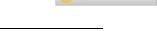
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# SPECIAL ISSUE ARTICLE



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# A randomized controlled trial of enhanced mentoring program practices for children of incarcerated caregivers: Assessing impacts on youth and match outcomes

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# **Abstract**

Parental incarceration is an adverse childhood experience that is associated with heightened risk for negative outcomes in youth. Mentoring programs seek to mitigate this risk by providing children of incarcerated parents (COIP) with a supportive relationship that fosters positive outcomes. The current study presents findings from a longitudinal evaluation of enhanced mentoring program practices designed for supporting COIP. One thousand three hundred and thirty-four COIP mentees, their parents or guardians, and their mentors were randomly assigned to receive either enhanced or business as usual (BAU) mentoring. Mentees who received enhanced mentoring demonstrated improved positive self-cognitions, and reduced internalizing behavior problems, intentions to use substances, and substance use, compared with youth who received BAU mentoring. The enhancements had no impact on the quality of mentoring relationships and the enhanced matches had shorter mentoring relationships compared with BAU matches. This evaluation demonstrates that the enhanced mentoring program practices for COIP had significant, positive impacts on outcomes for this special population of youth and suggests that enhanced practices

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tailored to COIP should be implemented throughout the duration of the mentoring relationship to be most effective.

#### **KEYWORDS**

children of incarcerated parents, delinquency prevention, mentoring, positive youth development, substance use prevention

# 1 | INTRODUCTION

For the past 40 years, the United States has experienced an era of mass incarceration (Western & Wildeman, 2009). The United States has the highest incarceration rate in the world, with nearly 2.1 million adults in jail or prison (Maruschak & Minton, 2020). Historically, over half of incarcerated adults are parents of minors (Glaze & Maruschak, 2010). Estimates from 2016 indicated that approximately 1.5 million US children have one or more parents in jail or prison (Maruschak et al., 2021) although the number of children who experience parental incarceration at some point during their childhood is much higher (Wildeman, 2009). In a glaring example of the racial inequities in the United States, Black children are over six times more likely to have a parent in prison than White children (Sykes & Pettit, 2014). The prevalence of this experience highlights the importance of understanding the impact on children.

The impacts of mass incarceration have been observed on children whose parents are among those incarcerated (Wakefield & Wildeman, 2013). There is a range of behavioral, emotional, cognitive, and social outcomes associated with the experience of being the child of an incarcerated parent (COIP). Externalizing behavior problems, including conduct disorder, noncompliance, aggression, and delinquency, are more common among COIP compared to children who have not had an incarcerated parent (Aaron & Dallaire, 2010; Kjellstrand et al., 2018; McGee et al., 2017). These behavior problems, in turn, are related to later behavior problems such as delinquency and adult criminality (Rakt et al., 2012). Internalizing problems (e.g., low self-esteem, irritability, depression, anxiety, withdrawal, and attachment problems) are more frequent among COIPs (National Research Council, 2014; Parke & Clarke-Stewart, 2002; Wakefield & Wildeman, 2011). Finally, substance use, including trying alcohol at a young age, prescription drug misuse, binge drinking, and tobacco and marijuana use are more common among adolescents who have a currently or formerly incarcerated parent compared to adolescents with no experience of parental incarceration (Davis & Shlafer, 2017).

Experiencing parental incarceration is an adverse childhood experience (Kalmakis & Chandler, 2015) due to the myriad of negative consequences associated with this life event including family instability, stress, and stigmatization (Parke & Clarke-Stewart, 2002). Incarceration of a parent can strain and destabilize familial relationships; children's living arrangements can be disrupted when a parent is incarcerated and they lose the inperson support and supervision of the incarcerated parent (Geller et al., 2009; Turney et al., 2012). The imprisonment of a parent can also mean the loss of financial support for children through loss of wages and incomes both during and after the parents' incarceration (Glaze & Maruschak, 2010).

Children who have experienced parental incarceration often feel stigmatized by peers, teachers, and society (Arditti et al., 2003). Some COIPs internalize beliefs that they are destined for the same fate as their parent, namely, to be involved in illegal or illicit activities (Eddy & Reid, 2003). The experience of witnessing the arrest of a parent can be particularly harmful, resulting in feelings of shame and embarrassment (Beckerman, 1998). The stigmatization, shame, and stress that can result from parental incarceration may prevent many of these children from sharing this family information with even their closest friends or potentially helpful adults (Jucovy, 2003). Of course, the experience of parental incarceration by children is influenced by many factors such as the living arrangements before incarceration, who has custody of the child during the parents' incarceration, and the quality

of relationships with extended family and other adults in the child's social network (Parke & Clarke-Stewart, 2002). While these aspects of the experience can modify the impact of incarceration on children, direct intervention services are also frequently recommended to support positive developmental outcomes in COIP.

# 1.1 | Mentoring for children who have experienced parental incarceration

The recent bilateral framework for mentoring posits that mentoring relationships can be viewed as both a means to an end and an end for youth (Cavell et al., 2021) and there are examples of how both the mentor as a mechanism for change and the mentoring relationship as the outcome have benefitted COIP. Most COIPs are embedded within a network of other supportive nonparental adults who can provide vital support during and after the parent's incarceration (Zwiebach et al., 2010). However, there are COIPs who would benefit from additional nonparental adults to provide them with support, companionship, and guidance; thus, intervention programs have been developed to address the needs of this population of youth. Mentoring is one type of program that has been explored as a means of filling this gap for COIP with reduced access to positive, supportive, and helpful adults. In fact, a national survey of youth mentoring programs revealed that a sizeable number of youth (7%) receiving mentoring were COIP (Garringer et al., 2017).

To address the unique needs of youth in this population, mentoring programs have been designed specifically for COIP with the first major model being the Amachi program, which recruited volunteers from Philadelphia church congregations to serve as mentors to local children (Jucovy, 2003). Over time, this model spread to other cities and organizations. Several evaluations have attempted to examine the impact of mentoring on outcomes for COIP. A 3year, multisite, randomized controlled trial evaluation of an Amachi and Big Brothers Big Sisters program revealed improvements in multiple short-term outcomes (6 months) for mentored COIP compared with nonmentored COIP (ICF International, 2011). Improved outcomes included better parent-child relationships, increases in children's feelings of self-worth or self-esteem, and sense of the future with moderate to large effect sizes (0.37-0.64; ICF International, 2011). In another randomized controlled trial of a Big Brothers Big Sister program, COIP was compared with a nationally representative sample of youth who were COIP but who did not participate in a mentoring program (Morris, 2017). As with the previous randomized controlled trial, there were significant changes in youth outcomes at the 6-month follow-up, specifically reduced delinquency, cheating, and feelings of sadness among the mentored COIP compared with the nonmentored COIP. The only positive impact of mentoring at the 12-month follow-up was reduced feelings of sadness. Another mentoring program model serving children who experienced parental incarceration is the Mentoring Connections Program. An evaluation of this program indicated that mentees exhibited fewer internalizing and externalizing symptoms, but only if their matches did not end prematurely and the mentor and mentee maintained regular contact (Shlafer et al., 2009). Thus, there is some preliminary, but not strong evidence that mentoring COIP can result in improvements across multiple short-term outcomes.

COIP who may already be at a higher risk of having unstable relationships with adults need a stable mentoring relationship. If a close, stable mentoring relationship is a desired goal of the program, then the length of the relationship, in particular, whether the relationship lasts for the expected amount of time, is an important indicator. Previous research has documented that premature closure in mentoring relationships can be detrimental (Grossman et al., 2012; Grossman & Rhodes, 2002) and there is cause for concern that mentoring relationships involving COIP are more likely to end prematurely. For example, in one study involving COIP over one-third of matches ended within 6 months of the expected 12-month commitment (Shlafer et al., 2009). When examining individual youth characteristics as predictors of premature match closure, having an incarcerated parent put youth at a much higher risk of having their mentoring relationship end prematurely (Kupersmidt et al., 2017). COIP may already be facing a host of negative circumstances and mentoring programs have a responsibility to ensure no harm results from their participation in the mentoring program.



# 1.2 | Need for enhanced mentoring program practices

Given the popularity as an intervention for supporting COIP, these findings call attention to the need for program enhancements and designs to improve the capacity of mentoring programs and mentors to serve COIP. There is some evidence that this tailored approach to mentoring can support better mentoring and youth outcomes for COIP. In a large, nationwide sample of COIP participating in one-on-one, community-based or site-based mentoring relationships, when generic mentoring programs enhanced their program practices to address the specific needs of COIP, mentoring resulted in more positive match and youth outcomes (Stump et al., 2018). On the other hand, previous attempts to implement enhanced mentoring program practices for all youth in a mentoring program (not just for a specific population of mentees) and compare the impact of these practices with business-as-usual mentoring on youth outcomes have not demonstrated any impact (DuBois & Keller, 2017; Jarjoura et al., 2018). Bearing this in mind, the enhanced mentoring program practices evaluated in the current study attempted to build upon findings regarding the benefits of tailoring mentoring program practices to the needs of the COIP population with a strategic set of practices.

# 1.3 | Positive youth development (PYD) framework guides mentoring program enhancements for COIP

The PYD approach focuses on reducing risks, strengthening assets, and building protective factors in youth rather than focusing on the challenges or deficits in youth (Lerner et al., 2014). Individual and ecological or environmental assets are given equal weight in the PYD approach and the more assets a young person has, the more likely they are to have positive developmental outcomes (Benson et al., 2011; Theokas & Lerner, 2006). The PYD approach to youth programming is effective for promoting positive developmental outcomes in youth (Benson et al., 2006; Bonell et al., 2015); however, specific PYD program practices for mentoring COIP have yet to be developed and evaluated. To this end, Youth Collaboratory (YC), a national training and technical assistance provider, developed and supported the implementation of the enhanced mentoring program practices that were evaluated in the current study. Below is an overview of the PYD framework and specific components of the framework that influenced the enhanced mentoring program practices. Table 1 provides a description of the seven enhanced mentoring program practices that were implemented during the stages of a mentoring relationship (i.e., mentor training, matching, match initiation, and match monitoring and support).

The PYD approach includes five key developmental assets (5C's); competence (academic, social, and cognitive skills), confidence (self-efficacy, self-worth), connection (relationships with other people and institutions), character (positive self-concept prosocial behavior), and caring/compassion (empathy), that can be identified and strengthened in young people (Lerner et al., 2014). The enhanced pre-match mentor training included instruction for mentors about the 5C's of PYD and how they can support the development of these 5C's through their relationship with their mentee. The enhancement practices put a particular focus on connection (one of the 5C's) as a key role of mentors by giving them training to support their mentees in gaining access to the ecological assets of their community (Lerner et al., 2014). Mentors were trained in how to identify their own connections that could benefit their mentee and given guidance during monitoring and coaching conversations about how the mentor could serve as a connector for their mentee. The other developmental assets were also discussed with mentors during monitoring and coaching conversations based on the unique strengths and interests of each mentee.

Developmental relationships with adults are a key mechanism of change in the PYD framework (Lerner et al., 2014; Pekel et al., 2018) and a critical asset to be promoted in young people (Li & Julian, 2012). In the enhanced prematch training, mentors learned about the role of mentoring in promoting positive youth outcomes and how they can create a developmental relationship with their mentee. The monitoring and coaching enhancement further reinforced the mentor's adoption of a developmental relationship with their mentee.

**TABLE 1** Overview of the enhanced mentoring program practices.

TABLE 1 Overview of the enhanced mentoring program practices.						
Enhanced practice	Target	Description				
Mentor prematch training	Mentors	A 2-h in-person training workshop delivered by mentoring program staff guided by a Trainer's manual and other standardized materials. The training included four main topics: (1) impact of incarceration on children, (2) the impact of stress and trauma on children, (3) positive youth development and resiliency, and (4) being a connector for your mentee.				
Mentor postmatch training	Mentors	Mentors were assigned two online, self-paced, asynchronous mentor training courses to complete 4 months after being matched with their mentee. One course focused on the mentor a as social connector for their mentee and the second course gave mentors guidance on how to partner and engage with their mentee's parent. After completing the online modules, mentoring program staff were instructed to have a follow-up conversation with mentors about the training to answer their questions, and assess their knowledge and application of the content to their mentoring relationship.				
Inventory of mentor and mentee assets to inform matching (optional)	Program staff	Mentors and mentees completed an assets checklist, upon agreeing to participate in the study. Participants checked any assets they believed they had from a list (e.g., I am confident; I make friends easily; I like helping others). In addition, the mentors completed a survey that asked about specific traits representing assets such as their overall commitment to the mentoring relationship, commitment to relationship continuity, attitudes toward youth, empathy, and agreeableness. The individual assets that mentees and mentors reported, and the means for each of the traits self-reported by mentors were accessible to program staff through the project's online software platform and was designed to help inform their matching of mentors and mentees.				
Initial match meeting conversation guide	Program staff	Program staff guided a conversation between the mentor, mentee, and parent during their first meeting together that addressed each person's role in supporting the mentoring relationship. Parents described their own and their child's strengths, and their hopes and dreams for their child. Mentees described their strengths, dreams, and hopes for their mentoring relationship. Mentors described their strengths, motivations for mentoring, and plans for supporting their mentee in achieving their dreams. At the end of the initial meeting, the mentee and mentor developed goals to guide their activities that could be revisited throughout the mentoring relationship.				
Monitoring and coaching	Mentors, mentees, and parents	Mentoring program staff were expected to contact each mentor, mentee, and parent once per month during the first 12 months of the mentoring relationship.				

(Continues)



TABLE 1 (Continued)

Enhanced practice	Target	Description		
		There were many potential topics proposed to staff for discussion during these conversations. Some primary themes suggested to staff for guiding these conversations were to think of ways to build the strengths and interests of the mentee, and promote family engagement in the mentoring relationship.		
Mentoring activities	Mentors and mentees	Mentors and mentees were expected to participate in a minimum of three community events and one community service event together in the first 12 months of their relationship. It was suggested that these events should be chosen because they were related to the mentee's interests and aspirations.		
Strengths-based staff supervision	Program staff	The program staff in the Enhancement group at each mentoring program participated in bi-weekly meetings to discuss the matches that they supervised. Staff were asked to focus on what was going well in the match, areas for growth, and any questions or concerns they had about child safety and well-being. Each site supervisor also participated in monthly support calls with the TTA provider.		

Note: More details about the enhancements are available on the Youth Collaboratory website: https://www.youthcollaboratory.org/toolkit/strength-based-mentoring

The enhancements created intentional opportunities for mentoring program staff, mentors, mentees, and their parents to both identify and strengthen the individual and environmental assets of the mentee. For example, mentors received training on the environmental resources that are available to COIP mentees and how both they and the mentoring program can help connect mentees to resources and connections in the community that support the mentee's interests and strengths and address their unique needs. As another example, the strengths-based staff supervision enhancement directed mentoring program staff to have targeted discussions about each Enhancement group match that focused on the strengths of mentee and match. These discussions informed the monthly conversations mentoring program staff had with each enhancement mentor, mentee, and parent.

The enhancements developed by YC represent the first known attempt to implement specific mentoring program practices informed by the PYD approach for COIP that also address the major stages of a mentoring relationship. The practices focused on building the mentee's connection to the mentor as a caring adult and connection to the community through the participation in community events and community service activities. Mentoring program staff members, assigned to the Enhanced condition, were trained by YC in the PYD approach and how to implement the enhanced practices. They also received ongoing professional development and support throughout the project.

# 1.4 | The current study

The main purpose of this project was to conduct an independent evaluation of the impact of enhanced mentoring program practices on outcomes important for the development of COIP. The PYD framework was infused throughout the enhanced mentoring program practices, which aimed to encourage a focus on the mentee's

strengths and assets. To determine whether this approach was successful, the current study outcomes included a set of mentee self-cognitions about their intelligence, future self, and overall flourishing. We hypothesized that the accumulation of enhanced mentoring program practices for COIP that promoted discussion and activities about the mentee's strengths and goals would contribute to mentee's positive cognitions about themselves and their future over and above the impact of mentoring-as-usual on these outcomes.

As described above, COIPs are at higher risk for internalizing and externalizing problems (Kjellstrand et al., 2018, 2020) and previous research on mentoring has documented impacts of mentoring on these outcomes (Herrera et al., 2013; Tolan et al., 2014). Furthermore, the enhanced mentoring program practices were designed to foster mentee's connections to the community through their relationship with their mentor and participating in community events and community service activities. When young people feel connected to their community, they experience benefits in terms of their mental and emotional health (Arango et al., 2019; Matlin et al., 2011). Thus, the current study measured a range of constructs within the domains of internalizing and externalizing problems. We hypothesized that mentees who received the enhanced mentoring program practices would have fewer internalizing and externalizing problems than mentees who did not receive the enhanced practices.

Universal, community-based programs such as mentoring programs have been supported as one effective approach for reducing substance use (Spoth et al., 2008). Despite this, few studies in the mentoring literature have examined substance use as an outcome (Thomas et al., 2013). One published study found that mentoring was associated with reduced alcohol and drug use for youth in longer lasting mentoring relationships (Rhodes et al., 2005). Other studies have included substance use as one of several risky behaviors important for youth development and found mentoring to contribute to reductions in substance use (see Erdem & Kaufman, 2020 for a recent review). In line with previous research on mentoring and PYD and reductions in substance use (Bonell et al., 2015), the PYD enhancements in the current study were hypothesized to reduce substance use compared to mentees who did not receive the enhanced practices.

Finally, the enhancements in the current study focused on the role of the mentor as a connector for their mentee. In line with the current bilateral framework of youth mentoring, the mentoring relationship was viewed as a "valued end unto itself" (Cavell et al., 2021, p. 1). To evaluate the impact of the enhancements on the connection between the mentor and mentee, we assessed the quality and length of mentoring relationships. We hypothesized that the set of enhancements to mentoring program practices would lead to longer-lasting and higher quality mentoring relationships.

Taken together, these set of outcomes were selected because they build on previous mentoring research, are relevant to understanding and supporting COIP, and were thought to be impacted by the PYD enhancements.

# 2 | METHOD

# 2.1 Design

The current study utilizes a randomized controlled trial design in which COIP at 20 mentoring programs were randomized to receive either business-as-usual (BAU) mentoring services or enhanced mentoring services. Youth were randomized at the person level; therefore, each mentoring program was serving youth in both the control (BAU) and treatment (Enhancement) groups. To minimize potential contamination, each staff member at the participating mentoring programs worked with matches in only one study condition (either treatment or control), to the greatest extent possible. Program enhancements were implemented during the first 12 months of a mentoring match.

# 2.2 | Procedure

Mentoring program staff members at each of the 20 participating programs were responsible for recruiting, screening, and obtaining informed consent from staff and mentors, child assent, and parent permission. Participating youth were recruited into the study when their caregivers were applying for the youth to participate in the mentoring program. Therefore, all participating youth were new mentees. Caregivers were asked eligibility and screening questions without the child present to avoid disclosing information about a caregiver's current or previous incarceration status. The screening survey included questions about whether the child had knowledge of the parent or caregiver's current or previous incarceration. Youth were deemed eligible for the study if they had a caregiver who was currently incarcerated or who had been incarcerated during the child's life time. The incarcerated caregiver had to be someone who had primary caregiving responsibilities for the child but did not have to be a biological parent.

Consent and assent were collected using a mobile software application created for this project on tablet devices. The caregiver provided informed consent to participate in the study and parent permission for their child to participate. The study was explained to children with parent permission and provided with an opportunity to ask questions about the study, and then, provided assent. After consenting, both the youth and parent completed baseline surveys. After surveys were complete, youth were randomized to conditions. Then mentoring programs began the process of identifying the best mentor for the mentee.

Mentors were recruited into the study when they were matched with a participating youth. Participating mentors provided informed consent and completed a baseline survey. If a prospective mentor did not want to participate in the study, the child was removed from the study so they could be matched with the most appropriate mentor. In other words, staff members prioritized making the best match for the child over retaining the child in the study.

Participants completed follow-up surveys 6-, 12-, and 18-months after the match began. Parents and mentees completed follow-up surveys regardless of whether their match was still meeting. Mentors completed follow-up surveys only when they were still meeting with their mentees. For example, if a match ended after 14 months, then the parent and mentee would complete the 18-month follow-up survey, but the mentor would not. Parents and mentees were given small financial incentives for completing follow-up surveys.

# 2.3 | Participants

Participants in the study included 1334 mentees and their parents and 1347 mentors. Some mentees were rematched with a second mentor during the project if their initial mentor had to end their participation in the program for some reason. The final sample included 666 matches in the BAU condition and 668 matches in the enhancement condition. Mentee demographic characteristics were provided by parents; mentees ranged in age from 7.5 to 17.7 years old at the baseline measurement occasion (mean age = 11.20 years; SD = 2.13 years). The mentee sample was 46.04% boys and 53.96% girls. Approximately 22% of the mentee sample were Hispanic/Latino/Latina. Participants could select multiple responses when reporting race; approximately 53% of the mentee sample was Black, 35% was White, 11% Multiracial, 3% Native American, and the remainder were Alaskan Native, Native Hawaiian/Pacific Islander, or Asian. Approximately 83% of the sample had an incarcerated father, 26% had an incarcerated mother, and 24.36% of the sample had multiple caregivers who had been incarcerated. On average, mentees had 1.39 caregivers who had been incarcerated. The majority of the mentee sample (85.55%) knew about their caregiver's incarceration and approximately 47% of the mentee sample had a caregiver who was currently incarcerated. The remainder of the mentee sample had a caregiver who was previously incarcerated during their life time.

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Parent baseline surveys were completed by caregivers when they were applying for their child to join a mentoring program and were not necessarily completed by a biological parent. For reporting purposes, the respondents who completed the surveys are referred to as "parents." Approximately 72% of those completing the parent survey were the biological mother of the mentee and 14% were the grandmother of the mentee. Other caregivers who completed the parent survey included adoptive parents, foster parents, other relatives, biological fathers, and step-parents. Parent respondents ranged in age from 17 to 82 years old at the baseline measurement occasion (mean age = 40.39 years; SD = 11.37 years). The parent sample was 3.67% men and 96.33% women. Approximately 17% of the parent sample were Hispanic/Latino/Latina. Approximately 49% of the parent sample was Black and 41% was White. The majority of the sample reported that they spoke English in the home (97.41%) and that they were a single-parent household (77.51%).

Mentors ranged in age from 18 to 79 years old at the screening measurement occasion (mean age = 31.74 years; SD = 11.04 years). The mentor sample was 45.80% men and 54.20% women. Approximately 15% of the mentor sample were Hispanic/Latino/Latina. Approximately 66% of the mentor sample was White and 20% was Black. 17.59% of the mentor sample were employed in a helping profession and 27.29% of the mentor sample had previous experience serving as a mentor. Approximately 23% of the mentor sample had some experience with incarceration, including being incarcerated themselves, having an incarcerated caregiver, having a close friend who had been incarcerated, or having a non-parental caregiver who had been incarcerated.

#### 2.4 Measures

#### 2.4.1 Youth outcomes

# Positive self-cognitions

A positive self-cognitions scale was created by combining items from three measures assessing thoughts about the self, including: growth mindset, future self, and flourishing. Scores for each scale were standardized and averaged together. The scale was then standardized. Each measure was completed at each time point by participating youth. The Cronbach's  $\alpha$  for the combined positive self-cognitions scale at baseline was .82.

#### Growth mindset

A three-item growth mindset measure assessed personal theories of intelligence (Dweck, 1999). Response options ranged from 1 (Disagree a lot) to 6 (Agree a lot). An example item was "Your intelligence is something you can't change very much." All items were reverse-scored, such that higher values reflected more growth mindset orientation. Cronbach's  $\alpha$  for the growth mindset measure was .83.

#### Future self

Following the methodology employed by previous research (e.g., Anderman et al., 1999; Kemmelmeier & Oyserman, 2001), youth rated the likelihood of achieving four life outcomes such as "How likely is it that you will have a well-paying job when you grow up?." Youth responded on a scale of 1 (Not at all likely) to 5 (Extremely likely). The possible selves score consisted of the mean of these four items with higher scores indicating a more positive future self. Cronbach's  $\alpha$  for the future self-measure was .83.

# Personal flourishing

Youth responded to two items for each of the following constructs: gratitude, hope, life purpose, life satisfaction, and goal orientation, which were selected from the original three- and four-item scales based on readability from a longer measure of well-being and flourishing (Lippman et al., 2014). Sample items included, "I feel thankful for everyday things," "I expect good things to happen to me," "I am happy with my life." Responses were on a 5-point Likert scale ranging from 1 (Not at all like me) to 5 (Exactly like me). Cronbach's  $\alpha$  for the personal flourishing measure was .83.

#### Substance use

At baseline, youth reported on whether or not they had consumed any kind of alcohol, been drunk, used tobacco products, used marijuana, or used drugs without a prescription in their life time (yes or no). At follow-up occasions, youth reported on how many days they used each substance in the past 30 days. Responses were summed together and dichotomized such that 0 = No substance use and 1 = Any substance use.

#### Intentions to use substances

At each time point, youth responded to five questions related to their intentions to use alcohol, tobacco products, or illicit drugs (e.g., "In the next year, do you think you will get drunk?"). Youth responded on a 4-point scale 0 (*I definitely will not*)-3 (*I definitely will*) and responses were averaged together. Average scores were then dichotomized such that youth who had an average of 0 were coded with a 0, indicating no intentions to use any substance, and youth who had an average above 0 were coded with a 1, indicating they might use one or more substances in the next year.

#### Delinquent behaviors

At baseline, parents and youth completed 10 items selected from the 30-item National Youth Survey Delinquency Scale (Elliott et al., 1982) regarding how many times the youth had engaged in various delinquent behaviors during the youth's life time such as damaged property, lied about their age to get into someplace or buy something, carried a weapon, stolen something, or sold drugs. Items were selected that represented a range of delinquent activities that could be relevant for most participants in our sample but that were not too sensitive given the age of mentees (e.g., items about being paid for sex and hitchhiking were not included). At each follow-up assessment, parents and youth were asked how many times the youth engaged in any of the behaviors within the previous 6 months (i.e., since the previous measurement occasion). The response scale was an integer scale of Never (0) through 10+ times (10). Responses to all items were summed and then recoded into a 5-point scale, such that 0 = Never, 1 = Once, 2 = 2 or 3 times, 3 = 4 or 5 times, and 4 = 6 + times. This rescaling procedure was conducted for both the youth and parent surveys. The resulting outcomes were youth-reported frequency of delinquent behaviors and parent-reported frequency delinquent behaviors. Because Cronbach's  $\alpha$  for a scale comprising parent- and child-reported delinquent behavior was poor (i.e., .50) and the correlation was low (i.e., .34) youth and parent reports of delinquent behavior were kept separate.

# Juvenile justice involvement

At baseline, youth were asked two dichotomously-coded questions about their involvement with the justice system: "Have you ever been stopped by the police?" and "Have you ever been arrested by the police?." At follow-up occasions, questions were prefaced with, "In the last 6 months..." (i.e., since the previous measurement occasion). Parents were asked six questions related to their child's involvement with the justice system (e.g., "Has your child ever been arrested by the police?"). At follow-up time points, parents were asked whether any of these instances occurred in the previous 6 months. Parent and youth responses for all items were summed together. Juvenile justice involvement was dichotomized and coded such that when the sum total response of 0 was coded as no involvement with the juvenile justice system. When the sum total response was greater than 0 (i.e., either the parent, youth, or both parent and youth reported that the youth had experienced some involvement with the juvenile justice involvement was coded as 1.

<sup>&</sup>lt;sup>1</sup>To determine if there were any racial differences in the youth-reported experiences of being stopped by police, we tested and did not observe any significant differences.

#### Internalizing problems

An internalizing problems scale was created by combining items from three measures, including depression, loneliness, and reverse-scored self-competence. Scores for each scale were standardized and averaged together. The overall internalizing problems scale score was then standardized and Cronbach's  $\alpha$  at baseline was .84.

#### Youth-reported depression

At each time point, youth responded to a single item with a 3-point response scale (1 = Not true; 2 = Sometimes true; 3 = True) about feelings of sadness in the past 2 weeks (Angold et al., 1995).

# Youth-reported loneliness

At each time point, youth responded to three-item measure reporting feelings of loneliness and social isolation in the past 2 weeks (Asher et al., 1984). An example item was "I feel alone" and youth responded on a scale of 1 = Not at all true to 5 = Always true. Cronbach's  $\alpha$  for the loneliness measure was .88.

# Youth-reported global self-competence

At each time point, youth responded to five items reflecting feelings of global perceived self-competence from the self-perception profile for adolescents (Harter, 2012). The formatting of the items and response scales were simplified for use with a younger sample. This format has been used extensively in the mentoring field by large mentoring organizations, which allows for comparison of findings across studies (e.g., Stump et al., 2018). Example items included "I am happy with myself most of the time" and youth responded on a scale of 1 = Not at all true to 4 = Very true. The scale was reversed for inclusion in the overall Internalizing scale with higher scores indicating lower feelings of global perceived self-competence. Cronbach's  $\alpha$  for the self-competence measure was .76.

# 2.4.2 | Match outcomes

#### Strength of mentoring relationship

Parents, mentees, and mentors reported on the strength of the relationship between mentors and mentees.

#### Parent report

At each follow-up, parents completed two measures. Twelve items from the Mentor Strength of Relationship Scale (Rhodes et. al., 2014) were modified to ask parents about their perceptions of the quality of their child's mentoring relationship and an example item was "My child enjoys the experience of having a mentor." Responses ranged from 1 ( $Strongly\ aigree$ ) to 5 ( $Strongly\ agree$ ). Three additional new items were added to the measures to assess parents' perceptions of relationship closeness and the parents' satisfaction with their child's mentoring relationship with responses ranging from 1 ( $Not\ at\ all\ close\ or\ Satisfied$ ) to 5 ( $Very\ close\ or\ Satisfied$ ). An average score including items from both measures was calculated with high scores indicating a more positive mentor-mentee relationship. Cronbach's  $\alpha$  at the 6-month follow-up was .91.

#### Youth report

At each follow-up, youth responded to nine items about the quality of their relationship with their mentor. Four items were adapted from the Strength of Relationships Scale (Rhodes et al., 2014). Five additional items were developed for this study to better align with the mentor version of the Strength of Relationship scale. An example item was "I think that my Mentor gets me (understands and likes me)." Responses on both scales ranged from 1 (Strongly disagree) to 5 (Strongly agree) with higher scores indicating a more positive mentee-mentor relationship. Cronbach's  $\alpha$  at the 6-month follow-up was .89.

#### Mentor report

At each follow-up, mentors completed two measures related to the strength of their relationship with their mentee. Using the 14-item Strength of Relationship Scale (Rhodes et al., 2014), mentors reflected the quality of their relationship with their mentee on a 5-point Likert scale from 1 (Strongly disagree) to 5 (Strongly agree). Four additional items about relationship closeness and satisfaction were completed by mentors, such as "How close do you think your mentee feels to you?" and "How satisfied do you feel with your relationship with your mentee?" on 5-point Likert scale from 1 (Not at all) to 5 (Very satisfied). All 18 items were averaged together with higher scores indicating a more positive mentor-mentee relationship. Cronbach's  $\alpha$  at the 6-month follow-up was .90.

#### Match length

The start and end date for each match was recorded by a staff person from the participating mentoring programs. Match length was calculated by comparing the two dates, and values were converted into months. If a match was still open, then the end date of the project was entered as the match end date and the match length was calculated. An additional dichotomous variable was created to indicate whether matches were open or closed at the end of the project, and to serve as a censoring variable in survival analyses.

# 2.5 | Analytic strategy

# 2.5.1 | Group equivalence analyses

Baseline equivalence of the two groups was assessed by comparing them on a broad set of child and family background and demographic variables, including variables related to incarceration. Analyses were conducted using a series of  $\chi^2$  and t test comparisons; background variables with effect sizes whose absolute values were greater than 0.050, for either phi ( $\phi$ , for categorical outcomes) or Hedge's g (for continuous outcomes), were considered to be nonequivalent.

# 2.5.2 | Missing data imputation

Due to high rates of missing data and attrition in the parent and youth follow-up surveys, ranging from 51% missing in the parent 6-month survey to 62% missing in the youth 18-month survey, missing data were multiply imputed 100 times for the outcome study. Simulation studies consistently show that multiple imputation reduces bias, even with high levels of missingness (even up to 90%), given that useful auxiliary variables are included in the imputation models (Madley-Dowd et al., 2019; Yuan, 2000).

The imputation models included parent and mentee outcome data from all time points, demographic and other background characteristics that were to be included in outcome analyses as covariates, and a set of auxiliary background variables, items that were included in baseline surveys because we expected them to be predictive of later missingness. Auxiliary variables included parental education; parental employment status; child and parent health statuses; whether the family owns their house, expects to move, or has unstable housing; the family's distance from the incarceration facility and whether the child had visited the incarcerated caregiver; whether the family has stable internet access; whether the child lives in a single parent home; and whether the child lives in an English language home.

Data were multiply imputed 100 times using PROC MI in SAS and the Markov Chain Monte Carlo sampling method, with separate chains used for each imputation (CHAIN = MULTIPLE). Data were imputed by condition (Enhancement or BAU) to preserve any differences between groups.

After imputation, missingness was coded back into the match quality outcomes for closed matches, as the measures are relevant for open matches only. For example, if a match closed after 14 months, then any imputed data from the 6- or 12-month follow-up was retained, but imputed match quality data from the 18-month time point was coded back to missing.

After imputation, the missing data rate for match quality outcomes was 24.63%, reflecting missing data from closed matches, and 0.15% for all other outcomes, indicating that all outcome and background demographic and auxiliary data were missing for two participants.

All outcome analyses were conducted in SAS and results were pooled using Rubin's rules via PROC MIANALYZE. Sensitivity analyses were conducted to determine whether results were robust with different imputation models.<sup>2</sup>

# 2.5.3 | Model-building procedures

#### Covariates

Multiple demographic and background variables were included as covariates in outcome analyses. Demographic covariates included the child's gender, race, ethnicity, and age at the baseline assessment. Three background variables related to caregiver incarceration were included as covariates: whether the child knows about the incarceration, whether the caregiver is currently incarcerated, and whether the child has or had multiple incarcerated caregivers. In addition, based on results from group equivalence analyses (see below), the family having a stable internet connection, the child having an incarcerated mother, and the child having an incarcerated uncle were included as covariates.

# Intent-to-treat models

A series of multilevel analyses were conducted to determine whether youth who were randomized to the Enhancement group had outcomes that differed significantly from outcomes for youth who were randomized to the business-as-usual mentoring group. All analyses were conducted in an intent-to-treat fashion; mentees who were randomized to the Enhancement group were considered to be part of that group, regardless of the extent to which they received enhanced mentoring. Likewise, mentees who were randomized to the business-as-usual group were considered to be part of that group, regardless of whether their mentoring experience differed from the business-as-usual protocols.

The evaluation took place at 20 mentoring programs across the United States and the multilevel analytic procedures accounted for the nesting of youth within mentoring programs.

#### ITT for continuous outcomes

For continuous outcomes, analyses were conducted using three-level (time, within person, within program) piecewise growth curves. The slopes for the growth curves were split into two components: the intervention period slope and the maintenance period slope. The intervention slope refers to the growth from baseline through 12-month postmatch, when implementation of the enhancements ended for the Enhancement group. The maintenance slope refers to the growth from 12-month postmatch to 18-month postmatch, when the final follow-up surveys were completed. Analyses were conducted using the high-performance suite of procedures in SAS using multiply imputed datasets.

<sup>&</sup>lt;sup>2</sup>After multiply imputing data and conducing all analyses, missing data were reimputed using a different starting seed value and analyses were conducted using the newly imputed datasets. All findings were replicated, with resulting parameter estimates for fixed and random effects falling within the confidence limits of the parameter estimates for the original analyses. The reimputation and reanalysis procedure was conducted twice.

For each outcome with a continuous distribution, final models were established using a step-wise model comparison approach to determine whether random slopes were required at Level-2 or Level-3 for the intervention and maintenance slopes. Cohen's *d* effect sizes for continuous outcomes were calculated using two-level (person, within program) multilevel regressions and comparing adjusted means of outcomes at 12-month postmatch, while controlling for baseline values of outcomes, and all background covariates.

#### ITT for dichotomous outcomes

For dichotomous outcomes, analyses were conducted using two-level (person, within program) multilevel logistic regression, to assess differences in the outcome at 12-month postmatch, and controlling for baseline values and all background covariates. Effect sizes were calculated as odds ratios.

# Match length

Match longevity analyses were completed on mentees who were part of only one match during the evaluation. Differences in match length were analyzed using survival analysis, with survival curves stratified by condition (business-as-usual or enhancement group). Open matches were right-censored.

#### 3 | RESULTS

# 3.1 | Preliminary analysis

# 3.1.1 | Group equivalence

According to the baseline equivalence analyses, youth in the Enhancement group were less likely to be Native American ( $\varphi$  = -0.067), more likely to have stable internet access ( $\varphi$  = 0.059), less likely to have a mother incarcerated ( $\varphi$  = -0.060), less likely to have an uncle incarcerated ( $\varphi$  = -0.065), and were slightly older (g = 0.145), as compared with the business-as-usual group. Child age and race variables were already part of the list of covariates for the analytic models. The three remaining variables that were nonequivalent at baseline—having an incarcerated mother, having an incarcerated uncle, and having stable internet access—were added to the list of covariates to include in analyses. For complete results from the group equivalence analyses, see Supporting Information: Table 1.

# 3.1.2 | Youth outcomes

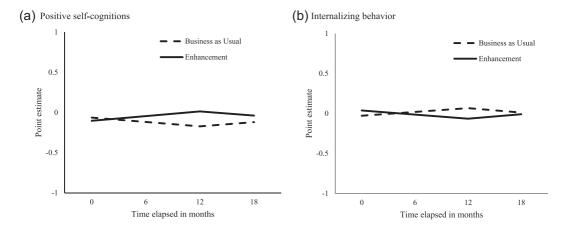
Table 2 provides an overview of results from the main analyses of the intervention portion of the project (i.e., baseline through 12-month postmatch). For continuous outcomes, the estimate column indicates the regression parameter estimate and standard error from the Enhancement × Intervention slope fixed effect parameter in the piecewise regression models. For dichotomous outcomes, the estimate column indicates the regression parameter estimate and standard error of the Enhancement fixed effect in the logistic regression models.

Based on the main outcome analyses models, four outcomes had significant Enhancement effects, even after controlling for the false discovery rate: positive self-cognitions, internalizing behavior problems, substance use, and intentions to use substances. For complete results for youth outcomes, see Supporting Information: Tables 1 and 2.

**TABLE 2** Results of Enhancement effects from multilevel growth curve and logistic analyses of youth outcomes.

Outcome	Estimate (SE)	p Value	Effect size Cohen's d (d) or odds Ratio (OR)
Positive self-cognitions	0.11 (0.04)	0.011	d = 0.22
Substance use	-0.50 (0.19)	0.008	OR = 0.61
Intention to use substances	-1.37 (0.30)	<0.001	OR = 0.25
Delinquency (parent-reported)	0.00 (0.04)	0.932	d = -0.01
Delinquency (youth-reported)	-0.11 (0.06)	0.076	d = 0.20
Juvenile justice involvement	0.21 (0.22)	0.348	OR = 1.24
Internalizing behavior	-0.10 (0.04)	0.020	<i>d</i> = 0.18
Match strength			
Youth-reported	-0.08 (0.07)	0.222	d = -0.06
Mentor-reported	-0.04 (0.05)	0.358	d = -0.06
Parent-reported	-0.01 (0.06)	0.860	d = 0.01

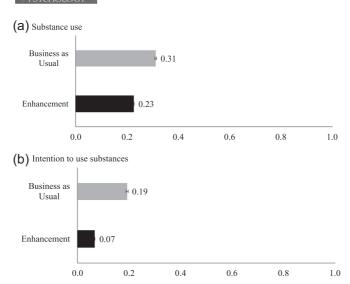
Note: For continuous outcomes (with effect size d), the Estimate column indicates the regression parameter estimate and standard error from the Enhancement × Intervention Slope fixed effect parameter in the piecewise regression models. For dichotomous outcomes (with effect size OR), the Estimate column indicates the regression parameter estimate and standard error of the Enhancement fixed effect in the logistic regression models.



Differential growth rates of Enhancement and Business-as-Usual groups. (a) Differential growth rates of enhancement and business as usual groups for the positive self-cognitions outcome, (b) differential growth rates of enhancement and business as usual groups for the internalizing behavior outcome.

#### 3.1.3 Positive self-cognitions

Figure 1a illustrates the differential growth rates of the Enhancement and Business-as-Usual groups throughout the course of the evaluation for this outcome. Though effects are modest, the results indicate that, between baseline and 12-month postmatch, the Enhancement group grew in their positive self-cognitions, while the Business-as-Usual group remained stable. Cohen's d effect size at 12-month postmatch was 0.22, a small effect.



**FIGURE 2** Predicted probabilities at 12-month follow-up for substance abuse outcomes. (a) Predicted probability of substance use at the 12-monthfollow-up, (b) predicted probability of intentions to use substances at the 12-month follow-up.

At 18-month postmatch, the positive self-cognitions point estimates for those in the Enhancement group were slightly lower than they were at 12-month postmatch, but slightly higher than they were at the beginning of the project. For those in the Business-as-Usual group, their point estimates at 18-month postmatch were slightly higher than they were at 12-month postmatch, but slightly lower than they were at the beginning of the project.

# 3.1.4 | Substance use and intentions to use substances

There were significant effects for the substance use and substance use intent outcomes.

Figure 2a,b illustrates the predicted probabilities of reporting using substances at the 12-month postmatch assessment and reporting intention to use substances at the 12-month postmatch assessment, respectively. Each predicted probability is controlling for baseline levels of the outcome and covariates. The odds ratio effect size at 12-month postmatch for substance use was 0.61, a medium effect. Therefore, the odds of the Business-as-Usual group reporting substance use is approximately 1.64 times the odds of the Enhancement group reporting substance use. The odds ratio effect size at 12-month postmatch for intentions to use substances was 0.25, a large effect. Therefore, the odds of the Business-as-Usual group reporting intention to use substances is approximately 3.94 times the odds of the Enhancement group reporting substance use.

# 3.1.5 | Delinguency and juvenile justice involvement

There were no significant effects for parent- or youth-reported delinquency, or the juvenile justice outcome.

# 3.1.6 | Internalizing

Figure 1b illustrates the differential growth rates of the Enhancement and Business-as-Usual groups throughout the course of the evaluation for the internalizing outcome. Results indicated that, between

baseline and 12-month postmatch, the Enhancement group declined in their internalizing behavior problems, while the Business-as-Usual group grew. The Cohen's d effect size at 12-month postmatch was 0.18, a small effect. At the 18-month time point, however, both groups had nearly identical internalizing point estimates.

#### 3.2 Match outcomes

#### 3.2.1 Match strength

There were no significant effects for youth-, mentor-, or parent-reported match strength.

#### 3.2.2 Match length

Match length was assessed using survival analysis and plotting Business-as-Usual and Enhancement groups on different strata. Open matches were included in the estimation and were right-censored. The survivor curves for the two groups are illustrated in Figure 3. The survivor curve for the Enhancement group is similar to the Business-as-Usual group during approximately the first year of the match, and then it is consistently lower. The difference between the two strata was statistically significant, Log-Range  $\chi^2(1) = 13.79$ , p < 0.001. Therefore, Business-as-Usual matches were more likely to last longer than matches from the Enhancement group. Follow-up multilevel logistic regressions suggest that Enhancement and Business-as-Usual matches do not differ in their rates of premature closure (i.e., match lasting less than 12 months; OR = 1.01), but do differ in their likelihood of lasting at least 2 years (OR = 0.70; The odds of Business-as-Usual matches lasting at least 24 months is 1.43 times the odds of Enhancement matches lasting at least 24 months). Overall, approximately 57% of the Business-as-Usual group was part of a match that lasted at least 2 years, whereas approximately 49% of the Enhancement group was part of a match that lasted at least 2 years. For complete results from the match outcome analyses, see Supporting Information: Table 4.

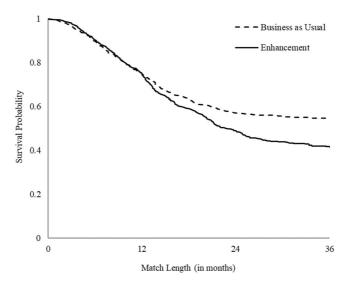


FIGURE 3 Survivor curves for analysis of match length.

# 4 | DISCUSSION

As rates of incarceration have grown in the United States, mentoring programs have increasingly endeavored to serve COIP. Previous research documents some promising, but modest, impacts of mentoring on child outcomes (Hagler et al., 2019). Youth mentoring programs, in general, have been somewhat stymied by low to moderate effect sizes (DuBois et al., 2011; Raposa et al., 2019) and researchers and practitioners have been in search of practices and approaches that help to improve the impact of mentoring to produce stronger effects on youth outcomes.

Results from the main outcome analyses that compared youth outcomes for the Enhancement and BAU conditions showed that youth who received enhanced mentoring had more positive self-cognitions, fewer internalizing behavior problems, lower intentions to use substances, and lower substance use after 12 months of experiencing enhanced mentoring. Despite the positive effects of the Enhancements on mentee outcomes, matches in the Enhancement condition were generally shorter than matches in the BAU condition. These findings will be discussed in more detail below.

Findings from this evaluation that the enhanced mentoring program practices successfully impacted youth outcomes contrast with other projects that have similarly tried to enhance mentoring program practices. For example, one project involving Big Brothers Big Sisters of America mentoring programs trained mentors to adopt a PYD approach by promoting a growth mindset, helping mentees identify and pursue their interests, and setting goals, but these enhanced practices did not produce any impact on youth outcomes when comparing youth who received enhanced mentoring and standard mentoring (DuBois & Keller, 2017). Another recent randomized controlled trial supported mentoring programs in developing mentor training and support practices designed to enhance the mentor serving as an advocate for their mentee, but also did not find any impact of these enhanced practices on mentee outcomes (Jarjoura et al., 2018). In this study, the lack of impact may be due, in part, to the more diffuse development and implementation of the enhanced practices because the participating mentoring programs developed and implemented their own set of mentor advocacy practices rather than all participating programs implementing the same set of practices, contrary to the current study, in which all programs implemented the same set of PYD practices.

The most important findings from this person-randomized controlled trial are that efforts to enhance a mentoring program through practices that are grounded in a consistent, research-based framework and tailored to support the specific needs of the targeted population can have a significant impact on youth outcomes. Program Enhancements resulted in positive effects for children impacted by parental incarceration, including reducing negative outcomes and increasing positive outcomes. Notably, these effects were found when comparing the enhanced mentoring to BAU mentoring; therefore, we can conclude that the effect size of these Enhancements on youth outcomes is greater than the average effect size observed for mentoring, in general.

# 4.1 | Positive self-cognitions

Staff and mentors in the Enhancement condition were trained and immersed in an approach to youth that focused attention on positive assets and strengths of the individual. The self-cognitions examined in this study predominantly explored the future self (Oyserman et al., 2004) including having a growth mindset, a positive future self, gratitude, hope for the future, a life purpose, life satisfaction, and a goal orientation. These indicators also represent positively valenced self-cognitions and are included because having optimism and a positive outlook on oneself and one's life are related to lower risk for psychopathology, a greater likelihood of resilience in the face of adversity, and improved motivation to succeed (Carver et al., 2010; Oyserman et al., 2015). Positive psychology interventions targeted at cognitions such as the positive future self, optimism, setting personal goals, and using

personal strengths have shown that these cognitions are malleable and can, in turn, impact behavioral outcomes and psychological well-being (e.g., Bolier et al., 2013; Oyserman et al., 2002, 2006).

The overarching conceptual framework that permeated the Enhancements developed and disseminated to programs participating in this study was grounded in a theory of PYD. With the adults talking about and focusing strongly on building assets and framing mentees' behaviors in a positive light in the Enhancement condition, the fact that an array of positive self-cognitions grew in mentees over the course of the study was not surprising. These outcomes were strategically targeted by the mentoring program enhancements. The emphasis of the enhancements on positivity and strengths, particularly in mentor training and during the monthly match support phone calls during which enhancement staff specifically asked mentors and mentees about the mentee's interests and goals, could have contributed to mentees feeling more positive overall about their future, their life, and goals. The small-to-medium effect supports the impact of these enhancements on this outcome.

# 4.2 Internalizing behavior problems

Internalizing behavior problems such as depression, loneliness, and low global self-competence have consistently been found to be reduced as a function of mentoring (DuBois et al., 2011; Keller et al., 2020; Schmidt et al., 2007; Schwartz et al., 2012). Thus, it is notable that the enhanced practices implemented in this intervention had an even greater impact on these internalizing outcomes over and above the positive impact found for mentored youth, in general. These findings suggest that, by enhancing program practices, mentoring programs have tremendous potential for improving their effects of youth outcomes by augmenting their business-as-usual practices. Notably, whereas youth in the Enhancement condition declined in their internalizing feelings from the baseline to the 12-month follow-up, the BAU youth increased their internalizing feelings during this period.

Internalizing problems are a significant concern among COIPs (Parke & Clarke-Stewart, 2002; Wakefield & Wildeman, 2011). The evidence that enhanced mentoring can help reduce these feelings in this population of youth is encouraging. Mentors in the enhancement condition received additional training about the challenges often faced by children impacted by parental incarceration and thus, may have been more sensitive to the emotional needs of their mentees, compared with mentors in the BAU condition. In addition, the enhanced monthly match support phone calls provided mentees with a consistent point of contact with another caring adult, which may have further contributed to them feeling more supported and less alone.

# 4.3 | Substance use and intent to use

Some of the strongest impacts of the enhanced mentoring intervention in the current study were in the reduction of substance use and intentions to use substances such as alcohol, tobacco products, and illicit drugs. Youth who received enhanced mentoring were less likely to report they use substances and that they intend to use substances at 12 months, compared with BAU youth, controlling for baseline levels and other covariates. These findings are consistent with a growing body of literature suggesting the protective effect of mentoring on reducing alcohol and drug use by youth (Rhodes et al., 2005; Thomas et al., 2013). One limitation of the current literature, however, is the paucity of randomized controlled trials examining substance use (for review see, Thomas et al., 2013). For this reason, the current randomized controlled trial makes an important contribution to the literature due to the rigorous, longitudinal design.

Substance use is reported at higher rates among children impacted by parental incarceration (Davis & Shlafer, 2017) and early initiation of substance use is a risk factor for future substance use problems, as well as other negative outcomes (Magid & Moreland, 2014). The enhanced mentoring program practices supported reductions in both intentions and actual substance use. One possible reason for this finding is that the mentees who

received the Enhancements received more monitoring by mentoring program staff than BAU mentees. The Match Support Enhancement required program staff to contact mentees, parents of mentees, and mentors a minimum of once per month. For many of the participating mentoring programs, this frequency of contact with the mentoring program was a substantial change, compared with their BAU practices. Previous research has found that parental monitoring is strongly associated with substance use (Clark et al., 2012) and similarly, the increased monitoring of mentees by program staff could have worked through the same mechanisms as parental monitoring. In addition, the community engagement and community service activities that were part of the enhanced monitoring and support could have promoted reduced substance use or intentions to use substances among Enhancement youth by connecting them with activities and opportunities in the community that provided alternative activities to substance use, engagement with other supportive adults, peers, and organizations.

# 4.4 | Match length and quality

Mentoring relationships in the current study were expected to last at least 1 year. Relationships that ended before 12 months were considered to have ended prematurely. The results indicated that youth in both conditions were equally likely to have a match that lasted at least 12 months. All participating mentors were asked to commit to a 12-month relationship and thus both groups did manage to meet this requirement, which is notable considering the high rates of mentoring relationships that end before 12 months observed in previous research (Kupersmidt et al., 2017; Stelter et al., 2018). Contrary to expectations, the BAU matches lasted longer, on average, than matches in the Enhancement condition. In addition, the BAU matches were more likely to last 24 months than enhancement matches. The reduced longevity of enhancement matches may be due to research fatigue given the potential burden of the requirements associated with being in the Enhanced group and being in the study. An alternative explanation for these findings is that participants in the Enhanced group may have perceived a loss of support, more isolation, and less accountability to the program when program staff in the enhancement condition were no longer required to provide extra match support to participants. Mentees, mentors, and parents may have become accustomed to the monthly contact with match support and, when the contact calls became less frequent, may have perceived a lack of support from the program. Thus, the reduced frequency may have led to participants choosing to terminate their relationship.

The groups did not have different trajectories in terms of relationship quality, suggesting that the strength of the relationships in the Enhancement condition did not seem to be a factor in the ending of these relationships. We had expected the Enhancement practices would contribute to closer mentor-mentee relationships; however, none of the Enhancements specifically addressed the relationship but primarily focused on supporting the mentees' interests and strengths. Both conditions had high relationship quality, and it appears this focus on the mentee using the PYD framework did not boost the promotion of a warm and close relationship between the mentor and mentee beyond what was observed in the BAU mentoring relationship.

# 4.5 | 18-month follow-up impacts

Despite the overall shorter matches of the Enhancement condition, the findings described above indicate that youth did derive benefits from the mentoring relationship during the relationship. However, as illustrated in Figure 1a,b, mentees' positive self-cognitions and internalizing problems returned to near baseline levels between the 12- and 18-month follow-up occasions. Unfortunately, the trend of beneficial findings dissipating over time is a consistent drawback in the field of prevention science, although the impacts of prevention and intervention do occasionally reemerge later in development (Bailey et al., 2017). One possible reason for this attenuation of effects is that the implementation of the enhancements ended when matches reached the 12-month mark in their

mentoring relationship. For the enhancement matches, this means they no longer received the enhanced monitoring and coaching, they no longer had to participate in community events or community service activities, and those matches were no longer discussed during the strengths-based staff supervision meetings. Enhancement matches likely felt the impact of this change in their experiences in the program, such as mentors and mentees feeling like they had less direction or purpose to their interactions now that they were receiving less programmatic support. After Enhancements were no longer being implemented, mentors and mentees may have engaged in fewer conversations about their assets and dedicated less time and energy to reflecting on their strengths, interests, and goals in the relationship. Without this time of generation and reflection, mentees may not have felt as positively about themselves and their future directions; thus, the self-reports of their internalizing problems and positive self-cognitions returned to near their baseline levels.

# 4.6 | Limitations

There are several limitations that should be considered when interpreting and applying the findings from this study. First, many of the outcomes relied on self-report by either the child or parent. Where possible, both the child and parent report of outcomes were included, but parent and child report of outcomes were not always in alignment with one another. For example, reports of delinquency by mentees and parents did not agree and thus, were analyzed separately. The lack of agreement between parent and child report is a common issue across constructs, suggesting the need for multiple informants in research (De Los Reyes et al., 2015).

A second limitation to the study is that, because there was rolling admission occurring over several years, there was significant staff turnover in the participating mentoring programs. New staff members had to be onboarded to both how to implement the enhancements, as well as their roles related to study recruitment, enrollment, and data collection.

Third, the rate of attrition at the follow-up survey time points was high across both the Enhancement and BAU conditions and is a cause for concern in terms of the generalizability of the findings. Based on standards of the What Works Clearinghouse, the overall attrition rates in this study would constitute an unacceptable threat of bias under cautious assumptions but a tolerable threat of bias under optimistic assumptions (What Works Clearinghouse Standards Handbook, Version 4.1). Several factors are thought to have influenced the high rate of attrition across this study. The population of children and parents included in this study often experience barriers to stable communication with support services such as the mentoring program staff, including lack of reliable phone and internet and, in some cases, reliable housing. High attrition rates have been reported in other studies examining the impact of mentoring on children impacted by parental incarceration. For example, one study reported 50% attrition rate at the 12-month follow-up survey among participants who received mentoring (BMBBS Indiana study) and another study reported that nearly half of the participants who received mentoring were no longer participating in the program at 12 months (ICF BBBS Texas study). To approximate the missing data and retain power, we utilized robust multiple imputation procedures that included auxiliary variables in the estimation algorithms. This method attenuates the bias associated with employing case-wise deletion methods and relying on complete data for analysis.

# 4.7 | Implications for practice

Based on the findings described above, we can offer some moderate support for the set of enhanced practices that were implemented in the current project to support mentoring relationships involving children impacted by parental incarceration. PYD is not a new approach to prevention; however, the application of this approach in youth programs is not universal, and it takes a deliberate effort on the part of programs to fully integrate this way of

thinking into their practices. This is due, in part, because many existing prevention programs are built on a shared legacy that did not emphasize theory and research and focused on preventing a specific problem behavior (Catalano et al., 2004). Changing this way of thinking among prevention programs is an ongoing process and must be taken on with purpose by mentoring programs to be effective.

A PYD, strengths-based approach permeated all the enhancement practices as well as the professional development of staff, how staff interacted with members of the match, and how mentors and mentees interacted with one another. Mentoring programs serving COIP should utilize the resources developed during this project to purposefully integrate the PYD framework into their practices. In particular, the strengths-based staff supervision practices help to reinforce the PYD approach in staff so that the focus on strengths spreads to their conversations and interactions with mentors, mentees, and parents. Asking everyone involved in the match to regularly discuss and strategize how to best support the mentee's strengths and interests should be embraced by mentoring programs serving COIP.

The pattern suggesting that beneficial impacts of the enhancements are somewhat diminished once the enhancements were no longer being implemented highlights the importance of sustaining a PYD framework to support COIP throughout the duration of the relationship. The PYD enhancements require a shift in how everyone involved in the match views the mentee, and it is possible that this perspective must be consistently reinforced throughout the program to have long-lasting impacts. In addition, mentoring programs serving COIP should consider the broader environments that impact mentees and the environment the mentee will be in once their participation in the program ends if they want to continue to support the gains achieved in the program. This is in line with the "sustaining environments" perspective for creating more enduring impacts of an intervention (Bailey et al., 2017). This perspective suggests that maintaining the positive impacts of any intervention requires consideration of the postintervention environment as well. In the case of mentoring COIP, the PYD enhancements did not include any practices directly targeted at parents or the incarcerated parent. Future research should consider what practices would be most effective and desirable for parents of children impacted by parental incarceration with an eye toward fostering an environment that will help sustain the impacts of the mentoring experience.

# 4.8 | Future directions

In line with recommendations from other mentoring researchers (Cavell et al., 2021), future research must examine specific program practices for children impacted by parental incarceration to unpack the many specific practices included in the current study and understand whether they are uniquely impactful. A multilevel factorial experiment, for example, could help identify what intervention components are more likely to produce the desired outcomes before evaluating the intervention as a whole, which is an extremely time-consuming and expensive process (Dziak et al., 2012). This method has not, to our knowledge, been applied to research on mentoring program practices and would represent an innovation to the field and perhaps an efficient approach to unpacking the many component practices of mentoring interventions. Future research should examine additional moderators and mediators of the impact of enhanced mentoring program practices on mentee outcomes. Program-level factors such as staffing, staff background and experience, and program location, were not examined in the current study. The current study included a variety of mentoring programs that varied in terms of their implementation, capacity, and program quality. For example, larger mentoring programs and family service organizations with a larger footprint in the community may have deeper connections to relevant community partners, such as child welfare agencies, re-entry programs, or others that also work with COIP, which might make it easier to provide the enhanced services to matches.

As mentioned above, the short-term impacts of interventions on youth outcomes do often fade out when implementation of the program ends, but long-term follow-ups of participants when they are in adulthood do

occasionally demonstrate impacts (Bailey et al., 2017). In fact, there is preliminary evidence from long-term follow-up of youth who participated in a mentoring program that such programs can have long-term benefits such as postsecondary school attendance and less delinquency for certain groups of participating youth (DuBois & Herrera, & Rivera, 2017). Future long-term follow-up of the mentees in the current study could further add to our knowledge about the long-term impacts of Business-as-Usual mentoring and the impact of PYD enhanced mentoring on longer-term outcomes.

# 5 | CONCLUSION

The current study was the first known attempt to develop, implement, and evaluate a set of mentoring program practices specifically designed for COIP and informed by the PYD framework. While many interventions are implemented at the dyadic or individual level, this study is novel because the intervention was implemented at the level of the program and many of the practices had implications for mentor-mentee dyads. Using a rigorous, experimental design, this study demonstrated the value of designing and implementing macrolevel interventions to have a positive impact on youth outcomes in a vulnerable population. Although there were modest findings from this evaluation supporting the impact of the enhancements on a variety of youth outcomes, the findings were promising, particularly given that the impact was observed when comparing outcomes to similar youth who also received mentoring. The emphasis on the PYD framework for the enhanced practices proved to be an effective approach for the improving outcomes of COIP and should be adopted by other mentoring programs serving vulnerable populations.

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#### CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

# DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in the National Archive of Criminal Justice Data at https://doi.org/10.3886/ICPSR38055.v1.

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#### PEER REVIEW

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# SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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