Stress and Coping in an Inner-City Environment: The Cities Mentor Project Coping Intervention with Youth Living in Urban Poverty

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Stress and Coping in an Inner-City Environment: The Cities Mentor Project Coping

Intervention with Youth Living in Urban Poverty.

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Abstract
Stress theory posits that exposure to stress predicts negative outcomes (Grant et al., 2003). Children residing in urban poverty are often exposed to multiple stressors which deleteriously impacts social, emotional, and academic well-being. The current study, which is derived from the Cities Mentor Project intervention, is a randomized control trial (RCT) designed to assess the impact of a coping curriculum (along with mentor support) on how adolescents cope with stressors. Participants were 54 6th grade students (31 intervention, 23 control), who ranged in age from 11-13 years old ($M= 11.35$, $SD= 0.52$), and 59.3% of participants were female. All participants identified as African-American. This study explores the coping strategies used by the groups receiving the coping and mentor intervention versus a demographically similar control group. Results suggest that children were able to learn and increase usage of more optimal coping strategies for dealing with academic stress (i.e., engagement coping) and violence stress (i.e., disengagement coping). However, results also suggest that children may have learned to overgeneralize coping strategies as they also showed a pattern of increased usage of sub-optimal coping strategies for dealing with academic stress (i.e., disengagement coping) and violence stress (i.e., engagement coping). Future research should be conducted to better understand how different mechanisms of the intervention influence how children use coping strategies.
The ability to adapt to stress and adversity often dictates how an individual’s developmental trajectory unfolds. Successful adaptation to stressors includes multiple processes, such as cognitive, emotional, and behavioral regulation. Through these processes, an individual develops coping mechanisms and strategies to deal with stress, which can lead to well-adjusted or maladjusted outcomes (Grant et al., 2003).

**Controllable versus Uncontrollable Stressors**

The literature suggests that a common way of conceptualizing stressors is as: controllable versus uncontrollable stressors. Clarke (2006) defined a controllable stressor as “the degree to which the objective conditions of a stressful situation can be prevented or eliminated by the abilities, resources, or actions of a typically developing child or adolescent (pg. 13).” The objective conditions refer directly to the observable events or experiences of the children or adolescents without taking into account their subjective emotional responses to a stressor (Clarke, 2006). Controllable stressors often faced by adolescents include peer or sibling conflicts or exams. Uncontrollable stressors refer to objective events or conditions in which the individual seemingly has little to no control to eliminate or prevent such circumstances. Examples of uncontrollable stressors include parental discord or divorce, illness of a family member, and natural or human-made disasters.

Coping in childhood and adolescence is viewed as “conscious volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances (Compas et al., 1999).” This broad definition of coping entails multiple aspects of the stress and coping response system involves a complex interaction between an individual’s biological, cognitive, social, and emotional regulatory processes.

*Stress theory/paradigm*
Stress theory posits that exposure to environmental stressors is associated with negative outcomes in multiple domains; most notably in the areas of psychological, physical, and socioemotional functioning (Grant et al., 2003). In particular, youth from urban, low-income backgrounds are disproportionately exposed to a range of environmental stressors; thus, they are at greater risk for negative outcomes (Grant et al., 2003; Carothers, Tyler, & Grant, 2014). Furthermore, African-American youth are more likely to suffer from urban poverty and are disproportionately exposed to the severe and chronic stressors linked to these social living conditions (Gaylord-Harden et al., 2010; Sánchez, Colón, Feuer, Roundfield, & Berardi, 2014). The stress paradigm also predicts that developmental outcomes can be mitigated by protective processes that promote resilience in youth, particularly coping skills and supportive adult relationships (Grant et al., 2003; Grant et al., 2000; Luthar, Cicchetti, & Becker, 2000). Yet, there is substantial evidence that low-income youth have limited opportunity to gain access to coping strategies needed for managing the stressors they experience (e.g., exposure to violence, poverty) as well as engage with academic challenges (Galaif, Sussman, Chou, & Wills, 2003; Tolan, Sherrod, & Gorman-Smith, 2004; Skinner & Zimmer-Gembeck, 2007). The need for these skills is readily apparent during adolescence when social and behavioral problems increase while academic engagement and achievement decrease for low-income students (Benner & Yijie, 2014; Cauce, Stewart, Rodriguez, Cochran, & Ginzler, 2003; Ellerbrock & Kiefer, 2013).

**Stress and academic outcomes in the context of urban poverty**

Research has shown a consistent pattern of substantial disparities in both academic engagement and achievement between children residing in urban poverty and individuals living outside of the impoverished context in the U.S. (Huston et al., 1994; Leventhal & Brooks-Gunn, 2004; Swanson, 2009). Aside from the economic constraints that children from low-income urban
neighborhoods must face, there are also many concomitant stressors that are associated with low academic achievement; in particular, many of these children attend under-resourced schools and are exposed to greater levels of community violence. Over the past fifty years, these problems have drawn considerable attention from policy makers, which has led to policy initiatives such as Head Start, and more recently, former President Obama’s “Ladders of Opportunity” program (U.S. Dept. of Education, 2013). However, despite these efforts, deleterious disparities in achievement continue, and school failure occurs at elevated rates in low-income urban communities (Swanson, 2009). There is considerable research evidence that shows an association between stressors directly compromising learning outcomes (Crean, 2004; Frydenberg et al., 2004; Henrich, Schwab-Stone, Fanti, Jones, & Ruchlch, 2004) as well as indirectly influencing these outcomes through social and behavioral consequences (Cunningham, Hurley, Foney, & Hayes, 2002; Goodman, Miller, & West-Olatunji, 2012; Spenciner et al., 2013).

Need for Coping Interventions

There is substantial evidence that youth living in low-income environments have limited opportunity to gain facility with coping strategies needed to both manage the stressors they experience and engage with academic challenges (Galaif, Sussman, Chou, & Wills, 2003; Whaley, & Davis, 2007; Tolan, Sherrod, & Gorman-Smith, 2004). There also is evidence that coping training can provide this opportunity for these youth, especially if scaffolding by adults is also provided (Duffy, Gaylord-Harden et al., 2014; Grant, McMahon, Carter, Carleton, Adam, & Chen, 2014; Heller et al., 2013; Lochman et al., 2013). Even the most severely stressed youth could benefit from coping strategies if they also experienced at least one relationship with a supportive adult and at least one connection to a protective setting (e.g., family, school, church;
Grant et al., 2014). Furthermore, the results of a recent coping study with 154 maltreated preadolescents placed in foster care suggests mentoring relationships are an efficacious way for improving vulnerable children’s coping skills (Chesmore, Weiler, & Taussig, in press).

**Academic Stressors and Violence Stressors**

Two specific types of stressors often faced by individuals living in urban poverty are: academic stress and violence stress. Academic stressors include homework assignments, class projects, and exams, which are used to evaluate an individual’s academic performance. Academic stress is often conceptualized as a controllable stressor (Compas et al., 2002; Farrell et al., 2010). Violence stress refers to community violence that occurs within the environment in which one resides. Child and adolescent exposure to community violence, which is typically conceptualized as an uncontrollable stressor, is highly prevalent in low-income urban areas (Rasmussen, Aber, & Bhana, 2004).

**Optimal matching of coping strategies based on stressor type**

In reviewing the coping literature, there is growing evidence that efficacy of particular coping strategies is dependent on the types of stressor to which they are matched (Elzy et al., 2013; Gaylord-Harden et al., 2008; Sánchez et al., 2013). For example, research indicates that an optimal approach for dealing with academic stress is active engagement coping (Compas et al., 2001; Duffy, Gaylord-Harden et al., 2017). Engaged approaches to coping includes responses that are oriented either directly toward the source of stress (e.g., failing an exam). This can be thought of as taking a more active engagement approach to deal with the stressor, such as problem-solving, or social support seeking that is directed toward changing the stressor (Duffy, Gaylord-Harden et al., 2017). Furthermore, active, engaged, problem-focused approaches are generally the most effective for youth exposed to normative rates and types of stress, yet can be
ineffective or iatrogenic when paired with uncontrollable stressors (Compas et al., 2001; Carothers et al., 2016; Rosario et al. 2003). Thus, research suggests that while actively engaged coping may be a successful strategy for less severe stressors, this same coping strategy may be related to negative outcomes for youth when exposed to severe uncontrollable stress (Compas et al., 2002; Carothers et al., 2016).

On the other hand, avoidant strategies are typically ineffective when paired with typical or controllable stressors, but can be protective when paired with severe uncontrollable stressors (Reife et al., 2017; Gaylord-Harden et al., 2008). Behavioral avoidance coping responses, conceptualized as disengagement coping (Compas et al., 2001), are oriented away from the stressor or one’s emotions or cognitions in relation to the stressor. These often include avoidant coping responses such as withdrawal, but often entail strategies that involve disengagement through redirection of attention (i.e., cognitive distraction), or social support seeking related to behavioral avoidance, distraction, or acceptance strategies (Compas et al., 2001; Forehand et al., 2012). The capacity to effectively match the right type of coping strategy with the right type of stressor is a complex cognitive task that is challenging for all youth but especially for low-income urban youth who experience the entire range of relatively controllable adolescent stressors (e.g., academic challenges) in addition to many serious uncontrollable stressors (e.g., community violence; Farrell et al., 2010; Katz et al., 2012).

Aside from being more likely to face violence stressors (Gutman et al., 2005), children from low-income areas are also less likely to have the opportunities to observe, learn, and use effective coping strategies necessary for managing the severity and frequency of the stressors they experience (Grant et al., 2014). Qualitative and quantitative studies of coping in the context of urban poverty indicate that many lack the ability to articulate responses that describe effective
coping in relation to the developmental, social, and context specific stressors common in their communities (Grant et al., 2014). Further, there is evidence that when low-income urban youth use coping strategies that have been found to be effective in other settings, they often do not derive the same benefits due to the chronic, and often, severe nature of the stressors they experience (Grant et al., 2000; Carothers et al., 2016). Moreover, what may be an effective coping strategy in one context may not have the same benefits in another where there are increased severity or uncontrollability of stressors (Compas et al., 2002).

**Rationale for coping training**

Programs that are focused on affecting coping while providing access to caring adults (i.e., mentoring programs) may have significant importance in increasing school achievement, engagement, and completion for youth in low-income urban neighborhoods as a result of fewer adults being available to meet the needs of youth in these communities (Hart et al., 2004). Youth in these communities often face a higher likelihood of single-parenthood, marital separation and divorce, death of parent(s), residential turnover and instability, family isolation, and significantly less industry and commerce that employ adults in these communities. Invariably, these factors all contribute to the substantially higher child to adult ratios prevalent in low income urban communities relative to more affluent communities (Hart et al., 2004). Additionally, the adults who do live in these communities are often less accessible to the youth, due to the fact that they face many of the same stressors that youth face, which may lead to limited capacity for providing nurturance and support to youth (Grant et al., 2005; Gutman et al., 2005; Williams & Sanchez, 2013). Thus, in low-income urban neighborhoods, there seems to be a combination of a greater need for access to caring adults along with less supportive adults available who can provide the type of coping supports these youths need.
There is emerging evidence that coping training allows for meaningful opportunities for youth to deal with stressors in a more well-adjusted fashion, especially when scaffolding by adults is provided (Heller et al., 2013; Duffy, Gaylord-Harden et al., 2017). Mentoring has been established as an effective way to promote emotional, behavioral, and academic outcomes for youth, with the greatest benefits occurring when mentors take on an active teaching and advocacy role (DuBois et al., 2011; Tolan et al., 2014). The Cities Mentor Project looks to use mentoring as a supportive vehicle for providing coping training to youth living in urban poverty. The current study looks to build upon existing theory and empirical findings on stress and coping via a random assignment trial of a contextually relevant, mentoring-supported coping program for aiding academic achievement for low-income urban youth. Furthermore, the program is designed to help low-income urban youth improve their social and behavioral outcomes through learned coping strategies.

Initial Analyses with the Cities Mentor Project

Duffy and colleagues (2017) conducted a comprehensive study that evaluated the effects of the Cities Mentor Project and group differences between the experimental and control groups. They found that youth in the intervention group displayed less attention problems, less problems with locus of control and sense of inadequacy, and earned better grades in reading while also showing better study skills and adaptive skills (Duffy et al., 2017). The authors concluded that the results indicated the intervention had many positive effects, but that they do not know whether the intervention had these effects as a result of changes in coping with stressors, changes in relationships with adults, or a combination of both.

The Cities Mentor Project was developed to provide individual skills training with supports at the interpersonal and systems levels in order to offset poverty’s negative effects during early
adolescence. The Cities Mentor Project theory of change builds upon the stress paradigm previously discussed. The theory of change is that relationships with adults (facilitated by connections to mentors and positive after-school programming) will foster adaptive coping strategies and that adaptive coping strategies will further strengthen relationships with adults. These effects are expected to extend beyond the specific relationships with mentors to also improve relationships with teachers and parents, which will further impact student engagement, achievement, and school completion. Further, positive relationships with adults and improved coping are expected to lead to improved academic outcomes directly and indirectly through improved social and behavioral outcomes (Duffy et al., 2017). Figure 1 depicts the complete theory of change, logic model for the Cities Mentor Project.

Theory of change logic model measures.

Academic Outcomes

Severe and Chronic Stressors

URBAN POVERTY
Social and Behavioral Outcomes

Coping Strategies

Relationships with Adults

Compromised Systems

INTERVENTION

Coping Curriculum

INTERVENTION

Community Partnerships and Mentoring

Figure 1. Theory of Change, Logic Model. Mechanisms through which Cities Mentor Project is expected to affect processes linking urban poverty with negative social, behavioral, and academic outcomes.

Intervention

This study focuses on when the program was run during one academic school year for a total of six months (November 2013 – April 2014). The clinical element of this project is a three-pronged intervention, which includes a protective settings component, a mentor component, and a coping skills training component.

Aims and Questions
Initial analyses will test the types of coping responses are being used by study participants at the beginning of the intervention (i.e., baseline) and at the completion of the first year of the intervention (i.e, at the end of the school year). The current study also aims to use a randomized controlled trial to evaluate the mechanisms of change for the Cities Mentor Project on the second cohort of enrolled youth in the program by evaluating group differences on coping outcomes. Based on the stress and coping model of change, the following hypotheses have been developed: Hypothesis I: Youth in the intervention condition will be more likely than the control group to match active, engaged coping strategies in response to controllable stressors (e.g., academic stress). In particular, youth in the intervention condition will use active, engaged coping strategies, such as problem-solving, cognitive restructuring, and emotional regulation to facilitate greater coping with controllable stressors, such as academic stress. Hypothesis II: Youth in the intervention condition will be more likely than the control group to match disengaged behavioral avoidance coping strategies, such as distraction and avoidance to deal with uncontrollable stressors (i.e., violence stress).

**Methods**

This was a multisite, randomized, no treatment controlled, parallel-group study conducted in a large urban midwestern city in the United States (3 schools). All schools were located in Englewood, an under-resourced neighborhood on the southwest side of Chicago, Illinois USA. Since the time of the Great Migration, the African American population has steadily grown in Englewood, and today African Americans represent over 99% of Englewood’s population. As a result of historical and contemporary discrimination, Englewood has long
struggled with poverty, crime, and violence. In 2012, the median household income was $11,993, and the unemployment rate was double that of the city at large (Tu, 2013). At the close of 2011, the overall murder rate in Chicago had decreased by 2%, but increased by 40% in Englewood (city-data.com, 2013). Englewood currently ranks as the 4th most violent of Chicago’s 77 communities (http://crime.chicagotribune.com/chicago/community/englewood). Englewood has organized to secure additional resources, culminating in the relocation of Kennedy King College and the construction of Urban Prep Academies and St. Bernard’s Housing Development. Despite these efforts, Englewood continues to experience economic struggles manifest in abandoned and deteriorated buildings, few businesses, few safe community spaces, and under-resourced and under-performing schools.

Three schools that had 75% or more of students receiving free or reduced lunch were recruited for this project. The first school is 98% African American and 92% low income; 12% of the students exceeded state standards on the Illinois State Achievement Test (ISAT) composite. The second school is 88% low income and 98% African American; 5% of students exceeded state standards on the LSAT (Chicago Public Schools, 2014).

Participants

Participants were 54 6th grade students (31 intervention, 23 control). Participants ranged in age from 11-13 years old ($M=11.35$, $SD=0.52$), and 59.3% of participants were female. All participants identified as African American. Table 1 below specifies descriptive information across conditions for each partner school.

<table>
<thead>
<tr>
<th>Table 1. Characteristics of Participants in Cohort Two (N = 54)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
</tbody>
</table>
### Child

<table>
<thead>
<tr>
<th>Age (mean (SD))</th>
<th>11.45 (.57)</th>
<th>13.45 (2.32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age range</td>
<td>11-13</td>
<td>11-13</td>
</tr>
<tr>
<td></td>
<td>% (n)</td>
<td>% (n)</td>
</tr>
</tbody>
</table>

| Grade           | 100 (31)    | 100 (23)    |
| Female          | 61.3 (19)   | 100 (23)    |

### Race

<table>
<thead>
<tr>
<th>Race</th>
<th>% (n)</th>
<th>% (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/Caucasian</td>
<td>60.5 (89)</td>
<td>57.7 (23)</td>
</tr>
<tr>
<td>Black/African American</td>
<td>19.7 (29)</td>
<td>20.0 (8)</td>
</tr>
<tr>
<td>Biracial</td>
<td>6.1 (9)</td>
<td>7.5 (3)</td>
</tr>
<tr>
<td>Other/Prefer Not to Respond</td>
<td>10.2 (15)</td>
<td>7.5 (3)</td>
</tr>
</tbody>
</table>

**Protective Settings.** A protective setting is a program or place/site, which provides youth with a safe place to spend time after school, and in turn protects them from the stress that arises from gang violence or other stressors in their community. The project partnered with community organizations, which provided protective settings to youth from Englewood: Salvation Army, St. Sabina Catholic Church, and YOUMedia.

Both the Salvation Army and St. Sabina provide a number of services to surrounding community members of all faiths including programs focused on sports, the arts, computer/digital media,
and academic support. St. Sabina also offers food, clothing, and financial assistance to families in need. YOUMedia connects CPS students with books and media, with the goal of engaging students in projects that promote critical thinking, creativity, and skill building.

All participants in the intervention condition were required to enroll in one of the aforementioned after-school programs. However, if none of these piqued the youth’s interest, or if the youth were already enrolled in an after-school program, they were free to select an after-school program of their own. Project staff provided transportation to the various protective settings so that the youth could attend these programs four days a week.

**Coping Curriculum.** The coping curriculum is focused on skill building. First, the focus is on “pro-active” skills, or activities that have been proven effective in combating the negative effects of stress (e.g., exercise, eating healthy, social support). Next, the curriculum introduces common barriers that get in the way of feeling good and reaching set goals. Youth identify stressors they face relevant to their inner-city environment and are then taught how to identify which stressors are in their control (e.g., not doing well on math tests) and which are out of their control (e.g., parents getting a divorce). Lastly, the curriculum then shifts to a focus on “re-active” skills, in which it teaches specific coping skills and engages the youth in conversations about which skills work better for which types of stressors (controllable versus uncontrollable). Furthermore, reminders about being “pro-active” in daily life is emphasized in each session, as well as discussion around how stressors impact the goals youth have set for themselves and how the skills they have learned can help them reach their hopes, dreams, and wishes for the future.

During the six month intervention, coping sessions were 120 minutes in length and held every month at one of the participating schools. All coping sessions were implemented by trained DePaul University graduate students. Further, during coping sessions, all children were
accompanied by their mentors (or DePaul graduate students), as these adults were available to help students understand the session material. Coping curriculum agendas included review of out-of-group coping practice assignments, an introduction of activities for the day, teaching, and activities between mentee-mentor pairs or groups of pairs to practice what was being taught that day. Sessions concluded with an explanation of the out-of-group coping assignment for the week. Youth and their mentors then completed a brief satisfaction form and a designated program staff completed the fidelity measure for that session’s curriculum.

**Measures**

The Response to Stress Questionnaire (RSQ; Conner-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000) was used to assess effective coping. Previous studies have established the psychometric reliability and validity of the RSQ using a five-factor model (Conner-Smith et al., 2000). The RSQ shows both internal consistency and test-retest reliability for the five factors ranges from adequate to excellent (Connor-Smith et al., 2000). The RSQ also shows high concurrent validity levels, which were established with another measure of coping, heart rate reactivity, and correlations of self- and parent-reports (Connor-Smith et al., 2000). The RSQ was designed to be adapted to specific stressors, and in this study, was adapted to assess youths’ responses to Violent Stress, which includes 14 items (see Appendix 1), and Academic Stress, which includes 14 items (see Appendix 2).

All items are rated on a four-point Likert-type scale response set focusing on frequency of coping strategy use, ranging from “not at all” to “a lot.” Items are scored to create 10 different subscales of specific coping strategies. The subscales can then be combined to create composites of overarching coping style (e.g. primary control engagement, secondary control engagement,
primary control disengagement, secondary control disengagement). These scores help understand
to what extent are children using different types of coping for common stressors they experience.

Next, the primary control engagement coping and secondary control engagement coping
variables were averaged into one variable: Control Engagement Coping (CEC). Furthermore, the
primary control disengagement coping and secondary control disengagement coping into one
composite scale: Control Disengagement Coping (CDC). These computations were conducted in
order to understand how much children were utilizing engagement and disengagement coping
strategies within the context of different types of stressors.

For academic stressors, we hypothesized that problem-solving would facilitate greater academic
coping. Sample items for academic stressors include: “I tell myself I can get through this, or that
I will be okay or do better next time,” “I try to make things better at school or with my school
work,” and “I try to change what is happening.” Whereas with violence stressors, we
hypothesized that distraction and avoidance were two coping mechanisms that would facilitate
greater coping with violence. Sample items for violence stressors include: “I try to get my mind
off the situation by doing or thinking about something else (like playing a sport or watching
T.V.),” “I try to do something else or think about something else so that I am not thinking about
the violence,” and “I just have to get away from everything when I am dealing with the stress of
violence.”

Procedures

Recruitment. To determine low-income status, schools were selected if they had 80% or more
of their students receiving free or reduced-price lunch. Once schools were selected, project staff
reached out by means of phone calls to the schools’ principals and discussed briefly with them
the purpose and goals of the project. If interested, the principals were provided with more information and project logistics.

Participants were recruited using a standardized approach. Research assistants went into the schools and informed the youth about the project and what it entailed. All youth were then given information packets, which included consent forms, to take home. Their parents were asked to review the information and sign consent forms for themselves and their children if interested. Project staff would then return to collect any signed forms and pass out new ones if needed.

**Data collection.** Once all signed permission slips were collected from the schools, families who indicated an interest in the project were called and scheduled for baseline data collection. During this initial data collection, the youth were asked to complete a battery of questionnaires. Parents and teachers were also asked to complete socio-emotional questionnaires for participating youth. All participants were provided with compensation for their participation. Youth received $60 in gift cards per questionnaire administration ($50 for self-report and $10 if parents completed questionnaire), while parents received $10 in gift cards, and teachers received $10 in gift cards per student questionnaire completed.

All youth who expressed interest and for whom both youth and parent components of baseline registration were completed were eligible to participate in the program and study. After baselines were collected for all participants, 10 students from each school were randomly selected to receive the intervention. Four youth that were selected did not enroll in the program. The rest of the participant pool served as the control condition and were only asked to complete questionnaires without receiving the intervention.

**Data Analysis**

**Proposed Analyses**
1. *Initial analyses* will test the types of coping responses are being used by study participants across the beginning of the school year and the end of the school year. Conduct a descriptive analysis of the most (“most frequently used”) to least (“least frequently used”) used coping strategies by the intervention and control groups at two different time points (i.e., start of the intervention, and end of the first year of the intervention) using proportional scoring based on both individual coping strategies and the composite subscales from the RSQ. Further, the authors will create composite subscales from the RSQ that categorize variables into 1) control engagement coping and 2) control disengagement coping then compare those individual subscales to the total coping score of the participants in order to classify participants as low, moderate, or high on a coping style relative to their overall coping profile.

2. *Hypothesis I*: Youth in the intervention condition will be more likely than the control group to match active, engagement coping strategies in response to controllable stressors (e.g., academic stress). In particular, youth in the intervention condition will use active engagement coping strategies, such as problem-solving, emotional regulation, cognitive restructuring, positive thinking, and acceptance to facilitate greater coping with controllable stressors, such as academic stress. Analyze the use of particular coping strategies (based on different composite subscales) in relation to other types of coping strategies in response to certain stressor types. Using the RAS measures from the RSQ, we will calculate a proportional score for items based on types of coping strategies (active engagement, disengagement, etc.) used in order to answer the question of what percentage of particular coping strategies do students use for certain stressors (i.e., academic stress), and then we will use a Analysis of Covariance (ANCOVA) to determine whether or not there is a significant difference between groups at the end of the first
year of the intervention (controlling for baseline differences) on types of coping responses used for academic stressors.

3. **Hypothesis II:** Youth in the intervention condition will be more likely than the control group to match disengagement coping strategies to deal with uncontrollable stressors (e.g., violence stress). Further, youth in the intervention condition will also be more likely to use disengaged, behavioral coping strategies, such as avoidance and distraction, as coping mechanisms for uncontrollable stressors, such as violence stressors. Using the RVS measures from the RSQ, we will calculate a proportional score for items based on types of coping strategies (active engagement, disengagement, etc.) used in order to answer the question of what percentage of particular coping strategies do students use for certain stressors (i.e., violence stress), and then we will analyze the differences between the intervention and control group on types of coping strategies used (e.g., active engagement coping versus disengaged behavioral avoidance coping) to deal with violence stress using a Analysis of Covariance (ANCOVA) statistical approach. Thus, we will investigate whether students in the intervention group are more likely than the control group to match optimal coping strategies to fit the certain types of stressors (i.e., violence stress) at the end of the first year of the intervention (controlling for differences at baseline).

**Results**

A descriptive analysis was conducted to gauge the mean frequency of coping responses used by the intervention and control groups with regards to academic stressors and violence
stressors.

Table 2. Means and Standard Deviations of Coping Strategies in Response to Academic Stress

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>Intervention Group (n=31)</th>
<th>Control Group (n=23)</th>
<th>Total Group (N=54)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1</td>
<td>T2</td>
<td>M(SD)</td>
</tr>
<tr>
<td>Primary Control Engagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem Solving</td>
<td>2.07( .76)</td>
<td>2.14 (.70)</td>
<td>2.22 (.77)</td>
</tr>
<tr>
<td>Emotional Regulation</td>
<td>2.08 (.91)</td>
<td>2.17 (.82)</td>
<td>2.26 (.94)</td>
</tr>
<tr>
<td>Emotional Expression</td>
<td>2.04 (.82)</td>
<td>2.04 (.89)</td>
<td>2.14 (.79)</td>
</tr>
<tr>
<td>Secondary Control Engagement</td>
<td>1.93 (.63)</td>
<td>2.04 (.79)</td>
<td>2.07 (.63)</td>
</tr>
<tr>
<td>Positive Thinking</td>
<td>2.03 (.92)</td>
<td>2.13 (.89)</td>
<td>2.26 (.84)</td>
</tr>
<tr>
<td>Cognitive Restructuring</td>
<td>1.71 (.69)</td>
<td>1.82 (.65)</td>
<td>1.62 (.67)</td>
</tr>
<tr>
<td>Acceptance</td>
<td>2.04 (.71)</td>
<td>2.28 (.93)</td>
<td>2.32 (.81)</td>
</tr>
<tr>
<td>Primary Control Disengagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidance</td>
<td>1.90 (.75)</td>
<td>2.03 (.75)</td>
<td>2.07 (.51)</td>
</tr>
<tr>
<td>Denial</td>
<td>2.02 (.89)</td>
<td>2.04 (.79)</td>
<td>2.19 (.80)</td>
</tr>
<tr>
<td>Secondary Control Disengagement</td>
<td>1.78 (.78)</td>
<td>2.01 (.94)</td>
<td>1.94 (.72)</td>
</tr>
<tr>
<td>Wishful Thinking</td>
<td>2.31 (.75)</td>
<td>2.37 (.83)</td>
<td>2.46 (.83)</td>
</tr>
<tr>
<td>Distraction</td>
<td>2.00 (.85)</td>
<td>2.18 (.91)</td>
<td>2.17 (.10)</td>
</tr>
</tbody>
</table>

Note. The first eight strategies listed pertain to engagement coping, while the last six strategies listed pertain to disengagement coping.

Table 3. Means and Standard Deviations of Coping Strategies in Response to Violent Stress

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>Intervention Group (n=31)</th>
<th>Control Group (n=23)</th>
<th>Total Group (N=54)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1</td>
<td>T2</td>
<td>M(SD)</td>
</tr>
<tr>
<td>Primary Control Engagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem Solving</td>
<td>1.84 (.69)</td>
<td>2.14 (.74)</td>
<td>1.96 (.71)</td>
</tr>
<tr>
<td>Emotional Regulation</td>
<td>1.82 (.72)</td>
<td>2.13 (.91)</td>
<td>1.96 (.87)</td>
</tr>
<tr>
<td>Emotional Expression</td>
<td>1.91 (.89)</td>
<td>2.14 (.83)</td>
<td>1.99 (.86)</td>
</tr>
<tr>
<td>Secondary Control Engagement</td>
<td>1.80 (.78)</td>
<td>2.15 (.92)</td>
<td>1.94 (.93)</td>
</tr>
<tr>
<td>Positive Thinking</td>
<td>1.86 (.74)</td>
<td>2.04 (.60)</td>
<td>1.96 (.84)</td>
</tr>
<tr>
<td>Cognitive Restructuring</td>
<td>1.86 (.82)</td>
<td>2.09 (.81)</td>
<td>2.06 (1.12)</td>
</tr>
<tr>
<td>Acceptance</td>
<td>1.81 (.77)</td>
<td>1.79 (.64)</td>
<td>1.72 (.72)</td>
</tr>
<tr>
<td>Primary Control Disengagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidance</td>
<td>1.92 (.74)</td>
<td>2.04 (.71)</td>
<td>1.92 (.60)</td>
</tr>
<tr>
<td>Denial</td>
<td>1.89 (.84)</td>
<td>2.12 (.80)</td>
<td>1.83 (.57)</td>
</tr>
<tr>
<td>Secondary Control Disengagement</td>
<td>1.73 (.80)</td>
<td>1.96 (.81)</td>
<td>2.01 (.88)</td>
</tr>
<tr>
<td>Wishful Thinking</td>
<td>2.30 (.74)</td>
<td>2.38 (.80)</td>
<td>2.23 (.67)</td>
</tr>
<tr>
<td>Distraction</td>
<td>1.95 (.87)</td>
<td>2.24 (.76)</td>
<td>1.97 (.85)</td>
</tr>
</tbody>
</table>

Note. The first eight strategies listed pertain to engagement coping, while the last six strategies listed pertain to disengagement coping.
Tables 2 and 3 display the means and standard deviations for the subscales within the Response to Academic Stress (RAS) and Response to Violent Stress (RVS) measures, respectively. Scores generally show that students are increasing the usage of coping strategies for both academic and violent stressors.

Table 4 shows the percentage of youth from both the intervention and control groups that classify as low, moderate, or high on types of coping response styles (i.e., engagement or disengagement) relative to their total coping score.

A One-way ANCOVA was conducted to determine if there was a statistically significant difference between the intervention and control groups on post-intervention engagement coping for academic stress controlling for baseline engagement coping for academic stress. There was no significant effect of group (intervention versus control) on post-intervention engagement coping after controlling for baseline engagement coping for academic stress, $F(1, 41) = 1.08, p = .31$.

A One-way ANCOVA was conducted to determine if there was a statistically significant difference between the intervention and control groups on post-intervention disengagement coping for academic stress controlling for baseline disengagement coping for academic stress. There was no significant effect of group (intervention versus control) on post-intervention disengagement coping after controlling for baseline disengagement coping for academic stress, $F(1, 41) = 0.77, p = .39$.

A One-way ANCOVA was conducted to determine if there was a statistically significant difference between the intervention and control groups on post-intervention engagement coping for violence stress controlling for baseline engagement coping for violence stress. There was no
significant effect of group (intervention versus control) on post-intervention engagement coping after controlling for baseline engagement coping for academic stress, $F(1, 41) = 0.57, p = .46$.

A One-way ANCOVA was conducted to determine if there was a statistically significant difference between the intervention and control groups on post-intervention disengagement coping for violence stress controlling for baseline disengagement coping for violence stress. There was no significant effect of group (intervention versus control) on post-intervention disengagement coping after controlling for baseline disengagement coping for academic stress, $F(1, 41) = 0.41, p = .53$.

In sum, there were no significant differences between the intervention and the control groups with regards to coping strategies (engagement or disengagement) with academic stressors or violence stressors post-intervention even when controlling for their baseline scores on engagement and disengagement coping with academic and violence stress.

A one-way repeated measures ANOVA was conducted to assess whether or not the intervention and control groups showed any change in types of coping strategies used for both academic and violence stress over time (baseline to end of the first year of the intervention). Results indicate a significant difference between types of coping (engagement and disengagement) for different types of stressors (academic and violence); Wilks’ Lambda = .861, $F (3, 50) = 2.69, p = .056$.

Three paired samples t-tests were used to make post-hoc comparisons between conditions. A first paired samples t-test indicated that there was not a significant difference between engagement coping ($M = 2.06, SD = .08$) and disengagement coping ($M = 2.12, SD = .09$) for academic stressors after the intervention.

**Discussion**
The purpose of this study was to examine the effects of the Cities Mentor Project on the coping skills of adolescents living in urban poverty. The results of the multisite randomized control trial provided mostly unexpected insignificant effects and some effects approaching significance. Youth in the intervention group did not show significant differences from the control group in coping strategies for dealing with academic and violence stressors both at baseline and after one academic school year of the coping intervention.

The Cities Mentor Project intended to increase adaptive coping strategies while also strengthening relationships with adults, as these are important protective processes that are negatively impacted by urban poverty. Unfortunately, there were no significant differences between the intervention group and control group on effective coping strategies immediately after the intervention. The coping curriculum focuses on improving ability to identify controllable and uncontrollable stressors and pro-active strategies to cope with controllable stressors, including academic stress; while focusing on behavioral avoidance strategies to cope with uncontrollable stressors, including violence stress. While the intervention group did not show optimal matching patterns to deal with both types of stressors, they did show a propensity for increasing usage of all coping strategies (mostly active engagement) for both academic and violence stressors.

There are multiple possibilities as to why this current study yielded few significant differences between the intervention group and the control group on measures of coping. We will discuss five possibilities to explain our results as well as explore the possible implications for future interventions and research studies that focus on coping with academic and violence stressors.
First, the length of the study was relatively short-term. The mentoring and coping curriculum intervention lasted only nine months (a little less than the equivalent of a school year), which may not have been a substantial enough amount of time to see positive effects from both the mentoring relationships and coping instruction. The comprehensive model of change used in this study may have robust long-term effects, but the relative short period of time for the intervention, may not have been enough to create more optimal coping attitudes. The Cities Mentor Project, especially the first two cohorts (this study looked at the second cohort), was designed as a progressively developing intervention that measures multiple outcomes throughout the intervention. Thus, it may be that nine months was too short of a time period for such a comprehensive intervention to have large effects on coping strategies with a high-risk population. Previous research suggests that mentor interventions can take up to as long as three to four years before seeing actionable effect sizes in areas like learning and applying optimal coping strategies to stressors (Dubois et al., 2011).

Second, the idea of coping with stressors, and in turn, focusing on coping techniques, may be a novel idea to the population of this study. Developing and learning an optimal coping style, especially when dealing with things like academic and violence stress, might not only be a novel idea, but also requires a sophisticated outlook to apply and put into daily practice. Thus, having supportive adults helping youth both differentiate between various stressors as well as helping guide them toward using and focusing on more optimal matching of coping strategies for different stressors may need to be a more primary area of focus when designing a coping curriculum.

Third, with the study participants being sixth graders, the level of exposure and practice with the learned coping techniques may not have been sufficient enough to create newly formed
coping behaviors. Further, the study did not measure the underlying level of exposure to both academic and violence stress the students were exposed to, rather, the study looked at coping responses to these stressors. There may have been differences in exposure levels between and within groups to both academic and violence stressors that the study was unable to account for.

Fourth, the use of college undergraduate students serving as mentors in this study may have created a situation where the mentors may not have had enough training and the general maturation necessary to help their mentees understand, grasp, and apply sophisticated coping techniques. Prior research (Weisz et al., 2005) suggests that when working with youth living in urban poverty, the age and life experience of the mentor may be important factors. Further, this research suggests that college undergraduates may not be as reliable as mentors as someone with more age and maturation.

Fifth, while the study suggests that students are not necessarily optimizing coping strategies to fit the certain stressor types they face, there was a suggestive pattern of the intervention leading to increased overall coping with stressors. Students in both in the intervention and the control groups self-reported a relative growth in usage of both engagement and disengagement coping strategies across time. In general, this could indicate that young adolescents, regardless of receiving an intervention or not, may naturally develop an increase in both of these types of coping strategies. Further,

There are limitations to the study including the relatively small sample size that limits the representativeness of the sample as well as the generalizability of the findings. Overall, the initial findings from a previous study on the Cities Mentoring Project did show there were important effects on social-emotional functioning and academic achievement of low-income early adolescents post intervention and 1 year later (Duffy et al., 2018). However,
Going forward, it is important to focus on increasing coping curriculum development that is focused on helping youth learn how to match unique stressors to their more optimal/appropriate coping strategies. The results of the current study imply that youth may be overgeneralizing their use of engagement coping strategies to deal with both academic and violent stressors. Engagement coping strategies have been shown to be effective for managing controllable stress (Conner-Smith et al., 2000), such as academic stress, and students seem to be more readily using these strategies for dealing with academic stress. However, they are not showing an ability to differentiate between different types of stressors, (i.e., academic versus violence stress), thus leading to extending engagement coping strategies to deal with violence stress when youth should be using disengagement coping strategies to cope with stress due to violence (Conner-Smith et al., 2000). Future interventions can directly address different types of stressors, and more importantly, focus on differentiating different types of coping strategies that more optimally and effectively deal with specific types of stressors.
References


Appendix A. Response to Stress Questionnaire (RSQ) adapted specifically to measure coping responses to violent stress.

Response to Stress – Violent Stress

Measure Description: The next upcoming questions will ask you about violent experiences that may have happened to you. The questions will ask how frequent they have occurred over the PAST 6 MONTHS.

This is a list of things about violence that children and teenagers sometimes find stressful or a problem to deal with. Please choose how much a problem the things listed below have been for you in the PAST 6 MONTHS.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeing someone else get threatened with violent words</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Getting threatened with violent words yourself</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Seeing someone else get threatened with a weapon</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Getting threatened with a weapon yourself</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Seeing someone else get bothered or chased by gangs</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Being bothered or chased by gangs yourself</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Seeing someone else get beaten up or jumped</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Getting beaten up or jumped yourself</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Seeing someone seriously hurt by another person</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
How much control do you think you have over the problems you just chose?  

How have you coped with these things?

Please answer the following questions as best you can.

**When dealing with the problem of violence:**

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I try to change what is happening.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I try to stop people from being violent.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I try to change the way I think about the situation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I try to think that good things could come from the violence.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I try to accept the situation and comfort myself.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I think there is nothing I can do about the violence, so I should try to take care of myself.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I try to get my mind off the situation by doing or thinking about something else (like playing a sport or watching T.V.).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. I try to do something else or think about something else so that I am not thinking about the violence.

9. I try not to think about the violence.

10. If I find myself thinking about the violence, I try to stop.

11. I try to get help from other people.

12. I turn to other people for help with problems with violence.

13. I think about the violence over and over.

14. I cannot stop myself from thinking about the violence.

Appendix B. Response to Stress Questionnaire (RSQ) adapted specifically to measure coping responses to academic stress.

Response to Stress – School Stress

Measure Description: The next upcoming questions will ask you about school experiences that may have happened to you. The questions will ask how frequent they have occurred over the PAST 6 MONTHS. This is a list of things about school or schoolwork that children and teenagers sometimes find stressful or a problem to deal with. Please choose how much a problem the things listed below have been for you in the PAST 6 MONTHS.
<table>
<thead>
<tr>
<th>Problem</th>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doing badly on a test or paper</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting bad grades or report cards</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not understanding classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not understanding homework</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers that yell or get angry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having bad classes or teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having trouble studying</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not having your homework done</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure from parents or teachers to perform perfectly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How much control do you think you have over the problems you just chose?

How have you coped with these things?
Please answer the following questions as best you can

**When dealing with school or school work problems:**
1. I try to change what is happening. | Not at all | A little | Some | A lot |
---|---|---|---|---|

2. I try to make things better at school or with my school work. | Not at all | A little | Some | A lot |

3. I try to change the way I think about the situation. | Not at all | A little | Some | A lot |

4. I try to think that good things could come from my school problems. | Not at all | A little | Some | A lot |

5. I try to accept the situation and comfort myself. | Not at all | A little | Some | A lot |

6. I think there is nothing I can do about my school problems, so I should try to take care of myself. | Not at all | A little | Some | A lot |

7. I try to get my mind off the situation by doing or thinking about something else (like playing a sport or watching T.V.). | Not at all | A little | Some | A lot |

8. I try to do something else or think about something else so that I am not thinking about my school problems. | Not at all | A little | Some | A lot |

9. I try not to think about my school problems. | Not at all | A little | Some | A lot |

10. If I find myself thinking about my school problems, I try to stop. | Not at all | A little | Some | A lot |
11. I try to get help from other people.  ○ ○ ○ ○ ○  
12. I turn to other people for help with my school problems.  ○ ○ ○ ○ ○  
13. I think about my school problems over and over.  ○ ○ ○ ○ ○  