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An Impact Evaluation of Power Through Choices Pregnancy Prevention Intervention for System-Involved Young People

TECHNICAL REPORT

UNIVERSITY of MARYLAND
SCHOOL OF SOCIAL WORK

PARI: PREVENTION OF ADOLESCENT RISKS INITIATIVE

POWER Through Choices

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For more information about this report:

Nadine Finigan-Carr, PhD
Executive Director of the UMB Center for Violence Prevention
nadine.finigan-carr@umaryland.edu

Introduction

Despite sustained decreases in adolescent birth rates in the last 20 years and recent federal efforts to decrease adolescent birth rates, persistent disparities remain between birth rates for the nation at large and our most vulnerable populations, particularly young people in systems of care such as the child welfare and juvenile justice system. System involvement is a social determinant of health leading to unique needs for adolescent pregnancy prevention and sexuality education. Currently, hundreds of thousands of young people are living in out-of-home placements in the U.S., usually placed through state child welfare or juvenile justice systems. In 2021, 391,641 children and adolescents were living in foster care in the U.S. (Annie E. Casey Foundation, 2024) and a 2022 point-in-time count of young people held in detention facilities found 27,587 young people incarcerated (Office of Juvenile Justice and Delinquency Prevention, 2023). This project's purpose was to explore new questions in the area of promotion of healthy behaviors to prevent adolescent pregnancy in system-involved young people.

Our initial goal was to identify components of programs that directly influence sexual risk-taking behaviors among this population, in order to ultimately reduce disparities in adolescent birth rates. This was in response to the second area of investigation funded, "Identifying and/or validating core program components or 'active ingredients' essential for teen pregnancy prevention programs and practices to produce the desired outcomes (HHS/OPA FOA, 93.343)." **Our secondary goal was to identify characteristics of system-involved young people that should be considered when tailoring adolescent pregnancy prevention programs.**

Research indicates that young people in foster care are two to three times more likely to become pregnant or cause a pregnancy by age 19 than those not in foster care (Dworsky & Courtney, 2010). A study of transitional-age young people with a history of foster care found that by age 21, 49% of the young women became pregnant, and 33% of young men reported getting someone pregnant (Combs, Begun, Rinehart, & Taussig, 2018). These young women are also more likely to experience a rapid repeat pregnancy (Courtney, Terao, & Bost, 2004; Finigan-Carr et al., 2015).

Some state-level findings are particularly stark; a 2018 study among young people in foster care in Texas found that the one-year pregnancy rate for young women in care was 5.7%, compared to just 1.2% among young women in Texas overall (Texans Care for Children, 2018.) Among young men aging out of foster care, half report having fathered a child, compared to 9-19% of their peers who have fathered children before age 18 (Scott, et al., 2012; Svoboda, Shaw, Barth, & Bright, 2012). A California study found that 20% of young men emancipating from foster care reported getting a partner pregnant by age 19 (Courtney et al., 2018). While the number of dually-adjudicated young people actively involved with both child welfare and juvenile justice systems is difficult to confirm, a 2019 study across three states found the prevalence of dual-system young people ranged from 44.8% to 70.3% and concluded that "at least half of juvenile justice youth have touched the child welfare system at some point in their lives" (Dierkhising, Herz, Hirsh, & Abbott, 2019.)

The higher rates of pregnancy among system-involved young people can partly be explained by the fact that they are more likely to possess characteristics and have lived experiences associated with risky sexual behavior, including a past history of physical and sexual abuse, mental health issues, behavioral problems, lack of peer or family support, poor school performance, and substance use (Kelly, Lesser, & Paper, 2008). Young people in out-of-home care report less access to sexual and reproductive health services and information (Finigan-Carr, Steward, & Watson, 2018). For many, by the time they receive sexual health education, it is too late due to earlier-than-average age of first sexual experiences (Becker & Barth, 2000; Boustani, Frazier, & Lesperance, 2017; Love, McIntosh, Rosst, & Tertzakian, 2005).

Any group-based program serving system-involved young people faces a myriad of challenges. First, it must be prepared to address the diversity and multiplicity of risk factors within a group. Second, it may be difficult to interpret program effects, given that effects could vary widely among individuals within a group due to these unique risk factors. Third, staff must work with constantly shifting populations and scarce resources. These challenges, and many others, point to the need to identify which factors contribute to system-involved young people deriving benefit from an adolescent pregnancy prevention program, and to determine which elements of any given program are most likely to yield benefits. This will help program staff to prioritize selecting programs and delivering them in ways that stand the best chance of having an impact. While we have made much progress in recent years in documenting overall effects for programs serving young people in systems of care, much more remains to be done. Occasionally, there are reports of differences in program

effects based on demographic characteristics of participants, but data is lacking on whether program effects vary by risk factors related to lived experiences, or which elements of a program are truly essential in making the program successful.

Unpacking *Power Through Choices* Evaluation Data: This impact evaluation project expanded on prior studies by concatenating the data from both the National and Baltimore City evaluations. It was expected that this would allow us to identify which core components of *Power Through Choices* (content, pedagogy, and implementation components) contribute to its effectiveness in reducing adolescent pregnancy and increasing the use of birth control and condoms among system-involved young people; and, concurrently examine its effectiveness among subgroups of these young people based on social and behavioral characteristics known to have an impact on adolescent pregnancy, such as aggression and violence, prosocial and problem peers, and substance use. By concatenating the evaluation data, we had a larger sample for investigating potential differential intervention effects by gender, age, race/ethnicity, or by the type of system (i.e., child welfare or juvenile justice). It also allowed examination of intervention effects for potentially confounding variables controlled for in the original evaluations.

Improving Efforts to Prevent Adolescent Pregnancy: Our study has the potential to impact the field of adolescent pregnancy prevention by helping program staff determine where to concentrate their scarce resources by focusing on reaching the populations most likely to benefit from *Power Through Choices*. In addition, it will help determine potential areas of expansion, to better serve populations currently less likely to benefit from *Power Through Choices*.

The project findings can lead to more robust and efficient evaluation of similar adolescent pregnancy prevention interventions and interventions with system-involved young people by (1) identifying key data to collect; and, (2) providing a template for analysis that future evaluators can duplicate, thereby adding to the body of research on ways to help young people in systems of care reduce sexual risk-taking behaviors.

Power Through Choices Background/Description

Power Through Choices **(PTC)** is a comprehensive adolescent pregnancy, HIV, and Sexually Transmitted Infection (STI) prevention program designed specifically to address the needs of young people living in foster care and other out-of-home care settings. Although there is a second evidence-based sexual and reproductive health curriculum designed to be utilized specifically with system-involved young people—*Making Proud Choices for Youth in Out-Of-Home Care* (Jemmott, Jemmott, McCaffree, & Wilson, 2014) which was adapted from *Making Proud Choices: A Safer Sex Approach to STDs, Teen Pregnancy and HIV/AIDS* (Jemmott, Jemmott & McCaffree, 2016)—PTC is the only one created specifically for this vulnerable population. **PTC seeks to reduce adolescent pregnancy and the incidence of STIs through delaying the onset of sexual activity, decreasing the number of sexual partners, increasing the use of birth control, and increasing the correct and consistent use of condoms.**

PTC Theoretical Groundings and Core Components: PTC draws on four behavior change theories to help young people build self-empowerment—The Health Belief Model, Self-Regulation Theory, Theory of Reasoned Action, and Social and Cognitive Learning Theory. Developers used these theories to focus on making the connection between power and choices, goal-setting, planning ahead, and examining the impact of choices on one's future. They also incorporated interactive pedagogical techniques that allowed multiple opportunities to build communication and planning skills through observation and practice. PTC's programmatic goals and components are provided in a logic model (Table 1). **PTC's core components** can be classified into three types: *implementation* (logistics), *pedagogy* (teaching methods used to deliver the curriculum), and *content* (program information and activities).

Table 1: *Power Through Choices* Core Components

Specific Core Components

Implementation

Young people aged 13–18

Young people are system-involved

Group size 8–20

Delivered within 3–5 weeks, multiple sessions per week

Delivered as 10 sessions, each 90 minutes in length

Implemented in order

Delivered by a team of two facilitators

Facilitators are sensitive to trauma that young people may have experienced

Facilitators are able to provide positive and encouraging messages

Facilitators have an aptitude for working with young people and experience working with young people who are system-involved

Pedagogy

Role-play in a safe environment without fear of failure

Problem-solving exercises

Opportunities to practice communication skills

Opportunities to practice condom use on a demonstrator model or fingers

Use of a variety of teaching styles (brainstorming, large group discussion, mini-lectures, small group work & interactive activities/games)

Content

Message of self-empowerment

Messages about the impact of choices on an individual's future

Communication styles

Name and functions of human reproductive anatomy

Fertilization and conception

Menstrual cycle

Contraception

Condom use

STI transmission, prevention, symptoms, outcomes, and treatments

Aspirations for the future and how choices impact ability to achieve goals

Rights to access sexual and reproductive health care

Resources for free or low-cost sexual health services

Belief that condoms can prevent pregnancy/HIV/STI

Self-efficacy and skills to communicate effectively with partners, adults, and health care providers

Belief that outcomes can be controlled by oneself

Self-efficacy and skills to contact a health care provider

Belief that abstaining from sex is a choice, and skill to avoid unwanted sex

Belief that not using condoms/contraception can lead to pregnancy/HIV/STI

Ability to use condoms/other contraception

Belief that various sexual behaviors have varying degrees of risk

Belief that contraception can prevent pregnancy

PTC Evaluation History: Originally developed in the mid-1990s (Becker & Barth, 2000), PTC was updated and piloted by the Oklahoma Institute for Child Advocacy as part of a Centers for Disease Control initiative to improve adolescent pregnancy prevention programs. In 2011, PTC was included in a national evaluation funded by the Office of Adolescent Health. This initiative served as the first rigorous test of the program's effectiveness in improving behavioral outcomes.

The evaluation involved implementation in 44 group homes in Oklahoma, California, and Maryland serving young people involved with the child welfare and/or juvenile justice systems. From January 2012 to June 2014, a total of 97 cohorts of young people aged 13-18 within the study homes were randomly assigned either to a treatment group or a control group. A total of 1,038 young people consented to participate in both the program and evaluation.

Concurrent to the national evaluation, Baltimore City was selected for a smaller scale evaluation of young people aged 14-21 in out-of-home placements, including foster homes, kinship care, and juvenile detention programs, but not in group homes. This was initially led by Richard Barth, Ph.D., M.S.W., one of the original developers of PTC, with Nadine Finigan-Carr, Ph.D. as co-principal investigator. The Baltimore City evaluation enrolled 399 young people from January 2012 through January 2020. This trial did not utilize a control group and instead had a delayed-start design so that by the end, all young people enrolled had received the intervention.

Evaluation Results: Both the national and Baltimore City interventions aimed to determine if implementation of PTC would increase the use of birth control and reduce pregnancy among system-involved young people. The national trial's results demonstrated that at the 6-month follow-up, participants had significantly lower odds of having recent sexual intercourse without using birth control, and at the 12-month follow-up, participants had lower odds of getting pregnant or getting someone pregnant (Oman, Vesely, Green, Clements-Nolle, & Lu, 2018). The Baltimore City trial showed similar results for the use of birth control and condoms at the 6-month follow-up (Finigan-Carr & Steward, 2017). Results of effectiveness of the first trial were published in 2018 (Oman et al.). Process evaluation data was collected but not analyzed as a part of the initial outcome evaluation for Baltimore City.

Methodology

The goal of this impact evaluation project was to identify the specific components and moderators of *Power Through Choices* (PTC) that directly influence sexual risk-taking behaviors among system-involved young people, and to ultimately reduce disparities in adolescent birth rates in this population. Our study had two main objectives: (1) identify which core components of PTC contribute to its effectiveness in reducing adolescent pregnancies and STIs; and, (2) examine the individual social behavioral and macro-level risk factors underlying adolescent pregnancy and their impact on the effectiveness of PTC for system-involved young people.

Two evaluation trials of PTC were conducted between 2012 and 2020. The first study, referred to as the national evaluation, involved implementation in 44 group homes in Oklahoma, California, and Maryland. Young people (n = 1038) were randomized by group home either to a treatment group or a control group. Concurrent to the national evaluation, Baltimore City was selected for a smaller scale evaluation of PTC for young people in out-of-home placements (e.g., foster homes, kinship care, and juvenile detention programs) but not in group homes (n = 399).

For both the national and Baltimore City intervention evaluations, young people self-report surveys were administered at baseline (up to 2 weeks before intervention start), follow-up (immediately after the last session), and 6 months and 12 months post-intervention. Both datasets included at least one observation for each of the young people who completed any round. The surveys collected information on a broad range of topics. Many of the same questions were included on all surveys to allow for longitudinal analyses of changes in attitudes and behaviors. For young people in the treatment group in the national trial and all young people in the Baltimore City trial, there were additional questions at follow-up about their impressions of the PTC program and its influence on them.

Proposed Research Questions: Through our secondary analysis of PTC data, we aimed to explore four new research questions in the area of adolescent pregnancy prevention related to the differences among this subpopulation of system-involved young people.

RQ 1: What are the differential effects of PTC on intervention outcomes according to variations in implementation of core components such as fidelity, content received, characteristics of facilitators, and schedule? **RQ 2:** What are the differential effects of PTC on intervention outcomes according to risk factors such as number of sexual partners, history of relationship violence, substance use, etc.? **RQ 3:** Are there risk profiles of young people who benefit from PTC more than others? **RQ 4:** Are there differential effects of PTC due to macro-level factors such as system-involvement (child welfare vs juvenile justice) or placement (group homes vs family/kinship/community)?

Upon receipt of the national database and supporting documentation, it was found that there were significant differences between what data was collected in the two trials. Specifically, our proposed RQ1 could not be addressed because fidelity and dosage were not available in the national trial, and what was collected in the Baltimore City trial was limited. Due to differences in items and scales for the surveys, some changes were made to the remaining questions for them to be answerable.

Current Study Design: We conducted a mixed-methods study on the national and Baltimore City evaluations of the PTC program. We included the baseline survey for all participants and the first follow-up survey that each participant completed. Though there were three survey opportunities for participants to provide post-intervention information about behavior and attitude changes, we only included the first available follow-up for each participant. All other follow-up data was excluded.

Research Questions: We asked four specific research questions.

1. **Describe the respondents in the national and the Baltimore City PTC programs.**

   Are the national and Baltimore City respondents different in regard to PTC-specific data including pregnancy and condom use?

   To answer the primary aspect of the first research question, we separated the analysis into three categories: age (continuous), scales (ordinal), and categorical variables. We completed analyses of the overall population, the national population, and the Baltimore City population separately to ensure that we used the most appropriate method (as described below) that best fit the entire population.

i. ***Age at Baseline*** – We assessed whether participant age at baseline was normally distributed using visualizations and the Shapiro-Wilk test (statistical significance of < 0.05 indicates data is not normally distributed). The data was not normally distributed and so the median and median absolute deviation (MAD) were used to describe the average of the age distribution and the variability of the data.

   To examine whether the age distribution was different between the national and Baltimore City populations, we used the Mann-Whitney U test as we were interested in a comparison of the overall data distribution not the mid-point. Statistical significance was determined using an α of 0.05 (two-tailed).

ii. ***Scale data*** – By nature, ordinal scale data has no specific distribution and thus the data is nonparametric. Using a histogram and the non-parametric Kolmogorov-Smirnov test, we assessed the data distribution and elected to use the median and MAD to describe the distribution of each.

iii. ***Binary (2 category) variables*** – To examine differences in binary (Yes/No) responses, we used a risk ratio as the effect size of interest. We treated the population (national/Baltimore City) as the exposure/group of interest. The outcome (Yes/No) was the response. We measured whether the rate of "Yes" in the national data was significantly different than the rate of "Yes" in the Baltimore City data. Statistical significance was determined using the confidence interval (CI). Intervals inclusive of 1.0 were not statistically significant.

iv. ***Variables with ≥2 categories*** – We identified and reported the distribution (number and percent) of each variable.

   To examine differences in categorical variables with more than two possible responses, we used the c^2 test followed by a post-hoc c^2 test of residuals with the Bonferroni correction to determine which responses were the largest contributors to an initial significant result. A p-value below the corrected alpha level (original α = 0.05) was considered statistically significant.

2. **Compare the Beliefs About Condoms, Attitudes About Condoms, and Sexual Education scores between the (1) baseline and follow-up surveys (Did the distribution of scores shift toward the higher, more positive end of the scale?) and (2) National and Baltimore City populations at baseline and at follow-up (Were the distributions between the populations the same or did one group have more positive responses**

than the other?). What is the difference in scores between the national and the Baltimore City cohort?

The three included scales were each used to create a score from Likert responses. We used histograms and mosaic plots to visualize whether the data had similar distributions (shape and spread) and tested to see whether there was a difference in distributions using the Mann-Whitney U test (equality). We proceeded to compare the midpoint of each distribution with the Hodges-Lehmann location shift estimate and the probability interval from a one-sided Mood's Median Test. We assumed that the scores would be higher at follow-up than baseline. Statistical significance was determined using an α of 0.05 (two-tailed).

3. **Are the young people involved in DJS different than the young people involved in DSS in regard to pregnancy (ever/never) and condom usage?**

   To examine differences in binary (Yes/No) responses for pregnancy and condom usage, we used a risk ratio as the effect size of interest. We treated the population (DJS/DSS) as the exposure/group of interest. The outcome (Yes/No) was the response. We measured whether the rate of "Yes" in the DJS group was significantly different than the rate of "Yes" in the DSS group. Statistical significance was determined using the CI. Intervals inclusive of 1.0 were not statistically significant.

4. **What factors contribute the most to pregnancy among young people? Which populations are the most at risk?**

   To answer this question, we used multivariable logistic regression models (overall, national, and Baltimore City) with pregnancy (ever/never) as the dependent variable. We were most interested in knowing how baseline and follow-up data both contributed to the response, so restricted the study population to just participants with complete baseline and follow-up information. We immediately excluded all variables with more than 50% missingness. As some factors were only available in the Baltimore City data (including substance use, violence, and the Social Activity Scale), these variables were excluded prior to the analysis of missingness in both the overall and the national analyses. In all analyses, we used both backwards and stepwise model selection tools as assistants to determine which factors to remove from the model. As a part of these analyses, we considered all three-way interactions between independent variables and retained those that were statistically significant based on an $\alpha = 0.05$. Combining the

results of automated model selection and manual model selection, we identified and retained only factors that were statistically significant contributors to a young people ever being pregnant in the models. Statistical significance was assessed using the CI after exponentiating the log-odds into the odds ratio. An interval inclusive of 1.0 was not considered statistically significant.

Data Analysis: Statistical analysis was completed using SAS Viya (version V.04.00M0P030625) and R 4.4.2. A p-value of ≤ 0.05 or a CI that did not include 1.0 were considered statistically significant.

Inclusion and Exclusion Criteria

Subjects included in this study could have been in either the national or the Baltimore PTC program but must have indicated at either baseline or follow-up that they had ever had sex. Participants were only required to have a completed baseline survey for Research Questions 1 and 2; no valid follow-up survey was required. For Research Question 4 only, participants without both a valid baseline and a valid follow-up survey result were excluded.

Data Preparation

Data from each survey was cleaned separately before combining into a single data set to assure similarity. Prior to analysis we condensed race categories into four categories due to small numbers, particularly within the Baltimore City data. Asian, Native American or Pacific Isander, and multiracial categories were folded into an existing "Other" category. For Table 1 only, to prevent potential identification of participants due to small numbers, "Other" and "Unknown" were combined into a single "Other & Unknown" category.

To make education consistent across surveys, all young people in 7th or 8th grade were categorized as "Before High School," all young people in 9th, 10th, 11th, or 12th grade were categorized as "High School," and those that indicated they were not in school or had graduated were categorized as "Not in School."

Age at the time of first sex was divided into three categories: young people between and including ages 5 and 11 were categorized as "Eleven and under," those who were 12 to 14 were defined as being in "Early Adolescence," and those who were age 15 to 21 were considered to be in "Late Adolescence."

All participants in the national data set that responded, "Never Entered Foster Care" to the question "How old were you when you entered foster care?" were categorized as being in DJS. Participants that gave an age for entering foster care were categorized as DSS. The Baltimore City database had an identifier for DJS vs. DSS classification for care agency.

Questions related to pubertal development and timing were only asked in the Baltimore City data. Three pubertal timing categories were created: Early (under 11 years old), On Time (12 to 14 years), and Late (>= 15 years). Stages of pubertal development were characterized with items related to menstruation for those assigned female at birth; and Tanner Stages for those assigned male.

Imputation: In Baltimore City data, 68 young people were missing a response for Sex Assigned at Birth/Gender. Due to the high proportion of missingness (> 20%), no imputation was performed. Using the median values (all whole numbers) for raw scores from the Belief About Condoms, Attitudes About Condoms, Social Activity, and Sexual Education scales, we imputed the missing values to decrease the amount of data excluded in analyses (median imputation). Each of these variables was <10% missing prior to imputation. This procedure was of particular importance to maximize the population size for the logistic regression (Research Question 4). Missing values for participant age in the national data set (<10% missing) were replaced with the median age in that specific data set.

Scale Data: Six indices/scales were created and/or selected for use with PTC data. All questions from three scales were captured in both the national and Baltimore City data: Beliefs About Condoms, Attitudes About Condoms, and the Amount of Sexual Education in the Last 12 Months. Additionally, the Baltimore City PTC data included questions on Violence, Substance Use, and a Prosocial Activity Scale. Details on the components of each scale and scoring are below.

The internal reliability of each scale was assessed using Cronbach's Alpha. Cronbach's Alpha is quantified on a scale of 0 to 1. Lower values indicate that components measure very different constructs (the factors are not well correlated) and higher values indicate the items in the scale reliably measure the same construct (factors are better correlated). We selected the values of 0.6 and higher to indicate a scale was reliable enough to be used. The sixth (final) scale did not meet the standard (substance use) and therefore the items contained were included individually in all subsequent models.

1. **The Beliefs About Condoms Effectiveness Scale** includes eight questions. Four levels (excluding neutral) in the national data, five levels (including neutral) in the Baltimore City data.

2. **The Attitudes About Condoms Scale** is a Likert scale comprised of seven questions asked at both baseline and follow-up. In the national data, there are four possible answers: strongly agree, agree, disagree, and strongly disagree. In the Baltimore City data, there are five possible answers including neutral. Data were normalized to have

a range of one to five (1-5) with five being the most positive response and one being the most negative response. Higher scores represent more positive attitudes about the benefits and use of condoms.

Participants were asked to respond to items describing beliefs with the stem, "Condoms are…" Three questions in this scale were reverse coded, meaning that the strongly agree option was the most negative response for the question and the strongly disagree option was the least negative response. These questions were about condoms *being a hassle to use, use of condoms meaning that you do not trust your partner, that condoms are morally wrong,* and *that condoms make sex less exciting*. The remaining four questions were that *condoms should always be used if a person your age has sex, are easy to get,* and *make sex safer*.

3. **Comprehensive Sexual Health Education Index -** Participants were asked about their exposure to sexual education over the past 12 months at baseline and follow-up. There were eight binary yes/no items. The resulting score is summative with a higher value indicating receiving more sexual education within the last year (i.e., 0 = no exposure to 8 = comprehensive sexual health education). Questions include beliefs on methods of birth control, STIs, how to talk to a partner about protection, how babies are made, how to say no to sex, abstinence, and relationships.

   Baseline was used to assess how much prior knowledge participants had from other interventions/curricula. Follow-up was used to determine retention of the key components of comprehensive sexuality education provided by PTC.

All participants were asked about other known protective and risk factors that can impede or promote sexual reproductive health outcomes. The two most relevant scales for this secondary data analysis were related to violence and prosocial behaviors and had binary yes or no responses.

4. **Violence Exposure** – These items included forced sex (at first sex and ever); and aggression and fighting (in the past 12 months, requiring medical care, and IPV).

5. **Weekly Time Participating in Activities (Social Activity Scale)** – Prosocial activities were measured with an index of items such as sports, lessons, clubs, working, and volunteering. Young people could be involved in no activities or up to six activities (0 to 6).

Table 2. Characteristics of Participants in the National and Baltimore City Cohorts of the *Power Through Choices* Program by Survey Location

	National Survey		Baltimore City Survey		Overall
	Total Cohort N = 891	Participants with Follow-up Information N = 818	Total Cohort N = 171	Participants with Follow-up Information N = 26	N = 1062
	Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)
Care Agency	**N = 878**		**N = 165**	**N = 26**	**N = 1043**
Department of Juvenile Services (DJS)	118 (13.44%)		66 (40%)	15 (57.69%)	184 (17.64%)
Department of Social Services (DSS)	760 (86.56%)		99 (60%)	11 (42.31%)	859 (82.36%)
Baseline Age	N = 891	N = 818	N = 171	N = 26	N = 1062
	16.00 ± 1.00	16.00 ± 1.00	17.00 ± 1.00	17.00 ± 1.00	17.00 ± 1.00
Sex	**N = 891**		**N = 148**	**N = 26**	**N = 1039**
Female	179 (20.09%)		51 (34.46%)	6 (23.08%)	230 (22.14%)
Male	712 (79.91%)		97 (65.54%)	20 (76.92%)	809 (77.86%)
Race	**N = 891**		**N = 171**		**N = 1062**
Black or African-American	176 (19.75%)		124 (72.51%)		300 (28.25%)
Multiracial	189 (21.21%)		13 (7.60%)		202 (19.02%)
White	211 (23.68%)		17 (9.94%)		228 (21.47%)
Other & Unknown[2]	315 (35.35%)		17 (9.94%)		332 (31.26%)
Ethnicity	**N = 879**		**N = 165**	**N = 26**	**N = 1044**
Hispanic and/or Latino	339 (38.57%)		11 (6.67%)	4 (15.38%)	350 (33.52%)
Not Hispanic or Latino	540 (61.43%)		154 (93.33%)	22 (84.62%)	694 (66.48%)
Grade in School	**N = 888**		**N = 167**	**N = 26**	**N = 1055**
Before High School	231 (26.01%)		20 (11.98%)	--	251 (23.79%)
High School	657 (73.99%)		104 (62.28%)	23 (88.46%)	761 (72.13%)
Not in School			43 (25.75%)	3 (11.54%)	43 (4.08%)
Age at Start of Puberty			**N = 171**		**N = 171**
Early			59 (34.5%)		59 (34.5%)
Late			43 (25.15%)		43 (25.15%)
On Time			69 (40.35%)		69 (40.35%)
Age at First Sex	**N = 851**		**N = 158**	**N = 24**	**N=1009**
≤ 11 Years of Age	174 (20.45%)		27 (17.09%)	4 (16.67%)	201 (19.92%)
Early Adolescence	509 (59.81%)		85 (53.8%)	12 (50%)	594 (58.87%)
Late Adolescence	168 (19.74%)		46 (29.11%)	8 (33.33%)	214 (21.21%)
Age of First Sex Partner			**N = 167**		**N = 167**
Three or more years younger than you			2 (1.2%)	5 (19.23%)	2 (1.2%)
A year or two younger than you			22 (13.17%)	10 (38.46%)	22 (13.17%)
The same age as you			65 (38.92%)	8 (30.77%)	65 (38.92%)
A year or two older than you			47 (28.14%)	0 (0.00%)	47 (28.14%)
Three or more years older than you			31 (18.56%)	3 (11.54%)	31 (18.56%)

	National Survey		Baltimore City Survey		Overall
	Total Cohort N = 891	Participants with Follow-up Information N = 818	Total Cohort N = 171	Participants with Follow-up Information N = 26	N = 1062
	Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)
Was First Sex Voluntary?			**N = 166**		**N = 166**
Yes, voluntary			145 (87.35%)		145 (87.35%)
No, not voluntary			21 (12.65%)		21 (12.65%)
Ever Been Forced to Have Sex? (at Baseline)			**N = 149**		**N = 149**
Yes			31 (20.81%)		31 (20.81%)
No			118 (79.19%)		118 (79.19%)
Ever Been Forced to Have Sex? (at Follow-up)				**N = 21**	**N = 21**
Yes				3 (14.29%)	3 (14.29%)
No				18 (85.71%)	18 (85.71%)
Ever Been Touched Without Consent?			**N = 149**		**N = 149**
Yes			42 (28.19%)		42 (28.19%)
No			107 (71.81%)		107 (71.81%)
Has Had Sex More Than Once	**N = 859**		**N = 170**	**N = 26**	**N = 1029**
Yes	829 (96.51%)		167 (98.24%)	26 (100.00%)	996 (96.79%)
No	30 (3.49%)		3 (1.76%)	0 (0.00%)	33 (3.21%)
Ever Been Pregnant or Gotten Someone Pregnant	**N = 882**		**N = 128**	**N = 25**	**N = 1010**
Yes	360 (40.82%)		46 (35.94%)	8 (32.00%)	406 (40.2%)
No	522 (59.18%)		82 (64.06%)	17 (68.00%)	604 (59.8%)
Ever Parenting	**N = 484**		**N = 78**	**N = 7**	**N = 562**
Yes	187 (38.64%)		29 (37.18%)	5 (71.43%)	236 (41.99%)
No	297 (61.36%)		49 (62.82%)	2 (28.57%)	326 (58.01%)
If You Became Pregnant Now, Would You Be Happy?	**N = 870**		**N = 92**	**N = 20**	**N = 962**
Very Happy	256 (29.43%)		17 (18.48%)	4 (20.00%)	273 (28.38%)
A little happy	215 (24.71%)		22 (23.91%)	1 (5.00%)	237 (24.64%)
Neither Happy nor Upset	220 (25.29%)		30 (32.61%)	10 (50.00%)	250 (25.99%)
A little upset	84 (9.66%)		10 (10.87%)	1 (5.00%)	94 (9.77%)
Very upset	95 (10.92%)		13 (14.13%)	4 (20.00%)	108 (11.23%)
Had Sex without a Condom in Last 3 Months (Baseline)	**N = 852**		**N = 111**	**N = 12**	**N = 963**
Yes	286 (33.57%)		100 (90.09%)	10 (83.33%)	386 (40.08%)
No	566 (66.43%)		11 (9.91%)	2 (16.67%)	577 (59.92%)
Had Sex without a Condom (Follow-up)[3]		**Last 3 Months**		**Last 6 Weeks**	
		N = 781		**N = 5**	**N = 786**
Yes		191 (24.46%)		4 (80.00%)	195 (24.81%)
No		590 (75.54%)		1 (20.00%)	591 (74.19%)

	National Survey		Baltimore City Survey		Overall
	Total Cohort	Participants with Follow-up Information	Total Cohort	Participants with Follow-up Information	
	N = 891	N = 818	N = 171	N = 26	N = 1062
	Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)
Had Sex in the Last 3 Months (at Baseline)	**N = 862**		**N = 166**	**N = 24**	**N = 1028**
Yes	353 (40.95%)		129 (77.71%)	15 (62.50%)	482 (46.89%)
No	509 (59.05%)		37 (22.29%)	9 (37.50%)	546 (53.11%)
Had Sex Recently (at Follow-up)[3]		**Last 3 Months**		**Last 6 Weeks**	
		N = 790		**N = 17**	**N = 807**
Yes		255 (32.28%)		4 (23.53%)	259 (32.09%)
No		535 (67.72%)		13 (76.47%)	548 (67.91%)
Plan to Have Sex in the Next Year (at Follow-up)		**N = 801**		**N = 26**	**N = 827**
Yes, Definitely		152 (18.98%)		11 (42.31%)	163 (19.71%)
Yes, Probably		590 (73.66%)		10 (38.46%)	600 (72.55%)
No, Probably Not		39 (4.87%)		3 (11.54%)	42 (5.08%)
No, Definitely Not		20 (2.50%)		2 (7.69%)	22 (2.66%)
Plan to Use a Condom When Having Sex in the Next Year (at Follow-up)		**N = 801**		**N = 26**	**N = 827**
Yes, Definitely		104 (12.98%)		12 (46.15%)	116 (14.03%)
Yes, Probably		57 (7.12%)		9 (34.62%)	66 (7.98%)
No, Probably Not		252 (31.46%)		2 (7.69%)	254 (30.71%)
No, Definitely Not		388 (48.44%)		3 (11.54%)	391 (47.28%)
Ever Had Oral Sex (Baseline)	**N = 887**		**N = 165**	**N = 26**	**N = 1052**
Yes	806 (90.87%)		115 (69.70%)	17 (65.38%)	921 (87.55%)
No	81 (9.13%)		50 (30.30%)	9 (34.62%)	131 (12.45%)
Ever Had Oral Sex (Follow-up)		**N = 802**		**N = 19**	**N = 821**
Yes		711 (88.65%)		12 (63.16%)	723 (88.06%)
No		91 (11.35%)		7 (36.84%)	98 (11.94%)
Had Oral Sex in Last 3 Months (at Baseline)	**N = 375**		**N = 133**	**N = 18**	**N = 508**
Yes	294 (78.40%)		78 (58.65%)	9 (50.00%)	372 (73.23%)
No	81 (21.60%)		55 (41.35%)	9 (50.00%)	136 (26.77%)
Had Oral Sex in Last 3 Months (at Follow-up)		**N = 817**			**N = 817**
Yes		196 (23.99%)			196 (23.99%)
No		621 (76.01%)			621 (76.01%)
Had Oral Sex without a Condom (Last 3 Months at Baseline)			**N = 85**		**N = 85**
Yes			80 (94.12%)		80 (94.12%)
No			5 (5.88%)		5 (5.88%)

	National Survey		Baltimore City Survey		Overall
	Total Cohort N = 891	Participants with Follow-up Information N = 818	Total Cohort N = 171	Participants with Follow-up Information N = 26	N = 1062
	Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)
Plan to Have Oral Sex in Next Year (at Follow-up)		**N = 799**		**N = 26**	**N = 825**
Yes, Definitely		215 (26.91%)		8 (30.77%)	223 (27.03%)
Yes, Probably		445 (55.69%)		6 (23.08%)	451 (54.67%)
No, Probably Not		71 (8.89%)		4 (15.38%)	75 (9.09%)
No, Definitely Not		68 (8.51%)		8 (30.77%)	76 (9.21%)
Ever Had Anal Sex			**N = 65**		**N = 65**
Yes			35 (53.85%)		35 (53.85%)
No			30 (46.15%)		30 (46.15%)
Had Anal Sex in the Last 3 Months (at Baseline)			**N = 72**	**N = 14**	**N = 72**
Yes			22 (30.56%)	3 (21.43%)	22 (30.56%)
No			50 (69.44%)	11 (78.57%)	50 (69.44%)
Had Anal Sex without a Condom (Last 3 Months at Baseline)			**N = 30**	**N = 3**	**N = 30**
Yes			20 (66.67%)	2 (66.67%)	20 (66.67%)
No			10 (33.33%)	1 (33.33%)	10 (33.33%)
Plan to Have Anal Sex in the Next Year (at Follow-up)				**N = 827**	**N = 827**
Yes, Definitely				116 (14.03%)	116 (14.03%)
Yes, Probably				66 (7.98%)	66 (7.98%)
No, Probably Not				254 (30.71%)	254 (30.71%)
No, Definitely Not				391 (47.28%)	391 (47.28%)
Ever Had Oral or Anal Sex with Someone of the Same Sex			**N = 163**		**N = 163**
Yes			34 (20.86%)		34 (20.86%)
No			129 (79.14%)		129 (79.14%)
Scaled Data					
Amount of Sexual Education in the Last 12 Months (at Baseline) [Possible Range 0 to 8]	**N = 840** 4.00 ± 2.00	**N = 818** 4.00 ± 2.00	**N = 163** 5.00 ± 2.00	**N = 26** 4.00 ± 2.00	**N = 1062** 4.00 ± 2.00
Amount of Sexual Education in the Last 12 Months (at Follow-up)		**N = 818** 7.00 ± 0.00		**N = 26** 7.00 ± 0.00	**N = 844** 7.00 ± 0.00
Attitude About Using Condoms (at Baseline) [Possible Range 7 to 35]	**N = 859** 23.00 ± 2.00	**N = 818** 23.00 ± 2.00	**N = 153** 15.00 ± 3.00	**N = 26** 15.00 ± 3.00	**N = 1062** 23.00 ± 3.00

	National Survey		Baltimore City Survey		Overall
	Total Cohort N = 891	Participants with Follow-up Information N = 818	Total Cohort N = 171	Participants with Follow-up Information N = 26	N = 1062
	Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)
Attitude About Using Condoms (at Follow-up) [Possible Range 7 to 35]		**N = 818** 23.00 ± 2.00		**N = 26** 16.00 ± 3.00	**N =917** 23.00 ± 2.00
Beliefs About Using Condoms (at Baseline) [Possible Range -3 to 6]			**N = 162** 4.00 ± 2.00	**N = 26** 4.00 ± 2.00	**N = 171** 4.00 ± 2.00
Beliefs About Using Condoms (at Follow-up) [Possible Range -3 to 6]				**N = 26** 5.00 ± 1.00	**N = 26** 5.00 ± 1.00
Weekly Time Participating in Activities (at Baseline) [Possible Range 0 to 18]			**N = 171** 3.00 ± 2.00	**N = 26** 3.00 ± 2.00	**N = 171** 3.00 ± 2.00
Weekly Time Participating in Activities (at Follow-up) [Possible Range 0 to 18]				**N = 26** 3.00 ± 2.00	**N = 26** 3.00 ± 2.00
Sexually Transmitted Infections (STIs)					
Tested Positive for an STI in the Last 12 Months (at Baseline)	**N = 882**		**N = 170**	**N = 26**	**N = 1038**
Yes	85 (9.64%)		16 (10.26%)	3 (11.54%)	101 (9.73%)
No	797 (90.36%)		140 (89.74%)	23 (88.46%)	937 (90.27%)
Tested Positive for an STI in the Last 6 Weeks (Follow-up)				**N = 21**	**N = 21**
Yes				3 (14.29%)	3 (14.29%)
No				18 (85.71%)	18 (85.71%)
Talked with a Clinician About STIs in the Last 12 Months (at Baseline)	**N = 886**		**N = 165**	**N = 26**	**N = 1051**
Yes	520 (58.69%)		85 (51.52%)	14 (53.85%)	605 (57.56%)
No	366 (41.31%)		80 (48.48%)	12 (46.15%)	446 (42.44%)
Talked with a Clinician About STIs in the Last 6 Weeks (at Follow-up)				**N = 21**	**N = 21**
Yes				7 (33.33%)	7 (33.33%)
No				14 (66.67%)	14 (66.67%)
Tested for an STI in the Last 12 Months (at Baseline)	**N = 884**		**N = 157**	**N = 26**	**N = 1041**
Yes	553 (62.56%)		93 (59.24%)	17 (65.38%)	646 (62.06%)
No	331 (37.44%)		64 (40.76%)	9 (34.62%)	395 (37.94%)
Tested for an STI in the last 6 Weeks (at Follow-up)				**N = 21**	**N = 21**
Yes				6 (28.57%)	6 (28.57%)
No				15 (71.43%)	15 (71.43%)

	National Survey		Baltimore City Survey		Overall
	Total Cohort N = 891	Participants with Follow-up Information N = 818	Total Cohort N = 171	Participants with Follow-up Information N = 26	N = 1062
	Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)
Substance Use					
Ever Used Alcohol			**N = 157**		**N = 157**
Yes			78 (49.68%)		78 (49.68%)
No			79 (50.32%)		79 (50.32%)
Age at First Alcoholic Drink			**N = 64**	**N = 13**	**N = 64**
			14.00 ± 1.00	14.00 ± 1.00	14.00 ± 1.00
Days With an Alcoholic Drink in the Last 30 (at Baseline)			**N = 78**	**N = 13**	**N = 78**
0 (zero) Days			28 (35.9%)	11 (84.62%)	28 (35.9%)
1-4 Days			26 (33.33%)	1 (7.69%)	26 (33.33%)
5-25 Days			13 (16.67%)	1 (7.69%)	13 (16.67%)
More Than 25 Days			11 (14.10%)	0 (0.00%)	11 (14.10%)
Five Alcoholic Drinks at a Sitting (Binge Drinking) in the Last 30 Days (at Baseline)			**N = 77**	**N = 13**	**N = 77**
0 (zero) Days			54 (70.13%)	11 (84.62%)	54 (70.13%)
1-4 Days			18 (23.38%)	2 (15.38%)	18 (23.38%)
5-25 Days			2 (2.60%)	0 (0.00%)	2 (2.60%)
More Than 25 Days			3 (3.90%)	0 (0.00%)	3 (3.90%)
Ever Used Prescription Drugs for a Reason Other Than Prescribed, Inhalants, or Illegal Drugs Other Than Marijuana			**N = 171**		**N = 171**
Yes			52 (30.41%)	10 (38.46%)	52 (30.41%)
No			119 (69.59%)	16 (61.54%)	119 (69.59%)
Ever Used Marijuana			**N = 163**		**N = 163**
Yes			100 (61.35%)		100 (61.35%)
No			63 (38.65%)		63 (38.65%)
Days With Marijuana Use in the Last 30 (at Baseline)			**N = 100**	**N = 19**	**N = 100**
0 (zero) Days			39 (39.00%)	12 (63.16%)	39 (39.00%)
1-4 Days			22 (22.00%)	4 (21.05%)	22 (22.00%)
5-25 Days			18 (18.00%)	2 (10.53%)	18 (18.00%)
More Than 25 Days			21 (21.00%)	1 (5.26%)	21 (21.00%)
Ever Smoked Cigarettes			**N = 165**		**N = 165**
Yes			121 (73.33%)		121 (73.33%)
No			44 (26.67%)		44 (26.67%)
Days Smoking in the Last 30 (at Baseline)			**N = 120**	**N = 20**	**N = 120**
0 (zero) Days			51 (42.50%)	7 (35%)	51 (42.50%)
1-4 Days			28 (23.33%)	7 (35%)	28 (23.33%)
5-25 Days			18 (15.00%)	2 (10%)	18 (15.00%)
More Than 25 Days			23 (19.17%)	4 (20%)	23 (19.17%)

	National Survey		Baltimore City Survey		Overall
	Total Cohort N = 891	Participants with Follow-up Information N = 818	Total Cohort N = 171	Participants with Follow-up Information N = 26	N = 1062
	Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)		Median ± MAD[1]; n (%)
Violence					
Any Physical Fight in the Last 12 Months (at Baseline)			**N = 120**	**N = 26**	**N = 120**
0 Times			24 (20.00%)	3 (11.54%)	24 (20.00%)
1-3 Times			48 (40.00%)	13 (50%)	48 (40.00%)
4-7 Times			27 (22.50%)	6 (23.08%)	27 (22.50%)
≥ 8 Times			21 (17.50%)	4 (15.38%)	21 (17.50%)
Number of Physical Fights Requiring a Doctor in the Last 12 Months (at Baseline)			**N = 121**		**N = 121**
0 Times			89 (73.55%)		89 (73.55%)
≥ 1 Time			32 (26.45%)		32 (26.45%)
Physically Assaulted by Partner in the Last 12 Months			**N = 119**		**N = 119**
Yes			25 (21.01%)		25 (21.01%)
No			94 (78.99%)		94 (78.99%)
Ever Fearful of Being Hurt by a Dating or Sex Partner (at Baseline)			**N = 147**		**N = 147**
Yes			20 (13.61%)		20 (13.61%)
No			127 (86.39%)		127 (86.39%)
Ever Fearful of Being Hurt by a Dating or Sex Partner (at Follow-up)			**N = 21**		**N = 21**
Yes			2 (9.52%)		2 (9.52%)
No			19 (90.48%)		19 (90.48%)

[1]MAD – Median Absolute Deviation. A robust measure of scale.

[2]Other includes participants with race identities (e.g., Asian) numbers too small to report (<10). For this table only, Other and Unknown are combined to prevent identification of individual participants due to small numbers.

[3] These Follow-up questions differ between the National and Baltimore City surveys so additional headers are provided.

[4] Each scale is the sum of values assigned to each possible response and should be interpreted as such:

SOCIAL ACTIVITY – The higher the score, the more socially active (based on hours) the participant is in a week. Activities include sports, the arts, religious services or programs, work, volunteering, or other organizations. Values are assigned to 0 (zero) hours a week [0], >0 (zero) to <2 (two) hours a week [1], ≥2 (two) hours to ≤5 (five) hours a week [2], to >5 (five) hours in a week [3].

CONDOM BELIEFS – Higher scores represent a more positive belief in the effectiveness of condoms. Items include: condoms decrease the risk of pregnancy, condoms reduce the risk of getting HIV or AIDS, and condoms decrease the risk of getting STIs other than HIV or AIDS.

ATTITUDES ABOUT CONDOMS - Higher scores represent more positive attitudes toward personally using condoms. Items include: condoms should always be used during intercourse, condoms are a hassle to use, condoms are easy to access, condoms are important to make sex safer, using condoms means you do not trust your partner, using condoms is morally wrong, and condoms reduce sexual pleasure. Four items (condoms are a hassle to use, using condoms means you do not trust your partner, using condoms is morally wrong, and condoms reduce sexual pleasure) are assigned a value based on the participant response–strongly agree [5], agree [4], neutral [3], disagree [2], and strongly disagree [1]. Three items (condoms should always be used during intercourse, condoms are easy to access, and condoms are important to make sex safer) are reverse coded so that strongly agree is assigned a value of 1 and strongly disagree is assigned a value of 5.

SEXUAL EDUCATION – Higher scores mean participants obtained education in the last year on a greater number of sexual education topics (methods of birth control, STI knowledge, where to obtain birth control, how to talk to a partner about using protection, how babies are made, how to say no to sex, and abstinence). Each item is assigned a value of 1 (one) if the participant answers "yes."

Scale reliability was measured with Chronbach's alpha and needed to be ≥ 0.65 to be used.

The number of participants with follow-up information is smaller than the number of participants participating initially. Despite both the national and local studies having multiple follow-up attempts, we only included responses from the first complete follow-up session for each participant.

Greyed out areas mean that the question was not asked on the respective survey.

Table 3. Comparison of Scales – Comparing Data from the National and Baltimore City Surveys

Comparison	Variable	Hodges-Lehmann Estimation (Shift)	Confidence Interval	
BCHD vs National*	Baseline Age	1.000	(1, 2)	BCHD participants are older than the National participants
BCHD vs National*	Baseline Attitudes Towards Condoms	-8.000	(-9, -8)	National participants have higher attitudes towards condoms
BCHD vs National*	Follow-up Attitudes Towards Condoms	-7.000	(-8, -5)	National participants have higher attitudes towards condoms
BCHD vs National*	Baseline Sexual Education	0.000	(0, 1)	No difference
BCHD vs National*	Follow-up Sexual Education	0.000	(0, 0)	No difference
BHCD ONLY – Follow-Up vs Baseline	Beliefs About Condoms	0	(0, 0)	No difference
BHCD ONLY – Follow-Up vs Baseline	Social Activity	0	(0, 0)	No difference
BCHD Follow-Up vs Baseline	Attitudes Towards Condoms	0	(-6, 8)	No difference
National Follow-Up vs Baseline	Attitudes Towards Condoms	0	(-7, 7)	No difference
BCHD Follow-Up vs Baseline	Sexual Education	1.5	(-4, 7)	Follow-Up is greater than Baseline but not statistically significant
National Follow-Up vs Baseline	Sexual Education	1.0	(-5, 7)	Follow-Up is greater than Baseline but not statistically significant

** The National Survey is the reference group for all comparisons between Baltimore City and the national data.*

Table 4. Comparison of Select Sexual Activity Variables by Agency Status (DJS and DJJ)

Variable	Overall Population	Males	Females	Interpretation
Age of First Sex	No difference by agency c2 = 3.94 (p 0.14)	No difference by agency c 2 = 3.18 (p 0.21)	No difference by agency c 2 = 0.50 (p 0.78)	Majority had first sex in early adolescence.
Ever Been Pregnant	No difference by agency RR = .91, CI 0.74, 1.12	No difference by agency RR = 1.01, CI 0.80, 1.27	No difference by agency RR = 0.65, CI 0.37, 1.15	The answers are not statistically significant, but fewer females in DSS have been pregnant than those in DJS.
Ever Had a Baby	No difference by agency RR = 1.00, CI 0.76, 1.31	No difference by agency RR = 1.06, CI 0.79, 1.42	No difference by agency RR = 0.72, CI 0.32, 1.65	There is not a statistically significant difference by agency. However, the distributions suggest that females in DSS were less likely than those in DJS to have ever had a baby.
Had an STI in the Last 12 Months	No difference by agency RR = 0.93, CI 0.56, 1.55	No difference by agency RR = 1.21, CI 0.69, 2.11	No difference by agency RR = 0.46, CI 0.11, 1.85	There is no statistically significant difference by agency. However, the distributions suggest that males in DSS and females in DJS were more likely to have had an STI in the last year.
Talked with a Clinician About an STI in the Last 12 Months	No difference by agency RR = 1.05, CI 0.93, 1.21	No difference by agency RR = 1.10, CI 0.93, 1.30	No difference by agency RR = 1.11, CI 0.93, 1.32	No statistically significant difference by agency.
Intent to Use a Condom in the Next Year	No difference by agency c 2 = 6.74 (p 0.08)	Difference by agency c 2 = 7.99 (p 0.05)	Difference by agency c 2 = 11.28 (p 0.01)	While young people in both agencies lean toward not using a condom in the next year, the proportion that probably or definitely will not is higher for those in DSS than DJJ.
Intent to Have Sex in the Next Year	No difference by agency c 2 = 1.98 (p 0.58)	No difference by agency c 2 = 6.43 (p 0.09)	No difference by agency c 2 = 0.23 (p 0.97)	Majority will definitely or probably have sex in the next year.

Table 5. Factors That Could Help Prevent Pregnancy - Multivariate Logistic Regression Analysis

Factor	Odds Ratio*	Confidence Interval	Interpretation
Baseline Age	1.33	1.19, 1.49	Increased chance as age increases.
Ever Having Had Oral Sex	2.32	1.40, 3.86	Increased chance if ever had oral sex.
Sex and STI Status	0.70	0.35, 1.39	Female young people with STIs in the last year have a lower chance of pregnancy than male young people with the same.
Age At First Sex – 11 and Under vs. Early Adolescence	1.95	1.36, 2.80	The chance of pregnancy differs by the age a young person first had sex. Compared to those who had first sex in late or early adolescence, young people who had first sex at or before 11 years have a greater chance for pregnancy.
Age At First Sex – 11 and Under vs. Late Adolescence	2.45	1.55, 3.87	
Age At First Sex – Early vs. Late Adolescence	1.26	0.87, 1.82	
Attitudes About Condoms (If Yes an STI in Last 12 Months)	1.20	1.07, 1.35	Though the differences are small, there is a difference in the chance of pregnancy for those that have positive attitudes about condoms when considering if they have had an STI in the last 12 months. The chance of pregnancy is higher for those that have had an STI in the last 12 months.
Attitudes About Condoms (If No an STI in Last 12 Months)	1.07	1.03, 1.11	
Talking to a Clinician About STIs (ref = No)	0.80	0.69, 0.93	Chance of pregnancy in those that did not talk to a clinician about STIs is 80% of the chance for those that did.

**All odds ratios are adjusted for the other factors in the model. The complete model considers sex, age at first sex, being diagnosed with an STI in the last 12 months, talked to a clinician about STIs in the last 12 months, ever having had oral sex, attitudes about condoms score, and interactions between 1) the attitudes about condoms score and having had an STI in the last 12 months and 2) sex and having had an STI in the last 12 months.*

Discussion of Findings

This project advanced our knowledge on what structural components and conditions impact the effectiveness of adolescent pregnancy prevention interventions aimed at system-involved young people, allowing us to better tailor the program to address the needs of this population. Typically studies of adolescent sexual reproductive health, especially when related to adolescent pregnancy prevention, focus primarily on girls. This study is unique in that the resulting combined sample is predominantly male (77.1%). This is likely a result of providing the intervention not just in child welfare systems but also in juvenile justice systems. Having more males in the study increases its usefulness and impact by demonstrating the need for comprehensive sexuality education for all genders. In fact, the findings demonstrate statistically significant differences in risk for STIs and pregnancy than the extant literature has reported. Boys in DSS and girls in DJS were more likely to report having an STI in the prior 12 months. Girls who reported an STI in the prior year were less likely than boys who reported an STI to experience a pregnancy (i.e., get someone pregnant).

The sample was aligned with the extant literature in that the majority of the young people were very young at the age of first sex. This is not unusual in a population of young people involved with the child welfare and juvenile justice systems. Most of these young people in the Baltimore sample also reported having an older partner. Adapting PTC for a younger audience and supplementing the curriculum with content focused on age differences between partners would benefit young people in systems of care.

Some important factors which could help to prevent pregnancy emerged. PTC had a significant impact on participants' attitudes about condom use which, in turn, may lead to increased condom usage and decreased pregnancy. One interesting finding is that PTC had a significant impact on the reduction of having oral sex for both boys and girls. As this is a population that may have experienced oral sex as a part of the abuse and/or trauma which led to their system involvement, this may speak to the effects of the intervention to empower them with the choice to say no to that specific sexual behavior.

Limitations

There were two challenges conducting this secondary data analysis. The first was related to the risk variables to be examined. The Baltimore trial utilized the survey initially designed for the national trial by Mathematica (Personal correspondence, 2011). The main intervention outcome variable was expected to be consistent between both databases. However, some of the risk variables were coded differently for masking purposes. Every attempt was made to match the key risk variables present in both databases so that the original research questions could be answered. The second challenge was related to the concatenation process. Comparisons were made to ensure that there were no significant differences between the two databases at baseline. As there were significant differences, some of the analyses were stratified as opposed to conducted on the concatenated dataset.

In addition, when we examined the process evaluation data for characteristics related to the facilitators or to variations in the intervention schedule, it was found that the national database did not include this information. As a result, there was not enough information to allow for analysis of quantitative data.

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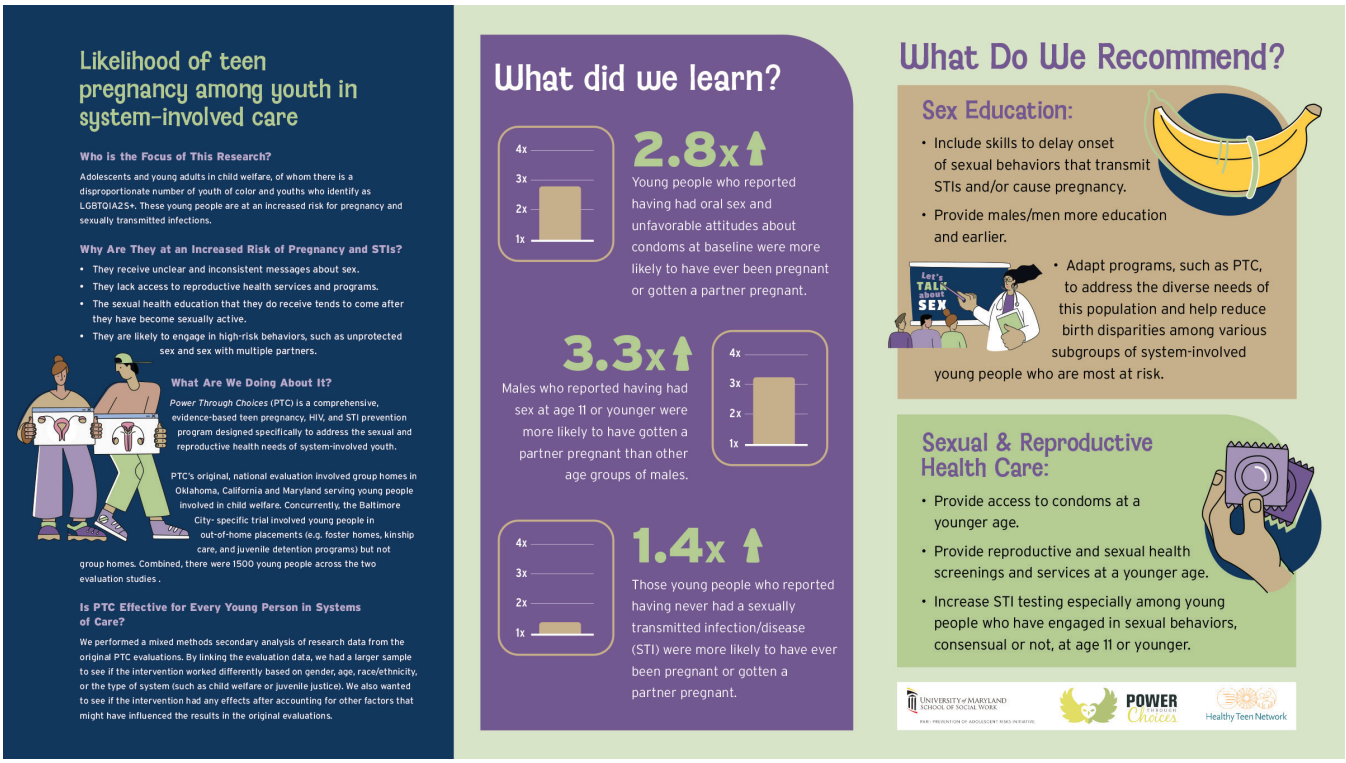
Appendices

Infographic



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