

# **Protocol for Brief Parent-Child Substance Use Education Intervention for Black Families in Urban Cities in New Jersey: A Formative Study Design**

Ijeoma Opara, Kimberly Pierre, Sandy Cayo, Kammarauche Aneni, Catherine Mwai, Aaron Hogue, Sara Becker

Submitted to: JMIR Research Protocols  
on: December 15, 2023

**Disclaimer:** © The authors. All rights reserved. This is a privileged document currently under peer-review/community review. Authors have provided JMIR Publications with an exclusive license to publish this preprint on its website for review purposes only. While the final peer-reviewed paper may be licensed under a CC BY license on publication, at this stage authors and publisher expressly prohibit redistribution of this draft paper other than for review purposes.

*Table of Contents*

---

**Original Manuscript..... 5**  
**Supplementary Files..... 29**  
    Multimedia Appendixes ..... 30  
        Multimedia Appendix 0..... 30



# Protocol for Brief Parent-Child Substance Use Education Intervention for Black Families in Urban Cities in New Jersey: A Formative Study Design

Ijeoma Opara<sup>1</sup> PhD, MPH, MSW; Kimberly Pierre<sup>1</sup> MPH; Sandy Cayo<sup>2</sup> DNP; Kammarauche Aneni<sup>3</sup> MBBS, MHS; Catherine Mwai<sup>1</sup> MPH; Aaron Hogue<sup>4</sup> PhD; Sara Becker<sup>5</sup> PhD

<sup>1</sup>Yale University School of Public Health new haven US

<sup>2</sup>Yale University School of Nursing New Haven US

<sup>3</sup>Yale School of Medicine New Haven US

<sup>4</sup>Partnership to End Addiction New York US

<sup>5</sup>Northwestern School of Medicine Chicago US

## Corresponding Author:

Ijeoma Opara PhD, MPH, MSW

Yale University School of Public Health

60 college street

new haven

US

## Abstract

**Background:** Substance use continues to remain a public health issue for youth in the U.S. Black youth living in urban communities are at a heightened risk of poor outcomes associated with substance use and misuse due to exposure to stressors in their neighborhoods, racial discrimination, and lack of prevention education programs specifically targeting Black youth. Since family is a well-known protective factor against substance misuse for Black youth, it is essential to create sustainable programming that incorporates the voices of Black youth and their families to develop a suitable prevention program for this population.

**Objective:** To adapt and develop a brief parent-child substance use prevention intervention for Black families

**Methods:** The study will take place in New Jersey. We will use the first 3 steps of the ADAPT-ITT framework to begin the development of an intervention for Black families. Three aims will be described in this protocol: Aim 1: Collect qualitative data from Black parents and youth between the ages of 11-17 years from (n=20) parent-child dyads on the challenges, barriers, and facilitators to communicating about substance use. Aim 2: Adapt a selected evidence-based intervention for Black families and develop a family advisory board to guide the adaptation of the intervention. Aim 3: Assess the feasibility of the intervention through theater testing, involving the family and community advisory board, we will enter step 3 of ADAPT-ITT implementation framework).

**Results:** The study is a 2-year research pilot study award funded by the National Institute of Drug Abuse. Data collection for this study began in May 2023. For aim 1, data collection is 95% complete. We expect to complete all data collection for aim 1 on or before December 30, 2023 and data analysis will occur immediately after. Study activities for aim 2 will occur Spring 2024. Study activities for aim 3 will likely begin in Fall 2024.

**Conclusions:** This study will be one of the few interventions that address substance use among youth and utilizes parents and families in urban communities as a protective factor within the program. We anticipate that the intervention will be beneficial for Black youth not only in New Jersey but across the nation to work on building culturally appropriate, community specific prevention education and building on strong families relationships, resulting in reduction or delayed substance use.

(JMIR Preprints 15/12/2023:55470)

DOI: <https://doi.org/10.2196/preprints.55470>

## Preprint Settings

1) Would you like to publish your submitted manuscript as preprint?

Please make my preprint PDF available to anyone at any time (recommended).

Please make my preprint PDF available only to logged-in users; I understand that my title and abstract will remain visible to all users.

Only make the preprint title and abstract visible.

✓ **No, I do not wish to publish my submitted manuscript as a preprint.**

2) If accepted for publication in a JMIR journal, would you like the PDF to be visible to the public?

✓ **Yes, please make my accepted manuscript PDF available to anyone at any time (Recommended).**

Yes, but please make my accepted manuscript PDF available only to logged-in users; I understand that the title and abstract will remain visible.

Yes, but only make the title and abstract visible (see Important note, above). I understand that if I later pay to participate in <http://www.jmir.org>, I will be able to make my manuscript PDF available to anyone at any time.



## Original Manuscript

# Protocol for Brief Parent-Child Substance Use Education Intervention for Black Families in Urban Cities in New Jersey: A Formative Study Design

Ijeoma Opara, PhD, MSW, MPH<sup>1</sup>

Kimberly Pierre, MPH, CHES<sup>2</sup>

Sandy Cayo, DNP FNP-BC<sup>3</sup>

Kammarauche Aneni, MBBS, MHS<sup>4</sup>

Catherine Mwai, MPH<sup>1</sup>

Aaron Hogue, PhD<sup>5</sup>

Sara Becker, PhD<sup>6</sup>

## Acknowledgments

This study is funded by a research education grant from the Family Involvement in Recovery Support and Treatment (FIRST) Research Network, which is co-funded by the National Institute on Drug Abuse and National Institute of Neurological Disorders and Stroke (PI: Aaron Hogue: R24DA051946). The first author is funded by the NIH Early Independence Award (PI: Ijeoma Opara; DP5OD029636) and NIDA Pioneer's Award (PI: Ijeoma Opara; DP1DA058982).

<sup>1</sup>Yale School of Public Health

<sup>2</sup>Irvington Department of Health, Irvington, NJ

<sup>3</sup>Yale School of Nursing, Orange, CT

<sup>4</sup>Yale School of Medicine, New Haven, CT

<sup>5</sup>Partnership to End Addiction, New York, NY

<sup>6</sup>Northwestern University, Chicago, IL

## Abstract

**Background:** Substance use continues to remain a public health issue for youth in the U.S. Black

youth living in urban communities are at a heightened risk of poor outcomes associated with substance use and misuse due to exposure to stressors in their neighborhoods, racial discrimination, and lack of prevention education programs specifically targeting Black youth. Many Black youth, especially those that live in urban communities, do not have access to culturally-tailored interventions, leaving a critical gap in prevention. Since family is a well-known protective factor against substance misuse for Black youth, it is essential to create sustainable and accessible programming that incorporates the voices of Black youth and their families to develop a suitable prevention program for this population.

**Methods:** The study will take place within urban cities in New Jersey such as Paterson and East Orange, NJ, which will be used as the main study sites. Both cities have a large population of Black youth and the study team has strong ties with youth serving organizations in both cities. A formative, qualitative study will be conducted first. We will use the first 3 steps of the ADAPT-ITT framework, a rigorous implementation science framework, to begin the development of an intervention for Black families. Three aims will be described in this protocol: Aim 1: Collect qualitative data from Black parents and youth between the ages of 11-17 years from (n=20) parent-child dyads on the challenges, barriers, and facilitators to communicating about substance use. Aim 2: Adapt a selected evidence-based intervention for Black families and develop a family advisory board to guide the adaptation of the intervention. Aim 3: Assess the feasibility of the intervention through theater testing, involving the family and community advisory board, we will enter step 3 of ADAPT-ITT implementation framework).

**Results:** The study is part of a 2-year research pilot study award from the National Institutes of Drug Abuse. Data collection for this study began in May 2023. For aim 1, data collection is 95% complete. We expect to complete all data collection for aim 1 on or before December 30, 2023 and data analysis will occur immediately after. Study activities for aim 2 will occur in Spring 2024. Study activities for aim 3 will likely begin in Fall 2024 and conclude in 2025.

**Conclusion:** This study will be one of the few interventions that address substance use among youth and utilizes parents and families in urban communities as a protective factor within the program. We anticipate that the intervention will be beneficial for Black youth not only in New Jersey but across the nation to work on building culturally appropriate, community specific prevention education and building on strong families relationships, resulting in reduction or delayed substance use.

### Significance of study

While Black youth have lower rates of substance use than White and Hispanic youth, Black youth tend to have worse outcomes associated with substance use such as poor academic outcomes, involvement in the criminal justice system, and engaging in sexual risk behaviors while using drugs [1]. Despite the well-established association between parent-child communication and adolescent substance use, racial specific differences among Black families compared to other racial-ethnic groups in parent-child drug use communication have received limited attention in intervention development. Thus, the adaptation of a race-specific parent-child substance use education



intervention for Black families which can promote family bonding, communication, and supervision, as well as acknowledging racial and ethnic specific norms, values, and pride, is necessary. In addition to racial stressors such as racial discrimination that Black families uniquely experience, it is essential for a racial-specific, strengths-based prevention intervention be utilized and adapted for urban Black youth and their families.

### **Background**

Decades of research have established substance use as a public health concern among youth [2,3]. According to the National Survey on Drug Use and Health, approximately 24% of Black/African American people aged 12 or older used illicit drugs in the past year, 10% were classified as having alcohol use disorder, and 10% were underage (12-20 years of age) when drinking alcohol [4-5]. Whereas Black youth are more likely to start drinking at a later age than their peers and consume less alcohol, [6,7] they also tend to experience more negative social consequences due to drinking compared to White youth [2, 8, 9]. Additionally, Black youth experience greater negative consequences from drug use, such as marijuana, compared to young men in other racial and similar socioeconomic status (SES) categories. Such consequences include increased accidents, illnesses, injuries, lower recovery rates from alcohol dependency, greater interpersonal issues, carceral issues, and economic challenges [10-13]. Black youth in urban settings tend to experience a unique set of stressors associated with their families, peers, and environment, that in turn impact their mental health, school attendance and engagement, substance use, sexual health, and overall ways they cope with those stressors [14]. In addition to commonly cited risk factors for drug use among Black youth, especially those that live in urban communities such as exposure to community trauma, peer pressure, and neighborhood disorganization, research suggests that attending to the developmental concerns of Black youth also requires addressing the needs of the family unit [14].

### **Family as a protective factor for Black youth**

Family influences on adolescent development as well as substance use are well documented and the results across the board unsurprisingly point out that parents play a major role when it comes to affecting risk and protective behaviors [1]. In general, the more attentive, engaged, warm, protective, communicative, and close the relationship is, the more it will serve as a protective factor [1,15-16]. Parental bonding plays a protective role against youth using drugs while living in urban environments and parent-child communication has been shown to be a significant protective factor for youth [15, 16]. Our team found that parent-child communication about substance use and the parental modeling and communication of drug use within a neighborhood context, were significant factors in reducing drug use and promoting abstinence among Black girls [17]. Other research by our team and others has demonstrated that youth report reduced use of drugs when they have positive relationships with their parents and communicate with their parents about sex [16-18]. However, very little research has specifically focused on family processes involved in drug use prevention among Black families. Salas-Wright et al. found that from 2002 to 2016, Black families who had lower SES were less likely to discuss substance use education with their children [19]. Most interventions addressing substance use have included large samples of White parents and children, which can result in gaps in prevention research focused on understanding significant cultural differences in family involvement and communication for Black families [16, 20-21].

### **Challenges within Black families**

While Black families are not homogenous, many Black youth who suffer from negative consequences of drug use are exposed to traumatic conditions such as poverty, parental unemployment, parental drug use, neighborhood violence, and crime within their environments [22,23]. Within a family context, research has indicated that the more internal and external family stress that youth experience, the more elevated their mental health problems, use of drugs, and sexual risk behavior [7]. In addition, racism that Black youth and families experience can be a risk factor in Black families and a mental health stressor that can lead to substance use [23-26]. Little is known

about the intersection of Black parent-child drug use communication and its influence on substance use outcomes in children. Consequently, it is essential to understand Black families' parenting practices and environment context in order to understand these practices' effects on youth's perception of substance use. This will avail the opportunity to create culturally sensitive and tailored interventions specifically designed to meet the unique needs of Black youth. This study protocol is describing a race-specific parent-child substance use education intervention adapted for Black families called, "The Development of a Brief Parent-Child Substance Use Educational Intervention for Black Families". This brief intervention has the potential to guide future substance use interventions focused on Black families with a focus on strength-based and parent-child communication approaches. Considerable studies have validated that participation in a culturally-tailored family-centered preventative interventions for Black adolescents and their caregiver(s) is associated with offsetting mental health risks, drug use, sexually risky behavior, academic and behavioral challenges in Black adolescents [27-29]. There is a great need for researchers to develop culturally relevant prevention programs that are designed by and for Black families.

Metzler and colleagues reviewed 11 best practice lists and identified 9 evidence-based adolescent programs that focused on prevention or treatment of substance use. Five were treatment programs but only one was an indicated prevention program, the Adolescent Transitions Program (ATP). There is only one parent-child intervention that targets risky behaviors (e.g., Strong African American Families Program (SAAF) including substance use for Black families. To be more specific, SAAF is focused on improving family cohesion, dynamics and communication for Black families and was adapted from the Strengthening Families Program [30]. However, it is 3 hours long and administered in seven sessions, which may pose barriers described in detail below.

The Strong African American Families Program (SAAF) is one of the few prevention programs designed for Black/African American families. Strong African American Families program is a 7-session program designed for youth aged 10–14 and their caregivers [30-31]. The goal of

SAAF is to build on the strengths of African American families and support parents and youth during the transition from early adolescence to the teen years with a specific emphasis on helping young people avoid risky and dangerous behaviors (e.g., substance use). SAAF has shown positive health outcomes [27, 32, 33] and has been adapted to include condoms education [32] and obesity and eating behaviors [34]. This study seeks to adapt the SAAF intervention to be applied into two urban cities in New Jersey: Paterson and East Orange, NJ. Both cities are considered urban and have a large population of Black people. The study team also has long standing partnerships with both cities and has experience in recruiting Black youth.

### **Barriers to recruiting Black families**

Traditional family interventions often do not meet the needs of urban Black youth with substance use for a variety of reasons. Overall, parent interventions usually suffer from high attrition [35]. A primary concern with the feasibility of existing parenting interventions is the difficulty ensuring that parents receive an adequate “dose” of the intervention. Adolescent substance use interventions involving parents that have been identified as “well-established” have generally ranged in intensity from 12 to 24 in-person sessions [36]. Further, studies with the highest retention rates of parents, [37] have relied upon home-based sessions or visits, an approach that is challenging to implement within residential facilities that are often short-staffed and financially constrained. Such high contact interventions may also be difficult for parents of adolescents in substance treatment due to structural barriers related to lower socio-economic status, such as limited transportation, lack of childcare, and competing demands [38]. Low attendance rates can be the result of busy work schedules and extracurricular activity schedules for youth, as well as a lack of motivation. While SAAF exists, there still remains implementation challenges in recruitment for Black parents and children in urban communities. In studies that have utilized SAAF, a common challenge in scheduling has been mothers’ varied work schedules [30]. Father involvement in the intervention has been found to be limited based on several studies that reported on this characteristic [39-41].

Additionally, the youths' fathers rarely participated in the prevention program even though they were invited to do so [42]. Although SAAF is a model intervention that has shown efficacy in improving knowledge, reducing risky behaviors, and improving mental health outcomes among African American families—there remains implementation challenges...". For example, a seven-session intervention may not be feasible for urban Black families who are facing systemic and structural factors and are unable to commit to an intensive, time-consuming schedule. Given the knowledge researchers have on prevention interventions for Black youth and families, it is essential that community-based approaches be incorporated as community-based and culturally relevant interventions are the gold-standard for urban communities [43]. Hence, the importance of adapting the intervention that can address the documented challenges and reach more Black youth and their parents.

Brief interventions, which are defined as interventions that have 4 or less number sessions have been emerging as a strong option in substance use frequently demand less in terms of time and financial commitment, are one such potential resource for Black families. Brief interventions have shown efficacy in addressing youth difficulties such as depression, anxiety, and substance use [44,45]. Specifically pertaining to substance use, meta-analytic reviews have found that brief interventions reduce risky drinking, [46] and systematic reviews have found that brief-motivation building interventions are well established [36]. Our study aims are as follows:

**Aim 1:** Collect qualitative data from Black parents and youth between the ages of 11-17 years from (n=20) parent-child dyads on the challenges, barriers, and facilitators to communicating about substance use. Recruitment will take place with partnership of community-based organizations and supportive family programs. Semi-structured interviews will be conducted with adolescents and their parents to solicit their perspectives on identifiable strategies that have worked to discuss substance use within their family, barriers and facilitators to effective prevention programs, and specific community and cultural norms regarding youth substance use.

**Aim 2:** Adapt Strong African American families (SAAF) intervention using the first three phases of the ADAPT-ITT implementation framework, Phase 1 and 2 which include a family and community advisory board (consisting of three parent-child dyads and 3 community leaders) will be developed to guide the adaptation of the intervention.

**Aim 3:** Assess the feasibility of the intervention through theater testing, involving the family and community advisory board, we will enter step 3 of ADAPT-ITT implementation framework).

## Methods

### Community Profile

**Paterson, NJ.** Paterson has a population of roughly 150,000 residents and is the third largest city in NJ [47]. Over 90% of the city's population identify as either Hispanic (57.7%) or as African American/Black (34.7%) and nearly one third are foreign-born residents [47]. My work in the city shows that, Paterson youth who drank alcohol during the past 30 days were 3 times more likely to smoke marijuana before age 14 [48]. In terms of accessibility, 60% of Paterson youth purchased alcohol from liquor stores and 40% of Paterson adolescents also admitted to having adults purchase their alcohol from liquor stores [48]. Additionally, the city is currently facing an extreme opioid crisis with Paterson being ranked the 2nd city in NJ for the highest rate of heroin overdoses [49].

**East Orange, New Jersey:** East Orange is an urban city also located in Northeastern NJ and just 20 mins away from Paterson. The city has one of the highest rates of drug overdoses in New Jersey and lacks youth substance abuse rehabilitation and treatment centers [49]. East Orange also has the highest amount of Black people in the State of New Jersey (85%) [50]. In 2020, 2,434 (34%) of Essex County residents admitted for substance abuse treatment were female, 4,375 (61%) were Black (non-Hispanic), and 31% residents were under the age of 18 [51]. In our work with the city of East Orange, we conducted a qualitative study in East Orange, NJ with a sample of 45 Black teen girls from the city who participated in focus groups with my team. Themes that arose involved: 1)

drug use being a major problem in their community, 2) peer pressure and mental health as a major risk factor, and 3) exposure to drugs in specific neighborhoods as an issue.

### **Framework for Adaptation**

The “ADAPT-ITT (Assessment, Decision, Adaptation, Production, Topical Experts. Integration, Training, Testing)” model is an implementation science framework that guides the adaptation of evidence-based interventions (EBI) for specific settings or populations [39, 52]. ADAPT-ITT will be used to adapt the target interventions in partnership with a Family and Community Advisory Board, consisting of parents, caregivers, and leaders of family-based organizations in New Jersey.

The framework consists of 8 phases, each of which brings contextual nuances and constraints that determine how the phases are engaged and the timing of corresponding tasks: (1) Assess the risk profile of Black families in participating cities: Paterson and East Orange, (2) Decide on whether to adopt or adapt an EBI, (3) Administer novel methods such as theater testing with families and children to facilitate the adaptation process, (4) Plan on what aspects of the EBI need to be adapted and plan on how best to evaluate the adapted EBI, (5) Identify additional topic experts to assist in the adaptation process, (6) Integrate material from the topic experts to adapt the evidence based intervention, (7) Train staff to implement the adapted evidence based intervention, and (8) Test the adapted evidence based intervention.

Given the time and financial consideration, we will complete the first three tasks (ADAPT) at the end of the pilot study. Using the ADAPT-ITT approach, we will first consult with Black families and stakeholders in cities that include a large population of Black people in New Jersey such as Paterson and East Orange to understand their unique challenges in discussing substance use with their children while also seeking their guidance on the development of a racial specific substance use parent-child intervention. A proactive approach, rather than a reactive approach, in recruitment and retention of minority populations in research is necessary in order to build trust through community

involvement, adapt to cultural norms, develop effective recruitment strategies, and through use of evidence-based practices engage and retain participants effectively [53]. Therefore, we will use a proactive approach to recruit study participants, which will bring project staff into direct contact with potential participants [53]. This typically involves face-to-face contact with community leaders and organizations, as well as recruitment presentations and meetings in the community.

### ***Study Design***

We will conduct a formative qualitative study design consisting of semi-structured individual interviews with (N=20) dyads of Black parents and their children. Qualitative data that will be collected from individual dyad interviews (parent-child) with Black families and children will be used to inform the data. Specifically, the research team will identify themes from data that center around challenges and barriers to drug use education and discussion within the family context and also will ask participants to provide examples of what they would like to see in a family centered substance use intervention for Black families.

### ***Eligibility***

A parent who identifies as (1) Black, (2) of any age, (3) speaks and understand English, and (4) resides in the state of New Jersey, and (5) has a child who identifies as follows. The child must identify as (1) Black, (2) between the ages of 10 and 17 years, (3) speaks and understands English, and (4) resides in a city that is classified as “urban” in the state of New Jersey. Note: While our study team is primarily focusing on targeting two cities: Paterson & East Orange, based on need and our community partnerships, we are also open to including youth and families from other urban cities in New Jersey. The parent and child dyad must meet all criteria to be eligible for this study.

### ***Ethical considerations***



The study was funded by a larger National Institute on Drug Abuse grant and approved by the Yale University Institutional Review Board in 2022. Due to the sensitivity of the research questions, we requested that written parental consent for youth under 18 years old, be waived for parent and youth and it was granted. All youth who participate in the study will receive a youth information sheet, and parents and guardians will receive a parent information sheet. Youth must give verbal consent to participate in the study. We will obtain informed consent from all youth who meet the eligibility criteria and want to participate before they are enrolled in study activities. All participants will be paid \$50.00, in cash, at the end of each interview.

**Aim 1:** Collect qualitative data from Black parents and youth between the ages of 11-17 years from parent-child dyads on the challenges, barriers, and facilitators to communicating about substance use.

### ***Recruitment***

Participation in this study will be strictly voluntary, confidential, and non-discriminatory. The study will be advertised via posters and flyers located and circulated through community-based organizations, schools, and supportive family programs with which the PI has partnered with. In addition, individual interviews with participants will also be recruited using social media sites, including Facebook, Instagram and Twitter as needed. The PI and her research team are well known in the State of New Jersey and have strong partnerships with cities that have large Black populations such as East Orange and Paterson, New Jersey. During the duration of the study and afterwards, the PI and her research team still intend to conduct workshops and seminars pertaining to prevention for youth and girls and dissemination of research pertaining to youth of color and parents specifically. The PI will continue to provide free workshops to youth and their families even if youth refuse to participate in current study. We will first recruit parents through community organizations and at parent nights at local schools and then will recruit youth once data collection for parents has been

completed. The second method of recruitment for this study will be with social media sites, including Facebook, Instagram, and Twitter. Participants will be asked to click on a link in the ad, which will take them to the Qualtrics webpage where they will fill out a form with basic demographic information (age, race) and the parents' contact information (email and phone number). If participants meet eligibility criteria, a research staff member will contact the potential participant through email to send the information sheet for them to review and set up a time to contact them by phone to review the study and obtain verbal consent. If either the participant or the parent do not wish to be in the study or have their child participate in the study, no further contact will be made.

Individual interviews with parents and children will take place in two locations: through Zoom where participants will be able to see and interact with each other, and in-person with the aid of the community partners' space. Parents and children will be interviewed separately. Members of the research team will have prolonged engagement within the community to establish trust with participants. As of December 2023, recruitment for the study began May 2023 and is 95% completed.

**Qualitative Interview Outcomes.** Qualitative methodology allows participants to discuss their lived experiences and can account for specific details that quantitative methods may not be able to attain. The research team will conduct semi-structured individual interviews. Research questions will address the factors that contribute to substance use among youth in urban cities. The interview guide will consist of questions pertaining to substance use perception and knowledge, parent-child relationships, and their perception of educational resources for Black families.

Qualitative methodology allows for participants to discuss their lived experiences and can account for specific details that quantitative methods may not be able to attain. Research questions will address the unique contextual factors that contribute to substance use in Paterson (or East Orange), challenges in discussing substance use within their families and understanding what they would like to see in a parent-child substance use prevention intervention for Black families in their

community. This component of the study focuses on three specific research questions: 1) *What are the social and environmental contexts of substance use initiation?* 2) *What are the challenges to discussing substance use within the Black family?* 3) *What specific components do Black families need in a substance use prevention intervention in Paterson?*

In qualitative research, data collection and data analysis occur inductively through the identification of recurring themes and patterns in transcripts, field notes, and analytic memos. A thematic analysis framework will be used for this study [54]. Thematic analysis allows for researchers to highlight similarities and differences across groups of participants. The research staff will work from an essentialist/realist perspective that assumes participants' language reflects their experiences, meanings, and realities [54]. Meaningful analytical units will then be developed by using a coding scheme informed by dominant themes in the data. Topics will then be divided into several subtopics based on recurring themes within the larger topics, allowing for more in-depth analysis and complex understanding and interpretation of each theme. Each theme and subtheme will be assigned a code, and the codes will be compiled in a codebook.

A confirmability audit will be conducted where multiple coders will be used to analyze the data. Data from the interviews will first be analyzed by interviewers using open coding, whereby concepts were identified and labeled as they emerged from the data and across the interviews. Interviews will be transcribed and analyzed using Nvivo 12 software. The coding process will be inductive in nature and consist of categorization and grouping. Line-by-line coding will be employed, and common themes will be grouped together using a coding map created from Nvivo to conceptualize the themes. At least a 90% inter-rater reliability will be achieved before codes and categories are developed. The categories that will be developed from the coding process will not be predetermined but rather formed during the coding process. After initial coding of the data, the research team will summarize and organize the results in Nvivo.<sup>55</sup>

**Aim 2:** Adapt a family and community-based substance use prevention intervention for Black

youth and families, which includes a family and community advisory board to guide the adaptation of the intervention.

**Family and Community Advisory Board.** After qualitative interviews, participants will be asked if they would like to be a member of the family-community advisory board, consisting of parents, caregivers, and leaders of family-based organizations in New Jersey. If the participant is interested, the Research Assistant will discuss the study with the guardian/parent and obtain informed written assent from the participants. For the focus group and individual interviews, the Research Assistant will discuss the study with the guardian/parent and obtain verbal assent from the participants. In describing the study to the participants, the purpose of the study will be to provide a strengths-based approach to build on the strengths of African American families and support parents and youth during the transition from early adolescence to the teen years with a specific emphasis on helping young people avoid risky and dangerous behaviors (e.g., substance use). If a participant or their guardian/parent indicates that they do not wish to participate, there will be no further involvement in the study. We will also obtain agreement from the appropriate administrator at the participating program. Findings from the qualitative study and approval from the board will aid in the adaptation of the intervention. Based on the current literature on Black families and available interventions, our study team decided to adapt an intervention that have been delivered to Black families: Strong African American Families (SAAF).

### **Intervention to Review & Adapt: The Strong African American Families Program**

The Strong African American Families Program (SAAF) is an innovative preventative intervention program for African Americans youth and their families. This intervention translated research that identified racial discrimination on Black youth frequently developed into poor mental health, depression, early sexual activity, alcohol use, drug misuse and behavioral issues [27]. Black youth who did not experience these negative health outcomes had supportive family relationships including emotional support, communicative parents, and high levels of potential control which was

identified as a protective factor [27]. While the initial SAAF program was designed for rural African American youth, it has since been successfully adapted across rural and urban settings. The intervention consists of 7 weekly gatherings lasting 2.5 hours in which caregivers and adolescents engage in discussions and activities led by community members. Caregivers focus on involved caregiving practices and providing consistent support to their adolescent(s). Adolescent topics include goal setting for the future, understanding who they are, dealing with early sexual desire, values, strategies for resisting peer pressure, and making good friends and choices. Caregiver topics include supporting adolescents, strict parental control, daily parenting, helping children achieve academically, encouraging racial pride, protection against negative behaviors, and maintaining adolescent-caregiver connection [28].

**Aim 3:** Assess the feasibility of the intervention through theater testing, involving the family and community advisory board, we will enter step 3 of ADAPT-ITT implementation framework).

In this aim, we will use theater testing, an innovative methodology to pretest our evidence-based intervention, with the feedback of stakeholders, including the study team and advisory board, for intervention adaptation. Theater testing is commonly utilized for product testing in the areas of public service announcements; and television, video, and print advertisements [39]. ADAPT-ITT recommends no more than 5-20 participants to be involved in theater/pilot testing in order to receive adequate feedback and make substantive change in the intervention [52]. Out of 40 participants (20 parents and 20 children), we will invite 10-20 parent-child participants for theater testing. Participants will receive a demonstration of the product, in this case the adapted intervention. Participants will then receive a questionnaire to provide feedback on their experience of the intervention. Documentation of participants' interaction and reactions to information and visual materials in a constrained time frame is a significant strength of theater testing. As the theater testing population is similar to the target population, this assessment will provide accurate information about the product (intervention).

## Results

The study is part of a two-year research pilot study award that received funding from the National Institute on Drug Abuse (NIDA). Data collection for this study began in May 2023. The remaining year will focus on completing data collection, analysis, forming the family and community advisory board, and dissemination of results, and developing the intervention components. Moreover, data collection for Aim 1 is 95% complete. We expect to complete all data collection for Aim 1 on or before December 30, 2023. We will begin analyzing the data and consulting with our family and community advisory board beginning in February 2024.

## Discussion/Anticipated Findings

The goal of this study is to adapt a race-specific parent-child substance use education intervention for Black families living in urban cities in New Jersey which can promote family bonding, communication, and supervision, as well as acknowledging racial and ethnic specific norms, values, and pride. The adaptation of this intervention will be co-designed based on the input of Black parents and their children and stakeholders. Through this approach, researchers will have in-depth understanding to adapt evidence-based substance abuse prevention interventions for Black families' parenting practices and environment context. Other studies have demonstrated that youth report reduced use of drugs when they have positive relationships with their parents and communicate with their parents about sex and drugs [16-18]. While limited research has specifically focused on family processes involved in drug use prevention among Black families solely, we anticipate reduced rates of substance use with positive parent-child communication drugs. We anticipate that study findings will provide more context on specific barriers that Black families face in their community around preventing drug use among their children. In addition, we anticipate that study findings will enhance the study team's knowledge on potential facilitators to substance use discussions that can be utilized in prevention interventions.

Further implications include an integrated community and health care provider approach to incorporate nurses within the school-based health setting and pediatric primary care settings. As nurses serve as member of one of the most trusted professions, nurses are positioned to positively influence outcomes with young black youth as they can provide healthcare related education, health promotion and prevention and support through necessary medical treatment. By including medical and nursing professionals in this work, this project plans to take a more holistic approach to understanding the foundations of substance use and prevention in Black youth while building a community with parents and families. Nurse roles will help to expand the creation of a plan which maintains consistent outreach and sustainability by providing students multiple opportunities to receive education and resources to integrate into the school culture.

### **Study Limitations**

This is a formative study using qualitative individual interviews as a methodology. A limitation of this study is that data will be collected via self-report and subject to response bias.

### **Conclusion**

This study aims to provide environmental level and culturally specific implications in implementation science regarding the use of an adapted substance use prevention interventions guided by Black families, for Black families living in urban neighborhoods. The evidence from this study will be used for the preparation of a feasibility trial and a more robust and larger parent-children drug use prevention clinical trial specifically for Black families.

### **Acknowledgments**

This study is funded by a research education grant from the Family Involvement in Recovery Support and Treatment (FIRST) Research Network, which is co-funded by the National Institute on Drug Abuse and National Institute of Neurological Disorders and Stroke (PI: Aaron Hogue:

R24DA051946). The first author is funded by the NIH Early Independence Award (PI: Ijeoma Opara; DP5OD029636) and NIDA Pioneer's Award (PI: Ijeoma Opara; DP1DA058982).

### Data Availability

The data sets generated during and analyzed during this study are not publicly available due to confidential reasons but are available from the corresponding author on reasonable request.

### Conflicts of Interest

None declared.

### Abbreviations

PI: principal investigator

### References

1. Boyd DT, Opara I, Quinn CR, Waller B, Ramos SR, Duncan DT. Associations between Parent–Child Communication on Sexual Health and Drug Use and Use of Drugs during Sex among Urban Black Youth. *International Journal of Environmental Research and Public Health*. 2021;18(10):5170. doi:10.3390/ijerph18105170
2. Glass JE, Rathouz PJ, Gattis M, Joo YS, Nelson JC, Williams EC. Intersections of poverty, race/ethnicity, and sex: Alcohol consumption and adverse outcomes in the United States. *Soc Psychiatry Psychiatr Epidemiol*. 2017;52(5):515-524. doi:10.1007/s00127-017-1362-4
3. Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual Causes of Death in the United States, 2000. *JAMA*. 2004;291(10):1238-1245. doi:10.1001/jama.291.10.1238
4. Key Substance Use and Mental Health Indicators in the United States: Results from the 2021 National Survey on Drug Use and Health. Published online 2021.



5. 2019 National Survey on Drug Use and Health: African Americans. Published online September 2020. <https://www.samhsa.gov/data/sites/default/files/reports/rpt31099/2019NSDUH-AA/AfricanAmerican%202019%20NSDUH.pdf>
6. Results from the 2013 National Survey on Drug Use and Health: Mental Health Findings.
7. Voisin D, Elsaesser C, Kim D, Patel S, Cantara A. The Relationship Between Family Stress and Behavioral Health Among African American Adolescents. *Journal of Child and Family Studies*. 2016;25. doi:10.1007/s10826-016-0402-0
8. Haeny AM, Sartor CE, Arshanapally S, Ahuja M, Werner KB, Bucholz KK. The association between racial and socioeconomic discrimination and two stages of alcohol use in blacks. *Drug Alcohol Depend*. 2019;199:129-135. doi:10.1016/j.drugalcdep.2019.02.026
9. Dawson DA, Grant BF, Stinson FS, Chou PS, Huang B, Ruan WJ. Recovery From DSM–IV Alcohol Dependence. *Alcohol Res Health*. 2006;29(2):131-142.
10. Kogan SM, Cho J, Brody GH, Beach SRH. Pathways Linking Marijuana Use to Substance Use Problems among Emerging Adults: A Prospective Analysis of Young Black Men. *Addict Behav*. 2017;72:86-92. doi:10.1016/j.addbeh.2017.03.027
11. Jones-Webb R. Drinking Patterns and Problems Among African-Americans: Recent Findings. *Alcohol Health Res World*. 1998;22(4):260-264.
12. Wallace JM, Bachman JG, O'Malley PM, Johnston LD, Schulenberg JE, Cooper SM. Tobacco, alcohol, and illicit drug use: racial and ethnic differences among U.S. high school seniors, 1976-2000. *Public Health Rep*. 2002;117(Suppl 1):S67-S75.
13. Zapolski TCB, Pedersen SL, McCarthy DM, Smith GT. Less Drinking, Yet More Problems: Understanding African American Drinking and Related Problems. *Psychol Bull*. 2014;140(1):10.1037/a0032113. doi:10.1037/a0032113
14. Voisin DR, Patel S, Hong JS, Takahashi L, Gaylord-Harden N. Behavioral health correlates of exposure to community violence among African-American adolescents in Chicago. *Children and Youth Services Review*. 2016;69:97-105. doi:10.1016/j.childyouth.2016.08.006
15. Boyd DT, Threats M, Winifred O, Nelson LE. The Association Between African American Father–Child Relationships and HIV Testing. *Am J Mens Health*. 2020;14(6):1557988320982702. doi:10.1177/1557988320982702
16. Boyd DT, Quinn CR, Aquino GA. The Inescapable Effects of Parent Support on Black Males and HIV Testing. *J Racial and Ethnic Health Disparities*. 2020;7(3):563-570. doi:10.1007/s40615-019-00685-7
17. Opara I, Lardier DT, Reid RJ, Garcia-Reid P. “It All Starts With the Parents”: A Qualitative Study on Protective Factors for Drug-Use Prevention Among Black and Hispanic Girls. *Affilia*. 2019;34(2):199-218. doi:10.1177/0886109918822543
18. Barman-Adhikari A, Cederbaum J, Sathoff C, Toro R. Direct and Indirect Effects of Maternal and Peer Influences on Sexual Intention among Urban African American and Hispanic Females. *Child Adolesc Soc Work J*. 2014;31(6):559-575. doi:10.1007/s10560-014-0338-4

19. Salas-Wright CP, AbiNader MA, Vaughn MG, et al. Trends in Substance Use Prevention Program Participation Among Adolescents in the U.S. *Journal of Adolescent Health*. 2019;65(3):426-429. doi:10.1016/j.jadohealth.2019.04.010
20. Carver H, Elliott L, Kennedy C, Hanley J. Parent–child connectedness and communication in relation to alcohol, tobacco and drug use in adolescence: An integrative review of the literature. *Drugs: Education, Prevention and Policy*. 2017;24(2):119-133. doi:10.1080/09687637.2016.1221060
21. Salas-Wright CP, Vaughn MG, Goings TC, et al. Disconcerting levels of alcohol use among Venezuelan immigrant adolescents in the United States. *Addictive Behaviors*. 2020;104:106269. doi:10.1016/j.addbeh.2019.106269
22. Khoury L, Tang YL, Bradley B, Cubells JF, Ressler KJ. Substance use, childhood traumatic experience, and Posttraumatic Stress Disorder in an urban civilian population. *Depression and Anxiety*. 2010;27(12):1077-1086. doi:10.1002/da.20751
23. Reboussin BA, Green KM, Milam AJ, Furr-Holden CDM, Ialongo NS. Neighborhood Environment and Urban African American Marijuana Use during High School. *J Urban Health*. 2014;91(6):1189-1201. doi:10.1007/s11524-014-9909-0
24. Gibbons FX, O'Hara RE, Stock ML, Gerrard M, Weng CY, Wills TA. The erosive effects of racism: Reduced self-control mediates the relation between perceived racial discrimination and substance use in African American adolescents. *Journal of Personality and Social Psychology*. 2012;102(5):1089-1104. doi:10.1037/a0027404
25. Lee DB, Heinze JE, Neblett EW, Caldwell CH, Zimmerman MA. Trajectories of Racial Discrimination That Predict Problematic Alcohol Use Among African American Emerging Adults. *Emerging Adulthood*. 2018;6(5):347-357. doi:10.1177/2167696817739022
26. Baiden P, Onyeaka HK, Aneni K, et al. Perceived racial discrimination and polysubstance use among racial/ethnic minority adolescents in the United States. *Drug and Alcohol Dependence*. 2023;248:109894. doi:10.1016/j.drugalcdep.2023.109894
27. Brody GH, Yu T, Chen E, Miller GE, Barton AW, Kogan SM. Family-Centered Prevention Effects on the Association Between Racial Discrimination and Mental Health in Black Adolescents: Secondary Analysis of 2 Randomized Clinical Trials. *JAMA Network Open*. 2021;4(3):e211964. doi:10.1001/jamanetworkopen.2021.1964
28. Berkel C, Murry VM, Thomas NA, et al. The Strong African American Families Program: Disrupting the Negative Consequences of Racial Discrimination Through Culturally Tailored, Family-Based Prevention. *Prev Sci*. Published online September 15, 2022. doi:10.1007/s11121-022-01432-x
29. Brody GH, Yu T, Miller GE, Ehrlich KB, Chen E. Preventive parenting intervention during childhood and young black adults' unhealthful behaviors: a randomized controlled trial. *Journal of Child Psychology and Psychiatry*. 2019;60(1):63-71. doi:10.1111/jcpp.12968
30. Brody GH, Murry VM, Gerrard M, et al. The strong African American families program: prevention of youths' high-risk behavior and a test of a model of change. *J Fam Psychol*. 2006;20(1):1-11. doi:10.1037/0893-3200.20.1.1

31. Stormshak EA, Dishion TJ. A School-Based, Family-Centered Intervention to Prevent Substance Use: The Family Check-Up. *The American Journal of Drug and Alcohol Abuse*. 2009;35(4):227-232. doi:10.1080/00952990903005908
32. Kogan SM, Bae D, Lei MK, Brody GH. Family-centered alcohol use prevention for African American adolescents: A randomized clinical trial. *J Consult Clin Psychol*. 2019;87(12):1085-1092. doi:10.1037/ccp0000448
33. Lavner JA, Barton AW, Beach SRH. Direct and Indirect Effects of a Couple-Focused Preventive Intervention on Children's Outcomes: A Randomized Controlled Trial with African American Families. *J Consult Clin Psychol*. 2020;88(8):696-707. doi:10.1037/ccp0000589
34. Lavner JA, Stansfield BK, Beach SRH, Brody GH, Birch LL. Sleep SAAF: a responsive parenting intervention to prevent excessive weight gain and obesity among African American infants. *BMC Pediatrics*. 2019;19(1):224. doi:10.1186/s12887-019-1583-7
35. Lieneman CC, Quetsch LB, Theodorou LL, Newton KA, McNeil CB. Reconceptualizing attrition in Parent-Child Interaction Therapy: "dropouts" demonstrate impressive improvements. *Psychol Res Behav Manag*. 2019;12:543-555. doi:10.2147/PRBM.S207370
36. Hogue A, Henderson CE, Becker SJ, Knight DK. Evidence Base on Outpatient Behavioral Treatments for Adolescent Substance Use, 2014-2017: Outcomes, Treatment Delivery, and Promising Horizons. *J Clin Child Adolesc Psychol*. 2018;47(4):499-526. doi:10.1080/15374416.2018.1466307
37. Godley MD, Godley SH, Dennis ML, Funk RR, Passeti LL. The effect of assertive continuing care on continuing care linkage, adherence and abstinence following residential treatment for adolescents with substance use disorders. *Addiction*. 2007;102(1):81-93. doi:10.1111/j.1360-0443.2006.01648.x
38. Acevedo A, Harvey N, Kamanu M, Tendulkar S, Fleary S. Barriers, facilitators, and disparities in retention for adolescents in treatment for substance use disorders: a qualitative study with treatment providers. *Subst Abuse Treat Prev Policy*. 2020;15:42. doi:10.1186/s13011-020-00284-4
39. Brody GH, Kogan SM, Chen Y fu, Murry VM. Long-Term Effects of the Strong African American Families Program on Youths' Conduct Problems. *Journal of Adolescent Health*. 2008;43(5):474-481. doi:10.1016/j.jadohealth.2008.04.016
40. Murry VM, Berkel C, Brody GH, Gibbons M, Gibbons FX. The Strong African American Families Program: Longitudinal Pathways to Sexual Risk Reduction. *Journal of Adolescent Health*. 2007;41(4):333-342. doi:10.1016/j.jadohealth.2007.04.003
41. Brody GH, Murry VM, Kogan SM, et al. The Strong African American Families Program: a cluster-randomized prevention trial of long-term effects and a mediational model. *J Consult Clin Psychol*. 2006;74(2):356-366. doi:10.1037/0022-006X.74.2.356
42. Perceived Discrimination and the Adjustment of African American Youths: A Five-Year Longitudinal Analysis With Contextual Moderation Effects - Brody - 2006 - Child Development - Wiley Online Library. Accessed October 2, 2023. <https://srcd.onlinelibrary.wiley.com/doi/10.1111/j.1467-8624.2006.00927.x>

43. Nickel S, von dem Knesebeck O. Effectiveness of Community-Based Health Promotion Interventions in Urban Areas: A Systematic Review. *J Community Health*. 2020;45(2):419-434. doi:10.1007/s10900-019-00733-7
44. Tait RJ, Hulse GK. A systematic review of the effectiveness of brief interventions with substance using adolescents by type of drug. *Drug and Alcohol Review*. 2003;22(3):337-346. doi:10.1080/0959523031000154481
45. Schleider JL, Weisz JR. Little Treatments, Promising Effects? Meta-Analysis of Single-Session Interventions for Youth Psychiatric Problems. *J Am Acad Child Adolesc Psychiatry*. 2017;56(2):107-115. doi:10.1016/j.jaac.2016.11.007
46. Steele DW, Becker SJ, Danko KJ, et al. Brief Behavioral Interventions for Substance Use in Adolescents: A Meta-analysis. *Pediatrics*. 2020;146(4):e20200351. doi:10.1542/peds.2020-0351
47. Paterson city, New Jersey - Census Bureau Profile. Accessed December 14, 2023. [https://data.census.gov/profile/Paterson\\_city,\\_New\\_Jersey?g=160XX00US3457000](https://data.census.gov/profile/Paterson_city,_New_Jersey?g=160XX00US3457000)
48. Opara I, Leonard NR, Thorpe D, Kershaw T. Understanding Neighborhoods' Impact on Youth Substance Use and Mental Health Outcomes in Paterson, New Jersey: Protocol for a Community-Based Participatory Research Study. *JMIR Research Protocols*. 2021;10(5):e29427. doi:10.2196/29427
49. 30 NJ Towns With The Most Heroin Abuse In New 2018 Report. Point Pleasant, NJ Patch. Published October 1, 2018. Accessed December 14, 2023. <https://patch.com/new-jersey/pointpleasant/30-nj-towns-most-heroin-abuse-new-2018-report>
50. U.S. Census Bureau QuickFacts: East Orange city, New Jersey. Accessed December 14, 2023. <https://www.census.gov/quickfacts/fact/table/eastorangecitynewjersey/PST045222>
51. Substance Abuse Overview 2021 Essex County. Accessed December 14, 2023. <https://www.nj.gov/humanservices/dmhas/publications/statistical/Substance%20Abuse%20Overview/2021/Ess.pdf>
52. Wingood GM, DiClemente RJ. The ADAPT-ITT Model: A Novel Method of Adapting Evidence-Based HIV Interventions. *JAIDS Journal of Acquired Immune Deficiency Syndromes*. 2008;47:S40. doi:10.1097/QAI.0b013e3181605df1
53. Yancey AK, Ortega AN, Kumanyika SK. Effective recruitment and retention of minority research participants. *Annu Rev Public Health*. 2006;27:1-28. doi:10.1146/annurev.publhealth.27.021405.102113
54. Kiger ME, Varpio L. Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical Teacher*. 2020;42(8):846-854. doi:10.1080/0142159X.2020.1755030
55. Nowell LS, Norris JM, White DE, Moules NJ. Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*. 2017;16(1):1609406917733847. doi:10.1177/1609406917733847

## Supplementary Files

## Multimedia Appendixes

Reviewers summary statement.

URL: <http://asset.jmir.pub/assets/c9f136cf844232e1f7a82979476204a3.pdf>