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Parent-adolescent Sexual Communication: Associations of Condom Use with Condom Discussions

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Abstract

This study investigated the relationship between parent-teen sexual communication, discussion of condoms, and condom use among adolescents in mental health treatment. Adolescents with a history of sexual intercourse and their parents completed questionnaires assessing adolescent sexual risk behavior, sexual communication, and discussion of sexual topics. Greater condom use by adolescents was associated with parent-adolescent condom discussion but was not associated with openness in sexual communication. Seventy-six percent of adolescents reported that parents had discussed condoms with them and these discussions were significantly associated with protected sexual acts. In a logistic regression, accounting for age, gender, race, and psychiatric diagnosis teens that discussed condoms with their parent were more likely to report condom use at last sex. Increasing direct communication about condoms may be an important step in increasing adolescent's safer sex behavior. Mental health disorders and family distress may make such discussions challenging but are not an insurmountable barrier to direct discussions about condoms.

INTRODUCTION

Sexual risk behavior among adolescents is a major public health problem. People under 25 comprise approximately half of all new HIV cases, the majority of whom are infected through unprotected sex (Centers for Disease Control and Prevention, 2006). Condom use is effective in preventing HIV infection, STIs, and unintended pregnancy and some family-based prevention programs hope to increase safer sex by improving parent-adolescent communication (Pequegnat & Szapocznik, 2000). Thus, understanding more about the relationship between condom use and parent-adolescent communication will likely have important implications for HIV prevention for adolescents and more specifically for adolescents in mental health treatment for whom the risk of HIV, STIs, and unplanned pregnancy is even greater (Brown, Danovsky, Lourie, DiClemente, & Ponton, 1997).

Several studies of community based student samples suggest that when parents talk with their teens about sex, adolescents report greater contraceptive use, including condom use (Casper, 1990; DiClemente et al., 2001; Kotva & Schneider, 1990; Romer et al., 1999). For example mother-child discussion about condom use prior to sexual debut has been correlated with

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adolescent condom use at last sex (Miller, Levin, Whitaker, & Xu, 1998). Likewise, a similar study found that 76% of sexually active adolescents who reported having had a conversation with either parent about condoms used a condom at most recent intercourse and also reported greater lifetime condom use than those who had not discussed condoms with a parent (Whitaker & Miller, 2000).

In contrast, other studies have linked parent-teen communication with increased sexual risk behaviors (DiIorio et al., 2002) or have found no relationship at all (Fisher & Feldman, 1998; Huebner & Howell, 2003). Study methodologies may account for these different findings. Specifically, measurement of parent-teen communication in DiIorio et al. (DiIorio et al., 2002) differs from other studies by assessing the summed occurrence of sexual discussions (across multiple topics), while other studies (Huebner et al., 2003) examine general communication topics (e.g., job plans after high school) as well as sexual topics, possibly weakening the link between communication and condom use.

The primary demographic variable influencing parent-adolescent sexual communication is gender. Mothers have been shown to be the most likely parent to engage teens in sexual discussion, though sons may be less likely to talk to either parent about sexual issues (DiIorio, Kelley, & Hockenberry-Eaton, 1999; Raffaelli, Bogenschneider, & Flood, 1998). Age and race/ethnicity, however, have little moderating influence on parent-adolescent sexual communication, with studies generally having found a low to moderate frequency of communication about a variety of sexual topics across Caucasian, African American, and Latino samples. Forty-seven percent of a Latino sample reported “often” having spoken with mothers about sex (Guzman et al., 2003), while specific discussion about condom use has been reported by 48% of a predominantly African American sample (DiIorio et al., 1999), and 78% of the sexually active portion of an African American/Puerto Rican sample (Whitaker et al., 2000).

There is substantial disagreement between parent and adolescent perceptions of sex-related communication, including the frequency of sex-specific talks (Fisher, 1993; Fisher, 2001; Newcomer & Udry, 1985). A minority (40%) of an undergraduate sample reported that a meaningful conversation about sex had occurred, while the majority (60%) of the sample's parents reported that such a discussion had occurred (King & Lorusso, 1997). The ramifications of this discrepancy are significant, for if teens do not *perceive* that communication is occurring, its positive effects may be lost. Other studies have shown that adolescent rather than parental perceptions of communication are more predictive of adolescents' sexual behavior (Jaccard, Dittus, & Gordon, 1998).

To date, studies have not examined the effect of parent-teen communication on condom use among adolescents in mental health treatment. Brown et al. (Brown, Reynolds, & Lourie, 1997) suggest that adolescents with psychiatric disorders are at high risk for HIV infection, as they are more likely than their peers to engage in behaviors such as sharing self-cutting instruments and sexual risk activities. Subsequent studies have found elevated rates of risk such as early sexual debut, unprotected sex, and multiple sexual partners among adolescents with psychiatric disorders relative to their peers (Donenberg, Wilson, Emerson, & Bryant, 2002; Donenberg, Bryant, Emerson, Wilson, & Pasch, 2003). Examination of potential protective factors among adolescents with psychiatric disorders is critical, as these youth are at high risk for HIV/STIs. The present study aimed to examine the association of parent-adolescent communication on condom use among youth with psychiatric disorders.

Based on the previous literature in community samples, we anticipated that 40% or less of adolescents would report discussing sexual topics with their parents. We hypothesized that adolescent and parent perceptions of having had a specific condom discussion and perceptions

of open sexual communication would be discrepant, and that *adolescent* perceptions of a condom discussion and open sexual communication would be the best predictors of condom use among this sample of youth with psychiatric disorders. Finally, we expected that adolescent report of open sexual communication and discussion of condoms with parents would be positively associated with two measures of adolescent condom use: proportion of protected sex acts in the past 90 days and condom use at most recent intercourse.

METHODS

Participants

Recruitment—The current study was part of a larger program that examined the efficacy of a family-based HIV prevention intervention in increasing safer sexual behavior for adolescents in mental health treatment. The three sites of the HIV prevention intervention (Project STYLE), Rhode Island Hospital (Providence RI), Emory University (Atlanta, GA), and the University of Illinois at Chicago (Chicago, IL) recruited subjects in mental health treatment from outpatient mental health settings and at the time of discharge from inpatient psychiatric units. Inpatient stays typically averaged no more than one week. Direct referrals from clinicians and discharge coordinators were the primary means of recruitment. All sites also employed passive recruitment via project posters and flyers. It is estimated that 80% of youth in these settings were screened for eligibility. Of 850 adolescents who were eligible to be in the project, 798 were enrolled, resulting in a 94% participation rate. Reasons for non-enrollment included not interested in a research program, not having enough time, and family in crisis due to recent hospitalization.

Inclusion/Exclusion Criteria—Adolescents between the ages of 13 and 18 were eligible to participate if they had been in mental health treatment within the past year and had a parent or adult caregiver who was able to participate and had been living with the teen for at least the past three months. A history of sexual activity was not necessary for inclusion in the larger study. Adolescents were excluded if they were currently pregnant or had delivered a baby within the past 90 days, actively trying to get pregnant, HIV infected by self-report, or were participating in another HIV prevention study.

Procedures

Adolescents under 18 years of age, who gave assent and whose parents gave informed consent, and those adolescents over 18 who gave informed consent were asked to complete a 60-90 minute baseline audio computer-assisted structured interview (A-CASI) on a laptop computer. Adolescents and parents were compensated \$50 each for their time and effort in completing the assessment.

Measures

Demographics—**Demographic information** included gender, age, and race/ethnicity.

Psychiatric Diagnosis—**Psychiatric Diagnosis** was assessed using the Computerized Diagnostic Interview Schedule for Children (C-DISC). The C-DISC is a structured computer-assisted diagnostic interview that screens for a full range of DSM-IV diagnoses (Shaffer, 1991a; Shaffer, 1991b). The C-DISC was administered via audio computer-assisted self-interview (ACASI) to adolescents. The Present State Youth version was used in this study with variable timelines for each diagnosis and for specific symptoms. Reliability and validity of the C-DISC are acceptable (Schwab-Stone, 1996; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000) and represent the gold standard in the field. Preliminary analyses of the C-DISC 4.0 found that test-retest reliability equals or surpasses former versions of the C-DISC for most diagnoses (Ullman, 1996). The presence of the following psychiatric disorders was assessed:

Major Depressive Disorder (MDD), Generalized Anxiety Disorder (GAD), Posttraumatic Stress Disorder (PTSD), Mania, Hypomania, Oppositional Defiant Disorder (ODD), and Conduct Disorder (CD). Diagnoses were derived using the algorithm developed by Shaffer and colleagues (Shaffer, 1991a; Shaffer, 1991b). The C-DISC was designed as a comprehensive screening instrument and does not provide definitive clinical diagnoses. Psychiatric diagnoses were collapsed to form one item indicating the presence or absence of any of the examined psychiatric disorders.

Sexual Behaviors—Sexual intercourse was defined as: “when a man inserts his penis into a woman's vagina” (vaginal intercourse) and “when a man puts his penis into a man's or woman's anus or butt” (anal intercourse).

Sexual activity status was assessed by asking adolescents whether they had ever had vaginal or anal intercourse and whether they used a condom the last time they had sex (yes/no). Adolescents were also asked whether they had vaginal or anal sex in the past 90 days (yes/no), how many times they had vaginal or anal sex in the last 90 days, and how many of those acts in the last 90 days were protected (e.g., condom used).

Proportion of protected sex acts was derived by dividing the number of times a condom was used during intercourse acts in the past 90 days by the total number of intercourse acts (vaginal and anal) in the past 90 days.

Communication—Miller Sexual Communication Scale (Dutra, Miller, & Forehand, 1999; Miller, Kotchick, Dorsey, Forehand, & Ham, 1998). Six items from the Parent-Adolescent Sexual Topic Discussion subscale were used to assess the content of sexual communication between parents and adolescents. Parents and adolescents completed the measure separately and responded (yes/no) as to whether they have had conversations with each other regarding each of the following topics: when to start having sex, contraception/birth control, condoms, AIDS and HIV, how to handle sexual pressure by friends or partners, and choosing sexual partners. These were created to give a general overview of topics discussed among parents and teens and were not summed to form a subscale score. The 6-item Open Sexual Communication subscale was used to assess openness of sexual communication between parents and adolescents and was completed by both parents and adolescents. Sample items included: “My parent/caregiver wants to know my questions about sexual topics” (adolescent version) and “I want to know my daughter/son's questions about sexual topics” (parent version). Each item was rated on a Likert scale from 1 (not true of me) to 7 (very true of me), with a range of 6–42. The internal consistency reliability for both the adolescent and parent report versions was .86 for the Open Sexual Communication subscale.

Data Analyses

Frequency counts and Cohen's kappa for both parent and adolescent report of each sexual topic were calculated. Cohen's kappa statistic indicates the level of agreement between two responders on the same item accounting for chance. Scores can range from 0 to 1 with a kappa of 0.6 indicating significant level of agreement (Cohen, 2007). Chi-square analyses and t-tests were conducted as appropriate. Logistic regression analyses were conducted to control for demographics and the presence of a psychiatric diagnosis and assess the relationship between condom use at last sex (using the entire sample) and proportion of protected sex acts (with adolescents reporting vaginal/anal sex in the past 90 days) and parent-adolescent communication. For purposes of interpretation, proportion of protected sex acts was dichotomized (100% condom use vs. less than 100% use) to examine the impact of parent-adolescent communication on condom use behavior over the last 90 days.

RESULTS

Sample Characteristics

A total of 798 parent-adolescent dyads were consented and assessed and, of those, 485 parent-adolescent dyads whose adolescents reported ever having vaginal and/or anal sex were selected for all of the following analyses. Adolescents ranged in age from 13 to 18 years with a mean age of 15.3 (SD=1.3) and 60% of the sample was female. Ethnically, the sample was comprised of 9% Latinos and racially, the sample was primarily composed of African-Americans (65%). Ninety-one percent of the caregivers were female and 77% of the caregivers were the adolescent's biological parent.

Diagnostic Information

The rates and proportion of diagnoses were comparable to youth in mental health treatment (Donenberg, Emerson, Bryant, Wilson, & Weber-Shifrin, 2001). About 65% of adolescents (per adolescent report) met threshold or sub-threshold (significantly symptomatic but not formally diagnosed) criteria for any psychiatric diagnosis based on their responses to the Computerized-Diagnostic Interview Schedule for Children (C-DISC, Shaffer, 1991a; Shaffer, 1991b). By adolescent report, the most frequent diagnoses were Oppositional Defiant Disorder (38%), Conduct Disorder (31%), Generalized Anxiety Disorder (20%), Major Depression (18%), Posttraumatic Stress Disorder (14%), Mania (14%), and Hypomania (11%).

Sexual History

Of the 485 adolescents reporting ever having vaginal and/or anal sex, 65% reported using a condom the last time they had sex. Forty-five percent ($n=217$) of the adolescents reported having vaginal/anal sex within the last 90 days and approximately 61% of those sex acts were protected ($M=0.6$, $SD=0.4$). Adolescents reporting condom use at last sex reported a significantly higher proportion of protected sexual acts compared to those adolescents who denied having used a condom at last sex ($M=0.8$, $SD=0.3$ vs. $M=0.2$, $SD=0.3$, $t(213)=239.1$, $p<.01$).

Sexual Topic Discussions

Across the six sexual topics surveyed, 50% or more of the adolescents and parents reported discussing each topic (see Figure I). Forty-five percent of the parents and 31% of the adolescents reportedly discussed all of the survey sexual topics. Only 3% of parents and 10% of adolescents denied having discussed any of these sexual topics. Seventy-six percent of the adolescents reported that their parents had discussed condoms with them, whereas 84% of the parents reported having had a condom discussion with their adolescent. Parent-adolescent agreement regarding the discussion of topics varied greatly by topic with kappas ranging from .12 for choosing sexual partners and HIV/AIDS to .28 for discussion of condoms (see Figure I). Analysis of communication patterns for sexually active ($n=485$) and non-sexually active ($n=313$) youth revealed a non-significant difference between groups on openness of their sexual communication. However, sexually active adolescents were significantly more likely to report having had a condom discussion with their parent than adolescents who denied having had sexual intercourse (76% vs. 53%, $\chi^2=44.7$, $df=1$, $p<.01$).

Association of Open Sexual and Condom Communication with Safer Sexual Practices

On average, parents reported greater open sexual communication than did their adolescents ($M=33.6$, $SD=5.8$ vs. $M=27.0$, $SD=9.6$, $t(411)=13.8$, $p<.01$). A moderate correlation was found between parent and adolescent reports of open sexual communication ($r=.27$, $p<.01$). Both parent and adolescent reports of open sexual communication were unrelated to proportion of protected sex acts and condom use at last sex. Adolescent report of having had a condom

discussion with their parent was significantly associated with adolescent report of more open sexual communication ($M=29.1$, $SD=8.6$ vs. $M=19.6$, $SD=9.2$, $t(414)=88.9$, $p<.01$).

Seventy percent of adolescents who reported a condom discussion with their parent/caregiver used a condom the last time they had sex, whereas only 53% of those who had not had a discussion about condoms with their caregiver used a condom at last sex, $\chi^2=11.0$, $df=1$, $p<.01$. Likewise, adolescents who reported having a condom discussion with their caregiver/parent were more likely to report 100% condom use than adolescents who denied having discussion with their parent, (87% vs. 71%, $\chi^2=7.0$, $df=1$, $p<.01$). Parent report of parent-adolescent condom discussion was unrelated to adolescent report of both condom use at last sex and proportion of protected sex acts.

Sixty-six percent of the parents and adolescents surveyed agreed on having had a previous condom discussion. Parent-adolescent agreement on recall of a condom discussion was not associated with adolescent report of condom use at last sex nor was it significantly related to adolescent report on the proportion of protected sex acts.

Logistic regression revealed that even after controlling for demographic variables (e.g., age, race, and gender) and the presence of a psychiatric diagnosis, adolescent report of having a condom discussion with their parent/caregiver was related to a higher proportion of protected sex acts (See Table I). Being male and the absence of any psychiatric diagnosis were also significantly associated with a higher proportion of protected sex acts.

The second logistic regression (controlling for demographic variables and psychiatric diagnosis) also found an association between adolescent report of condom discussion with parents and adolescent report of condom use at last sex (See Table I). Similarly, African-Americans and adolescents without a psychiatric diagnosis were more likely to report using a condom at last sex.

We similarly examined the relationship between parent and adolescent communication about the other sex related communication topics (e.g. when to have sex, contraception, etc.) and condom use behaviors. After controlling for age, gender, race, and psychiatric diagnosis there were no significant associations between any of the other sex related communication topics, per parent and adolescent report, and adolescent report of condom use behaviors.

DISCUSSION

This study provides important information concerning parent and adolescent discussion of sexual topics. Adolescents reported discussing sexual topics more frequently than anticipated. Five of the six sex related topics were reportedly discussed with parents by more than 60% of adolescents. In addition, nearly 80% of adolescents reported discussions about condoms with parents, similar to rates reported in community samples. Notably, among this sample of adolescents with high rates of psychiatric disorders and family turmoil, discussion about sex occurred at relatively high rates. Given the young age of the subjects, it was surprising that such a large proportion of the families had discussions of condom use. However, all subjects in this subgroup were sexually active, so the discussions were certainly appropriate and given the frequency rates of risk behaviors, the discussions were opportune.

Multiple reasons may account for less frequent discussion of topics such as “when to have sex.” It may have seemed irrelevant for parents of sexually active youth and likewise, “partner choice” may be viewed as an unhelpful strategy for safer sex. The association between parent and adolescent reports on these topics was small, as found in other studies. In fact, the highest measure of agreement was for condom use, perhaps because this was a more memorable discussion for adolescents and parents. Overall, these data support previous studies among

community samples, which have found that parents report talking about sexual topics more than their adolescents report the occurrence of these discussions (King et al., 1997).

Importantly, this project demonstrates that adolescents who report discussing condoms with their parents were significantly more likely to use condoms consistently and this association existed even when controlling for demographic factors and the presence of a psychiatric diagnosis. This finding reinforces the notion that such discussions may be useful. Discussions by parents of condoms may reinforce the adolescent's intentions to use condoms in order to prevent pregnancy or sexually transmitted infections. It is significant that parent and adolescent perceptions of open sexual communication were not related to consistency of condom use. Thus, the general openness of their communication about sexual behaviors was unrelated to the adolescent's safe behavior. This finding optimistically suggests that regardless of the sexual communication patterns within the family, techniques that increase the occurrence of parent and adolescent discussions concerning condoms will prove useful in preventing HIV and STIs among adolescents.

This study, although of a large sample of youth with psychiatric disorders at three different sites, may not be generalizable to all adolescents in mental health treatment nor to adolescents in the community. The assessment of communication by adolescents and parents did not include frequency of communication or the quality of the communication nor the exact message given by parents. These aspects of communication are important to examine in future studies. A larger sample would permit the power to discern the influence of adolescent psychiatric diagnosis and family turmoil on patterns and occurrence of sexual discussions between parents and adolescents as well as examine specific patterns of communication among mixed and same gendered parent-adolescent dyads. Other significant influences on adolescent behaviors were not examined, such as the influences of peers or adolescent communication with other significant adults. Certainly these may be important factors but parents are often thought to be the most long-term influences in adolescents' lives, even as they are becoming sexually active. Finally, the cross-sectional design of the current study prohibits inference of causality of condom discussion on condom use behavior. For example, adolescents who use condoms may be predisposed to report having had a condom conversation with their parent.

Overall, this study provides the intriguing suggestion that direct communication about condoms by parents may be an important step in increasing this specific safer sex behavior of adolescents. Strategies that increase parent's comfort and ways to appropriately address these issues are worthy of further investigation. These data do not identify the precise messages that parents can give that will increase safe sex behavior nor ways to do it in an age appropriate format. Parents may be encouraged that even as adolescents age and become sexually active and despite other emotional and behavioral disorders and family stresses that preoccupy time and energy, preventive communication about sexual issues can make a lasting impact.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Figure I.
Adolescents' and Parents' Reports on Sexual Communication Topics

Table I
Multivariate Logistic regression predicting sexual risk taking behaviors

	Proportion protected sex acts (n=198)		Condom use last sex (n=431)	
	O.R.	95% C.I.	O.R.	95% C.I.
<i>Block 1</i>				
Age	1.02	0.80-1.31	1.16	.98-1.37
Gender	2.16 *	1.15-4.06	1.30	.84-2.02
Race	1.12	0.59-2.15	2.32 **	1.68-3.95
Psychiatric Dx	2.43 *	1.23-4.77	1.64 *	1.02-2.65
<i>Block 2</i>				
Condom Communication	2.39 *	1.06-5.39	1.64 *	1.04-2.57

Note: O.R.= Adjusted Odds Ratio; The referent categories for categorical variables were as follows: race (African-American), gender (male), age (≥ 16).

*
p<.05

**
p<.01