



The Inescapable Effects of Parent Support on Black Males and HIV Testing

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Abstract

Focusing on parental communication is a promising way to extend the reach of HIV-related interventions and prevention programs to underserved adolescents and their families in the US. One highly relevant population in need of services is Black males who constitute more than one-third of all new HIV infection cases in the US. We sought to determine whether the family context (i.e., parent support, parent relationships) impacted HIV testing over time. For this study, we used the first and third waves of the Add Health restricted dataset from the National Longitudinal Study of Adolescent Health of Black males (average age 16.1 years). Descriptive statistics found that over 75% of the sample had never been tested for HIV/AIDS, while only 58% reported using a condom. Bivariate regression analysis followed by multinomial analysis was conducted to identify the factors that were associated with the likelihood of one-time or continued HIV/AIDS testing. Major study findings indicate that Black males, who reported positive parent support and/or had visited the doctor, were more likely to get tested for HIV/AIDS. Males who had parents or peers that possessed negative attitudes about sex were less likely to get tested for HIV. The findings of this study suggest several implications for prevention and intervention aimed at optimal ways to increase HIV testing among Black males warranting further investigation.

Keywords Black/African American · Parent support · HIV/AIDS · Adolescence · Health/Public health

Introduction

Black males constitute more than one-third of all new HIV infection cases in the United States (US). Moreover, Black males have higher rates of contracting HIV in comparison with any other racial and ethnicity group. The rates of new HIV infection are 11 times higher for Black males than for young White males and four times higher than Hispanic males [1, 2]. There have been many interventions aimed at reducing HIV-related risk behaviors for Black males, with improving parent–adolescent communication showing promise as a way to extend the reach of

HIV-related interventions. Parent–adolescent communication has been found to be important in delaying sex [3–5], having fewer sexual partners [6, 7], and increasing contraceptive use among youth [8, 9]. A meta-analysis of 52 studies found a significant positive association between parent–adolescent sexual communication and adolescent safe sex behavior. The results were found across longitudinal and cross-sectional studies, as well as among adolescents and young adults [10]. Hyde and colleagues found that conversations between parents and adolescents that included learning to say “no” to sex, delaying sexual debut, the importance of contraception use, and talking about sex with their partners were found to delay vaginal intercourse [11]. However, parents do not feel they have the knowledge to talk to their child about sexual health and do not usually have conversations with their adolescents about sexuality, sexually transmitted diseases (STDs), and HIV [12, 13]. This study sought to determine whether the family context (i.e., parent support, parent relationships) impacted HIV testing over time for Black males.

Parent–Child Communication

Much of the existing literature on parent–child communication has focused on mother–daughter sexual communication

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[14]. Prior research has found that mothers are more likely to talk to their daughters about sex, whereas fathers are more likely to talk to their sons [15, 16]; however, in general, mothers are more likely than fathers to engage with their children about sex [17]. The content, context, and delivery differ according to race and gender [14]. Studies have found sexual health conversations to serve as an effective prevention strategy for racial and ethnic minority youth, particularly young Black men. For instance, in a mixed methods exploratory study that looked at the dynamics of sexual health conversations between single Black mothers ($n = 23$) and their sons aged 11–14 ($n = 25$) [18], they found mothers' and sons' comfort while discussing sexual health topics varied widely. Nevertheless, most of the youth expressed that their mothers were approachable, and some reported talking with their mothers prior to their first sexual experience. However, while such findings highlighted the relationships between Black mothers and their sons and their willingness to talk about the importance of condom usage and other sexual health topics, HIV testing was not considered.

Prior surveys of adolescents have demonstrated that father–son communication about sex was limited and mainly focused on condom use [14, 16, 19, 20]. Kapungu and colleagues conducted a study of parent–child communication with 162 Black males and female adolescents [3]. They found that conversations with fathers mostly focused on condom use and sons reported more frequent conversations around sex (primarily condom use) with their mothers, than daughters did. It has been documented that several factors affect communication about sex between fathers and sons. Fathers are more likely to engage in sexual health conversations with their sons if they are comfortable talking about sex, if their fathers talked about sex with them when they were younger, if they believe that their sons will benefit from having a conversation about sex, and if they have a positive attitude toward adolescent sexual behavior [14, 21]. Other research has found that father–son sexual communication can potentially help reduce risky sexual behaviors and increase HIV testing rates. Harris and colleagues conducted a study with 96 Black fathers and their sons aged 16–21 years using a structural equation model to examine neighborhood characteristics, father–son closeness and bonding, father–son communication, sexual permissiveness, condom attitudes, and sexual risk behaviors [22]. The authors found that Black father–son closeness and parental bonding were associated with father–son communication, which in turn was negatively associated with sons' permissiveness and positively related to condom attitudes. Further, sons' permissiveness was positively associated with their sexual risk behaviors. Father–son communication and bonding are important because these allow for trust to be built between father and son and enable them to have safe conversations around important topics like sex. However, we do not know whether these relationships affect the rate of HIV testing.

Ecodevelopmental Theory

The ecodevelopmental theory includes three elements: (a) social ecological theory, (b) developmental theory, and (c) an emphasis on social interactions. Social ecological theory expands Bronfenbrenner's social ecological model, which frames the social ecology of an individual as a group of four interrelated systems: microsystem, mesosystem, exosystem, and macrosystem [21, 23]. Unlike the social ecological theory, ecodevelopmental theory emphasizes the role of family functioning and interactions among risk and protective processes from a developmental lens [24]. In this study, we focus on Black males and the role of their families as highly influential microsystems in their lives. The microsystem also includes peers, school, and neighborhood systems, but among all of these, family is the most powerful influence. The ecodevelopmental theoretical framework examines factors that can increase HIV testing among Black males, which is important because literature identifies testing as a key approach to reducing HIV risk behaviors among Black males [25]. Previous study findings have shown that appropriate bonding and communication between parents and adolescents postpone the onset of early sexual behaviors and, thus, reduce the risk of contracting STDs/HIV among adolescents [26–30]. Therefore, this study seeks to investigate whether the family context (i.e., parent support, parent relationships) impacted HIV testing over time for Black males.

The Present Study

Guided by the ecodevelopmental theory, and given the dearth of literature on the topic, we sought to determine whether the family context (i.e., parent support, parent relationships) impacted HIV testing over time. Specifically, it was hypothesized that parent support of Black adolescent males will be related to (a) HIV testing; (b) Black males' self-efficacy about condoms will predict HIV testing; (c) parent attitudes toward sex will impact Black males' choice to get tested; and (d) Black male peers who are knowledgeable are more likely to get tested for HIV.

Method

Participants

This study was conducted using data from the National Longitudinal Study of Adolescent Health (Add Health) [31]. Add Health was conducted from 1994/1995 to 2008 to survey adolescents and their parents over time as a clustered sample to represent the US national population. It comprises four waves of data collected to examine the social, emotional, physical, and health domains of each participant [31]. Add

Health was also representative of US schools with respect to differences in regions of the country, urbanity, school size, school type (private/public), and race/ethnicity. For this study, we analyzed waves 1 and 3 of the restricted data from a nationally representative sample of Black male adolescents in grades 7 through 12 in 1994–1995 and 2001–2002. Our sample from wave 1 (1994) comprised 1179 sexually active Black males and wave 3 (2001–2002) comprised 553 sexually active Black males. The average age for both waves in this sample was 16 years (ranging between 11 and 21 years) and the average age of sexual debut was 13 years. The variables were obtained from household surveys. Sample weights were applied in the data analysis as appropriate to represent all young Black males in the US.

Measures

HIV Testing (Waves 1 and 3)

The four-level polytomous response dependent variable is a measure of HIV testing from two waves of data (1 = Not tested for HIV; 2 = Yes, tested at wave 1; 3 = Yes, tested at wave 3; and 4 = tested at both waves) asked the following: “Have you been tested for HIV/AIDS in the past twelve months?”

Parent Support (Wave 1)

This item was constructed using two variables: father support and mother support. Both mother and father support were constructed using mother communication, father communication, mother bonding, and father bonding. Mother and father communication consisted of a four-item scale (0 = No and 1 = Yes) asking these items to respondents: (1) “Did you talk about someone you’re dating or a party you went to?” (2) “Did you talk about school, work, or grades?” (3) “Did you have a talk about any personal problems you were facing?” (4) “Did you talk about other things you’re doing at school?” Mother–adolescent and father–adolescent bonding both consisted of a three-item scale (ranging from 1 = strongly disagree to 5 = strongly agree) and asked the respondents the following: (1) “Most of the time, your mother/father is warm and loving toward you,” (2) “Overall, you are satisfied with your relationship with your mother/father” (3) “You feel close to your biological mother/father.” The Cronbach alpha for this scale is .77.

Parent Attitudes

This six-item scale (ranging from 1 = strongly disapprove to 5 = strongly approve) asked respondents the following questions: (1) “How would she feel about your having sex at this time in your life?” (2) “How would she feel about your having sexual intercourse with someone who was special to you and

whom you knew well—like a steady?” (3) “How would she feel about your using birth control at this time in your life?” (4) “How would he feel about your having sex at this time in your life?” (5) “How would he feel about your having sexual intercourse with someone who was special to you and whom you knew well—like a steady?” (6) “How would he feel about your using birth control at this time in your life?” The Cronbach alpha for this scale is .89.

Parent Relationships

This six-item scale (0 = No and 1 = Yes) asked respondents the following questions: (1) “Do your parents let you make your own decisions about what you wear?” (2) “Do your parents let you make your own decisions about the people you hang around with?” (3) “Do your parents let you make your own decisions about the time you must be home on weekend nights?” (4) “Do your parents let you make your own decisions about how much television you watch?” (5) “Do your parents let you make your own decisions about which television programs you watch?” (6) “Do your parents let you make your own decisions about what time you go to bed on weeknights?” The Cronbach alpha for this scale is .65.

Self-efficacy (Wave 1)

This three-item scale (ranging from 1 = very unsure to 5 = very sure) asked the respondents the following: (1) “How sure are you that you could plan ahead to have some form of birth control available?” (2) “If you wanted to use birth control, how sure are you that you could stop yourself and use birth control once you were highly aroused or turned on?” (3) “How sure are you that you could resist sexual intercourse if your partner did not want to use some form of birth control?” These items were reverse scored so that a higher score indicated more of this attribute. The Cronbach alpha for this scale is .67.

Peers’ Knowledge and Influence (Wave 1)

This three-item scale (ranging from 1 = strongly disagree to 5 = strongly agree) asked the respondents the following: (1) “Are your closest friends quite knowledgeable about how to use a condom correctly?” (2) “Do your closest friends know about the rhythm method of birth control and the monthly occurrence of ‘safe’ time for a woman during which she can have sex and not get pregnant?” (3) “Are your closest friends quite knowledgeable about the withdrawal method of birth control?” The Cronbach alpha for this scale is .84.

Chances of Contracting HIV (Wave 1)

This item (ranging from 1 = almost no chance to 5 = almost certain) asked the respondents the following: “Suppose that sometime soon you had sexual intercourse for a whole month, as often as you wanted to, without using any protection. What is the chance that you would get the AIDS virus?”

Covariates

Parent education and age were included as covariates. Parents indicated their education in (wave 1) a two-item scale (1 = eighth grade or less to 12 = does not know if she/he went to school). The respondents were asked the following: “How far in school did he/she go?” Age was reported as a continuous variable.

Data Analysis Plan

The analysis was conducted using Stata 15. The analysis consisted of Black males who reported being sexually active with an average age of 16 years. To obtain results that are generalizable to the Black population, the analysis utilized analytic weights. All statistical analyses were accounted for the complex multi-stage clustered design of the Add Health sample. All estimates that were reported were weighted.

First, a univariate analysis (Table 1) was conducted to explore each variable in the dataset separately. Second, a bivariate regression analysis (Table 2) was conducted with independent variables: self-efficacy, parent support, peer

knowledge, parent education, age, chances of contracting HIV and the dependent variable, HIV testing. Lastly, a multinomial logistic regression (Table 3) analysis was used to analyze the independent variables and a four-level polytomous response to HIV testing. Multinomial logistic regression is appropriate for the four-level polytomous response dependent variable because there were two waves of data used in this study (i.e., “Have you ever been tested for HIV?”) and can accommodate continuous and categorical independent variables. The reference category is never being tested for HIV. More specifically, the results focus on the contrasts involving (1) never being tested for HIV versus being tested once for HIV at an earlier age, (2) never being tested for HIV versus being tested for HIV at an older age, and (3) never being tested for HIV versus being tested for HIV multiple times.

For the multinomial logistic regression analysis, relative risk ratios (RRRs) and 95% confidence intervals (CIs) are presented. The authors first conducted a multinomial logistic

Table 1 Descriptive statistics of Black males ($N=1732$)

	Proportions	Mean	SE
HIV testing		1.44	0.05
Never tested	76%		0.03
Tested once at wave 1	5%		0.10
Tested once at wave 3	18%		0.03
Tested both at waves	2%		0.10
Condom use		2.43	0.31
Condom use first time not recent	15%		0.02
Condom use recent times	27%		0.02
Condom use both times	58%		0.02
Parent support		1.89	0.40
Parent attitudes		2.56	0.25
Self-efficacy		4.22	0.71
Parent relationships		4.39	0.61
Peer knowledge		6.97	0.07
Age		16.18	0.19
Parent education		5.63	0.14
Chances of contract HIV		2.12	0.06

Table 2 Bivariate regression analysis on HIV testing

	RRR	SE	95% CI
1 Not tested at all			
2 Tested at wave 1			
Parent support	2.30***	0.48	[1.44–3.68]
Parent attitudes	1.44	0.50	[0.60–1.27]
Self-efficacy	1.37	0.52	[0.63–2.96]
Parent relationships	1.35*	0.21	[0.97–1.83]
Peer knowledge	0.96	0.13	[0.72–1.27]
Age	1.02	0.25	[0.77–1.80]
Parent education	0.91	0.10	[0.73–1.13]
Chances of contracting HIV	0.72	0.19	[0.42–1.25]
3 Tested at wave 3			
Parent support	1.40	0.28	[0.94–2.10]
Parent attitudes	0.88	0.16	[0.60–1.27]
Self-efficacy	0.98	0.11	[0.79–1.22]
Parent relationships	1.10	0.90	[0.78–1.05]
Peer knowledge	1.00	0.08	[0.87–1.16]
Age	0.86	0.07	[0.73–1.03]
Parent education	1.09	0.06	[0.96–1.23]
Chances of contracting HIV	0.74*	0.57	[0.57–0.97]
4 Tested at both waves			
Parent support	2.07*	0.63	[1.13–3.80]
Parent attitudes	2.26**	0.67	[1.25–4.06]
Self-efficacy	0.72	0.20	[0.42–1.24]
Parent relationships	1.51	0.43	[0.38–1.15]
Peer knowledge	0.82	0.16	[0.56–1.21]
Age	1.37**	0.35	[1.06–1.77]
Parent education	1.65**	0.32	[1.12–2.43]
Chances of contracting HIV	1.24	0.57	[0.49–3.11]

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3 Multinomial logistic regression on HIV testing (*N* = 509)

HIV testing	RRR	SE	95% CI
1 Not tested at all	(Base outcome)		
2 Tested at wave 1			
Parent support	2.10***	0.31	[1.14–3.85]
Parental attitudes	0.87	0.32	[0.42–1.81]
Self-efficacy	1.38	0.58	[0.60–3.17]
Peer knowledge	0.90	0.39	[0.38–2.12]
Parent education	0.88	0.09	[0.71–1.08]
Age	1.22	0.27	[0.78–1.90]
Chances of contracting AIDS	0.86	0.23	[0.51–1.45]
3 Tested at wave 3			
Parent support	1.30	0.27	[0.66–1.79]
Parent attitudes	1.08	0.27	[0.84–1.99]
Self-efficacy	1.00	0.14	[0.75–1.30]
Peer knowledge	0.98	0.18	[0.68–1.43]
Parent education	1.08	0.07	[0.95–1.23]
Age	0.88	0.07	[0.74–1.04]
Chances of contract AIDS	0.80	0.12	[0.60–1.09]
4 Tested at both waves			
Parent support	3.13**	1.50	[1.20–8.20]
Parent attitudes	0.41**	0.16	[0.18–0.88]
Self-efficacy	0.71	0.50	[0.38–1.34]
Parent education	1.47**	0.27	[1.01–2.14]
Peer knowledge	0.56**	0.15	[0.32–0.98]
Age	1.42**	0.18	[1.10–1.83]
Chances of contracting AIDs	1.00	0.39	[0.44–2.22]

****p* < .001, ***p* < .01, **p* < .05

regression because the dependent variable is nominal with more than two levels and there is no ordering to the levels of HIV testing in this context. Furthermore, a multinomial logistic regression is an extension of a binary logistic regression that allows for more than two categories of the dependent variable. This ratio is called the relative risk or odds and the log of this ratio is called the generalized logit. Moreover, Stata mlogit command only reports RRR, which is an extension of odds ratios. The authors chose multinomial analysis and reporting of RRR based on previous studies using these analytical methods (Cho, 2004; Izudi, J., Auma, S., & Alege, 2017; Starkweather, & Moske, 2011).

Results

Descriptive Statistics

Table 1 summarizes the descriptive statistics, which include proportions, means, and standard errors. The average age of the individuals in the sample at both waves was 16 (SE =

0.19), and the average age of sexual debut was 13. Of study participants, 76% indicated that they never had been tested for HIV/AIDS, and 2% of individuals had been tested multiple times. More than half of the sample (58%) reported using a condom both times—“most recent time they had sexual intercourse” and “during the first time they had sexual intercourse.” Only 15% of the sample reported using a condom during their first time of sexual intercourse and not their most recent time.

Bivariate Regression

Table 2 presents the bivariate regression analysis on HIV testing and condom use. Bivariate analysis indicates that having parent support is significant and positively associated with HIV testing, showing that participants with positive parent support were 2.3 times more likely to be tested than those who had never been tested or do not have positive parent support at wave 1. Black males whose parents had positive attitudes toward sex were 2.26 times more likely to get tested for HIV multiple times (waves 1 and 3) in comparison with those who never got tested for HIV. Older youth were 1.37 times more likely to get tested for HIV than younger youth. Also, parents’ education was positively associated with HIV testing at both waves 1 and 3. Youth who believed that they had an increase in chances of contracting HIV were 26% less likely to get tested for HIV in comparison with those who had never gotten tested for HIV.

Multinomial Analysis

Table 3 presents a multinomial logistic regression to answer the following question: Are self-efficacy, sense of belonging, parent support, parent attitudes toward sex, parental relationships, and peer knowledge predictive of HIV testing? This was applied to four groups: never tested, tested at wave 1, tested at wave 3, and tested at both waves. The overall model was statistically significant: $\chi^2 F_{(21,44)} = 3.11$, *N* = 509, *p* < .001. The results revealed that parent support is significant and positively associated, indicating that Black males with parental support were more likely to be tested for HIV, in comparison with those who had never been tested. Males who reported positive parental support were 3.13 times more likely to be tested multiple times, in comparison with males who had never been tested for HIV. Parent attitudes about sex were negatively associated, indicating that males who had parents with negative attitudes about sex were 59% less likely to get tested for HIV multiple times, in comparison with males who had never been tested for HIV. Peer knowledge was negatively associated with never being tested for HIV, so those who had peers with little knowledge about sex were 44% less likely to be tested. Parents’ education was positively associated, indicating Black males with parents with an increase in

education were more likely to get tested multiple times, in comparison with males who never been tested. Older Black males were almost 1.5 times more likely to be tested multiple times compared with younger Black males.

Discussion

The present study utilized the ecodevelopmental theory, which incorporates both risk and protective processes to investigate how the family context (i.e., parent support, parent relationships) impacted HIV testing over time. A secondary national dataset was used to assess these factors. Findings from our study support the assertion that the influence from the familial microsystem is prominent in modifying HIV-related sexually risky behavior, i.e., HIV testing in Black males. We noted significant associations between parental support and Black males' HIV testing behavior, which was noteworthy since 76% of the sample reported that they had never been tested for HIV/AIDS. Black males with parent support reported being tested for HIV more than once. Furthermore, adolescents whose parents had positive attitudes about sex were more than twice as likely to get tested for HIV more than once versus adolescents who had never been tested. This implies that parents' attitudes—especially about sex—are powerful vehicles to influence their children's attitudes about sex and healthy sexual behaviors (i.e., HIV testing). Furthermore, this finding supports previous research regarding the relationship between good bonding with parents and the delay of early sexual behaviors to reduce the risk of Black males contracting HIV [24, 26–30]. In this context, parents functioned as a microsystem and favorably influenced the sexual behaviors of Black males.

Breaking down the multinomial logistic analysis, the model was statistically significant in explaining how predictive of HIV testing the study variables were. We noted both strong positive and negative associations with Black males and HIV testing based on self-efficacy, parental support, parent attitudes toward sex, parental relationships, and peer knowledge. Of significant note was the fact that more than half of the sample held negative attitudes about sex, like their parents, and were less likely to get tested for HIV more than once. Also, more than one-third of the sample had peers that were less knowledgeable about sex, so they were also less likely to get tested. Therefore, adolescent males exposed to limited or negative information about sex are much less likely to undergo HIV testing. This is of importance since previous studies with Black adolescents note frequent conversations about sex with both parents, even if the specific topics may vary in terms of the adolescent's gender; paternal attitudes toward adolescents' sexuality were displayed, and thus, they were found to be influential on their behavior [33, 34].

Although Black males are on the high end of HIV risk, the burden is not equally distributed across the population. Scholars report evidence suggesting that high rates of HIV/AIDS in Black communities are associated with social-structural factors such as crime and drug-affected neighborhoods [35, 36], incarceration [35, 37], poverty [25, 38], and unstable housing [37, 38]. Other scholars have also noted the role of racial discrimination and its impact on Black males and their HIV status. Bowleg and colleagues noted that racial discrimination rarely appears in HIV prevention literature as one of the structural factors that may increase HIV risk [38]. Additionally, these social-structural factors could further compound adolescents' ability to engage in healthy sexual behaviors, which have both direct and indirect influences on their health status, including their HIV status.

Limitations and Directions for Future Research

The results of our study should be interpreted considering several limitations. First, our findings may not be generalizable to all adolescents of color in the US. The Black males in the Add Health data were drawn from a national sample of the general population versus an indicated population of males of color (e.g., Black and Latino males) with high risk of HIV. Consequently, our results may not be generalizable to individuals who have been exposed to violence, being homeless or system-involved (i.e., juvenile justice and/or child welfare), or those who were not born in the US. Secondly, the specific constructs we used focused solely on the microsystem in the ecodevelopmental framework. Given the theory's breadth and the inclusion of additional systems—mesosystem, exosystem, and macrosystem—we do not know how the variables at these levels could influence our results. Specifically, cultural and societal issues like racial discrimination may have a dramatic impact on Black males and their likelihood of undergoing HIV testing. The third limitation is the use of self-reported measures in our study that could have led to social desirability and recall biases, with potential resultant effects on our results. However, utilizing the sample weights in the analysis could have contributed to reducing selection bias and variance. Lastly, the data was collected in the early 1990s and 2000s, and the authors recognize this as a limitation in our study. Since the data have been collected, there have been major advancements in HIV prevention programs and treatments, and potentially family dynamics, which is a limitation in this study. However, the data allowed us to investigate some of these family relationships and how these relationships influence healthy behaviors including HIV testing among Black males, which has been shown in prior literature to be of strong importance.

Despite the study's limitations, the strengths of our study lie in the use of the ecodevelopmental theory to assess these study variables and their association with HIV risk behaviors

among Black males. Also, the study contributes to our understanding of how parent support affects the health status of Black males. Our study findings inform the literature on Black families and HIV prevention by adopting a developmental communication lens and demonstrating that parent support may favorably impact HIV testing behavior. Importantly, this study highlights the family context and its impact on whether Black males will engage in HIV prevention efforts (i.e., testing), as well as the influence of peers related to their knowledge and attitudes about sex. This is noteworthy for Black males who also have histories of violence exposure, homelessness, and/or delinquency. Specifically, previous research study findings suggest that significant increases in delinquency have been associated with significant decreases in parent–child relationship quality across childhood, early adolescence, and middle adolescence [39]. Thus, innovative and comprehensive prevention and intervention efforts could benefit from informative content to enhance parents and peers’ knowledge about improved health, especially sex and HIV prevention in order to foster greater adherence to healthy sexual behaviors.

Preventing HIV in Black males is a core element of relevant research, and also of social welfare, public health, and HIV prevention and intervention. Future research should further expand the ecodesvelopmental theory to include the other systems—especially the macrosystem—to further explore the structural, systemic, and societal issues (e.g., racism and poverty) that impact Black males and their engagement in prosocial sexual health behaviors. To that end, the results of our study may have important implications for designing future studies, including the design and implementation of preventive interventions to reduce HIV risky behaviors and other health outcomes for Black males and their families. Future research efforts need to address the absence of structural interventions that could tailor HIV prevention research and interventions, which have been straggling [40]. Recognizing the need to include both protective and risk processes in future research studies is necessary to move the needle and achieve an uptake of effective interventions, especially for populations with unique needs, for instance, homeless and incarcerated adolescents.

Conclusion

By examining the microsystem in the ecodesvelopmental theory, we found factors that greatly contribute to increasing or decreasing the odds of adolescent male participation in HIV testing. Our study results suggest the powerful role parents play in educating their children about sex and making safe decisions. Evidence from our investigation suggests that parents are model change facilitators who have significant influence on their children’s decision-making, including seeking

out HIV-related services like HIV testing. Similarly, peers also represent a vital influence that could reinforce adolescents’ knowledge and decision-making in positive or negative ways. Consequently, any intervention aimed at optimal protection against HIV-related risks among Black males should consider a micro- and macro-focus and context with strategies that promote positive communication skills and enhance culturally tailored knowledge about sexual health to increase their seeking of HIV-related services and engaging in the HIV continuum of care. This is of particular concern for youth with histories of homelessness, arrest/incarceration, or exposure to violence. In addition, prevention and intervention programs should be designed with input from parents, family members (other caregivers), and key constituents (teachers, coaches, etc.) who play a significant role in the lives of adolescents. All these efforts would result in improved well-being, health, and sexual health for adolescents and their parents.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

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