The Dreamer Girls Project: Utilizing ADAPT-ITT to develop a Drug Use Prevention and Sexual Health Wellness Intervention for Black Girls

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Table of Contents

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Abstract

Background: Drug use rates are rising among Black girls in the U.S. this is concerning as drug use among Black girls have the worse health outcomes including increased likelihood of engagement in sexual risk behaviors. Sexual risk behaviors can lead to early pregnancy, STI or even HIV diagnoses. It is essential that prevention interventions for Black girls aim to address both areas of concern to ensure a successful and healthy transition into adulthood for Black girls.

Objective: We aim to explain the process the development of a drug use prevention and sexual health wellness through the adaptation of an already the existing evidence-based intervention, SIHLE.

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Results: The ADAPT-ITT framework offered structure and facilitated this intervention. This process culminated with a facilitator's guide and associated materials ready for pilot
testing.

Conclusions: We followed the ADAPT-ITT framework, phases 1–6, to iteratively adapt SIHLE to revise activities and created additional sessions pertaining to drug use education and knowledge. The study represents the first time, to our knowledge, that SIHLE has been adapted to include a major focus on drug use among Black girls. Intervention testing will occur late Spring of 2025. Clinical Trial: ClinicalTrials.Gov, NCT05014074

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Keywords: HIV; sexual health; prevention; girls; intervention

Introduction/Background

Black girls in the United States remain disproportionately affected by sexually transmitted infections (STIs) and HIV compared to girls from other races and ethnicities. For example, in 2023, the reported rate of chlamydia was nearly six times higher among non-Hispanic Black girls ages 15-19 compared to non-Hispanic White girls in the same age group.(1) Similar trends in racial disparities for other STIs have been well-documented.(1) In addition, recent data from the Centers for Disease Control and Prevention (2) revealed that of the estimated 4,900 HIV diagnoses among women reporting heterosexual contact, about 10% of those diagnoses are comprised of Black girls and young adults between the ages of 13-24 years. This is especially alarming given that Black girls

and women between the ages of 13-24 represent less than 13% of the population of women and girls in the United States. These statistics reveal concerning information about the state of sexual health among Black women and girls.

Although much of the aforementioned data amplifies disparities among Black women and girls, studies that specifically focus on Black girls are important because adolescence is a critical developmental period in which youth establish habits that shapes their sexual health behaviors and outcomes well into adulthood.(3) Furthermore, the sexual health of Black girls is uniquely impacted by structural issues and other sociocultural conditions that increases their vulnerability to STIs and HIV.(4) For example, recent research suggests that gendered racism (5) and structural racism (4) contribute to sexual risk among Black girls.

In addition to the challenges Black girls face with HIV and STIs, substance use is a related problem among this population. Data from the Youth Risk Behavior Surveillance System reveals that lower percentages of Black girl's report drinking alcohol and using electronic vapor products in the past 30 days compared to White and Hispanic girls.(6) However, a greater percentage of Black girl's report using marijuana in the past 30 days compared to White and Hispanic girls in the same age group. Despite the variation in Black girls' substance use, they are more likely than girls of other ethnic groups to suffer from the negative consequences of substance use.(7) Consequences can include engaging in risky sexual behaviors, adverse mental health outcomes, and a greater risk of disciplinary issues in school which may lead to more serious consequences within the criminal justice system.(8–10)

There is a unique connection between substance use and sexual health among Black girls. For example, Rothman et al., (11) found that the association between age at first drink and age at first sex was not as strong among Black female adolescents compared to White female adolescents. In a similar study, Hipwell et al., (12) found that White female adolescents have a higher rate of alcohol use compared to Black girls, yet Black girls remain at a higher risk for engaging in risky sexual behaviors. Although research suggests Black female adolescents are more likely to use illicit substances besides alcohol (e.g., marijuana, cocaine, ecstasy, injection drugs) compared to female adolescents of other races, more research is needed to explore the connection between this type of substance use and sexual health for Black girls.

The Need for Black girl Drug Use, HIV and STI Prevention Interventions

Very few existing interventions designed to promote sexual health wellness and prevent substance use are not tailored, accessible, or applicable to the unique experiences of Black female adolescents. Sex education researchers argue that prominent sexual health promotion programs are particularly harmful to Black girls because they come from a risk-reduction framework as opposed to a more strengths-based framework which would better capture the complexities of Black girls.(13) Similarly, substance use prevention research and programs also fail to fully account for the nuanced lived experiences of Black girls when they combine their experiences with other youth of color.(14) To address these gaps there is a critical need for a combined substance use and sexual health prevention intervention for Black girls. A tailored approach that leverages existing strengths and protective factors in Black girls' lives such as parental communication, (14) social support, (14–17) and ethnic identity, (17,18) may make the intervention more effective. It is also essential for researchers and interventionists to include youth voices and perspectives in the intervention development process. Research suggests that approaches that actively involve youth in intervention development, such as Youth Participatory Action Research (YPAR) for example, not only help young people to develop important skills, (19–21) while also enhancing the sustainability and acceptability of the intervention.(22) To fill this gap the current study adapted SiHLE, (23) an evidence-based HIV prevention intervention for Black female adolescents to include substance use prevention information.

Methods

This study employed the ADAPT-ITT (Assessment, Decision, Adaptation, Production, Topical Experts, Integration, Training, Testing) framework, a model for adapting evidence-based interventions,(24) to iteratively adapt the SIHLE intervention for Black teen girls. We applied phases one through six of the ADAPT-ITT framework. The study was designed to ensure that the adapted intervention effectively addresses both drug use and sexual health, which are critical areas of concern for Black girls in the U.S. Steps are outlined in Table 1. Formative research took place in multiple stages between September 2021 and March 2023 in the form of focus group interviews via zoom and in person. Our team included researchers with expertise in community-based participatory methods, qualitative and quantitative methods, intervention development and curriculum design, and outreach specialists.

Table 1. Applying the ADAPT-ITT model to Developing the Dreamer Girls Project Prevention Intervention

Phase	Methodology	Results or Observations
1. Assessment	- Conducted 12 formative focus groups with Black girls (90-120 minutes each) to explore their experiences and needs using a phenomenological framework. - Held two meetings with community leaders to obtain feedback on intervention development and assess readiness for the intervention in schools, youth-serving organizations, and clinics. - Developed a survey to assess prevalence of drug use and sexual risk behaviors (n=200). - Formative data collected through a systematic review and advisory board meetings. - Created an advisory board from focus group participants to guide the adaptation process. - Conducted additional focus groups and individual interviews with Black girls to gather comprehensive data on needs and behaviors.	- Identified themes related to drug use and need for education -need for discussion on sexual risk behaviors, protective factors, and experiences of Black girls. - Data suggested alcohol use and vaping are prevalent among participants. - Formed advisory board and integrated community leader feedback to inform adaptation process. -Data suggested more discussion needed around how to address racism and discrimination specific to Black girls
2. Decision	- Presented six interventions to the youth advisory board (YAB): SIHLE, Condom	- SIHLE was chosen for its proven effectiveness in addressing HIV and STI prevention among Black girls. - The intervention was seen as a good fit due to its prior success and relevance to

	Carnival, Dating Matters, 2 Hype, and Abstinence Club. - Participants selected the SIHLE intervention for adaptation.	the target population.
3. Adaptation	- Analyzed themes from focus groups and surveys. - Hired a consultant to assist in revising the SIHLE intervention. - Conducted iterative review sessions with the YAB to ensure that changes were feasible and relatable. - Held an in-person retreat with six YAB members to discuss changes and themes.	- Revised intervention was theater tested over eight weeks to confirm timing and effectiveness. - Final adaptations incorporated feedback from focus groups and YAB. - Developed additional activities to address substance use and sexual health.
4. Production	- Created the first draft of the adapted intervention materials. - Conducted an 8-hour in-person working session to review each session. - Revisions made based on feedback from YAB and consultants.	- Produced revised draft with additional sessions focusing on substance use education. - YAB members reviewed and provided feedback on adapted sessions.
5. Topic Experts	- Study Principal Investigator (PI), consultants, and intervention development experts reviewed the adapted intervention. - Met with Dr. Wingood, creator of SIHLE, at a HIV conference to obtain general feedback and to make her aware of adaptations	- Dr. Wingood supported the addition of educational sessions on substance use.
6. Integration	- Held additional focus group meetings with YAB to review	- Developed a comprehensive facilitator guide with culturally appropriate language and content.

	all sessions. - Finalized facilitator guide based on group feedback. - Integrated community input to ensure the adapted intervention remained culturally relevant and effective.	- Adaptations reflected community and expert recommendations for improving engagement and educational outcomes.
7. Training	- Scheduled trainings for facilitators to deliver the adapted SIHLE intervention. - Trainings include sessions on cultural humility, intersectionality, and maintaining intervention fidelity.	- Training process in progress
8. Testing	- Prepared for pilot testing of the adapted SIHLE intervention. - IRB approval submitted; awaiting confirmation.	- Funding has been secured to support pilot testing with a small sample of no more than 30 female participants. - Testing phase will evaluate feasibility, acceptability, and potential effectiveness of the adapted intervention.

Researcher's Positionality

The research team collectively consists of Black women whom are dedicated to improving the lives of Black girls and work under a NIH funded study that center on engaging with communities of color and highlighting the strengths of Black girls. While we share similar race/ethnic attributes with the participants in the study, we acknowledge that we are not experts in their lived realities as Black girls. We utilize the experience of our existing youth advisory board which includes all Black girls in the adaptation and implementation of the intervention. Research team consists of youth advisory board leaders, qualitative researchers, project management staff, and research assistants. All of the authors of this protocol were involved in some capacity in either 1) data collection or data analysis and 2) youth advisory board facilitators and notetakers who collected and analyzed meeting notes from the board meetings.

Participant recruitment

For the formative stage, qualitative focus groups were decided upon due to the empowering nature of focus groups. The study was approved by the Institutional Review Board at Yale University. Due to the sensitivity of the topic, parent written consent was waived and only verbal assent from youth participants was required. To be eligible to be a part of this study, all participants had to identify as female, Black, and be between the ages of 13-18 years old. Recruitment included word of mouth from youth serving organizations and posting of a flyer on social media platforms such as Twitter and Instagram. All interested individuals (1,215) first completed an eligibility form then the study project manager at the time, individually contacted potential participants to confirm their age, race, and gender. During this process, 1,100 individuals were excluded from participating in study for not meeting the eligibility criteria which included mostly not being with the target age group or race (not identifying as Black). Eligible individuals were invited to participate in the study via email and a study staff member called each eligible individual to conduct a screening interview. Once eligible participants met screening criteria and confirmed interest in participation were given the option to participate in available focus group times.

All of the focus groups were led by a Black woman research staff member on the study team. This was done due to the importance of racial and gender matching in the data collection phase, which can help create a welcoming research environment and encourage active participation (Demo, 2003). All youth participants verbally assented to participate at the start of each focus group and were given an information sheet about the study. Information sheets were mailed to all youth participants under the age of 18 years old and to their parent/guardians to inform them about the study. The focus group interviews were conducted within nine months of the initial posting of the recruitment ad. Black girls (N = 62) between the ages of 13-18 (M = 15.6 years, SD = 1.50) participated in the focus groups. In total, 12 focus groups were conducted; 4 groups were online, 4 groups were in-person at a neighborhood youth serving organization, and 4 groups were in a closed, private space at a high school.

Phase 1 (Assessment)

We conducted a mixed methods assessment and regular discussions between research team and community partners, where we identified the need to develop and HIV and drug use prevention program for Black girls. Specifically, the assessment portion also allowed us to identify which

drugs of interest, educational sessions should be focusing on.

Procedures

We used multiple methods to gather comprehensive data on the needs and behaviors of Black teen girls. Formative focus groups were conducted with Black teen girls and community partners to understand their experiences and needs. Additionally, we conducted quantitative data collection, surveying 200 participants to assess the prevalence of drug use and sexual risk behaviors, noting significant use of alcohol and vaping. A systematic review of existing literature was also conducted and published by the research team. We established a working youth advisory board composed of focus group participants who were between the ages of 13-18 years old and identified as Black and female and expressed interest in being a part of the advisory board.

The first youth advisory board cohort included approximately eight girls and began October 2021. The purpose of the advisory board was to guide the adaptation process and held meetings with six Black women leaders to gain insights into community perspectives. In 2021, the youth advisory board met six times virtually. In 2022, the board met 24 times virtually on Zoom. In 2023 the board met 20 times virtually and met for the first time as a group, in person at a youth advisory board retreat at Yale University hosted by the Study PI. Girls and at least one parent/guardian were invited to attend the 1-day retreat. The youth were in a separate room on campus with project staff while their parents/guardians were in a separate classroom on campus. During this visit, the YAB members met with an intervention consultant and staff to discuss the findings and go over the plans for adapting the intervention. During this two-hour meeting, the girls provided feedback on the types of characters to be used within the curriculum, messaging, and decided on a schedule to meet with research team and consultant for the remainder of the year for adaptation phases.

Data Collection for Formative Focus Groups

Before conducting focus groups, research staff were trained on how to conduct qualitative focus groups with Black girls. The PI recruited a topical expert to train the data collection team whom has experience in conduct qualitative interviewing with vulnerable populations and training research teams on the importance of cultural humility, intersectionality, and cultural competency. In addition, we conducted two meetings with community leaders who have led organizations that serve Black girls in the U.S., to obtain feedback on plans for intervention development and to assess readiness in places like schools, youth-serving organizations, and clinics. We conducted twelve focus groups to enhance rigor and ensure diverse representation of participants and their perspectives. The focus groups were audio-recorded through the university's-secured Zoom video conferencing software. A phenomenological framework was used to guide the development of semi-structured interview questions. The focus group guide was developed iteratively by the principal investigator and incorporated feedback her research team and community partners. Interviewers guided the discussion following the semi-structured focus group guide. Interviews were then transcribed verbatim. The focus groups ranged from 90-120 minutes and each focus group consisted of six to eight participants. Each group had at least one co-facilitator who took notes and memos. At the end of each focus group, participants were either emailed a $30 gift card or were given a gift card in person.

Data Coding and Analysis

Audio recordings were transcribed by a professional transcription service and verified for accuracy by the research team. The research team which consisted of four research assistants coded all transcripts utilizing an Intersectionality approach to qualitative data.(25) Data from the interviews were first analyzed by research team using open coding, whereby concepts were identified and labeled as they emerged from the data and across the focus groups.(26) The research team read and re-read all the transcripts and developed initial codes in isolation. During weekly research team meetings, the initial codes were reviewed and discussed until all team members agreed on the coding and no discrepancies remained. The team agreed on the process of coding before analysis occurred. All coding was conducted by hand and were then imported into NVivo.

Quantitative survey

We developed a 213-item survey to assess prevalence of drug use and sexual risk behaviors currently among Black girls. We collected data from (n=201) participants who identified as Black girls between the ages of 13-18 years old. Data was collected primarily in person, at various data collection sessions held in partnering high schools in urban cities in New Jersey, with a small portion of girls in the sample (n=24) living outside of New Jersey.

Phase 2 (Decision)

In Phase 2 (Decision), The study PI led a systematic review of interventions focused on HIV/STI and drug use preventions interventions that was published in 2021 (Opara et al., 2021). In addition, Six interventions were presented to the original youth advisory board (1st cohort), including SiHLE, (27) Condom Carnival, (28) Dating Matters, (29) and 2 Hype Abstinence Club. (30). The participants chose the SiHLE intervention for adaptation. Phase 3 (Adaptation) involved analyzing feedback from the focus groups and hiring a consultant to assist in revising the SIHLE intervention along with the research team and youth advisory board members. Key activities included reviewing each session of SIHLE with the advisory board, conducting an in-person retreat with six girls from the Youth Advisory Board (YAB) in July 2023 to discuss changes and themes, and theater testing of the revised SIHLE intervention over eight weeks to confirm timing and effectiveness.

SiHLE is an evidence-based intervention designed to reduce STI and HIV risk among sexually active Black girls.(27)Informed by Social Cognitive Theory and the theory of gender and power, SiHLE includes four complementary sessions that focus on skills training for negotiating safer sex as well as addressing sociocultural factors unique to the vulnerability of Black girls. The combination of these two components have been cited as strengths of SiHLE that contribute to the efficacy of the intervention.(27) Key findings from a randomized control trial of SiHLE revealed that SiHLE participants demonstrated more HIV knowledge, more consistent condom use and fewer sexual partners compared to the comparison condition.(31) SiHLE also includes the five elements of efficacious STI prevention interventions for adolescents, (32) further supporting its use in the current project.

Since its development, SiHLE has been adapted across several contexts which include a web-based adaptation of the intervention, (33–35) an adaptation tailored to youth living in

temporary housing, (36) and adaptations for other demographic groups.(37) Across each of these adaptations, SiHLE has remained associated with reduced high risk sexual behaviors. The strengths of this intervention coupled with its successful adaptation with other populations and into other modalities enhances the potential for SiHLE to benefit this study's population. Feedback from formative focus groups with Black girls also provide rationale for the decision to adapt SiHLE as opposed to other interventions. Table 2 outlines feedback from the focus groups that demonstrate alignment with the core elements of SiHLE.

Table 2. Formative focus group quotes reflecting alignment with SiHLE

Participant Quotes	Lesson Learned	Core Element of SiHLE	Themes aligned with The Dreamer Girls Project
"Information regarding like safe sex practices" *"I would probably want to see how different Black girls are able to express themselves in ways they can't in other places because they feel like they'll be judged."*	Participants expressed a desire for safe spaces where Black girls can express themselves without judgment and gain knowledge on safe sex practices	Develop assertive communication skills to negotiate abstinence, safer sex and or/ condom use with partners and improve condom use skills (e.g., how to properly use a condom, consistent condom use)	The Dreamer Girls Project seeks to share information about sexual health wellness and drug use as a way to prevent the engagement of risky behaviors.
"The consequences to which the disease has on your life. It's like we can die is some of those things don't get treated or HIV can't really get treated." *"I feel it'll be the transmitted diseases personally, because I didn't know a lot about the diseases, so I took in a lot from what they were saying."*	Participants expressed an interest in learning about STIs and the associated consequences of contracting an STI.	Provide participants with HIV and STI knowledge and insight on risky sexual behaviors	The Dreamer Girls Project seeks to share information about sexual health wellness and drug use as a way to prevent the engagement of risky behaviors
"I think promoting healthy and trustful relationships can also allow to prevent HIV and	Healthy relationships were seen as a mechanism for HIV	Understanding of healthy relationships SiHLE aims to equip Black	The Dreamer Girls Project aims to empower Black adolescent girls to recognize and cultivate healthy,

STDs and STIs because if you trust the wrong person and they don't tell you about their diseases, you can eventually get that through sex."	and STI prevention.	female adolescents with the knowledge to discern healthy and unhealthy relationships and the implications associated with each.	empowering relationships while understanding the impact of relationship dynamics on their overall well-being and aspirations. Through a culturally relevant framework, the intervention emphasizes fostering self-awareness, confidence, and resilience to navigate complex social and emotional experiences.
"I would like to see a lot of Black girls have self-confidence." *"I think it was the sexism that stuck out to me."* *"Maybe like discussing like colorism within not just black girls, but like the black community. That would have been nice to talk about."* *"I personally think it would be better if it was just Black girls only because then we would probably be able to relate to more things and be able to get, be comfortable, and say certain things…"*	Participants expressed interest in a prevention program that centers and reaffirms their lived experiences as Black girls.	Cultural and gender pride A key element of SiHLE is to discuss what it means to be an African American girl and to enhance empowerment and self-efficacy based on cultural and gender pride.	The Dreamer Girls Project centers on fostering cultural and gender pride by celebrating the unique identities and strengths of Black adolescent girls. It emphasizes empowerment and self-efficacy through an exploration of cultural heritage, shared experiences, and the resilience of Black girls, inspiring participants to embrace their individuality and collective power in achieving their goals.

“I think the people who should be leading them should be in between the senior college people. Because I feel like if older people do it, they will just be so extra with it. But the seniors and colleges, even seniors, sometimes they don't know what they doing, but the college people they've been through it. They've been through help. They've been through high school. They've been through everything. They had sex. You know you had sex, you're not Jane, the Virgin. You're not Jane, the Virgin.” *“What she's saying, it's like she said, they just went through high school. So I feel like we connect on a type of level that we're like "oh, you just came out of high school. You understand what we're going through. And you understand our mindset" and*	There is a preference for intervention facilitators that are relatable in terms of age and lived experience as well as being trustworthy.	Adult and peer educators to implement group sessions. SiHLE requires facilitators that are African American and Female.	The Dreamer Girls Project incorporates adult and peer mentors to facilitate group sessions, creating a supportive and relatable environment. These mentors, reflecting the experiences and aspirations of Black adolescent girls, serve as role models and guides, fostering trust, engagement, and the exchange of knowledge and experiences.

I feel like, yeah.”			

Phase 3 (Adaptation)

Research team, consultants, and youth advisory board members collaborated to conceptualize how to adapt SIHLE.

Procedures

The research team conducted virtual sessions with the existing youth advisory board (YAB) where we reported findings from the focus groups conducted during the assessment phase. From 2022-2023, the intervention consultant met with the PI and study team once a month to discuss the adaptation of the intervention, however the PI preferred for the consultant to work directly with the YAB to ensure the intervention's fidelity is maintained and to ensure that the girls approved of the intervention. In July 2023, youth advisory board members were invited to the university campus to meet for an in-person retreat, in order to discuss the process of adaptation of the intervention. The consultant met with the YAB and PI during the retreat. Afterwards, the consultant then met with YAB members and research team once a week for three months in 2023 after the retreat meeting. First the research team, consultant and YAB went through each session of SIHLE as is. Then the consultant took notes of the changes being made to SIHLE as suggested by the YAB. Then, once changes were made, the consultant went through the sessions with the YAB members again, to test out whether the changes were feasible and relatable to the group.

Phase 4 (Production)

In February of 2024, the PI and research team met as a group for a 8-hour working session to go over each session that was to be adapted based on the work conducted with the YAB and consultant notes. Table 3 outlines how SIHLE maintains its fidelity and suggested changes made by YAB members. The original SIHLE intervention has 4 sessions, a suggested by the YAB were to extend the sessions and include drug use as additional core sessions integrated within the curriculum.

SiHLE Session and Purpose	The Dreamer Girl's Project Sessions	Adaptations Made to SIHLE
1. My Girls, My Sistas Purpose: Discuss gender and ethnic pride and positive aspects of being a Black girl	1. We are Dreamer Girls Purpose:	Icebreaker: Create accompanying list of ice breakers that facilitators can choose from for hybrid facilitation. Program Intro**:** Adaptation to reflect the vision of the Dreamer Girls Project. Creation of Pact: "Who are the Dreamer Girls?": This was adapted from SiHLE Workshop 1, Activity C – Who are SiHLE Sistas? Dreamer Girl Pact and Motto: Defining the "Dreamer Girl" was adapted from SiHLE Workshop 1, Activity D – The SiHLE Pact. The Dreamer Girls Motto was created by members of the Dreamer Girls Advisory Board. Young & Black: was adapted from Workshop 2, SiHLE Activity E – Young Black & Female. Poem: SiHLE Activity F uses the poem Room Full of Sisters by: Mona Lake Jones. The poem choice was updated for contemporary youth as suggested by the Dreamer Girls Advisory Board. New poem is, "At the Age of 18-Ode To Girls of Color" by Amanda Gorman. Dreamers & Visionaries: This has already been created for DGP. It is similar to SiHLE Activity G – Strong Black Women but has been updated based on the suggestions of the Dreamer Girls Advisory Board. Pieces of Me: This activity combines elements of the original DGP with elements of SiHLE Workshop 1, Activity I - Values – What Matters. How I'll Thrive: This was adapted from SiHLE Workshop 1, Activity J –

		Thought Works. It was updated from a pictograph to a vision board based on the suggestion of the Dreamer Girls Advisory. Board. This activity is now a supplemental activity.
2. It's My Body Purpose: Provide information about STIs, HIV, risk behaviors and consequences of STIs and HIV	2. It's My Voice Purpose:	**Divided these sessions into three separate sessions.** **It's My Voice:** Selfcare: This was suggested as a way to unite program themes by the Dreamer Girls Advisory Board. Boundaries: This was suggested as a way to introduce assertive communication and unite program themes by the Dreamer Girls Advisory Board. Addition of discussion around boundaries with romantic partners was added to focus conversations on this topic. Communication Skills: This was adapted from SiHLE Workshop 3, Activity H – Three Ways to Say It. Whereas the original activity focused on communicating about safe sex, and general boundary setting.
	3. It's My Body (part 1) Purpose:	**It's My Body – Part 1:** Let's Talk About Bodies: This content was added by the request of the Dreamer Girls Advisory Board. Card Swap Game: This was adapted from SiHLE Workshop 2, Activity G – Card Swap Game.

		Candy Swap Game: This is similar to the card swap game; this was added as an alternative. Talk About Bodies: removed; all topics on anatomy and were removed with the idea that a standalone puberty/anatomy workshop would be developed to offer more compressive information. Trivia questions: added with suggestion for Youth Advisory Board. About STIs: This was adapted from SiHLE Workshop 2, Activity F – Speaking of STIs. This includes more detailed information on STI was added. Videos about youth/young adults with HIV/AIDs were added based on Dr. Opara's request.
	4. It's My Body (part 2) Purpose:	**It's My Body – Part 2:** Contraceptives: This was adapted from SiHLE Workshop 3, Activity H – Three Ways to Say It. Whereas the original activity focused on communicating about safe sex, this activity focuses on general boundary-setting. OPRAH: This was adapted from SiHLE Workshop 2, Activity L – OPRaH. Communication Skills: This was adapted from SiHLEActivity H – Three Ways to Say It. Whereas the original activity focused on communicating about safe sex, this activity focuses on communicating about periods and sexual health. Scenarios: added based on the Youth Advisory Board. Addition of pregnancy prevention, pregnancy tests, and emergency contraceptives.

3. SiHLE Skills Purpose: Equip participants with the skills to resist partner pressure to engage in risky sex, negotiate safer sex and to teach proper condom use.	5. It's My Brain (part 1) Purpose:	**It's My Brain (part 1)** Dreamer Girls Need Dopamine: This was adapted from SiHLE Workshop 2, Activity F – Speaking of STIs. Overview of Unhealthy Dopamine Boosters: This was adapted from SiHLE Workshop 3, Activity K – Alcohol and Sex. Additional information was added about substance use in accordance with SASH Lab program goals. Greater focus was placed on vaping and marijuana use at the suggestion of the Dreamer Girls Advisory Board. Life on Dopamine: activity added to create more engagement. More content on the impacts of substances on the brain was added. Myth/Fact decks were added based on suggestions from the Youth Advisory Board. Communication Skills: This was adapted from SiHLE Activity H – Three Ways to Say It. Whereas the original activity focused on communicating about safe sex, this activity focuses on communicating about periods and sexual health.

	6. It's My Brain (part 2) Purpose:	**It's My Brain (part 2)** Content on marijuana, vaping added based on Dr. Opara's request. Activity (Disruption): added to offer more engagement. How to Help a Friend: This was adapted from SiHLE Workshop 2, Activity H –HIV/AIDS. OARS Model: This was added at the suggestion of the Dreamer Girls Advisory Board. Communication Skills: This was adapted from SiHLE Activity H – Three Ways to Say It. Whereas the original activity focused on communicating about safe sex, this activity focuses on communicating about periods and sexual health.
4. Relationship and Power Purpose: Break down power imbalances in heterosexual relationships and teach participants to distinguish between health and unhealthy relationships		The majority of this workshop has been removed from the curriculum. However, one activity has been kept and "infused" across the curriculum. That activity is Communication Skills which was adapted from SiHLE Activity H (Three Ways to Say It). The original activity focused on safe sex communication. The adapted activity focused on periods and sexual health. Now, this activity focuses on participants role playing to understand passive and aggressive communication, with an emphasis on assertive communication

		in different types of relationships. Communication Skills (in its adapted form about passive, aggressive, and assertive communication) is infused in session 2, 4, 5, and 6.

Phase 5 (Topic Experts) involved the study Principal Investigator, an expert in this area, and other consultants reviewing the intervention to provide feedback including a substance use intervention consultant, a HIV prevention intervention expert, an intervention materials developer and graphic designer, and various researchers on the research team whom are experts in gendered racism, sexual health, and drug use prevention among Black girls. The first draft of the adapted intervention was reviewed with the research team and was changed to include more sessions and discussion involving substance use and engaging prevention activities. The second draft, included new sessions, was documented, and the study PI met with the creator of SIHLE at a conference, Dr. Gina Wingood in May 2023, who verbally acknowledged the need for additional drug educational sessions and supported the adaptation. After meeting, the research team collected feedback to adapt this intervention even further to ensure there are various sessions that include substance use education.

Phase 6 (Integration)

Feedback from topical experts and findings from focus groups that included Black girls, and the Youth Advisory Board (YAB) informed the third draft of the model adaptation. We reviewed and collaboratively adapted the second draft of the Dreamer Girls Project with YAB members, incorporating insights from the focus group analyses to develop the third draft of the model and its associated facilitator's guide. We developed a Dreamer Girls Project facilitator guide that aims to highlight the importance of community, and outline facilitator expectations and detailing goals and objectives for each of the 7 sessions. The following section outlines the final adaptations made to the original activities.

Adaptations made to original activities

Core elements of SIHLE, such as fostering gender and cultural pride, promoting healthy relationships, and enhancing communication skills, have been thoughtfully reimagined to create a contemporary, culturally relevant program. Key adaptations include updates to activities, icebreakers, and session structures to resonate with the lived experiences of participants. For example, gender and cultural pride discussions are framed through themes of empowerment and identity, as guided by the Dreamer Girls Advisory Board. Communication skill activities have been expanded to address modern topics like boundary-setting and assertiveness in various contexts, including relationships and self-care. Additionally, content on drug use specifically around marijuana use, alcohol use, and vaping prevention strategies, mental health, and community-building have been integrated to provide a holistic approach to the participants' growth and well-being. Through these adaptations, the Dreamer Girls Project prevention intervention emphasizes relatable mentorship, interactive learning, and culturally relevant tools to empower Black girls to navigate their environments, build resilience, and achieve their dreams. This evolution maintains the integrity of SIHLE's evidence-based principles while aligning with the innovative mission of the Dreamer Girls Project.

Patient and Public Involvement Statement

This study actively engaged Black girls from our Youth Advisory Board (YAB) in the development and refinement of the intervention using the ADAPT-ITT framework. The YAB played a crucial role in shaping the intervention by providing formative feedback on content,

delivery, and overall feasibility. Through a series of structured discussions and iterative adaptations, we integrated their perspectives to ensure the intervention was culturally relevant, developmentally appropriate, and responsive to the lived experiences of Black girls. Additionally, the YAB contributed to refining key components of the intervention by reviewing session materials, providing insights on acceptability, and identifying areas for improvement. Their ongoing engagement throughout the research process strengthened the intervention's alignment with community needs and reinforced our commitment to participatory research approaches. While youth advisory board members were not directly involved in data analysis, their insights informed our interpretation of findings and the final intervention model.

Discussion

The adaptation of the SIHLE intervention was named, "The Dreamer Girls Project Sexual Health Wellness and Drug Use Prevention Intervention." The intervention addresses critical gaps in HIV/STI and drug use prevention research by incorporating tailored drug use prevention sessions specifically designed for Black adolescent girls, a population that often faces intersecting health and social inequities.(38,39) While SIHLE has been successfully adapted in various contexts, The Dreamer Girls Project Sexual Health Wellness and Drug Use Prevention Intervention represents one of the first efforts to integrate comprehensive drug use education into the core program, focusing on substances like vaping, marijuana, and alcohol, which are highly relevant in the lives of urban youth. By employing the ADAPT-ITT framework, which is particularly well-suited for HIV prevention interventions, the adaptation process was methodologically rigorous and culturally responsive, ensuring the intervention meets the unique needs of this population.

A key strength of the Dreamer Girls Project lies in its emphasis on addressing gendered racism and challenging it by empowering Black girls to take control of their health.(5) By including discussions and activities that raise awareness about gendered racism and teach participants how to recognize and challenge these inequities, the intervention equips girls with tools to navigate and resist societal pressures and stereotypes. This focus not only enhances self-efficacy but also fosters a sense of pride and solidarity among participants, further contributing to their resilience. The intervention also incorporates updated scenarios, and role plays within the sessions, which were co-developed with the Youth Advisory Board (YAB) and informed by findings from formative interviews. These updates ensure that the activities are relatable and reflective of the real-life experiences of the participants. For example, scenarios address common challenges such as peer pressure, navigating unhealthy relationships, and making safer choices in social settings around resisting drugs, all while maintaining cultural relevance. These realistic, context-specific role plays enable participants to practice critical communication and decision-making skills in a safe, supportive environment.

Additionally, changes to the program's language, inspirational poetry, and motivational messages reflect the voices and preferences of contemporary Black girls, further enhancing engagement and relatability. The inclusion of updated poetry, such as "At the Age of 18: Ode to Girls of Color" by Amanda Gorman, provides culturally relevant inspiration, aligning with the intervention's goal of fostering empowerment and community building.

By creating a space where Black girls can explore their identities, support one another, and learn strategies to prevent substance use and risky sexual behaviors, the Dreamer Girls

Project goes beyond individual behavior change. It aims to build a community of resilience and empowerment, addressing systemic issues while providing practical tools for personal growth. This innovative approach has the potential to significantly improve the health outcomes and overall quality of life for Black girls, establishing a model for future culturally tailored interventions.

Limitations

The ADAPT-ITT framework has demonstrated its effectiveness and has been successfully utilized in numerous studies. A key limitation of our feasibility for adapting the SIHLE intervention is that the Dreamer Girls Project has not yet been piloted. The following steps involve the final two phases of the study: training and testing. We have secured funding to carry out both the training and testing phases of the intervention. The intervention was initially designed for in-person facilitation, instead of traditional theater testing which would, typically involve a controlled environment, in person, to observe participant responses, we relied on online meetings to test components of the intervention. While these virtual sessions provided valuable preliminary insights, they may not fully capture the dynamics and outcomes of in-person group interactions that will occur in person when the Dreamer Girls Project will be piloted.

The Dreamer Girls Project Sexual Health Wellness and Drug Use Prevention Intervention will be piloted in a city that has a large population of Black people in New Jersey to assess its feasibility and acceptability in increasing knowledge of HIV, STIs, and the perceived risks of drug use. The pilot will involve comprehensive, step-by-step training for Dreamer Girls Project facilitators, capacity building for community partners working with Black girls, measuring baseline and post intervention measures, and the active engagement of youth advisory boards. Guided by an community-engaged framework, we aim to strengthen our collaboration with community members, youth, schools, and nonprofit organizations to enhance access to the Dreamer Girls Project in various communities that have high population of Black girls. Although the SIHLE intervention has been shown to be effective in addressing sexual health, no prior studies have integrated drug use prevention education specifically aimed at reducing drug use and improving risk perception among Black girls.

Conclusion

The primary goal of this study was to utilize the ADAPT-ITT model phases 1–6 to adapt SIHLE for Black Girls. The primary change of our intervention is including key sessions around drug use knowledge and updating sessions to focus on the current trends and scenarios Black girls are facing. Dreamer Girls Project represents a groundbreaking adaptation of the SIHLE intervention, emphasizing the intersection of drug use prevention and sexual health education for Black adolescent girls. By leveraging the ADAPT-ITT framework and incorporating input from Youth Advisory Board members and topical experts, the intervention has been thoughtfully tailored to address the unique challenges and strengths of this population. This process not only preserves the evidence-based core elements of SIHLE but also expands its scope to include culturally relevant strategies that confront gendered racism, enhance resilience, and foster a sense of community among participants.

Our findings highlight the importance of youth-centered, participatory approaches in developing effective prevention programs. The integration of contemporary issues, such as substance use and its connection to sexual health, within a framework that uplifts the voices of Black girls, is a

notable innovation. Although the intervention is yet to be piloted, its methodological rigor, cultural responsiveness, and emphasis on empowerment provide a strong foundation for future implementation and evaluation.

As we prepare for the pilot phase, our work underscores the critical need for prevention interventions that not only address individual behaviors but also engage with the systemic inequities impacting Black girls. The Dreamer Girls Project offers a model for creating community-engaged, culturally tailored interventions with the potential to improve health outcomes and empower the next generation of Black girls. Future studies will focus on evaluating the intervention's feasibility, acceptability, and effectiveness in diverse settings, paving the way for broader dissemination and impact.

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