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Sexual Risk Among African American Girls: Psychopathology and Mother-Daughter Relationships

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Abstract

Objective—To examine the associations among mental health problems, maternal monitoring and permissiveness, mother-daughter communication and attachment, and sexual behaviors among African American girls receiving outpatient psychiatric care. Youth with mental health problems report higher rates of HIV-risk behavior than their peers, and African American girls have higher rates of sexually transmitted infections than all other racial groups.

Method—Two hundred and sixty six 12-16 year-old African American girls ($M = 14.46$ years) and their female caregivers (73% biological mothers) completed computerized assessments of girls' mental health symptoms, maternal monitoring and permissiveness, and mother-daughter communication and attachment, and girls indicated their sexual risk behaviors (vaginal/anal sex, consistent condom use, number of partners).

Results—African American girls who reported clinically significant externalizing problems, more permissive parenting, less open mother-daughter sexual communication, and more frequent mother-daughter communication were more likely to report having had vaginal and/or anal sex. Sexually active girls with greater maternal attachment were less likely to report inconsistent condom use.

Conclusions—Findings revealed important risk and protective factors for African American girls in psychiatric care. HIV-prevention programs may be strengthened by improving mother-daughter relationships and communication and reducing girls' mental health problems.

Keywords

mental health; adolescents; sexual risk; African American; mother-daughter relationships and communication

African American girls and youth in psychiatric care are at elevated risk for sexually transmitted infections (STI) (CDC, 2009b; Donenberg & Pao, 2005). The HIV infection rate nationwide among young Black females is 11 times that of young white females (CDC, 2010), and compared to other racial groups, 15-19 year-old African American girls have the highest rates of chlamydia and gonorrhea (CDC, 2009b). Most STI infections among girls are acquired through high-risk heterosexual contact (CDC, 2009a), such as non-condom use and multiple partners. Teens in psychiatric care tend to engage in more sexual risk taking

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than their non-troubled peers (Donenberg & Pao, 2005). This study, guided by the Social Personal Framework, evaluated theoretically important parenting characteristics and mental health problems in relation to sexual risk taking among African American girls in psychiatric care. Despite elevated risk profiles, few studies have focused on African American girls receiving mental health services.

Two parenting characteristics have been consistently related to child mental health and HIV risk: instrumental behaviors (e.g., parental monitoring and permissiveness) and affective expression (e.g., warmth and attachment). Research consistently links more parental monitoring to less sexual risk taking (Fletcher, Steinberg, & Williams-Wheeler, 2004) and fewer externalizing problems (Beyers, Bates, Pettit, & Dodge, 2004), while parental permissiveness is related to more sexual risk and disruptive behavior (Donenberg, Wilson, Emerson, & Bryant, 2002). Similarly, affective parenting, such as close family relationships and parental support, forecast more consistent condom use, less exposure to risky situations, and later sexual debut among teens (see Donenberg & Pao, 2005). Strong parent-child attachment is consistently related to positive child and adolescent outcomes, including fewer mental health problems and less sexual risk taking (Egeland & Carlson, 2004; Kotchick, Shaffer, Miller, & Forehand, 2001).

Research on the relationship between parent-teen communication and adolescent sexual behavior is mixed (see DiIorio, Pluhar, & Belcher, 2003). Associations between communication frequency and sexual risk taking are inconsistent (see Donenberg & Pao, 2005), whereas communication quality (open and helpful) is more reliably related to less risk behavior (Dutra, Miller, & Forehand, 1999). Communication patterns in families of troubled teens are often characterized by conflict, misinterpretation, and a lack of appropriate intergenerational boundaries (Donenberg & Pao, 2005), and thus, prior research may not generalize to this group.

Family factors may be particularly salient for girls, who often place special value on maintaining interpersonal connections (Gilligan, 1982). African American girls describe the mother-daughter bond as their most important relationship, and mothers as the key person providing information about health, sexuality, and HIV prevention (McKay et al., 2000). Hence, teenage girls may be more likely to benefit from safe sex messages delivered by parents than boys (DiIorio et al., 2003; Nappi et al., 2009).

This study explored how mental health symptoms and parenting uniquely influence African American girls' sexual risk taking. Few, if any, studies differentiate the contributions of mental health, instrumental and affective parenting, and parent-teen communication for these girls, yet identifying modifiable risk and protective factors is vital to stem the growing rates of STI/HIV/AIDS infection and mental health disparities.

Method

Participants and Procedure

The University of Illinois at Chicago Institutional Review Board approved this research. This study is part of a longitudinal project to understand HIV-risk among African American girls seeking psychiatric services. Female caregivers (hereafter referred to as "mothers") and daughters were recruited from eight mental health clinics in Chicago. Clinic personnel obtained permission from families to send contact information to study staff. Eighty-two percent of invited participants enrolled in the study. As determined by clinic staff, youth with mental retardation, severe cognitive impairment, or wards of the Illinois Department of Child and Family Services (DCFS) were excluded from the study. After providing consent and assent, mothers and daughters completed questionnaires, a computer-assisted self-

interview, a structured diagnostic interview, and activities unrelated to these analyses. Mothers and daughters each received \$45, and travel expenses. Participants were 266 12-16 year-old ($M = 14.46$; $SD = 1.14$) daughters and their biological mothers (73%), grandmothers (15%), and other female caregivers (12%). Consistent with methods used by Brown et al. (2010), 66% of the girls met subthreshold or threshold criteria for a psychiatric diagnosis on the Computerized Diagnostic Interview Schedule for Children.

Measures

Demographics—Demographic information included girl's age, family income, and maternal caregiver status (e.g., biological mother, aunt).

Sexual behaviors—The AIDS Risk Behavior Assessment (ARBA) (Donenberg, Emerson, Bryant, Wilson, & Weber-Shifrin, 2001) is a computerized self-administered interview of adolescent sexual behavior, drug/alcohol use, and needle use associated with HIV infection. We examined three HIV-risk behaviors: (1) number of sexual partners during the last 6 months; (2) ever had vaginal or anal sex (yes/no); and (3) condom use during vaginal sex (always versus less than always).

Mother-daughter relationship characteristics

Attachment: Girls completed the Inventory of Parent and Peer Attachment (IPPA). The IPPA has good test-retest reliability and concurrent validity (Armsden, McCauley, Greenberg, Burke, & Mitchell, 1990). Sample items are "My mother accepts me as I am," and "I can tell my mother about my problems and troubles." A higher score represents more positive attachment, mutual trust, open communication, and less alienation. Internal consistency was strong ($r = .93$).

Mother-Daughter Communication: Adapted from Miller et al. (1998), mothers and daughters reported: (1) How frequently they discussed 5 topics (e.g., when to start having sex, condoms, HIV/AIDS) on a scale from 1=once to 3=a lot; (2) How open the discussions were; sum of eight items¹ rated from 1 (strongly disagree) to 4 (strongly agree) (e.g., "My mother/daughter and I talk openly and freely about these topics"); (3) Number of sex-related topics discussed (0 to 12). Internal consistency was strong for frequency ($r = .80$ for girls; $r = .78$ for mothers) and good for open communication ($r = 0.79$ for girls; $r = 0.65$ for mothers).

Parental Monitoring and Permissiveness: Using the Parenting Style Questionnaire (PSQ) (Oregon Social Learning Center, 1990), adolescents reported parental monitoring on a scale from 1 (Never or Almost Never) to 5 (Always or Almost Always), (e.g., "How often do you check in with your parents/caretakers or an adult after school/work before going out?") and permissiveness from 1 (Not at all True/Never) to 5 (Very True/Almost Every Day) (e.g., "Your parents/caretakers let you go any place you please without asking."). Internal consistency reliability was good for monitoring ($r = 0.84$) and fair for permissiveness ($r = 0.64$).

Mental Health—T-scores on the Child Behavior Checklist (CBCL) and Youth Self-Report (YSR) were dichotomized to indicate clinically significant internalizing and externalizing behaviors ($T \geq 63$). Internal consistency ranged from .87 to .96.

¹The scale was originally reverse coded, but in fact they correlated positively with the other scale items. comprised of ten items; two items were dropped because they were intended to be

Data Analysis

Age-adjusted odds ratios were obtained from logistic regression analyses for each mental health, parenting, and communication measure with 1) ever had vaginal/anal sex, 2) inconsistent condom use during vaginal sex (among sexually active girls), and 3) having more than one partner in the past six months (among sexually active girls). Continuous covariates were standardized for regression analyses. For constructs with both mother and adolescent reports (mental health and communication) we selected either mother or daughter report by comparing predictive values based on Akaike's information criteria (AIC) and Bayes' information criteria (BIC). Multivariate regression models were constructed by first including all selected covariates and then eliminating those with $p \geq .20$.

Results

Sexual behaviors are summarized in Table 1. Mother-daughter relationship and adolescent mental health measures, and agreement between mother and daughter reports are presented in Table 2.

Mental Health and Sexual Risk

Adjusting for age, girls who reported clinically significant externalizing and internalizing problems ($T \geq 63$) were nearly five times and two times as likely to have engaged in sexual activity respectively (see Table 3). Mothers' reports of girls' clinically significant externalizing but not internalizing problems were also associated with increased odds of girls engaging in sexual activity. None of the mental health indicators were associated with inconsistent condom use among sexually active girls (Table 4), but self-reported clinically significant internalizing and externalizing problems were associated with increased odds of having multiple partners (Table 5). A model predicting sexual activity from girls' reports of externalizing and internalizing problems resulted in smaller AIC and BIC values compared to a model predicting sexual activity from both mother-reported measures of mental health. Therefore, the adolescent measures were included in subsequent multivariate models.

Communication and Sexual Risk

Adolescent- and parent-reported frequency of communication and number of topics discussed were associated with an increased likelihood of girls ever having sex. Parent and adolescent reports of open communication were negatively associated with sexual activity. None of the communication variables were associated with inconsistent condom use or multiple partners among sexually active girls. Models predicting sexual activity from all three parent-reported communication variables resulted in smaller AIC and BIC values compared to models using all three adolescent-reported communication variables. Therefore, parent-reported communication variables were included in subsequent multivariate models.

Attachment, Monitoring, and Permissiveness and Sexual Risk

Higher levels of parental monitoring and maternal attachment were related to decreased likelihood of girls ever having sex, while higher levels of parental permissiveness were linked to increased likelihood of sexual experience. None of these variables were significantly associated with inconsistent condom use among sexually active girls. Parental monitoring was related to decreased risk of multiple partners.

Mother-Daughter Relationship Characteristics, Mental Health, and Sexual Risk

In a multivariate analysis, clinically significant externalizing problems, more permissive parenting, less open sexual communication, and more frequent communication were associated with girls' ever having sex (Table 3). Sexually active girls with greater maternal

attachment were less likely to report inconsistent condom use during vaginal sex. Less parental monitoring ($p=.056$) and more externalizing problems approached significance ($p=.055$) in association with sexually active girls' reporting multiple partners.

Discussion

This is the first study to evaluate mental health and family characteristics related to sexual behavior among urban African American girls seeking outpatient psychiatric care. Findings revealed important risk (psychopathology, parental permissiveness) and protective (mother-daughter attachment, mother-daughter open communication, parental monitoring) factors associated with girls' sexual experience, condom use, and number of partners that can inform future health promotion efforts.

Extensive evidence implicates mental illness in sexual risk taking among youth (Donenberg & Pao, 2005). These findings replicate linkages between sexual behavior and externalizing problems for African American girls, but provide new data regarding internalizing symptoms. Girls with clinically significant externalizing problems by their own and their mothers' reports were more likely to have had vaginal and/or anal sex. Similarly, although to a lesser degree, girls with clinically significant internalizing problems were more likely to have had vaginal and/or anal sex. Finally, both internalizing and externalizing problems were related to more sexual partners in the past 6 months. Girls with mental health problems may be particularly vulnerable to engaging in sexual activity, often lacking the ability to adequately assess risk, difficulty asserting themselves in sexual situations, and placing greater value on maintaining relationships than on their own health. Moreover, many girls report first sex with older male partners, and these power differentials combined with mental illness (e.g., low self-esteem) may inhibit girls from refusing sex even if it means compromising their well-being.

The well-documented relationship between less adolescent sexual risk taking, greater parental monitoring, and less parental permissiveness was replicated in this study, thereby extending the research to urban African American treatment seeking girls. Previous literature suggests that parental monitoring may be particularly important in urban, low-income settings where exposure to violence and deviant peers are common. Parental monitoring and permissiveness may be more salient for girls than for boys, because girls place greater value on interpersonal relationships and may interpret monitoring as a form of caring and attention and permissiveness as "neglect" or lack of concern. In the context of low parental supervision and more permissiveness, girls may seek or tolerate sexual encounters to fulfill unmet needs at home.

Similar to previous research, sexual experience was related to more frequent mother-daughter communication and discussion of more topics (Hadley et al., 2009). Several explanations are possible. For example, once parents learn their daughters are sexually active, they may begin to engage in more frequent conversations and address more topics (DiIorio, et al., 2002). The discovery may alleviate the common concern that "talking about sex" will "cause teens to have sex". Similarly, once girls become sexually active, parents may shift from emphasizing abstinence (i.e., "there is nothing to discuss") to keeping daughters safe from disease and pregnancy. Hence, they may engage in more frequent discussions and more topics in order to prevent negative health outcomes. In any case, research indicates that mother-daughter conversations prior to first sex predict later sexual debut and condom use at first sex. For African American mothers and daughters, intervention efforts should emphasize communication before sexual debut.

Findings offer new clarity regarding the impact of communication quality and mother-daughter attachment on African American girls' sexual behavior. More open mother-daughter communication was related to less likelihood of ever having sex, while greater mother-daughter attachment was associated with less inconsistent condom use. Findings support theoretical assumptions that mother-daughter relationships and positive communication are protective for girls' health behavior, and they underscore the potential to reduce risk by strengthening the mother-daughter bond and improving the quality (rather than the frequency) of communication. Girls who experience strong mother-daughter attachment and open communication may be less vulnerable to partner pressure and more willing to refuse sex to maintain maternal closeness, avoid maternal disappointment and anger, and/or avert mother-daughter conflict. Findings may not generalize beyond African American girls in psychiatric care. The cross-sectional data prevent causal interpretations, but isolating the role of mental health and family characteristics in African American girls' sexual risk is noteworthy, as both are amenable to change and can be addressed in health promotion efforts.

African American girls are at high risk for STIs, including HIV/AIDS, and the added vulnerability of mental health problems requires careful consideration in prevention efforts. This study sheds new light on the protective role of mother-daughter attachment and open mother-daughter communication for African American girls seeking psychiatric care. Most prevention programs focus on individuals and individual-behavior change, yet positive outcomes decay over time. This study suggests that programs for troubled African American girls can be strengthened by including family members, emphasizing system-level change, improving mother-daughter relationships and communication, and reducing girls' mental health problems. These may ultimately lead to more sustained improvements over time.

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Table 1

Rates of Sexual Behavior, N=266

		N	%
Ever had vaginal sex	No	181	68%
	Yes	85	32%
Use condoms during vaginal sex ^a	Every time	46	57%
	< every time	35	43%
	NA	181	
Ever had anal sex	No	240	90%
	Yes	26	10%
Use condoms during anal sex ^b	Every time	11	44%
	< every time	14	56%
	NA	240	
Ever had vaginal or anal sex	No	180	68%
	Yes	86	32%
Age of first vaginal or anal sex ^c	< 9	5	6%
	9-12	14	16%
	13	28	33%
	14	27	31%
	15-16	12	14%
Number of partners past 6m ^c	0	15	17%
	1	50	58%
	2 or more	21	24%
Used condom last time had sex ^c	No	30	35%
	Yes	56	65%
Used condom last time had sex	No	30	35%
	Yes	56	65%
	NA	180	

^a 4 participants had missing data^b 1 participant had missing data^c Out of girls who have had vaginal or anal sex

Table 2

Mother-Daughter Relationship and Mental Health Symptoms

	Mean	SD	N	rho ^c	SE(rho)
Communication: frequency ^a	6.65	4.42	266	0.524	0.042
Communication: frequency ^b	8.39	4.32	266		
Communication: number of topics ^a	5.42	3.58	264	0.488	0.045
Communication: number of topics ^b	6.53	3.39	264		
Communication: openness ^a	28.42	4.98	263	0.236	0.049
Communication: openness ^b	29.76	3.08	265		
Parental monitoring ^a	16.28	4.04	266		
Parental permissiveness ^a	8.89	3.51	266		
Maternal attachment ^a	92.41	19.96	266		

	n	%	N	kappa
Internalizing behaviors (t-score $\geq$ 63) ^a	53	20%	266	0.13
Internalizing behaviors (t-score $\geq$ 63) ^b	90	34%	266	
Externalizing behaviors (t-score $\geq$ 63) ^a	85	32%	266	0.24
Externalizing behaviors (t-score $\geq$ 63) ^b	138	52%	266	

^a adolescent reported^b parent reported^c concordance between adolescent and parent reports

Table 3

Logistic regression analyses predicting sexual activity

	Age-adjusted			Multivariate		
	OR	95% Conf. Interval		OR	95% Conf. Interval	
Age	1.91	1.48	2.48	1.75	1.300	2.353 ***
Internalizing behaviors (t-score ≥ 63) ^a	2.04	1.05	3.98 *	--	--	--
Internalizing behaviors (t-score ≥ 63) ^b	1.58	0.90	2.77	--	--	--
Externalizing behaviors (t-score ≥ 63) ^a	4.90	2.71	8.85 ***	3.99	2.091	7.610 ***
Externalizing behaviors (t-score ≥ 63) ^b	2.33	1.33	4.09 **	--	--	--
Communication: frequency ^a	1.62	1.21	2.16 **	--	--	--
Communication: frequency ^b	1.66	1.23	2.24 **	2.41	1.636	3.563 ***
Communication: number of topics ^a	1.53	1.15	2.03 **	--	--	--
Communication: number of topics ^b	1.65	1.22	2.23 **	--	--	--
Communication: openness ^a	0.76	0.58	1.00 *	--	--	--
Communication: openness ^b	0.63	0.47	0.84 **	0.51	0.351	0.727 ***
Parental monitoring ^a	0.61	0.46	0.80 ***	--	--	--
Parental permissiveness ^a	1.47	1.12	1.94 **	1.44	1.049	1.990 *
Maternal attachment ^a	0.73	0.56	0.97 *	--	--	--

* $p < .05$ ** $p < .01$ *** $p < .001$ ^a adolescent reported^b parent reported

Table 4

Logistic regression analyses predicting inconsistent condom use among sexually active girls (N = 81)

	Age-adjusted		Multivariate	
	OR	95% Conf. Interval	OR	95% Conf. Interval
Age	1.10	0.71 1.72	1.66	0.857 3.207
Internalizing behaviors (t-score $\geq$ 63) ^a	1.55	0.56 4.25	--	--
Internalizing behaviors (t-score $\geq$ 63) ^b	1.58	0.65 3.83	--	--
Externalizing behaviors (t-score $\geq$ 63) ^a	0.98	0.40 2.37	--	--
Externalizing behaviors (t-score $\geq$ 63) ^b	1.82	0.71 4.63	--	--
Communication: frequency ^a	1.07	0.68 1.67	--	--
Communication: frequency ^b	1.09	0.67 1.80	--	--
Communication: number of topics ^a	0.99	0.63 1.55	--	--
Communication: number of topics ^b	1.07	0.64 1.79	--	--
Communication: openness ^a	0.77	0.49 1.20	--	--
Communication: openness ^b	1.27	0.81 1.98	1.55	0.936 2.567
Parental monitoring ^a	0.75	0.51 1.11	--	--
Parental permissiveness ^a	0.71	0.46 1.11	0.73	0.454 1.176
Maternal attachment ^a	0.66	0.41 1.06	0.56	0.335 0.939 *
Age of sexual debut	0.63	0.38 1.03	0.57	0.318 1.007

* p < .05

^a adolescent reported^b parent reported

Table 5

Logistic regression analyses predicting multiple sex partners among sexually active girls (N = 89)

	Age-adjusted		Multivariate	
	OR	95% Conf. Interval	OR	95% Conf. Interval
Age	0.86	0.53 1.42	0.89	0.524 1.503
Internalizing behaviors (t-score ≥ 63) ^a	2.93	1.01 8.52 *	--	--
Internalizing behaviors (t-score ≥ 63) ^b	2.25	0.82 6.13	--	--
Externalizing behaviors (t-score ≥ 63) ^a	4.60	1.39 15.19 *	3.36	0.977 11.53
Externalizing behaviors (t-score ≥ 63) ^b	2.76	0.83 9.25	--	--
Communication: frequency ^a	1.22	0.723 2.067	--	--
Communication: frequency ^b	1.10	0.624 1.951	--	--
Communication: number of topics ^a	1.16	0.694 1.951	--	--
Communication: number of topics ^b	1.53	0.814 2.864	--	--
Communication: openness ^a	0.75	0.459 1.217	--	--
Communication: openness ^b	0.74	0.447 1.208	--	--
Parental monitoring ^a	0.57	0.365 0.887 *	0.63	0.395 1.011
Parental permissiveness ^a	1.11	0.695 1.764	--	--
Maternal attachment ^a	0.63	0.372 1.068	--	--
Age of sexual debut	0.84	0.538 1.324	--	--

*
p < .05^a adolescent reported^b parent reported