Imagery, Positive Affirmations	Academic Success
2. Future Me	Guided Imagery, Positive Affirmations	Career Success
3. Soft Light I	Guided Imagery, Lovingkindness	Self-Care, Kindness Toward Oneself and One Other
4. Soft Light II	Guided Imagery, Lovingkindness	Community Building, Kindness Toward Others
5. Peaceful Stream	Guided Imagery, Mindfulness	Emotion Regulation
6. Starry Sky	Guided Imagery, Mindfulness	Emotion Regulation
7. Peaceful Place	Guided Imagery, Progressive Relaxation	Dealing with Adversity
8. Ball of Clay	Guided Imagery, Progressive Relaxation	Dealing with Adversity
9. Floating on a Cloud	Guided Imagery, 4 to 8 Breaths	Relaxation
10. Fluffy Cloud	Guided Imagery, 4 to 8 Breaths	Relaxation

## 1. High School Graduation

Find a comfortable seated position. If you would like, rest your head on your hands.

Allow your eyes to close, or look towards the ground. Take a couple of slow, gentle breaths as you begin to relax.

(pause for 1 slow breath)

Imagine you are in a safe, place. Perhaps a real place at your school or at home. Or a beautiful place you can create in your imagination. You may be alone, or with someone you love and trust. Take a moment to imagine yourself in this place.

(pause for 1 slow breath)

Relax your face, your neck, shoulders. Allow your chest and back to relax. Let your belly soften as you breathe easily. Naturally. Relax your legs and your feet. Relax your hands... and imagine you are holding your high school diploma. You are in your safe place, you have worked hard, and now you can relax and feel what you have accomplished. You finished high school. You graduated. You made it.

(pause for 1 slow breath)

Despite the challenges you may face in your day to day life, imagine your future self, holding your diploma, with a new sense of relief and pride. In this moment, relax and know that you have everything you need to succeed already within yourself. Now you can rest.

(pause for 1 slow breath)

You are enough. You are capable. You are accomplished. You worked hard. Now, you can rest and breathe easy. Keep your belly soft as the air flows in easily. As you breathe out, release any self-doubt. Breathe out any remaining insecurities. Visualize your name

on your diploma, and feel proud of yourself. See your name written on your diploma in beautiful, bold letters.

(pause for 2 slow breaths)

Imagine one person who loves you and supports you. Someone who believed that you would graduate high school and earn that diploma. This could be someone from your family, a teacher, a friend, or even me. Because I believe in you. Visualize that person who believes in you. See the happiness on their face. They are so proud of you. Allow yourself to feel the love and pride that person has for you in this moment. While you hold your diploma in your hands, take a few more relaxing breaths.

(pause for 2 slow breaths)

As you inhale, breath that feeling of pride and accomplishment into your heart and mind. As you exhale, let go of any negativity you no longer need. You are intelligent. You are strong. You are full of potential. Relax your mind.

(pause for 1 slow breath)

Know that you can earn your high school diploma. If you keep working toward your goal, you will succeed. It's normal to doubt ourselves sometimes. If that ever happens, imagine yourself in this safe, peaceful place and know that you will succeed. Take one more deep, slow breath in.... and out. When you're ready, open your eyes.

## 2. Future Me

Find a comfortable seated position. If you would like, rest your head on your hands.

Allow your eyes to close, or look down. Take a couple of slow, gentle breaths as you begin to relax.

(pause for 1 slow breath)

Relax your face, your hands, your body. Breathe in deep and easy with a soft belly.

Breathe out any stress or tension you may be feeling. With each breath, you relax a little more.

(pause for 1 slow breath)

Imagine yourself in the future. Maybe 5 or even 10 years from now. You have a successful, rewarding career. You are good at what you do. Very good. And you enjoy your work. Imagine the feeling of enjoying your work, and being successful in the future as you continue to relax your breath and your body.

(pause for 2 slow breaths)

Take a moment to imagine your future self. You are walking down a hallway at work, or perhaps a sidewalk. You're feeling safe and confident. Imagine what you are wearing.

You chose just the right clothing for your career. You are comfortable, and you look like the confident, capable professional that you are. Perhaps you are wearing strong work boots like a construction site manager. Or nice looking shoes that people wear in offices.

Maybe you are wearing sturdy, athletic shoes like a nurse or a doctor. Your clothes fit you comfortably and you are walking with confidence.

(pause for 2 slow breaths)

As you inhale gently and deeply, notice any areas of your body that still feel tense or uncomfortable. On your exhales, allow your body to relax. Enjoy this relaxed feeling, as you think about the things that make you successful at work. Perhaps these are the things that you admire about yourself now. Like being able to show up to work on time.

Showing kindness or respect to your coworkers. Your ability to find good solutions in challenging situations. Perhaps you are good at math, or writing. Maybe you enjoy talking to people. Think of the things you like about yourself that make you special.

(pause for 1 slow breath)

These things you admire about yourself now, imagine them growing even stronger over time. As you gain more experience, you become more knowledgeable, you are more professional, and you have everything you need to reach your goals. You are capable, and you don't give up. Relax knowing that everything you need to succeed is already inside of you.

(pause for 1 slow breath)

Now imagine your future coworkers. They respect you because you are good at what you do. They are your team. You work together to reach goals and you trust each other. Think of the things you like about yourself. Your intelligence. Your work ethic. Your confidence. These things that make you successful, they make your team stronger too. You are an important part of your team. Relax and know that you are valuable. You're important. You can help others reach their goals, while you reach your goals. Take one more relaxing breath, and when you are ready, open your eyes.

### 3. Soft Light I

Find a comfortable seated position. If you would like, rest your head on your hands.

Allow your eyes to close, or look towards the ground. Take a couple of slow, gentle breaths as you begin to relax.

(pause for 1 breath)

Imagine you are in a peaceful place. Maybe you are in a nice room with a view of a big city at night. Or maybe you're on a warm, sunny beach with a cool breeze. Imagine a place that feels safe and peaceful while you take a couple of slow, relaxing breaths.

(pause for 1 breath)

Relax your face, your hands, your back. Allow your neck and shoulders to relax. Feel your body become heavy. Enjoy this feeling while imagining your safe, peaceful place.

(pause for 1 breath)

As you inhale, visualize a soft light. The light may shine or glow white or yellow like warm sunlight. Perhaps it is another color, like a cool blue or a vibrant pink. For now, this light is small. It rests comfortably in the palm of your hand. Relax your hands and imagine the light you are holding represents kindness or love. This is a gift for yourself.

As you breathe in, the light in your hand becomes a little brighter. As you breathe out, the light softens and spreads out like a pillow in your hands. Being kind to yourself is very important. Your relationships with other people all begin with how you treat yourself. We are all connected. Continue breathing in and out, and feel the kindness and love you have for yourself grow. Visualize the light spreading this love and kindness all around you.

(pause for 1 breath)



You're in your safe, peaceful place, focusing on being kind and loving towards yourself. In your mind, repeat these words. I wish myself happiness. I wish myself love. I wish myself peace. As you breathe in, see the soft light that represents your kindness grow brighter. As you exhale, the light softens and grows. Imagine the color, the warmth, the softness of the light. Perhaps it stays in your hands, like a soft pillow to rest your head. Maybe the light swirls around you, like a gentle blanket protecting you. Continue breathing deeply and slowly while you visualize the light, and wish yourself happiness, love, and peace.

(pause for 1 breath)

Now think of one person you love. Someone you trust, who shows you kindness. As you inhale, imagine the light in your hands growing brighter, as you exhale, imagine that light surrounding the person you love. In your mind, say these words to that person. I wish you happiness. I wish you love. I wish you peace. Imagine they feel the kindness you have shown, and they feel the same relaxed, peaceful feeling you have created for yourself.

(pause for 1 breath)

Take one more relaxing breath, and keep this relaxed feeling as you open your eyes.

#### 4. Soft Light II

Find a comfortable seated position. If you would like, rest your head on your hands.

Allow your eyes to close, or look towards the ground. Take a couple of slow, gentle breaths as you begin to relax. Notice any tension or discomfort in your body, and release it as you exhale.

(pause for 1 slow breath)

Imagine you are in a safe, peaceful place. It can be indoors or out in nature. You are surrounded by people you know and care about. Family, friends, and people close to you that you can trust. It could be one person, or dozens of people. Breathe and relax as you picture this place.

(pause for 2 slow breaths)

Release any tension in your face, your shoulders, your arms. Feel your hands relax.

Visualize a soft light. This light represents kindness that you can share with others. What color is the light? How does it feel in your hands? This light may be warm and yellow like sunshine. It may be a cool and comforting blue. Or an energizing and vibrant pink.

(pause for 1 breath)

Think about the kindness you feel toward your loved ones who are here with you in your safe, peaceful place. As you inhale, the light in your hands grows brighter. As you exhale, the light softens and swirls out toward your loved ones. They feel the kindness you are sending, and share in the relaxation you feel in this peaceful place. In your mind, say these words to your loved ones. I wish you happiness. I wish you love. I wish you peace.

(pause for 1 breath)

Inhale and the lights grow brighter. Exhale and they spread further. Filling this safe, peaceful place with a feeling of love and kindness. Relax your body. Relax your mind. And imagine sharing this feeling of relaxation with your loved ones. A gift of relaxation from you to those that you love.

(pause for 1 breath)

As you remain in your safe, peaceful place, imagine your community. The light grows brighter as you inhale deeply. As you exhale, imagine the feelings of kindness, of love, of peace swirling throughout your community like a comforting, but powerful light. We cannot fix the world by ourselves, but we are all connected. Ourselves, our loved ones, our community. We are all connected, and we all improve when we are shown kindness.

(pause for 1 breath)

Now imagine you are by yourself in your safe, peaceful place. You feel relaxed from your head to your toes. With each breath, you relax a bit more. As you relax, imagine the light that you shared today with your loved ones and with your community. The kindness and love is now coming back to you in a full circle. Allow the positive feelings to come back to you. You deserve happiness. You are loved. Enjoy the peaceful relaxation.

(pause for 1 breath)

Take one last relaxing breath, and when you are ready, open your eyes.

## 5. Peaceful Stream

Find a comfortable seated position. If you would like, rest your head on your hands.

Allow your eyes to close, or look towards the ground. Take a couple of slow, gentle breaths as you begin to relax.

(pause for 1 slow breath)

Imagine you are beside a small, gentle stream. Smaller than a river, but with water that flows steadily for miles and miles. Imagine you are safe on the side of this stream. Close enough to see the water. It's clear straight through to the bottom. You see smooth pebbles and rocks, and even a few tiny fish swimming with the current. Breathe in and feel warm sunshine on your skin. Breathe out as a cool, gentle breeze flows by. Allow your body and mind to relax.

(pause for 2 slow breaths)

Imagine the rest of the scenery around you. Maybe there are trees and open spaces with wild flowers. Or maybe you are in a yard with a tall fence protecting you from the outside world. Imagine a place where you feel safe and relaxed while you watch the water flow by.

(pause for 1 slow breath)

As you relax, gently focus your attention on your breath. Soften the muscles in your belly so you can breathe in deeply, and then slowly breathe out any tension or stress you may be feeling. Breathe in deeply... and breathe out slowly.

(pause for 2 slow breaths)

It's easy to become distracted during relaxation times. Thoughts may pop up about past memories, things we did today, or things we need to do later. Imagine any thoughts that

pop up are like small fish in the stream. Notice them, and then allow them to swim down the stream with the current and far, far away. Redirect your attention back to your slow, relaxing breaths.

(pause for 1 slow breath)

Inhale deeply... and exhale slowly.

(pause for 1 slow breath)

Notice if you are experiencing any uncomfortable feelings in your body. It could be a tightness in your chest, a sad or angry feeling, or maybe a head ache. If you are feeling any discomfort, breathe in deeply, and as you breathe out, imagine those feelings flowing out of you and far, far away with that cool breeze. Bring your attention back to those relaxing breaths.

(pause for 1 slow breath)

Breathe in deeply... and breathe out slowly. Every time you exhale, relax a little more.

(pause for 1 slow breath)

One last relaxing breath, and when you feel comfortable, open your eyes.

## 6. Starry Sky

Find a comfortable seated position. If you would like, rest your head on your hands.

Allow your eyes to close, or look down. Take a couple of slow, gentle breaths as you begin to relax.

(pause for 1 slow breath)

Soften your belly for a full, deep inhale.... And slowly exhale away any stress or tension in your body. Relax your face, your neck, your shoulders. Relax your arms and hands.

Your legs and feet. Enjoy a heavy, relaxed feeling in your body as you exhale away any remaining discomfort.

(pause for 1 slow breath)

Now imagine that you are looking at a large, beautiful sky just before sunset. In the distance you may see snowy mountains, an ocean, or just a peaceful, grassy plain. You are in a safe, peaceful place. Perhaps you are inside of a warm, cozy cabin, or you could be outdoors where you can smell the fresh, crisp mountain air. Take a moment to create an ideal place in your mind to relax and watch the sunset.

(pause for 1 slow breath)

Breathe in deeply... and exhale slowly. You are in your safe place. It is still light out, but the sun begins to dip below the horizon. Beautiful streaks of bright orange and pink shine low in the sky. Higher in the sky the last remnants of blue fade into a deep indigo color.

You admire the changing, blending colors of the sunset as you take a couple more relaxing breaths.

(pause for 1 slow breath)

Inhale deeply into a soft belly.... Exhale slowly into a deeper state of relaxation.

(pause for 1 slow breath)

You enjoy a peaceful feeling while you watch the sky darken. The air around you is still and calm. In the distance, you can see the indigo and purple tones in the sky growing darker, fading to a gentle black with small dots of light. You see the first stars begin to appear. First one star... and then another... and another. Imagine them shiny like tiny diamonds across a velvet sky. Take a couple of relaxing breaths as you watch the night begin.

(pause for 1 slow breath)

Breathe in deeply... exhale slowly and completely. With each breath, you become more relaxed.

(pause for 1 slow breath)

Now the sky is jet black. Out here, away from the city lights, the stars are amazingly bright. You've never seen so many stars. The sky is filled with stars from one side to the other, like a vast expanse as far as you can see in every direction. See the constellations formed by the stars. The sky reminds you of a beautiful, glimmering blanket of stars stretching up in a complete circle around you from every horizon. Admire the starry sky... Feeling very calm... relaxed... and at peace.

(pause for 1 slow breath)

Take one last relaxing breath, and begin to come back to this room. Notice the sounds in this room and beyond. Open your eyes.

## 7. Peaceful Place

Find a comfortable seated position. If you would like, rest your head on your hands.

Allow your eyes to close, or look down. Take a couple of slow, gentle breaths as you begin to relax.

(pause for 1 slow breath)

We're going to relax our bodies starting at the top of our head and working down to our toes. Relax your scalp, your forehead, your eyebrows. Notice any tension or pressure in your face, and let it go as you exhale. Relax your eyes... your cheeks... your nose. Relax your mouth... your tongue... your lips... your jaw. If you would like, we can relax these areas more. When you inhale, tense up the muscles in your face. As you exhale, release the tension and feel your face relax.

(pause for 1 slow breath)

Now imagine a peaceful place. A safe place where you feel calm. Where is this place? You might envision somewhere outdoors like the beach or a mountain... or somewhere indoors with a beautiful view. It may be a simple place, or full of intricate details.

Visualize this place that makes you feel safe and peaceful.

(pause for 1 slow breath)

Now bring your attention to your neck and shoulders. Inhale and notice any tension, exhale and release... relax. Notice your arms. Inhale and tense... exhale relax. Next your hands. Inhale into any discomfort or tension... exhale and release, relax.

(pause for 1 slow breath)

You are in your peaceful place. Notice the sights.... the sounds.... the smells. Focus on any parts of this place that make you feel calm.



(pause for 1 slow breath)

In your peaceful place, you can be safe in solitude with no one else around. Or you can invite people you love and trust to join you. They can be people you know, or people you imagine. Allow your mind to calm, and enjoy this peaceful, relaxing place.

(pause for 1 slow breath)

Continue with your slow, relaxing breaths, and relax your back. Relax your belly. Find any tension in these areas, and release it. Every time you breathe out, release the tension. Inhale and notice any tension in your thighs, or calves. Exhale and relax your legs, your knees, your ankles. Inhale and notice any discomfort in your feet. Exhale, relax your feet. Take one deep, slow breath, and enjoy the feeling of total relaxation from your head to your toes.

(pause for 1 slow breath)

Remember this peaceful place. You can come back here any time you would like.

Whenever you want, you can take one slow breath and relax into this peaceful place... this relaxed feeling.

(pause for 1 breath)

Keep this relaxation as you come back to the present moment. This relaxation is a gift to yourself. When you are ready, open your eyes.

## 8. Ball of Clay

Find a comfortable seated position. Rest your arms at your side, and plant your feet flat on the floor. Sit up with a straight, tall spine, and relax your shoulders. Take a deep, slow breath.

(pause for 1 slow breath)

Close your eyes or look down at the ground. Imagine you have a ball of clay in your right hand. Squeeze that ball of clay as hard as you can. Feel how tight the muscles in your hand and arm become. Squeeze for 3, 2, 1, and drop the ball of clay. Let your hand open... completely relaxed. Feel the difference in the muscles of your hand and arm when they are relaxed.

(pause for 1 slow breath)

Now the ball of clay is in your left hand. Squeeze the ball of clay as hard as you can. Feel the tightness of your muscles in your hand and your arm as you squeeze. Keep squeezing for 3, 2, 1. And drop the ball of clay. Feel the muscles of your hand and arm relax. Keep breathing deeply... slowly... and feel the relaxation spread to your shoulders... your neck.

(pause for 1 slow breath)

Imagine your peaceful place. A place you create in your mind where you feel calm and safe. Maybe you're in a garden, or a cabin in the mountains, or beside a quiet stream.

Visualize the details... the sights... smells... sounds. Take a deep, slow breath and let your mind relax.

(pause for 1 slow breath)

Scan your whole body, beginning with your scalp... your face. Inhale fresh, calming oxygen into any areas of tension, and let go of all of it as you exhale. With each exhale, you relax more.

(pause for 1 slow breath)

Notice your belly. Allow the muscles in your abdomen to soften so you can inhale deeply... naturally. As you exhale, release any tension in your chest... your ribs... your back. If you are still sitting tall, feel free to relax over and rest your head in your hands, while keeping your upper body completely relaxed.

(pause for 1 slow breath)

Inhale and visualize your peaceful place... Exhale and release all of your worries, all the stress. You are safe and loved. You deserve this peaceful feeling. Allow yourself to let go of everything and enjoy this feeling of deep relaxation.

(pause for 1 slow breath)

Inhale and notice any tension in your thighs... your knees... your calves... your ankles. On each exhale, relax. Your legs feel heavy against your chair as you embrace this relaxation. Inhale and notice your feet... note any discomfort or tension. Exhale and relax. Now your entire body is relaxed. Enjoy this moment of complete relaxation.

(pause for 1 slow breath)

You can come back to this peaceful place... this relaxed feeling... anytime you would like. Take one more deep, slow breath, and when you're ready, come back to the present moment. Open your eyes.

## 9. Floating on a Cloud

Find a comfortable seated position. If you would like, rest your head on your hands.

Allow your eyes to close, or look towards the ground. Take a couple of slow, gentle breaths as you begin to relax.

(pause for 1 slow breath)

As you inhale, gently let your lungs fill all the way up. Then slowly release all of the air from your lungs. Try to let your exhales last longer than your inhales.

(pause for 1 slow breath)

Now imagine you are floating on a soft, fluffy cloud. Feel the surface beneath you becoming softer... more like a cloud. Feel the cloud rising out of the surface you are on... surrounding you in its protective support. Soon you are floating on just the cloud.

(pause for 1 slow breath)

As you relax on the cloud, we'll try a breathing technique to help you relax more. It's called the 4 to 8 breath. We will inhale for 4 seconds, and exhale for 8 seconds. With each exhale, you can let go of any tension or discomfort in your body. Go ahead and release all of the air from your lungs. Inhale for 1, 2, 3, 4. Exhale for 1, 2, 3, 4, 5, 6, 7, 8. Inhale for 1, 2, 3, 4. Exhale for 1, 2, 3, 4, 5, 6, 7, 8. Continue this slow, relaxing breath....

Relaxing into your cloud more with each exhale.

(pause for 1 slow breath)

Imagine the cloud beneath you rises slightly higher. As you relax, your body feels heavier. The cloud is like a soft blanket holding you... protecting you. Visualize the wall and ceiling around you disappear. See the sky above you and around you. Perhaps it's a

beautiful, sunny day. Or maybe a peaceful, starry night. See the sky expand around you, and create a place in your mind where you feel calm... safe... content.

(pause for 1 slow breath)

Continue floating on your cloud... relaxing. Imagine wherever it is you would like to go. Your cloud can take you there. Maybe you want to float above the mountains, drifting above their rocky peaks. Or perhaps you would like to drift along the coast of the ocean, watching waves roll onto the shore. You can travel anywhere you wish. Enjoy the peaceful journey you have created in your mind.

(pause for 2 slow breaths)

Whenever you need to relax, you can take a few breaths and come back to this peaceful cloud. It will be here for you when you want it. Now we will come back to the present moment, but keep the relaxation we feel now. When you are ready, open your eyes.

## 10. Fluffy Cloud

Find a comfortable seated position. If you would like, rest your head on your hands.

Allow your eyes to close, or look towards the ground. Take a couple of slow, gentle breaths as you begin to relax.

(pause for 1 slow breath)

Now imagine you are floating on a soft, fluffy cloud. You feel all warm and safe nestled into your cloud as it cradles your body like a hammock. Use your imagination and visualize your cloud. What does it look like? Picture its size and shape. Picture its color and shade. Imagine where it is in the sky. Is your cloud high or low in the sky? Is it by itself or are there any other clouds surrounding it?

(pause for 1 slow breath)

As you float on your fluffy cloud, I invite you to try something with me called the 4 to 8 breath. We will inhale for 4 seconds and really fill our lungs up all the way. Then we will slowly exhale for 8 seconds. Go ahead and release all of the air from your lungs until they are completely empty, and inhale for 1, 2, 3, 4. Exhale for 1, 2, 3, 4, 5, 6, 7, 8. Inhale, 1, 2, 3, 4. Exhale 1, 2, 3, 4, 5, 6, 7, 8. Continue breathing with full, deep inhales, and slow, relaxing exhales. On each exhale, relax a little deeper into your fluffy cloud.

(pause for 1 slow breath)

Visualize your cloud again. What can you see from your cloud? Do you see the sky, or perhaps more clouds? Is it day or night? Warm or cool? What colors are around you?

Imagine you are safe and sound, floating on this fluffy cloud with nothing more important to focus on than your relaxing breaths.

(pause for 1 slow breath)

As you inhale, soften your belly and feel it rise. Slowly exhale and allow the breath to calm your body. With each breath, you feel a little more relaxed. Your body feels heavier. You are safe and comfortable floating in your cloud.

(pause for 1 slow breath)

Where has your cloud taken you now? Are you moving quickly, slowly, or floating in one place?

Are you rising higher, or sinking lower towards the ground? Are there other people around you? People you care for and trust? Or are you alone? Allow your mind to explore and create details that make this place feel calm... peaceful... beautiful... so that you can feel content and completely relaxed.

(pause for 1 slow breath)

We'll try one more 4 to 8 breath now. Release all of the air from your lungs. Inhale 1, 2, 3, 4. Exhale 1, 2, 3, 4, 5, 6, 7, 8. Take a couple more relaxing breaths and feel the relaxation spread all over your body... from your head to your toes.

(pause for 2 slow breaths)

Slowly come back to the present moment. Feel the ground beneath your feet. Hear the sounds in the room around you and beyond. When you feel ready, open your eyes.

## A.2. Sleep Health Journaling Activities

### **Sleep Health Journal** **Lesson 1: Introductory Sleep Education**

#### **Lesson Objectives**

1. Teens will understand the importance of sleep for adolescent well-being.
2. Teens will learn about factors that impact sleep and common sleep problems.

#### **Psychoeducation: What You Need to Know**

Research has found that teenagers need more sleep than adults—close to 9 hours every night, on average. Yet surveys have shown that only 15% of teens actually get that amount of sleep regularly. That means about 85% of today’s teenagers are not getting enough sleep.

There are many things that get in the way of sleep. We call these sleep barriers or challenges to getting a good night’s sleep. Some examples include early school start times, excessive homework assignments, jobs, staying out late with friends, using alcohol or drugs, too much time on computers and phones, and even just normal developmental changes in your body during adolescence.

Despite these challenges, it is very important to try to get enough sleep. Sleep problems can lead to physical problems like cardiac or heart disease, obesity, and too much sleepiness during the day. Too little sleep can also make it hard to regulate your mood or emotions, leading to symptoms of anxiety and depression. Also, not having enough sleep makes it harder to learn at school and focus at work.

Many people underestimate how important sleep is for teens. It’s good to take time to slow down and think about your sleep habits from time to time.

Over the next few weeks we are going to use our journaling time to complete a sleep health journaling intervention. For our first sleep health journaling activity, I want you to reflect on your sleep habits. Please use full sentences and write clearly. I encourage you to answer honestly. There are no right or wrong answers—just write what is true for you. You can start writing now.



## Journal Activity

*Answer the following questions in your own words honestly. There are no right or wrong answers. Just write what is true for you.*

1) What are some things that get in the way of you getting good sleep?

2) What are some things that help you get good sleep?

## **Sleep Health Journal**

### **Lesson 1: Introductory Sleep Education**

#### **Lesson Objectives**

1. Teens will understand the importance of sleep for adolescent well-being.
2. Teens will learn about factors that impact sleep and common sleep problems.

#### **Psychoeducation: What You Need to Know**

Research has found that teenagers need more sleep than adults—close to 9 hours every night, on average. Yet surveys have shown that only 15% of teens actually get that amount of sleep regularly. That means about 85% of today’s teenagers are not getting enough sleep.

There are many things that get in the way of sleep. We call these sleep barriers or challenges to getting a good night’s sleep. Some examples include early school start times, excessive homework assignments, jobs, staying out late with friends, using alcohol or drugs, too much time on computers and phones, and even just normal developmental changes in your body during adolescence.

Despite these challenges, it is very important to try to get enough sleep. Sleep problems can lead to physical problems like cardiac or heart disease, obesity, and too much sleepiness during the day. Too little sleep can also make it hard to regulate your mood or emotions, leading to symptoms of anxiety and depression. Also, not having enough sleep makes it harder to learn at school and focus at work.

Many people underestimate how important sleep is for teens. It’s good to take time to slow down and think about your sleep habits from time to time.

Over the next few weeks we are going to use our journaling time to complete a sleep health journaling intervention. For our first sleep health journaling activity, I want you to reflect on your sleep habits. Please use full sentences and write clearly. I encourage you to answer honestly. There are no right or wrong answers—just write what is true for you. You can start writing now.

## Journal Activity

*Answer the following questions in your own words honestly. There are no right or wrong answers. Just write what is true for you.*

1) What are some things that get in the way of you getting good sleep?

2) What are some things that help you get good sleep?

## **Sleep Health Journal**

### **Lesson 3: The Circadian Rhythm**

#### **Lesson Objectives**

1. Teens will understand the basic components of the circadian rhythm.
2. Teens will learn about establishing a regular sleep/wake cycle.

#### **Psychoeducation: What You Need to Know**

Last week we learned some tips for getting good sleep, like coming up with a relaxing evening routine and limiting naps to 30 or 45 minutes. This week we will learn about the science of your body's natural sleep & waking cycle. There are two factors that influence how sleepy or how alert anyone is at any certain time in a 24-hour period. The first is how long it has been since you last slept, which is called the sleep-wake balance. The second factor that influences sleepiness or awakesness is called the circadian rhythm, and is sometimes called your body's biological clock. Everyone's body has this natural timing system, which tells you when you should be awake, and when you should be sleeping.

When you feel sleepy at night, that is your circadian rhythm telling you it is time to go to sleep. Most people feel a mild need for sleep in the mid-afternoon, and a strong need for sleep at night. Because this rhythm is set, the urge to sleep will be triggered at specific pre-set times, no matter how much sleep you got the night before. Teenagers have a special change in the circadian rhythm. Children typically need sleep by 8 or 9pm. For teens, that rhythm shifts to a couple of hours later, usually around 10 or 11pm. The natural shift in a teen's circadian rhythm is called "sleep phase delay," because the need for sleep is delayed for about 2 hours. It's important to remember that teens still need about 9 hours of sleep, even though you get tired later at night. You can count back from the time you have to wake up to figure out when you need to fall asleep at night. Remember that getting sleep every night is better than trying to catch up on the weekends, because that can throw off your sleep-wake balance.

With pressures from school, work, family, and friends, teens have a lot to handle every day. Taking out time to think about your sleep schedule is a basic self-care need, and is especially important for teens.



## **Sleep Health Journal**

### **Lesson 4: Personal Sleep Goals**

#### **Lesson Objectives**

1. Teens will identify their individual barriers to sleep health.
2. Teens will develop personal sleep goals.

#### **Psychoeducation: What You Need to Know**

Over the last few weeks we have learned about the importance of sleep for teens, and how sleep restriction or deprivation is linked to negative things like lack of focus, learning problems, obesity, heart disease, depression, and anxiety. We also learned some things teens can do to get better sleep. This week we will talk about the difference between knowing about good sleep habits, and actually making changes in your sleep health.

Sleep health is just like any other type of health. We have to do things maintain our health and prevent disease. We know sleep health is important for teens, but how do you know what sleep health habits work best for you? We can find out in 4 steps: Observe, Set Goals, Revise Goals, and Make a Sleep Plan.

Let's talk about the first step. To observe you take an honest look at how much sleep you are getting, how well you are sleeping, and factors that contribute to your current sleep pattern. You've already completed the first step during our previous journaling activities.

Next, you set goals for your sleep health. A couple of weeks ago we went over some tips for good sleep health. In a moment, I will give you a handout with an even longer list of things you can try to improve your sleep quality. You may like some of them, and find others less useful or possible. Our challenge today is to choose a few sleep health tips you would like to try this week. These tips will be your sleep goals. I encourage you to circle the ones you like, and keep this list with you as a reminder of your goals this week. Remember to include in your goals how often you will use each goal. For example, some sleep goals could be to practice mindful relaxation for a few minutes before you go to sleep every night, exercise in the early afternoon at least 4 times a week, or go to sleep at 10pm every week night.

Next week we will check in on our goals and figure out what worked.

## Journal Activity

*Answer the following questions in your own words honestly. There are no right or wrong answers. Just write what is true for you.*

My sleep goals for this week are (*remember to include specific times or amounts*):

1)

2)

3)

What problems may get in the way of you accomplishing your goals this week?

What can you do this week to remember your sleep goals and meet them?

## **Sleep Health Journal**

### **Lesson 5: Personal Sleep Plan**

#### **Lesson Objectives**

1. Teens will practice identifying solutions to their sleep health barriers.
2. Teens will design personal sleep plans.

#### **Psychoeducation: What You Need to Know**

Over the past 4 weeks, we've been discussing the importance of sleep and how to set goals for healthy sleep habits. We learned about 4 steps you can use to develop a sleep health routine that works for you. We completed step 1: to Observe our sleep habits. We completed step 2: to Set Goals. Today we'll do step 3, which is to Revise Goals, and step 4: to Make a Sleep Plan.

Let's begin by talking about goal revision. After you set a goal, it's important to evaluate how it went. You can ask yourself if you met your goal, and if not—what got in your way? Sometimes the goals just aren't right for us, and we need to choose another goal instead. Other times we need to problem-solve, so that we can meet our goal next time. Let's say my goal was to stop texting and talking on my phone 1 hour before the time I want to sleep each night, but my phone keeps ringing. People keep texting me. Raise your hand if you can tell me a way I can solve that problem so I can meet my goal?

(Allow 3 teens to provide suggestions.)

Thank you (*teens' names*) for sharing that. Those are all good ideas I can use to meet my goal.

Sometimes we make goals that just end up not working. Then we have to decide whether to change them or get rid of them and try something different instead. For example, I made a goal to exercise 4 times a week in the early afternoon. Due to my work schedule, I can't exercise that often during that time of day, so I revised my goal to say I'm going to work out 4 times a week in the morning.

On the other hand, there are some goals that don't have an easy solution. I could make a goal to have a peaceful environment with no arguing in the evening, but we can't control if our family or roommates argue. In this case I need to get rid of that goal and





### Sleep Health Tips for Teens

- 1) Get about 9 hours of sleep each night.
- 2) Limit naps to 30 or 45 minutes at most, and only before 4pm.
- 3) Avoid exciting or highly stimulating activities before sleep. This includes violent or exciting TV, movies, video games, and heavy studying, etc.
- 4) Avoid alcohol & drugs.
- 5) Avoid caffeine after 2-4pm. This includes coffee, tea, soda, chocolate, etc.
- 6) Practice mindfulness relaxation such as progressive relaxation before bed.
- 7) Avoid electronics right before bed. Keep your cell phone, laptop, and other electronics out of reach of your bed at night.
- 8) If you do use electronics in bed, use your settings to dim the lights on your phone, TV, or computer. Some phones have a setting to reduce blue light.
- 9) Take a warm bath or shower a couple of hours before bed.
- 10) Eat your last large meal at least a couple of hours before it's time to sleep. Large meals and spicy foods too close to bedtime makes your digestive system work too hard while you're trying to sleep.
- 11) Maintain a regular sleep routine. For example, go to bed at 9pm each night and wake up at 6am every day.
- 12) On the weekends, wake up within at least 2 hours of when you would normally wake up on weekdays (to keep a steady sleep-wake balance).
- 13) Turn down the lights and close your blinds or curtains in the evenings.
- 14) Exercise during the morning or the early afternoon.
- 15) Keep your room temperature low at night.
- 16) Turn off all lights before going to bed.
- 17) Wear socks if your feet get too cold to improve circulation while you sleep.
- 18) Allow yourself to stop e-mails and texting at least an hour before bed.
- 19) If you wake up during the night, don't use any electronics.
- 20) If you find yourself checking the time at night, hide any clocks before bed.
- 21) Turn off the TV or any extra noise that may disrupt your sleep. If you need background noise, use a fan, white noise, or relaxing instrumental music without lyrics instead.
- 22) *If you have trouble falling asleep at night:* 1) get up when you think it has been about 20 minutes. Don't watch the clock though; 2) Go somewhere quiet, peaceful and dimly lit and do something relaxing (e.g., look at a magazine, write about something inspiring or peaceful, listen to chill music); 3) Return to bed when sleepy; 4) Repeat steps 1-3 until you fall asleep.

## **Sleep Health Journal**

### **Lesson 6: 1st Sleep Plan Check-In**

#### **Lesson Objectives**

1. Teens will practice identifying solutions to their sleep health barriers.
2. Teens will revise personal sleep plans.

#### **Psychoeducation: What You Need to Know**

During the first unit of enrichment this year, we discussed the importance of sleep and how to create sleep plans to improve our sleep habits. We completed a 4-step process to develop individual sleep plans for each of us. Step 1 was to Observe our sleep habits. Step 2 was to Set Goals. Step 3 was to Revise Goals, and step 4 was to Make a Sleep Plan.

Today we're going to use this journaling time to check in and see how our sleep plans are working out. You can use this time to think about the goals in your sleep plan, and revise or replace them if you would like. Remember sometimes you may have a goal that you really want to use, but something is getting in the way of you reaching that goal. For example, I have a sleep goal of relaxing with a few minutes of mindful breathing before I go to sleep. The biggest barrier to this is I just forget to do it. I want to keep mindful breathing as a goal in my sleep plan, so I'm going to put a timer in my phone to remind me when it's time for me to do the relaxation.

On the other hand, there are some problems that don't have an easy solution. Like I want to buy a more comfortable bed, but I don't have extra money for that right now. In this case I'm putting that goal on hold and replacing it with a goal that I can really make happen.

You may remember a lot of tips for healthy sleep routines that we learned at the beginning of the year. I'm going to give you the full list again just in case there are some goals you don't remember. Also, in your journals you will find your sleep plans that you made at the beginning of the year. Today you will use your journaling activity to think about how helpful your first sleep plan has been, and change or replace any goals that aren't working for you.



## **Sleep Health Journal**

### **Lesson 7: 2nd Sleep Plan Check-In**

#### **Lesson Objectives**

1. Teens will practice identifying solutions to their sleep health barriers.
2. Teens will revise personal sleep plans.

#### **Psychoeducation: What You Need to Know**

During the first unit of this year’s enrichment, almost a year ago, we began learning about the importance of sleep and how to create sleep plans to improve our sleep habits. We completed a 4-step process to develop individual sleep plans for each of us. Step 1 was to Observe our sleep habits. Step 2 was to Set Goals. Step 3 was to Revise Goals, and step 4 was to Make a Sleep Plan.

Then about halfway through the year, we checked in and see how our sleep plans were working out, and we updated our sleep plans. Today we’re going to use this last journaling time to check in one last time on our sleep plans. You can think about the goals in your sleep plan, and revise or replace them if you would like. Remember sometimes you may have a goal that you really want to use, but something is getting in the way of you reaching that goal. For example, one goal that really helped me get better sleep was to relax for a few minutes with mindful breathing before I go to sleep. The biggest barrier to me reaching this goal is when I forget to do it. To keep my mindful relaxation as a goal in my sleep plan, I decided to put a timer in my phone to remind me of when it’s time to do the relaxation.

On the other hand, there are some problems that don’t have an easy solution. Like when you want to have a peaceful, quiet household at night, by your family is loud or argues too much. You can set a different goal that can help make your evenings more relaxing—something you can actually control, like listening to music that’s calm and relaxing. Sometimes by listening to music we like, we can tune out other background noise that’s annoying or stressful.

You may remember a lot of tips for healthy sleep routines that we learned this year. I’m going to give you the full list again just in case there are some goals you don’t remember. Also, in your journals you will find your sleep plans that you updated about halfway through enrichment this year. Today you will use your journaling activity to think about how helpful your updated sleep plan has been, and change or replace any



### B.1. Meditation Feedback Form

**Age:**                      **Gender** (*circle or mark one*):    Female      Male      Non-Binary

*Circle or mark your answer for these 5 questions.*

- |                                                            |    |    |     |     |
|------------------------------------------------------------|----|----|-----|-----|
| 1) <b>I enjoyed this activity.</b>                         | NO | no | yes | YES |
| 2) <b>I would like to do this activity again.</b>          | NO | no | yes | YES |
| 3) <b>I see a benefit or value in doing this activity.</b> | NO | no | yes | YES |
| 4) <b>This activity would be easy to use by myself.</b>    | NO | no | yes | YES |
| 5) <b>This activity was relaxing.</b>                      | NO | no | yes | YES |

**What do you think of this activity?** (*write whatever comes to mind*)

## B.2. Adverse Childhood Experiences Questionnaire

While you were growing up/prior to your 18th birthday did a parent or other adult in the household often or very often: (yes/no)

1. Swear at you, insult you, put you down, or humiliate you?
2. Act in a way that made you afraid that you might be physically hurt?
3. Push, grab, slap, or throw something at you?
4. Ever hit you so hard that you had marks or were injured?

Did an adult or person at least 5 years older than you ever...

5. Touch or fondle you or have you touch their body in an inappropriate way?

Did you often feel that...

6. No one in your family loved you or thought you were important or special?
7. Your family didn't look out for each other, feel close to each other, or support each other?
8. You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?
9. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
10. Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
11. While you were growing up, were your parents ever separated or divorced?

Was your mother or stepmother:

12. Often or very often pushed, grabbed, slapped, or had something thrown at her?
13. Sometimes, often, or very often kicked, bitten hit with a fist, or hit with something hard?
14. Ever repeatedly hit at least a few minutes or threatened with a gun or knife?
15. Did you live with a household member that was depressed or mentally ill, or did a household member ever attempt suicide?
16. Did a household member go to prison?
17. Did other kids, including brothers or sisters, often or very often hit you, threaten you, pick on you or insult you?
18. Did you often or very often feel lonely, rejected, or that nobody liked you?
19. Did you live for 2 years or more in a neighborhood that was dangerous, or where you saw people being assaulted?
20. Was there a period of 2 or more years when your family was very poor or on public assistance?
21. Are there other adverse (negative) childhood experiences that were not included in these questions that you feel we should know about? (OPEN ENDED)



### **B.3. Screen for Child Anxiety and Related Emotional Disorders**

Below is a list of sentences that describe how people feel.

Read each phrase and decide if it is:

- “Not True or Hardly Ever True” (0)
- “Somewhat True or Sometimes True” (1) or
- “Very True or Often True” for you (2)

Then, for each sentence, fill in one circle that corresponds to the response that seems to describe you for the last 3 months.

1. I get really frightened for no reason at all.
2. I am afraid to be alone in the house.
3. People tell me that I worry too much.
4. I am scared to go to school.
5. I am shy.

#### **B.4. Short Mood and Feelings Questionnaire**

This form is about how you might have been feeling or acting recently. For each question, please check how much you have felt or acted this way in the past two weeks. If a sentence was true about you most of the time, check TRUE. If it was only sometimes true, check SOMETIMES. If a sentence was not true about you, check NOT TRUE.

1. I felt miserable or unhappy.
2. I didn't enjoy anything at all.
3. I felt so tired I just sat around and did nothing.
4. I was very restless.
5. I felt I was no good any more.
6. I cried a lot.
7. I found it hard to think properly or concentrate.
8. I hated myself.
9. I was a bad person.
10. I felt lonely.
11. I thought nobody really loved me.
12. I thought I could never be as good as other kids.
13. I did everything wrong.



## **B.6. Self-Efficacy for Teen Conflict**

How often do you... (never/not often/sometimes/very often/always)

1. Stay out of fights?
2. Understand another person's point of view?
3. Calm down when you are mad?
4. Talk out a disagreement?
5. Learn to stay out of fights?

## VITA

KELLY DIANE CROMER

kcromer@fiu.edu

- 2014-Current Florida International University  
*Degree:* Doctor of Philosophy (Ph.D.)  
*Area of Study:* Clinical Science in Child and Adolescent Psychology  
*Faculty Mentor:* Stacy Frazier, Ph.D.  
*GPA:* 3.86
- 2009-2012 Auburn University Montgomery  
*Degree:* Master of Science (M.S.)  
*Area of Study:* Clinical Psychology  
*GPA:* 4.0
- 2004-2009 Auburn University Montgomery  
*Degree:* Bachelor of Science (B.S.)  
*Area of Study:* Psychology  
*GPA:* 3.88

## PUBLICATIONS AND PRESENTATIONS

- Cromer, K.D., D'Agostino, E. M., Hansen, E., Alfonso, C., & Frasier, S. (2019). After-school poly-strengths programming for urban teens at high-risk for violence exposure. *Translational Behavioral Medicine (in press)*. doi: 10.1093/tbm/ibz013
- Frazier, S., Chou, T., Ouellette, R. R., Helseth, S., Hedemann, E., & Cromer, K. D. (2019). Workforce support for urban after-school programs: Turning obstacles into opportunities. *American Journal of Community Psychology (in press)*.
- Mendez, L., Cromer, K. D., & Villodas M. T. (2018). Pathways to drug delinquency among adolescents at high-risk for victimization. *Psychology of Violence (in press)*. doi: 10.1037/vio0000230
- Cromer, K. D., Chou, T., & Villodas, M. T. (2018). Psychological distress pathways to suicidal ideation in adolescents at high-risk for victimization by violence. *Psychology of Violence (in press)*. doi: 10.1037/vio0000200
- Cromer, K. D., & Villodas, M. T. (2017). Post-traumatic stress as a pathway to psychopathology among adolescents at high-risk for victimization. *Child Abuse & Neglect, 67*, 182-192. doi: 10.1016/j.chiabu.2017.02.025

- Ogle., R. R., Frazier, S. L., Helseth, S. A., Cromer, K., & Lesperance, N. (2017). Does poverty moderate psychosocial treatment efficacy for ADHD? A systematic review. *Journal of Attention Disorders*. doi: 10.1177/1087054717707044
- Cromer, K. D., & Villodas, M. T. (2017). The role of posttraumatic stress as a pathway to psychopathology among youth at high-risk for victimization. *Psychology of Violence*, 7(1), 12-21. doi: 10.1037/vio0000034
- Villodas, M. T., Cromer, K. D., Moses, J. O., Litrownik, A. J., Newton, R. R., & Davis, I. P. (2016). Unstable child welfare permanent placements and early adolescent physical and mental health: The roles of adverse childhood experiences and post-traumatic stress. *Child Abuse & Neglect*, 62, 76-88. doi: 10.1016/j.chiabu.2016.10.014
- Cromer, K. D., Alfonso, C., D'Agostino, E., Hansen, E., Pena, M., & Frazier, S. L. (2019, April). *After-School Park Internship Program for Urban Teens at High-Risk for Violence Exposure: A CBPR Approach to Poly-Strengths Programming*. Oral presentation at the ResilienceCon Conference, Nashville, TN.
- Cromer, K. D. & Villodas, M. T. (2017, November). *Joint Trajectories of Post-Traumatic Stress and Externalizing Problems Among Youth at High-Risk for Victimization by Violence*. Poster presentation at the Association for Behavioral and Cognitive Therapies Conference, San Diego, CA.
- Cromer, K. D., Villodas, M. T., & Magariño, L. (2017, April). *Potential Protective Factors in Post-Secondary Educational Attainment Among Youth Exiting Foster Care*. Oral presentation at the ResilienceCon Conference, Nashville, TN.
- Cromer, K. D., Garcia, K. A., & Villodas, M. T. (2016, July). *Differential Pathways to Suicidal Ideation Among Male and Female Adolescents at High-Risk for Victimization by Violence*. Oral presentation at the International Family Violence and Child Victimization Conference, Portsmouth, NH.
- Cromer, K. D. & Villodas, M. T. (2015, November). *The Role of Posttraumatic Stress as a Pathway to Psychopathology Among Youth at High-Risk for Victimization by Violence*. A poster presentation at the Association for Behavioral and Cognitive Therapies Conference, Chicago, IL.
- Cromer, K. D., Mendez, L., Potes, S., Garcia, K., Martinez, J., Khan, I., & Villodas, M. (2015, May). *Post-Traumatic Stress as a Pathway to Psychopathology Among Adolescents At-High-Risk for Violence Victimization*. Oral presentation at the South Florida Child Psychology Research Conference, Miami, FL.