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Measurement Noninvariance of Safer Sex Self-Efficacy Between Heterosexual and Sexual Minority Black Youth

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Abstract

Objective—Black and lesbian, gay, bisexual, or questioning (LGBQ) youth in the United States are disproportionately affected by HIV and other sexually transmitted diseases (STDs). Although self-efficacy is strongly, positively associated with safer sex behaviors, no studies have examined the validity of a safer sex self-efficacy scale used by many federally funded HIV/STD prevention programs. This study aims to test factor validity of the Sexual Self-Efficacy Scale by using confirmatory factor analysis (CFA) to determine if scale validity varies between heterosexual and LGBQ Black youth.

Method—The study uses cross-sectional data collected through baseline surveys with 226 Black youth (15 to 24 years) enrolled in community-based HIV-prevention programs. Participants use a 4-point Likert-type scale to report their confidence in performing 6 healthy sexual behaviors. CFAs are conducted on 2 factor structures of the scale. Using the best-fitting model, the scale is tested for measurement invariance between the 2 groups.

Results—A single-factor model with correlated errors of condom-specific items fits the sample well and, when tested with the heterosexual group, the model demonstrates good fit. However, when tested with the LGBQ group, the same model yields poor fit, indicating factorial noninvariance between the groups.

Conclusions—The Sexual Self-Efficacy Scale does not perform equally well among Black heterosexual and LGBQ youth. Study findings suggest additional research is needed to inform development of measures for safer sex self-efficacy among Black LGBQ youth to ensure validity of conceptual understanding and to accurately assess effectiveness of HIV/STD prevention interventions among this population.

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Keywords

sexual behavior; self-efficacy; sexual orientation; HIV/AIDS; prevention

Sexually transmitted diseases (STDs), including HIV, remain a critical public health threat, with nearly 20 million new cases each year at a cost of approximately \$16 billion to the U.S. health care system (Centers for Disease Control and Prevention [CDC], 2015a). Youth between the ages 15 and 24 years comprise approximately 50% of STD infections each year, with Black and sexual minority (LGBQ) youth bearing a disparate amount of the disease burden. For example, young Black women are the group at highest risk for chlamydia infection (CDC, 2015a). Although the research on STD risk among sexual minority women is limited, results from a recent study suggested that young women with multiple female partners were at increased risk for STDs (Lindley, Walsemann, & Carter, 2013). Moreover, young Black and sexual minority men are disproportionately affected by HIV. In 2010, approximately 57% of new HIV infections in youth occurred among those who are Black and 72% occurred among gay and bisexual men (CDC, 2015b). Young gay, bisexual, and other men who have sex with men were the only population that experienced a significant increase (20%) in new HIV infections from 2008 to 2010 (CDC, 2015b).

Although increasing attention has been given in recent years to the development of biomedical approaches to HIV prevention, behavioral strategies, such as condom use, remain effective and inexpensive ways to prevent the transmission of HIV and other STDs (Weller & Davis-Beatty, 2002). Evidence-based behavioral HIV and other STD prevention interventions, including Sisters Informing Sisters on Topics about AIDS (SISTA; DiClemente & Wingood, 1995), Street Smart (Rotheram-Borus et al., 2003), and others (CDC, 2015c), are guided by theories of health behavior such as Bandura's (1991, 1994) social cognitive theory. These theories highlight the importance of self-efficacy (i.e., a person's belief that he or she can exercise control over personal actions and perform a health promoting behavior within his or her social environment; Bandura, 1990) in performing HIV and other STD preventive behaviors. Furthermore, previous empirical studies of the factors associated with safer sex have identified strong relationships between self-efficacy and safer sex intentions and behaviors (Bandura, 1990; Bauermeister, Hickok, Meadowbrooke, Veinot, & Loveluck, 2014; Black, Sun, Rohrbach, & Sussman, 2011; Burns & Dillon, 2005; Cerwonka, Isbell, & Hansen, 2000; Peterson & Gabany, 2001; Turchik & Gidycz, 2012). Given the widespread focus on self-efficacy in behavioral interventions for prevention of HIV and STDs as well as the consistent, positive relationship between self-efficacy and safer sex behaviors, it is essential that program staff and administrators are able to accurately assess safer sex self-efficacy—particularly of clients with the highest risk for HIV and other STDs—and to adequately evaluate sexual risk and appropriately intervene.

For approximately 17 years, the Substance Abuse and Mental Health Services Administration's (SAMHSA) National Minority Substance Abuse and HIV/AIDS Prevention Initiative has funded community-based prevention programs that target racial/ethnic and LGBQ populations that are at high-risk for substance use and HIV infection (T. Clarke, personal communication, February 8, 2016). Since 2002, most prevention programs

funded under this initiative have been required to administer a measure of safer sex self-efficacy called the Sexual Self-Efficacy Scale as a part of a larger self-report client survey named the Adult Baseline Questionnaire (N. Isvan, personal communication, February 16, 2016; SAMHSA, 2011; Wang et al., 2007). Developed by John Snow International Research and Training Institute (JSI Research, 2000), the six-item Sexual Self-Efficacy Scale measures the respondent's self-reported confidence that he or she can refuse to engage in risky sexual behaviors (N. Isvan, personal communication, February 16, 2016; see Appendix). As of December 31, 2014, approximately 75,000 respondents had completed the Sexual Self-Efficacy Scale. SAMHSA expects to continue requiring programs funded by the National Minority Substance Abuse and HIV/AIDS Prevention Initiative to administer the scale as part of the Adult Baseline Questionnaire in the future (N. Isvan, personal communication, February 17, 2016). However, despite the widespread use of the Sexual Self-Efficacy Scale by SAMHSA, to the best of the authors' knowledge, the development and validation of the scale has not been described in the literature. Moreover, the Sexual Self-Efficacy Scale has not yet been tested for factorial validity among Black youth or for measurement invariance by sexual orientation within this population at high risk for contracting HIV and other STDs.

Several studies have investigated the measurement of self-efficacy for condom use (Barkley & Burns, 2000; Brien & Thombs, 1994; Peterson & Gabany, 2001; Pratte, Whitesell, MacFarlane, & Bull, 2010), but few studies have examined the factor structure of the broader concept of safer sex self-efficacy. The Sexual Self-Efficacy Scale (JSI Research, 2000) was designed to measure the broader concept of safer sex self-efficacy, yet the scale has not yet been examined for factor structure. Moreover, among the available studies that have examined safer sex self-efficacy, some disagreement exists regarding which components scales must include to accurately and appropriately assess self-efficacy, as well as the factor structure of safer sex self-efficacy scales. Scholars have argued that an instrument cannot accurately measure safer sex self-efficacy without explicitly identifying the specific preventive behaviors and circumstances under which the behavior is to be performed in each item (Forsyth & Carey, 1998; Murphy, Stein, Schlenger, & Maibach, 2001). Indeed, results of one study of a safer sex self-efficacy scale demonstrated that a multidimensional measurement model that included the behavior, the context in which the behavior takes place, and the degree of difficulty for performing that behavior was superior to unidimensional models that did not specify the behavioral context (Murphy et al., 2001). However, these results are inconsistent with a separate factor analysis of a different safer sex self-efficacy scale, which revealed that both unidimensional and multidimensional scales might be appropriate for assessing safer sex self-efficacy (Redding & Rossi, 1999). The Sexual Self-Efficacy Scale (JSI Research, 2000) establishes a cursory context by specifying that items are focused on an individual's primary partner; however, this scale should be considered unidimensional because it does not provide a detailed context or specify the extent difficulty associated with each behavior. The limited data available and conflicting results regarding a specific factor structure for scales of safer sex self-efficacy underscore the need for further investigation.

Although the aforementioned research has contributed to increased understanding of the measurement of safer sex self-efficacy, the generalizability of prior research is limited by the

sample composition, which has primarily consisted of heterosexual college students (Brien & Thombs, 1994; Peterson & Gabany, 2001; Redding & Rossi, 1999). These samples are not reflective of the populations at highest risk for contracting HIV and other STDs, namely LGBQ youth. Studies have identified several factors associated with increased sexual risk among LGBQ youth, including earlier age at initiation of sexual activity, stigma and discrimination related to sexual orientation, and differing sexual norms when compared with heterosexual youth (Harper, 2007; Lindley & Walsemann, 2015; Meyer, 2003). Safer sex self-efficacy scales that have been developed and tested with heterosexual populations might fail to capture the unique experiences related to safer sex self-efficacy among LGBQ youth. For instance, a scale might not capture the influence of internalized stigma on safer sex self-efficacy of a young gay male who is struggling with his sexual orientation and who might engage in unprotected sex with multiple male and female partners as a demonstration of masculinity that acts against homophobic stereotypes (Harper, 2007).

Furthermore, some items on existing scales of safer-sex self-efficacy are written based on the assumption that the respondent is heterosexual. For example, the scenarios provided to contextualize sexual behavior in a study of a multidimensional scale of safer sex self-efficacy specified a female partner for male respondents and a male partner for female respondents (Murphy et al., 2001). Another scale included an item that assesses the extent to which a respondent was afraid his or her partner would think the respondent was homosexual if the respondent asked the partner to use a condom (Brien & Thombs, 1994). Because these instruments have been developed for and tested with heterosexual youth, the extent to which the instruments can accurately measure safer sex self-efficacy among LGBQ youth remains unknown.

Data collected from SAMHSA-funded HIV and substance use prevention programs using the Adult Baseline Questionnaire have the potential to inform intervention development and lead to increased program effectiveness. However, these advances cannot be accomplished without first examining the accuracy of the safer sex self-efficacy measurement tool for the various populations that the programs serve. Given the disproportionate need for effective behavioral HIV and STD prevention interventions for Black youth, especially those who identify as LGBQ, it is critically important that the data collected to inform these interventions are valid. The present study aimed to contribute to the empirical literature regarding measurement of self-efficacy by (a) conducting a confirmatory factor analysis of the Sexual Self-Efficacy Scale (JSI Research, 2000) with a sample of Black youth, and (b) testing whether the measurement of safer sex self-efficacy using this scale varied by sexual orientation.

Method

Data Source

The cross-sectional data in this study were derived from the baseline assessment in 2010–2011 of youth participants enrolled in 1 of 2 group-level HIV prevention programs delivered at a community-based agency located in a city within the U.S. Midwest. This research was approved by the Institutional Review Board of a large university in the Midwestern United States.

Measures

The Sexual Self-Efficacy Scale (JSI Research, 2000) includes six items that use a Likert-type response scale to assess the respondent's self-efficacy for carrying out healthy sexual behaviors with a primary partner. Study participants were asked to rate how confident they were that they could perform a specific behavior with a primary partner; self-reports of the extent of confidence used a 4-point ordered scale ranging from *not at all confident* (coded 1) to *very much confident* (coded 4), with higher scores indicating greater level of confidence. Three scale items specifically inquired about condom use (e.g., "How confident are you that you could ... Ask your partner to use a condom/dental dam"), whereas the remaining three items refer to other components of negotiating healthy sexual boundaries (e.g., "How confident are you that you could ... Refuse to engage in sex practices you didn't like"). A full list of items can be found in the Appendix. Although psychometrics of the scale have not been published in the literature, an annual report created by the agency responsible for design and analysis of the Adult Baseline Questionnaire indicated that the Sexual Self-Efficacy Scale has demonstrated strong internal consistency ($\alpha = .87$; Center for Substance Abuse Prevention, 2012).

Participants were also asked to endorse 1 of 4 possible sexual orientations: straight/heterosexual, bisexual, gay/lesbian, or unsure. For the purposes of this analysis, sexual orientation was dichotomized to compare the same model of safer sex self-efficacy between heterosexual and LGBQ participants.

Study Sample

Participants were 226 Black youth ages 15 to 24 years ($M = 19.29$ years; $SD = 1.67$) living in an urban setting. The original sample of 317 young adults included 204 heterosexual and 113 LGBQ participants. To accurately test for measurement invariance between these groups, a random sample of 113 heterosexual participants was generated to allow for equal numbers of participants in each group. Approximately 51% of the total study sample identified as male, 45% as female, and 4% as transgender. Approximately 67% of transgender participants identified as bisexual, and the remaining 33% identified as heterosexual.

Analytic Plan

Descriptive statistics were computed using SPSS version 19.0. Confirmatory factor analysis (CFA) was conducted and analyzed using Mplus version 6.11 (Muthén & Muthén, 1998–2010). Two single-factor CFAs were conducted on the full sample. The first model did not specify correlations among error terms, and the second model specified correlated error among the three items that explicitly mentioned condom use to adjust for potential method effects (see Figure 1). Using the best-fitting model from the previous step, separate CFAs were conducted on the heterosexual and LGBQ groups to test for factorial invariance (Brown, 2006).

For all models, the robust weighted least-squares estimator with corrections for means and variances (WLSMV) was used, which is able to appropriately analyze ordered (e.g., Likert-type) data (Finney & DiStefano, 2006). Mplus used all available data when estimating a

model; therefore, only cases with missing data on all six items of sexual health self-efficacy were excluded from analyses. Less than 1% of the data were missing on each item. Model fit was determined using the comparative fit index (CFI), Tucker-Lewis fit index (TLI), root mean square error of approximation (RMSEA), and WLSMV chi square. Although no strict cut-off points exist for these fit statistics, CFI and TLI values above .95 and RMSEA values close to .06 are considered indicators of good model fit (Hu & Bentler, 1999). Given that RMSEA is influenced by sample size, values below .08 in this small sample were considered acceptable (Kline, 2011). Although the WLSMV chi-square is sensitive to skewed distribution (Finney & DiStefano, 2006), this estimator was chosen to serve as a conservative indicator of model fit (Kline, 2011). A non-significant chi-square value ($p > .05$) also indicated good model fit. Although individual item r^2 values could not be interpreted as variance explained in this study due to the categorical nature of the data, these values were reported as indicators of item reliability (Brown, 2006).

Results

Descriptive results indicated that the gender and age distribution of participants varied by sexual orientation. Participants in the LGBQ group were more likely to be male, whereas participants in the heterosexual group were more likely to be female, $\chi^2(3, N = 226) = 29.733, p < .001$. Additionally, those in the LGBQ group were an average of 1 year older ($M = 19.81$ years, $SD = 1.84$) than participants in the heterosexual group ($M = 18.78$ years, $SD = 1.28$), $t(224) = -4.849, p < .001$.

Table 1 illustrates the distribution of responses to each item in the Sexual Self-Efficacy Scale (JSI Research, 2000). Notably, distributions were skewed for both the heterosexual group and the LGBQ group, with the majority of participants endorsing higher levels of self-efficacy on every item. Although a larger proportion of LGBQ participants reported higher rates of self-efficacy than heterosexual participants on 5 of 6 items, these differences were not statistically significant. No case was missing data on every item, so all cases were included in the CFA.

Full Sample Models

A CFA of the entire sample (without correlated error) revealed a poorly fitting model of safer sex self-efficacy among the sample of Black youth (see Table 2 for model fit statistics and Table 3 for factor loadings). Although the CFI and TLI values (CFI = .985; TLI = .975) fell within the acceptable range for good model fit, both the chi-square and RMSEA values were outside of the acceptable range [RMSEA = .113; $\chi^2(9, N = 226) = 42.742, p < .001$]. The full sample model with adjustments for potential correlated error demonstrated better model fit compared with the first model. Although still significant, the chi-square value reduced in magnitude and significance, $\chi^2(6, N = 226) = 12.673, p < .05$, and all other fit statistics fell within the acceptable range for good model fit (RMSEA = .070; CFI = .996; TLI = .990). Standardized factor loadings for this model were strong, ranging from .752 to .868, all of which were statistically significant ($p < .001$). Reliability of each item was modest, with r^2 values ranging from .57 to .75. The lowest r^2 values were found with the three condom-specific items.

Models by Sexual Orientation

The two models used for testing measurement invariance by sexual orientation included correlated errors of the three condom-specific items. Fit statistics for models of safer sex self-efficacy by heterosexual and LGBQ Black young adults appear in Table 2 and factor loadings appear in Table 3.

The model tested with the heterosexual group demonstrated good fit, $\chi^2(6, N= 113) = 9.067, p = .170, (RMSEA = .067, CFI = .996, TLI = .991)$. All six factor loadings were strong and statistically significant at $p < .0001$, with standardized estimates ranging from .760 to .859. Reliability for each item was similar to that of the full sample model with correlated errors, with r^2 values ranging from .58 to .74 in the heterosexual group. The same model tested among the LGBQ group yielded poorer model fit, $\chi^2(6, N= 113) = 13.019, p < .05, (RMSEA = .102, CFI = .993, TLI = .983)$, compared with the same model tested among the heterosexual group. These differences indicate factorial noninvariance between the heterosexual and LGBQ groups of this sample. Factor loadings remained strong and statistically significant in the model tested with the LGBQ group, ranging from .682 to .854. Although factor loadings were strong and significant in both sexual orientation groups, the parameter estimates for the method effects were significantly larger in the LGBQ-tested model (see Table 2). Because factorial noninvariance was established when comparing models between the two groups, no further steps were taken to test for configural and strong invariance (Byrne, 2012).

Discussion

This study examined the validity of a scale used to measure safer sex self-efficacy that is mandated for use by HIV prevention programs across the United States. To the authors' knowledge, this is the first study to test the factor structure of this scale, and the first to examine measurement invariance of the scale between heterosexual and LGBQ Black youth. The study findings suggest that the Sexual Self-Efficacy Scale (JSI Research, 2000) currently used by SAMHSA does not measure safer sex self-efficacy equally well between sexual orientation groups. Although the scale shows good model fit for heterosexual Black youth, it shows poorer model fit among their LGBQ counterparts. Given the disproportionate rates of HIV and other STDs among LGBQ youth, especially young Black men who have sex with men, these findings highlight a need for additional research and scale development to improve the measurement of safer sex self-efficacy among this population, and in turn, to more accurately inform the hundreds of HIV prevention programs from which they seek services.

The findings also identified important demographic differences between the two comparison groups that must be considered when interpreting the results of this study. A significant difference was found in the number of males and females in the two groups; more than 67% of the LGBQ group identified as male as compared with 35% of the heterosexual group. This difference presents the possibility that model fit for the Sexual Self-Efficacy Scale might vary by gender in addition to sexual orientation. An investigation of safer sex self-efficacy measurement invariance across genders was not feasible in this study because of sample size limitations; however, these results highlight an opportunity for future research.

Regardless of this possible measurement noninvariance by gender, the study results obtained from the CFA on the safer sex self-efficacy scores from the LGBQ group remain reflective of those at highest risk for HIV, namely young Black gay, bisexual, and other men who have sex with men (CDC, 2015b).

The Sexual Self-Efficacy Scale (JSI Research, 2000) differs from some related safer sex self-efficacy scales in its exclusion of context from each item. Bandura's theory of self-efficacy posits that the social environment in which a health behavior (e.g., condom use) takes place must be considered when evaluating an individual's perceived self-efficacy for performing that behavior (Bandura, 1990; Fisher & Fisher, 2000). Accordingly, one study found that the best fitting measurement model for condom use self-efficacy among a diverse sample of adults seeking services at a clinic for the treatment of STDs included three dimensions: the behavior; the situation in which the behavior would be performed; and the level of difficulty for performing that behavior, where the situation and the level of difficulty are both components of the social/environmental context for that behavior (Murphy et al., 2001). Although the overall three-dimensional factor structure fit well for both men and women, the study reported that self-efficacy varied substantially by situation for men, but not for women, suggesting that assessment of safer sex self-efficacy could be strengthened if dimensions related to the social/environmental context are tailored to the gender of participants. Similarly, it is possible that the difference in model goodness of fit between the models for heterosexual and LGBQ groups in the current study was influenced by a lack of explicit social/environmental context for each item. Given the stigma associated with minority sexual identities and the different social norms that inform sexual relationships for heterosexual versus LGBQ young people (Harper, 2007; Meyer, 2003; Preston, D'Augelli, Kassab, & Starks, 2007), it is possible that the two groups interpreted the meaning of the questions differently.

Limitations

Data were collected from a convenience sample of those attending an HIV prevention program, and therefore, the study findings might not be generalizable to those who are not engaged in HIV prevention services. The skewed distribution of responses in this sample, indicating high safer sex self-efficacy, might reflect one of the potential differences between Black youth who seek services from HIV prevention programs versus those who do not. Data also were collected through self-report, and therefore, are subject to social desirability bias. In addition, although respondents who identified as LGBQ were grouped together to maintain an adequate sample size for between-group comparisons, they are not a homogeneous group. The way in which a young man who identifies as gay interprets each item on the safer sex self-efficacy scale likely differs from his lesbian peer, who is less likely to contract HIV through same-sex sexual contact. Moreover, the sample included participants who identified as transgender, but they were too few in number to analyze as a distinct group. If this scale continues to be used among diverse populations of young adults across the United States, future research should test the scale's validity among larger samples of each sexual orientation and gender identity, particularly those most affected by HIV and other STDs.

Conclusions

Previous research has demonstrated the importance of increasing self-efficacy for behaviors that promote sexual health when using behavioral HIV and other STD prevention strategies. Self-efficacy is both highly associated with safer sex behaviors and modifiable, justifying the inclusion of the Sexual Self-Efficacy Scale (JSI Research, 2000) within the evaluative questionnaire that is required to be administered to clients of SAMHSA-funded HIV prevention programs in the United States. However, it is challenging to ascertain the effectiveness of an intervention for changing self-efficacy if the measurement tool used to assess the construct does not produce valid responses among the target population. This study found that the current measure of safer sex self-efficacy used by SAMHSA does not perform as well for those at highest risk for HIV and other STDs, Black LGBQ youth, compared to their heterosexual peers. Continued development and testing of scales of safer sex self-efficacy among this high-risk population is one next step toward improving the evaluation of HIV and STD prevention programs, better tailoring of these prevention programs, and ultimately reducing population-level health disparities.

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Appendix

Sexual Self-Efficacy Scale

National Minority Substance Abuse and HIV/AIDS Prevention Initiative Adult Baseline Questionnaire

Now think about your relationship with your PRIMARY (MAIN) partner. How confident are you that you could ...

1. **Refuse to have sex with your partner because you weren't in the mood?**
 1. Not at all
 2. A little
 3. Somewhat
 4. Very much
2. **Ask your partner to wait while you got a condom or dental dam?**
 1. Not at all
 2. A little
 3. Somewhat
 4. Very much

- 3. Tell your partner how to treat you sexually?**
1. Not at all
 2. A little
 3. Somewhat
 4. Very much
- 4. Refuse to engage in sexual practices you didn't like?**
1. Not at all
 2. A little
 3. Somewhat
 4. Very much
- 5. Ask your partner to use a condom or dental dam?**
1. Not at all
 2. A little
 3. Somewhat
 4. Very much
- 6. Refuse to have sex because your partner did not want to use a condom or dental dam?**
1. Not at all
 2. A little
 3. Somewhat
 4. Very much

Scoring Instructions: Sum items to find total scale score.

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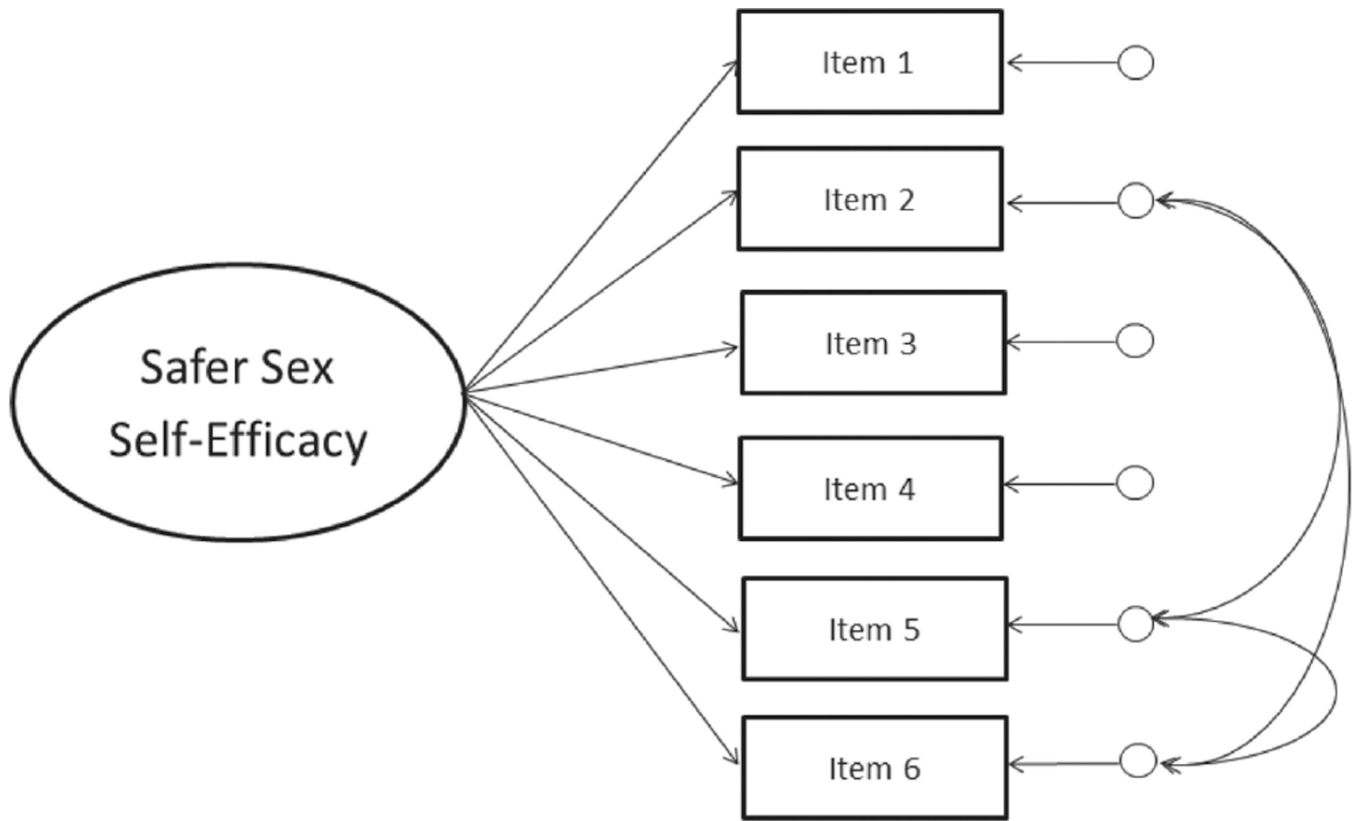


Figure 1. Measurement model for safer sex self-efficacy with correlated errors. *Note.* Items 2, 5, and 6 are related to condom use.

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Table 1

Distribution of Responses to Sexual Self-Efficacy Scale Items from Black Youth (N = 226)

	Total Sample	Heterosexual	LGBQ
	<i>n (%)</i>	<i>n(%)</i>	<i>n (%)</i>
Item 1. Refuse sex—not in the mood			
1 = Not at all confident	41 (18)	25 (22)	16 (14)
2 = A little confident	31 (14)	13 (12)	18 (16)
3 = Somewhat confident	44 (20)	24 (21)	20 (18)
4 = Very much confident	109 (48)	51 (45)	58 (52)
Item 2. Ask partner to wait for condom/dam			
1 = Not at all confident	34 (15)	20 (18)	14 (13)
2 = A little confident	18 (8)	10 (9)	8 (7)
3 = Somewhat confident	33 (15)	16 (14)	17 (15)
4 = Very much confident	140 (62)	67 (60)	73 (65)
Item 3. Tell partner how to treat you sexually			
1 = Not at all confident	38 (17)	20 (18)	18 (16)
2 = A little confident	13 (6)	9 (8)	4 (4)
3 = Somewhat confident	37 (16)	22 (20)	15 (13)
4 = Very much confident	138 (61)	62 (55)	76 (67)
Item 4. Refuse sex practices you don't like			
1 = Not at all confident	46 (20)	30 (27)	16 (14)
2 = A little confident	19 (8)	11 (10)	8 (7)
3 = Somewhat confident	27 (12)	9 (8)	18 (16)
4 = Very much confident	133 (59)	63 (56)	70 (63)
Item 5. Ask partner to use condom/dam			
1 = Not at all confident	32 (14)	22 (20)	10 (9)
2 = A little confident	10 (5)	4 (4)	6 (5)
3 = Somewhat confident	30 (13)	11 (10)	19 (17)
4 = Very much confident	152 (68)	75 (67)	77 (69)
Item 6. Refuse sex—partner won't use a condom			
1 = Not at all confident	33 (15)	19 (17)	14 (13)
2 = A little confident	23 (10)	12 (11)	11 (10)
3 = Somewhat confident	15 (34)	14 (12)	20 (18)
4 = Very much confident	135 (60)	68 (60)	67 (60)

Note. LGBQ = lesbian, gay, bisexual, or questioning.

Table 2
Fit Statistics for Full Sample and Separate Group Models of the Sexual Self-Efficacy Scale Among Black Youth (N = 226)

Model	χ^2	df	RMSEA [90% CI]	CFI	TLI
Full sample without correlated errors	35.153 ^{***}	9	.113 [.075, .154]	.985	.975
Full sample with correlated errors	12.673 [*]	6	.070 [.005, .124]	.996	.990
Heterosexual-only (n = 113)	9.067	6	.067 [.000, .151]	.996	.991
LGBQ-only (n = 113)	13.019 [*]	6	.102 [.017, .178]	.993	.983

Note. df = degrees of freedom. RMSEA = root mean square error of approximation. CI = 90% confidence intervals. CFI = comparative fit index. TLI = Tucker-Lewis fit index. LGBQ = individuals who identify as lesbian, gay, bisexual, or questioning.

^{*} $p < .05$.

^{***} $p < .001$.

Table 3
Fully Standardized Factor Loadings for Full Sample and Separate Group Models of the Sexual Self-Efficacy Scale Among Black Youth (N = 226)

Item	Full sample w/out CE		Full Sample with CE		Heterosexual-only		LGBQ-only	
	Factor loading	SE	Factor loading	SE	Factor loading	SE	Factor loading	SE
1. Refuse sex—not in the mood	.778**	.042	.815**	.043	.839**	.056	.800**	.061
2. Ask partner to wait for condom or dam	.845**	.034	.752**	.052	.807**	.063	.680**	.082
3. Tell partner how to treat you sexually	.814**	.038	.868**	.040	.859**	.052	.876**	.065
4. Refuse sex practices you don't like	.777**	.044	.813**	.044	.823**	.057	.794**	.066
5. Ask partner to use condom/dam	.897**	.029	.779**	.052	.760**	.076	.811**	.065
6. Refuse sex—partner won't use a condom	.881**	.028	.780**	.046	.778**	.068	.786**	.062
CE of Items 2 and 5	–		.494**	.095	.279	.184	.709**	.078
CE of Items 2 and 6	–		.430**	.088	.329*	.146	.533**	.106
CE of Items 5 and 6	–		.547**	.091	.510**	.135	.594**	.128

Note. CE = Correlated error. SE = Standard error. LGBQ = lesbian, gay, bisexual, or questioning.

* $p < .05$.

** $p < .0001$.