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Gendered Powerlessness in At-Risk Adolescent and Young Women: An Empirical Model

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Abstract

In the United States, youth aged 13 to 24 comprised approximately 21% of new HIV infections in 2017; 13% of these infections occurred among women, the majority of whom (86%) acquired HIV through heterosexual contact (CDC, 2019a, 2019b). We fit and validated a developmentally appropriate empirical model of Connell's Theory of Gender and Power (Connell, 1987, 2013) in a sample of young women and assessed whether gendered powerlessness reflected a multidimensional higher-order latent factor, as the theory implies. Anonymous computer-assisted interviews were administered to at-risk, sexually active young women (N=1,101). Factor analyses and structural equation modeling were used to determine the dimensionality of gendered powerlessness. Associations with condom use were examined to validate the model. We fit a three-component model of gendered powerlessness, but not a higher-order latent factor. We observed that high scores on two dimensions of gendered powerlessness – cathexis and sexual division of power — were associated with lower likelihood of condom use. Our three-component model helps elucidate the role that components of gendered powerlessness play in young women's health behaviors and underscores the need for measures tailored to young women at high risk of contracting HIV.

Keywords

Adolescent and young women; Connell's Theory of Gender and Power; Gendered power imbalance; condom use

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Introduction

The youth HIV epidemic remains a serious public health concern. Worldwide, approximately 4 million youth aged 15 to 24 are living with HIV (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2018a). Globally, young women are twice as likely to acquire HIV as young men (UNAIDS, 2018b). In the United States, 13% of new infections among youth aged 13 to 24 occurred in women, the majority of whom (86%) acquired HIV through heterosexual contact and are Black (52%) or Hispanic (23%) (Centers for Disease Control and Prevention [CDC], 2019a, 2019b, 2019c). Because the bulk of new infections among United States' youth occur among gay and bisexual males (CDC, 2019a), research to understand the unique HIV-risk factors specific to young women is often overlooked.

A growing body of international literature examines global inequalities in rates of HIV among women using Connell's Theory of Gender and Power (1987, 2013). Gendered powerlessness refers to women's lack of power in social relationships with men. Gendered power reflects men's ability to limit women's self-determination and exercise control over women's agency. Connell identifies three social structures that characterize power dynamics in heterosexual relationships (Connell, 1987, 2013): (1) Sexual Division of Labor; (2) Sexual Division of Power; and (3) Cathexis. Sexual Division of Labor reflects women's inability to access economic resources and attain financial independence. Sexual Division of Power concerns dynamics within sexual relationships that leave women vulnerable to coercion. Cathexis refers to restrictive social norms regarding sexuality and gender, as well as those that limit access to reproductive health information. These three structures of gendered powerlessness interact and manifest at the interpersonal, institutional, and societal level (Connell, 2013).

In a seminal paper, Wingood and DiClemente (2000) adapted Connell's framework to explain adult women's vulnerability to HIV. Subsequent research applying Wingood and DiClemente's framework supports the contention that power imbalances increase women's reproductive health risks (Amaro & Raj, 2000; Bralock & Koniak-Griffin, 2007; Hahm, Lee, Rough & Stradhee, 2012; Jewkes, Levin, & Penn-Kekana, 2003; Jewkes & Morrell, 2010; Pulerwitz, Amaro, Jong, Gortmaker, & Rudd, 2002; Rosenbaum, Zemilman, Rose, Wingood, & DiClemente, 2016; Teitelman, Ratcliffe, Morales-Aleman, & Sullivan, 2008).

For young women, HIV transmission typically occurs through heterosexual contact and is therefore preventable through consistent, correct use of latex male condoms (CDC, 2013, 2019; Gallo et al., 2007; Rietmeijer, Krebs, Feorino, & Judson, 1988). Consistent, correct condom use remains challenging for young women because success relies on a cooperative male partner with whom young women can negotiate (Kann et al., 2018; Reece et al., 2010; Swan & O'Connell, 2012; Teitelman et al., 2008; Teitelman, Tenille, Bohinski, Jemmott, & Jemmott, 2011). Gendered powerlessness may make this negotiation difficult (Blanc, 2001; Crepaz et al., 2009; Pulerwitz, et al., 2002; Rickert, Sanghvi, & Wiemann, 2002). Requesting use of a condom may threaten a male partner's sense of entitlement to control sexual decision making or prompt feelings of distrust and suspicion of infidelity (El-Bassel, Gilbert, Rajah, Foleno, & Frye, 2000; Wildsmith, Manlove, Steward-Streng, 2015; Wingood & DiClemente, 1997). For instance, Rosenbaum and colleagues observed that unprotected

sex among young Black women was associated with indicators of powerlessness such as having abusive and older sexual partners (Rosenbaum et al., 2016).

Despite strong evidence that gendered powerlessness increases women's HIV risk, there is less evidence that gendered powerlessness forms a multidimensional latent construct as the theory implies. Researchers typically examine direct associations between a small set of indicators and health outcomes rather than assessing powerlessness as a composite construct. Research to examine developmentally appropriate measurement models and to assess gendered powerlessness as a multidimensional, latent construct can contribute to evolving theory on gendered powerlessness among younger women and to the evidence base for its impact on their sexual health. Accordingly, we used an existing dataset to derive a developmentally appropriate measure of gendered powerlessness in a sample of urban, at-risk young women in the United States. Specifically, we examined: (1) whether we could fit an empirical model of gendered powerlessness; (2) whether gendered powerlessness reflected a single latent construct; and (3) whether our measure of gendered powerlessness could be validated by its association with self-reported condom use with male partners. Condom use should be affected by women's experienced levels of gendered powerlessness.

Methods

Study Procedures

Data were collected through a community mobilization initiative of the Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN). Detailed descriptions of the initiative are available elsewhere (Miller, Reed, Francisco, Ellen, & The ATN, 2012; Miller et al., 2017; Willard, Chutuape, Stine, Ellen, & The ATN, 2012; Ziff et al., 2006). Each adolescent medicine trials unit in the network (Baltimore, Boston, Chicago, Denver, Detroit, Houston, Los Angeles, Memphis, Miami, New Orleans, New York, Philadelphia, Tampa, Washington DC) collected anonymous survey data using audio computer-assisted self-interview technology from youth who were intercepted in geographic areas selected on the basis of their HIV and STD epidemiological risk profile for youth (see Ziff et al, 2006). Following the methods of times-space sampling (Muhib et al., 2001), youth were approached for recruitment, screening, consent, and enrollment by study personnel on select days and times in carefully chosen community venues in these high-risk neighborhoods (see Chutuape et al., 2009; Geanuracos et al., 2007; Ziff et al., 2006). Venues included parks, clubs, and shopping malls.

Standardized screening and recruitment procedures were used. Youth were individually approached by study staff, who informed them of the nature of the study. Youth who expressed interest in the study provided their verbal consent or assent to be screened. Youth completed an interviewer-administered anonymous screening survey to determine if they met eligibility criteria (i.e., sexually experienced, aged 12-24 years, gay/bisexual male or high-risk heterosexual female). Eligible youth were then asked to complete a second verbal informed consent/assent process, after which they completed an audio computer-assisted self-interview in English or Spanish on a laptop in a private location at or near the venue.

The Institutional Review Boards governing each trials unit approved all procedures, including incentives to youth valued from $20 to $50. All trials units obtained a waiver of documentation of consent to protect participants' anonymity. With one exception, each trials unit was also granted a waiver of parental consent for minor youth. Adolescents below age 18 verbally assented in these sites. In Miami, where the waiver request was denied, eligibility was restricted to youth aged 18 years and older.

Study Participants

Eligible participants were young men and women aged 12-24 years who engaged in consensual sexual behavior (i.e., oral, anal, or vaginal sex) over the 12-months prior to interview administration. Our analytic sample comprises youth who reported their birth sex and current gender identity as female (n=1,101). We use data from youth who reported their sex assigned at birth was male (n=906) to perform sensitivity analyses.

Measures

All measures have been used in prior studies conducted by the ATN (see Boyer et al., 2017; Boyer, Santiago, Chiaramonte, & Ellen, 2018; Gamarel et al., 2017; Miller et al., 2016).

Demographics.—Participants indicated their age, race, Hispanic origin, sexual orientation, level of educational attainment, and if they were currently in school.

Pregnancy attempts.—Participants reported whether they had intentionally tried to become pregnant in the prior 3 months (1 = Yes, 0 = No).

Gendered powerlessness.—We selected indicators that reflect the domains of gendered powerlessness as defined for the context of HIV by Wingood and DiClemente (2000). Gendered powerlessness indicators are briefly described in Table 1.

Condom use with a main partner.—Participants reported condom use with a main partner for oral, anal, and vaginal sex in the past year using a 5-point scale (every time = 1 to never = 5).

Statistical Analyses

To determine the structure of gendered powerlessness, we used exploratory and confirmatory factor analysis. Variables were treated as ordered categorical or binary indicators. We employed Bayesian estimation techniques. Bayesian estimation with categorical variables does not require that the assumptions of normality or continuity are met (Liang & Yang, 2014). We evaluated model fit using posterior predictive p-values (*ppp*). We assessed Bayesian autocorrelation plots and Bayesian posterior parameter trace plots to check that all chains converged at approximately equal points and were stable. We trimmed indicators based on the magnitude of their factor loadings (< .4), lack of statistical significance, and cross-loadings (Brown, 2006). To conduct the exploratory and the confirmatory factor analyses, we split participants into two randomly selected and similarly sized samples (Calibration sample n=551; validation sample n= 550) (Dunn, Masyn, Jones, Subramanian, & Koenen, 2014). The split-half samples were balanced on demographic characteristics (see

Table 3). We evaluated the dimensionality of the indicators using exploratory factor analysis in the calibration sample. We confirmed the structure by conducting a confirmatory factor analysis in the validation sample. Additionally, we conducted a sensitivity analysis to determine if the latent structure fit the data only for women, as the theory of gendered powerlessness suggests, by replicating our analyses in the sample of men. Lastly, we assessed the relationships among the latent structures and condom use by performing a structural equation model. Analyses used the Gibbs sampler with four chains and four processes, 10,000 iterations with 5,000 burn-ins, and a thinning interval of 100. Convergence was set to the strictest cutoff value of 0.01 (Van de Schoot et al., 2013), but for prior models we used the default settings [i.e. ~N (0,5)]. Analyses were performed using Mplus version 8 (Muthén & Muthén, 1998–2015).

Results

Young women were an average age of 20.1 years (SD = 2.7), with a median age of 20 years (1^{st} quartile = 18 years; 3^{rd} quartile = 22 years) (Table 2). Young women were primarily heterosexually identified (86.5%) and Black (82.3%). Nearly one-fifth (18.1%) identified as Hispanic/Latina. Most women (75.7%) reported they did not use condoms during their recent sexual encounters with main sexual partners (Table 3). The males in the validation sample are, on average, age 21.2 (SD = 2.1; median = 21 years; 1^{st} quartile = 20 years; 3^{rd} quartile = 23 years), primarily gay identified (71.4%), and majority Black (57.0%).

The results of the final exploratory factor analysis on the calibration sample (N=551) are presented in Table 4. Results indicate evidence of convergence and good model fit (*ppp*=0.250 with 95% CI X^2 Values = [−50.46, 105.57]), with 23 indicators remaining in the model. A three-factor solution proved optimal and was conceptually clear. As we show, the first factor comprised four variables reflecting economic and residential dependence (i.e., Sexual Division of Labor), the second comprised indicators reflecting the normative experience of access to information and resources on sexual health and well-being (i.e., Structure of Cathexis) (seven indicators), and the third comprised variables reflecting Sexual Division of Power (12 indicators).

Table 5 presents the results of the confirmatory factor analysis performed on the validation sample (N=550). The model fit the data well with a three-factor structure solution (*ppp*=0.122 with 95% CI X^2 Values = [−34.37, 113.80]) (Song & Lee, 2012). However, we found that one item on attending school was too highly correlated with age to remain in the model. We therefore removed the item from the analysis for a three-latent factor model with 22 indicators. As shown, these final three latent factors provided an optimal fit to the data (*ppp*=0.128 with 95% CI X^2 Values = [−28.58, 103.98]). To assess whether the latent structure held only for women, we conducted a measurement invariance test with the 906 male participants and the total sample of 1,101 women. The results of the measurement invariance test across sexes indicated that the overall model did not fit the data because of the inclusion of the male group (*ppp*=0.008 with 95% CI X^2 Values = [21.17, 218.73] for overall; *ppp*=0.021 with 95% CI X^2 Values = [2.76, 144.95] for males; *ppp*=0.09 with 95% CI X^2 Values = [−21.45, 116.73] for females). The results of these tests suggest that—as

expected and suggested by theory—the three-factor latent structure of gendered powerlessness applies only to our sample of women.

To examine whether our three latent factors of gendered powerlessness predicted condom use with male partners, we used structural equation modeling to examine the association between it and the frequency of condom use during vaginal sex with a main sexual partner in the past year. We restricted these analyses to participants who were not actively trying to become pregnant (n=635). As shown in Table 6, after controlling for age, we found that the Sexual Division of Power and the Structure of Cathexis were negatively associated with using condoms with main partners (*ppp*=0.184 with 95% CI X^2 Values = [−.41.26, 111.48]); as powerlessness increased, condom use declined.

Discussion

We developed and tested a measurement model of gendered powerlessness and evaluated if its components collectively reflected a higher-order construct. We then explored whether components of gendered powerlessness were negatively associated with consistent condom use. Our results support the perspective that gendered powerlessness is a multidimensional latent construct, although it does not form a higher-order construct. We found evidence of three clear, distinct, and theoretically anticipated latent components, indicated by financial and residential dependence on others (Sexual Division of Labor), conditions that limit women's power in sexual relationships (Sexual Division of Power), and normative restrictions on access to reproductive health care, information, and resources (Structure of Cathexis). As theory would predict, these latent components were not present in a sample of same-aged at-risk males. Also, as predicted and consistent with prior work on adults (Jimenez, Andrade, Raffaelli, & Iwelunmor, 2015; Stokes, Harvey, & Warren, 2016), the Structure of Cathexis and the Sexual Division of Power were negatively associated with condom use. These last two findings support the general validity of our measurement model.

The latent factors that we observed correspond with Connell's theorized gendered power structures (1987, 2013). Economic security and housing stability, dynamics in sexual relationships, and norms regarding access to information on reproductive health and the implicit assumptions underlying those norms about women's sexuality shape power for young women. Although we found evidence in the observed data of three indicators of gender powerlessness, we failed to find young women's financial and residential dependence on others is associated with self-reported condom-protected sex. The lack of association between condom use and our measure of the Sexual Division of Labor may reflect that many youth in the United States remain partially or fully dependent on parents or guardians well into their 20s (Vespa, 2017) and are not yet fully exposed to the Sexual Division of Labor. In our sample, a large proportion of young women are still in school and may not have fully transitioned to adulthood. Financial indicators of a woman's social powerlessness relative to men may show their influence on sexual decision making and agency at later ages when women leave the care of their parents or guardians. Nonetheless, the structure of gendered powerlessness we uncovered provides developmentally specific insight on the manifestations of power for urban young women.

Researchers have seldom examined gender and power using multidimensional higher-order models. Our approach highlights the benefits of empirically testing how theorized components of gendered powerless effect sexual behavior and outcomes in samples of young women. Our results underscore the importance of focusing on components of gendered powerlessness simultaneously in preventive interventions. Interventions to prevent exposure to STDs, HIV, and unplanned pregnancy might shift norms regarding women's entitlement to control their sexual well-being and promoting their access to credible information sources in support of their sexual decision-making (Zimmerman, 2018). In addition, programs might assist young women to view their interpersonal relationships through a gendered lens, highlighting the unique sources of gendered powerlessness through which they become vulnerable. Facilitating the development of critical consciousness (Freire, 1973) on women's sexual agency and on the factors that undermine it, might assist young women to achieve power in their sexual relationships. Strategies to promote young women's (and young men's) critical thinking on the gendered nature of HIV risk may help them take actions to protect their sexual health.

Our study has several limitations. First, although the model structure we identified fits the data and the presumed causal order of effects is logical and consistent with theory, our research was cross-sectional. We cannot make a causal inference between gendered powerlessness and low rates of condom use. Future research should examine the development of gendered powerlessness and its behavioral effects longitudinally. Second, our data were collected from select low-income, urban community venues. Although the racial diversity of our sample is a strength, our results may not be generalizable to young women who do not frequent the kinds of venues from which our sample was drawn and may not be applicable to those who reside in non-urban, high income, or low risk communities. Third, although we have evidence of a latent construct and its indicators are consistent with theory, we cannot rule out the possibility that an alternative latent construct better reflects the phenomena we observed in our data. Competing theories of gendered power may better explain the relationships we observed (e.g., Rosenthal & Levy, 2010). Finally, because we relied on a secondary dataset, we did not always have the ideal measure for every potential indicator (e.g., financial security, adverse physical exposures). Importantly, we did not have available two critical indicators of gendered powerlessness, namely history of interpersonal violence (other than having accessed domestic violence resources) and mental health status (other than having accessed mental health services). Investigating the role these phenomena play in reducing young women's power in interpersonal relationships is an important next step.

Our results affirm the relevance of Connell's Theory of Gender and Power to young women. Our three-component model elucidates the specific nature of gendered powerlessness for young women. Our findings underscore the need to test measurement models to reflect the dynamics of gendered power pertinent to the experiences of young urban women at high risk of contracting HIV. Gendered powerlessness proves a highly relevant construct for predicting young women's lack of condom use. Developmentally specific measurement models of gendered powerlessness can provide guidance on the creation of multi-level interventions to promote young women's sexual health and foster their ability to exercise agency over their sexual well-being.

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Table 1.

Hypothesized Gendered Powerlessness Indicators

Sexual Division of Labor	***Financial dependent***	Respondent's primary source of money was through their own employment (0) or through their reliance on others for financial support (1).
	Attends school	Respondent was currently in school (1 = Yes, 0 = No).
	Lifetime residential mobility	Number of times respondent moved residences since kindergarten—moved 3 or more times (1) and moved zero to 2 times (0).
	Residential dependent	Respondent owned or rented house or apartment (0) or lived in a home for which the respondent did not have primary financial responsibility (1).
	Lives with others	Respondent lived alone (0) or with other people (1).
	Lack of money prevented participation in activities	Respondent reported whether lack of money had prevented them from participating in activities in the past year (1 = Yes, 0 = No).
Structure of Cathexis	***Lack of access to reproductive health resources and information***	Dichotomous variables were created by collapsing strongly agree and agree responses and recoding these as "0" and collapsing strongly disagree and disagree responses and coding these as "1" for each of the six following questions: "In the past year, have you been taught about STIs, HIV or AIDS in school, including information about condoms and practicing safer sex"; "I know where to go to access information or resources, such as condoms, to keep me safe from HIV and STIs"; "Accurate information about sex is easily available to young people"; "Young people know a lot about STIs and HIV'; "Condoms are widely used by young people"; "My friends know how to keep themselves safe from HIV and AIDS". Respondents also reported having received any information such as brochures, videos, or other materials about sexually transmitted infections or HIV/AIDS in the past year (0 = Yes, 1 =No).
	Lack of routine HIV and STD screening	Respondent's health care provider routinely offered them testing for HIV and sexually transmitted diseases (0 = Yes, 1 = No).
	Lack of routine sexual health care	Respondent's health care provider routinely asked them about their sexual health (0 = Yes, 1 = No).
Sexual Division of Power	***Exchanged sex for drugs or money***	Respondent ever exchanged sex for drugs or money (1 = Yes, 0 = No).
	Lifetime homelessness	Respondent had to stay one night or more in a place that was not their home because they could not stay in their home or did not have a home (1 = Yes, 0 = No).
	Lifetime sexual risk behaviors	Respondent ever had sex with someone who injects drugs; ever had sex with someone who was suspected of having HIV; ever had sex with a male who also has sex with other males (1 = Yes, 0 = No). Responses to each question were included as separate indicators.
	Crime victim in past year	Respondent was victim of a crime in the past year (1 = Yes, 0 = No).
	Lifetime alcohol and drug use	Respondent had ever used any kind of drug that was not prescribed by a doctor or other health care provider; had ever smoked marijuana, other than just trying a few puffs; and, had ever had more than just a few sips of alcohol (1 = Yes, 0 = No). Each item was included as a potential indicator.
	Access to community health, mental health, and other resources	Respondent had used resources available in their community in the past year (1 = Yes, 0 = No): "Have you spoken with a doctor, nurse, social worker, teacher or other professional?"; "Have you gotten treatment for substance use, including drugs and/or alcohol?"; "Have you used community mental health services?"; "Have you used community health care services?"; (5) "Have you used school-based health services?"; "Have you used church-based health services?"; (7) "Have you used drug treatment (inpatient) services?"; "Have you used drug treatment (outpatient) services?"; "Have you used for domestic violence or sexual abuse services?"; and (10) "Have you used lesbian, gay, bisexual, or transgender (LGBT) services?"
	Finding sexual partners on internet	Respondent had ever used the internet to meet potential sex partners (1 = Yes, 0 = No).
	Older sexual partner	Respondent's sexual partner(s) were 2 or more years older than the respondent (1 = partner 2 or more years older than respondent; 0 = partner not 2 or more years older than respondent).

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Sex with main partner	Respondent had a main sexual partner in the past year (1 = Yes, 0 = No).
Sex with casual partner	Respondent had had one or more casual sexual partners in the past year (1 = Yes, 0 = No).
STDs assessed in prior year	Respondent had been checked by a medical professional for an STD in the past year (1 = Yes, 0 = No).
Lifetime HIV test	Respondent had ever had an HIV test (1 = Yes, 0 = No).
Lifetime STDs	Respondent had ever had a diagnosed STD (1 = Yes, 0 = No).

Table 2.

Demographic Characteristics of Study Respondents (Female N= 1,101; Male N=906)

Characteristic		***Female***						***Male***	
		Calibration Sample (n=551)		***Validation Sample (n=550)***		***Total Female(n=1101)***		***Sensitivity Analysis Sample (n=906)***	
		Mean	***SD***	***Mean***	***SD***	***Mean***	***SD***	***Mean***	***SD***
	Age	20.1	2.7	20.1	2.7	20.1	2.7	21.2	2.1
		N	***Valid Percent***	***N***	***Valid Percent***	***N***	***Valid Percent***	***N***	***Valid Percent***
Sexual Identity									
	Gay/Lesbian	8	1.7	12	2.5	20	2.1	538	71.4
	Bisexual	58	12.4	49	10.4	107	11.4	203	26.9
	Heterosexual	403	85.9	411	87.1	814	86.5	13	1.7
Hispanic/Latino Ethnicity		105	19.1	94	17.1	199	18.1	224	24.8
Racial Background									
	Black	439	80.3	462	84.3	901	82.3	514	57.0
	Other	108	19.7	86	15.7	194	17.7	388	43.0
In School									
	Yes	349	63.5	361	65.6	710	64.5	418	46.2
	No	201	36.5	189	34.4	390	35.5	486	53.8
Highest Level of Educational Attainment									
	Less than High School Graduate	160	29.0	148	26.9	308	28.0	116	12.9
	High School Graduate or GED	233	42.3	224	40.7	457	41.5	403	44.7
Some College or Post-Secondary Education		140	25.4	156	28.4	296	26.9	307	34.1
	College Graduate or Greater	18	3.3	22	4.0	40	3.6	75	8.3

Table 3.

Condom Use by Demographic Characteristics of Female Study Respondents (N= 1,101)

		Condom Use Frequency									
		Every time		**Most of the time**		**Half of the time**		**A few times**		**Never**	
Sexual Identity		*N*	*Valid %*	*N*	*Valid %*	*N*	*Valid %*	*N*	*Valid %*	*N*	*Valid %*
	Gay/Lesbian	4	22%	1	6%	2	11%	5	28%	6	33%
	Bisexual	24	25%	19	20%	14	14%	12	12%	28	29%
	Heterosexual	168	24%	163	23%	74	11%	144	21%	148	21%
Hispanic/Latina Ethnicity											
	Yes	41	27%	32	21%	18	12%	32	21%	30	20%
	No	161	24%	156	23%	76	11%	133	20%	152	22%
Racial Background											
	Black	165	24%	155	23%	78	11%	139	20%	145	21%
	Other	35	24%	33	23%	16	11%	26	18%	36	25%
In School											
	Yes	144	27%	132	25%	49	9%	97	18%	108	20%
	No	58	19%	57	19%	45	15%	68	23%	74	25%
Highest Level of Educational Attainment											
	Less than High School Graduate	65	31%	53	25%	20	9%	37	17%	37	17%
	High School Graduate or GED	82	23%	81	23%	52	15%	68	19%	72	20%
	Some College or Post-Secondary Education	50	22%	48	21%	18	8%	52	22%	64	28%
	College Graduate or Greater	5	15%	7	21%	4	12%	8	24%	9	27%

Table 4.

Factor Loadings for Exploratory Factor Analysis of Indicators of Gendered Powerlessness (N = 551)

	Factor loading		
Sexual Division of Labor	Factor 1	Factor 2	Factor 3
Financial dependent	.326		
Attends school	.541		
Residential dependent	.869		
Lives with others	.599		
Structure of Cathexis			
Not taught about STDs or HIV in school in the past year		.746	
Did not receive information about STDs or HIV		.540	
Accurate information about sex is not easily available		.827	
Young people do not know a lot about STDs and HIV		.452	
My friends do not know how to keep themselves safe		.542	
I do not know where to access information or resources to keep me safe from HIV		.803	
Lack of routine sexual health care		.407	
Sexual Division of Power			
Lack of money prevented participation in activities			.307
Lifetime homelessness			.406
Crime victim in past year			.498
Found sexual partners on internet			.648
Exchanged sex for drugs or money			.663
Had sex with someone who injects drugs			.519
Had sex with men who have sex with men			.428
Had sex with someone suspected of having HIV			.419
Ever drank alcohol			.645
Ever smoked marijuana			.735
Ever used non-prescription drugs			.731
Ever used domestic violence or abuse resources			.602

Table 5.

Final CFA Results (N = 550)

	Model Results	
	EAD (SD)	***95% CI***
Sexual Division of Labor (CR=.78; 95% CI = [.68,.90])		
Financial dependent	.45 (.09)***	[.28, .63]
Residential dependent	.76 (.10)***	[.56, .94]
Lives with others	.76 (.10)***	[.55, .92]
Structure of Cathexis (CR=.90; 95% CI = [.87,.92])		
Not taught about STDs or HIV in school in the past year	.66 (.07)***	[.51, .78]
Did not receive information about STDs or HIV	.49 (.08)***	[.33, .63]
Accurate information about sex is not easily available	.81 (.06)***	[.68, .91]
Young people do not know a lot about STDs and HIV	.55 (.07)***	[.41, .68]
My friends do not know how to keep themselves safe	.53 (.07)***	[.39, .65]
I do not know where to access information or resources to keep me safe from HIV	.72 (.08)***	[.55, .85]
Lack of routine sexual health care	.40 (.08)***	[.24, .54]
Sexual Division of Power (CR=.86; 95% CI = [.83,.89])		
Lack of money prevented participation in activities	.41 (.07)***	[.28, .54]
Lifetime homelessness	.55 (.07)***	[.40, .66]
Crime victim in past year	.65 (.07)***	[.51, .76]
Found sexual partners on internet	.71 (.07)***	[.56, .82]
Exchanged sex for drugs or money	.72 (.06)***	[.58, .83]
Had sex with someone who injects drugs	.59 (.11)***	[.34, .77]
Had sex with men who have sex with men	.60 (.10)***	[.37, .77]
Had sex with someone suspected of having HIV	.58 (.09)***	[.38, .74]
Ever drank alcohol	.53 (.07)***	[.38, .66]
Ever smoked marijuana	.56 (.06)***	[.42, .67]
Ever used non-prescription drugs	.79 (.06)***	[.66, .88]
Ever used domestic violence or abuse resources	.41 (.15)***	[.10, .67]

Note.

*** p < .001*

** p < .01

p < .05; CR = Composite Reliability; CI = Credible Interval. Posterior Predictive P-value for final CFA =.128; 95% CI = [−.28.58, 103.98].

Table 6.

Bayesian SEM Results Predicting Condom Use with Main Partner after Controlling for Age (N=635)

	EAD (SD)	95% CI
Sexual Division of Labor		
Financial dependent	.31*** (.10)	[.13, .52]
Residential dependent	.52*** (.10)	[.32, .69]
Lives with others	.65*** (.11)	[.42, .83]
Structure of Cathexis		
Not taught about STDs or HIV in school in the past year	.67*** (.06)	[.53, .78]
Did not receive information about STDs or HIV	.42*** (.07)	[.28, .56]
Accurate information about sex is easily available	.80*** (.06)	[.68, .90]
Young people do not know a lot about STDs and HIV	.52*** (.06)	[.39, .64]
My friends do not know how to keep themselves safe	.61*** (.06)	[.48, .72]
I do not know where to access information or resources to keep me safe from HIV	.78*** (.07)	[.63, .90]
Lack of routine sexual health care	.41*** (.08)	[.26, .55]
Sexual Division of Power		
Lack of money prevented participation in activities	.33*** (.06)	[.21, .45]
Lifetime homelessness	.44*** (.07)	[.31, .57]
Crime victim in past year	.61*** (.07)	[.47, .73]
Found sexual partners on internet	.74*** (.07)	[.60, .86]
Exchanged sex for drugs or money	.66*** (.07)	[.50, .78]
Had sex with someone who injects drugs	.53*** (.12)	[.28, .73]
Had sex with men who have sex with men	.35*** (.12)	[.11, .57]
Had sex with someone suspected of having HIV	.44*** (.10)	[.23, .62]
Ever drank alcohol	.65*** (.06)	[.52, .75]
Ever smoked marijuana	.68*** (.05)	[.57, .77]
Ever used non-prescription drugs	.78*** (.06)	[.65, .88]
Ever used domestic violence or abuse resources	.51*** (.13)	[.22, .74]
Condom Use on Economic Dependence and Insecurity	.07 (.08)	[−.08, .23]
Condom Use on Structure of Cathexis	.17*** (.06)	[.05, .28]
Condom Use on Sexual Division of Power	.29*** (.05)	[.19, .39]

Note.

*** p < .001*

** p < .01

p < .05.. BSEM=Bayesian structural equation model; CI = Credible Interval. Posterior Predictive P-value for BSEM =.184; 95% CI = [−.41.26, 111.48].