Sex Risk Behavior Among Adolescent and Young Adult Children of Opiate Addicts: Outcomes From the Focus on Families Prevention Trial and an Examination of Childhood and Concurrent Predictors of Sex Risk Behavior

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Abstract This study reports on rates and predictors of sex risk behavior among a sample of adolescent and young adult children of parents enrolled in methadone treatment for opiate addiction. Data are from 151 participants (80 males, 71 females) in the Focus on Families (FOF) project, a randomized trial of a family intervention and a study of the development of at-risk children. The study participants are children of parents enrolled in methadone treatment between 1990 and 1993. Participants were interviewed in 2005 when they ranged in age from 15 to 29 years. In the year prior to the follow-up, 79 % of the males and 83 % of females were sexually active, 26 % of males and 10 % of females had more than one partner in the prior year, and 34 % of males and 24 % of females reported having sex outside of a committed relationship. Twenty-four percent of males and 17 % of females met criteria for high-risk sexual behavior, reporting casual or multiple partners in the prior year and inconsistent condom use. Participants in the intervention and control conditions did not differ significantly in terms of any measure of sex risk behavior examined. None of the measures of parent behavior and family processes derived from data at baseline of the FOF study predicted whether participants engaged in high-risk sex. Among measures derived from data collected at long-term follow-up, however, having ever met criteria for substance abuse or dependence predicted greater likelihood of high-risk sexual behavior, and being married or being in a romantic relationship was associated with lower likelihood of high-risk sexual behavior. The findings point to the important role of committed relationships in regulating sex risk behavior among this population, as well as heightened levels of sex risk behavior associated with substance abuse or dependence.

Keywords Sexual risk behavior · Children of drug users · Children of addicts

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Having an opiate-addicted parent has been linked to a wide range of adverse outcomes (Barnard and McKeganey 2004; Hogan 1998; Johnson and Leff 1999), including learning disabilities, attention deficits, and increased risk for problem behaviors including drug abuse and delinquency. However, little research has been done on patterns of sex risk behavior among this population, especially as they enter young adulthood. The late teens and early 20s comprise a period of heightened sexual risk behavior that increases the likelihood of contracting HIV or other sexually transmitted infections (STIs) (Bearinger and Resnick 2003; Centers for Disease Control and Prevention 2003; Dariotis et al. 2008). In fact, STI prevalence is highest in this age group (Centers for Disease Control and Prevention 2003). This developmental period is also a period of increased risky behaviors for many young people (Arnett 2000, 2005). Sex risk behavior is

commonly associated with other types of risky or problem behavior, such as substance abuse and delinquency (Jessor and Jessor 1977), and shares many of the same risk factors (Chia-Chen Chen and Thompson 2007; Miller et al. 2001; Pearson et al. 2006). These risk factors, such as poor-quality relationships with parents, early drug use, and delinquency are commonly at elevated levels among children of drug abusers. It is therefore likely that this population will be characterized by patterns of high-risk sexual behavior.

This study reports on rates and predictors of sex risk behavior among young adult children from the Focus on Families (FOF) project, a longitudinal study of families with an opiate-dependent parent. The goals of the current study are to (a) provide descriptive data on the sex risk behavior of the children from these families when they ranged between age 15 and 29, (b) assess whether the preventive intervention for children that was delivered as part of the FOF project reduced sex risk behavior when these children reached late adolescence or young adulthood, and (c) examine other potential predictors of sex risk behavior in this population.

The FOF intervention is a family program for parents in methadone treatment. The FOF intervention combined relapse prevention and parenting and child skills training with home-based case management services. Findings from a 2-year follow-up of the original study found promising differences between experimental and control families in parent drug use, domestic conflict, deviant peer networks, the number of family rules for children's behavior, and children's rates of drug use, delinquent behavior, and picking fights (Catalano et al. 2002). After a period of more than 10 years with no contact with participants in the project, we re-contacted parents and children from the project and conducted follow-up interviews. Analysis of 12-year follow-up data on drug abuse and dependence found no overall differences between participants in the intervention and control groups, but male children in the intervention condition had significantly lower risk of onset of substance abuse than male children in the control condition (Haggerty et al. 2008). Analysis of a broader measure of resilience, which included information on arrest and incarceration, meeting criteria for substance use disorder, and constructive engagement in work or school showed a nonsignificant overall difference between experimental and control participants, but males in the experimental condition were more likely to meet criteria for functional resilience (i.e., working or being enrolled in school, no history of substance abuse or dependence, and no adult criminal charges in the prior 5 years) than males in the control condition (Skinner et al. 2009). The current study adds to these prior reports by comparing experimental and control participants with respect to risky sexual behavior at the 12-year follow-up. Preventing substance misuse and delinquency were the primary targets of the FOF intervention; preventing risky

sexual behavior is seen as a potential crossover effect. By crossover we mean effects on outcomes other than those specifically targeted by the intervention. The intervention was intended to reduce underlying risk factors for drug abuse and delinquency, but the effects of the intervention may have crossed over into other related outcomes such as sex risk behavior. This seems plausible due to the shared underlying risk factors for drug use, delinquency, and sex risk behaviors in adolescence and the early adult years (Bailey 2009). As in other broad-spectrum, family-based preventive interventions, FOF included skills training for better communication and clearer statements of parental expectations (guidelines) and consequences for rule violations. These parenting skills, once acquired, could be used to establish guidelines around sexual conduct including abstinence and condom use. The program also included teaching teens refusal skills when offered drugs or alcohol. The same refusal skills might be employed to turn down sexual advances or to refuse to have sex without a condom.

In addition to experimental condition, we examine other potential predictors of risky sexual behavior to determine if risk factors for risky sexual behavior are similar among children of substance addicted parents as in more general population samples. If so, sex risk prevention efforts for these youth should target similar outcomes, although interventions might require different strategies to be effective. If not, then prevention efforts in this population should target different proximal and distal outcomes. Two sets of variables are considered. First, we examine characteristics of the family environment from when study participants were children or adolescents, including variables that are common predictors of risk for substance use and delinquency (Farrington 1998; Hawkins et al. 1992, 1998). Some of these have also been found to be predictors of sex risk behavior. Felitti and colleagues have demonstrated the link between adverse childhood experiences such as parental drug use and physical, sexual, and emotional abuse and a wide range of poor adjustment outcomes in adulthood, including sex risk behavior (Felitti et al. 1998; Skinner et al. 2009). In a previously published study on the FOF sample, childhood internalizing and externalizing behaviors were predictive of less successful transitions to adulthood in terms of criminal behavior, drug abuse, and work and school engagement (Skinner et al. 2009). Second, we considered more proximal steps to successful adult functioning that might be predictive of moving away from high risk taking into a more mature lifestyle. These include educational attainment, whether the child participants had become parents, whether they had developed a substance use disorder, and relationship status (i.e., whether they were married or were involved in a committed romantic relationship). Being in a committed relationship has been found to be related to having fewer sexual partners and being more

likely to have intercourse without using condoms (Bailey et al. 2011). Within a married or committed relationship, especially if pregnancy is desired, having a single partner and not using a condom would not be considered high risk, although not completely without risk since one's partner may have a sexually transmitted infection without knowing or choosing to divulge it. In this study we consider each sex risk behavior separately in order to avoid conflating these contradictory influences. When considering inconsistent condom use and multiple partners, both are considered risky but both are required to constitute high risk.

Methods

Participants

The sampling strategy was designed to include normal variability in the demographics of opiate addicted adults with children between the ages of 3 and 14 years. Both male and female parents were recruited without regard for age or race/ethnicity. Parents were recruited until the targeted sample size was reached. One hundred thirty families (representing 144 parents and 177 children) were recruited from two Seattle-area methadone clinics during the course of 2.5 years from 1990 to 1993. To be eligible to participate in the project, parents had to have been in methadone treatment for a minimum of 90 days and have one or more children between the ages of 3 and 14 residing with them at least 50 % of the time. Seventy-five percent of eligible parents consented to be involved in the study. Families were randomly assigned to the experimental or control condition after blocking on parents' race, parents' age at first drug use, whether parents lived with a spouse or partner, and ages of children. A higher proportion of families were assigned to the experimental (*n*=75) than control (*n*=55) condition. The parents in the original study were primarily mothers (75 %, mean age 35.3; s.d.=5.8), were married or living with a partner (80 %), were Caucasian (77 %), and had at least a high school diploma (78 %). There were no treatment group differences in these demographic characteristics.

Beginning in 2005, more than 10 years since we last contacted participants, we were able to locate 98 % of the original sample, and 151 (85 %) of the 177 children originally enrolled in the study completed an interview between March 2005 and May 2006 (Haggerty et al. 2008). Interviews were conducted in person at the participant's home or at a convenient location such as a coffee shop or library. The interview took approximately 90 min and participants were paid $60.

The 151 children located at the long-term follow-up make up the analysis sample for the current study. Fifty-three percent of the sample is female. The average age at baseline of the FOF project was 8.21 years (s.d.=3.89);

average age at follow-up was 22.02 (s.d.=3.83), ranging from 15 to 29. The ethnic composition of the sample, according to participants' self-identification, is 53 % Caucasian, 17 % African American, and 30 % mixed race. Forty-seven percent of the participants were female. Thirty-eight percent were currently in school (94 % of those under 18, 30 % of 18- to 24-year-olds, and 10 % of 24- to 29-year-olds). Of those 18 years or older, 33 % had not completed high school or a GED, 29 % had only completed high school or a GED, and 38 % had attended some schooling after high school. Those who completed the long-term follow-up interview (*n*=151) did not differ from noncompleters (*n*=26) in terms of race, gender, age, or experimental condition.

Focus on Families Intervention

Focus on Families combined relapse prevention (Marlatt and Gordon 1985) and parenting skills training (Hawkins et al. 1987; Kessler et al. 2005; Kumpfer 1987; Patterson et al. 1982) with home-based case management services (Catalano et al. 1999, 2002, 1997). Based on the social development model (Catalano and Hawkins 1996), it included components that addressed risk and protective factors for adolescent substance abuse (Hawkins et al. 1992) and factors associated with parent relapse after drug treatment (Catalano 1991; Surgeon General 1988).

The FOF parent training curriculum began with a 5-hour family retreat (attended by both parents and their children) followed by twice-weekly 1.5-hour parent and family training sessions. Sessions were conducted with groups of six to eight parents for 16 weeks by master's-level therapists with a background in addiction. Training sessions were co-led by a two-person team to allow for effective demonstration of the skills being taught. Parents were taught positive family management practices (including monitoring, limit setting, and using positive and negative consequences for socially appropriate and antisocial behavior), how to more effectively communicate with their children, how to hold family meetings to increase children's involvement in family tasks and activities, how to teach children problem-solving and drug-refusal skills, and strategies to help their children succeed in school. Children attended 12 of the sessions so that parents could have supervised practice in parenting skills. Home-based case managers worked with families in their homes, helping parents generalize the skills learned in the training to the home environment and taking advantage of naturally occurring situations to practice and reinforce skills. A more detailed description of the FOF intervention is provided in Catalano et al. (2002).

Intervention Exposure

Of those parents assigned to the program condition (*n*=82), 86.5 % initiated participation in the parenting groups. When

all those assigned to the experimental condition are included, families attended 45 % of the sessions on average. Excluding the 11 parents (14.5 %) who did not attend a single session, the average attendance was 52 % of the sessions. Missed sessions for those who initiated treatment were made up through home visits by case managers. The average number of case management contacts with parents who initiated the program was 63 over 9 months (range=4 to 291). Case managers conducted an average of 17 home visits (range=0 to 39).

Measures

Sex Risk Behavior Multiple aspects of sex risk behavior were examined. Each measure was derived from survey items at the long-term follow-up that asked about behavior in the year prior to the interview. These measures included whether the participants had (a) oral, vaginal, or anal sex; (b) more than two sexual partners; (c) sex with someone "outside a committed relationship"; (d) sex in exchange for money or drugs (i.e., prostitution or solicitation); e) been informed "by a doctor or nurse" that the participant had a sexually transmitted infection; and (f) a sex partner who was an IV drug user. We also noted how many male respondents reported having a male sexual partner. A single dichotomous measure of high-risk sex was based on whether a respondent reported both (a) using condoms less than always when having vaginal or anal intercourse, and (b) either having more than two partners in the prior year or having sex outside a committed relationship. This measure is based on the idea that the combination of unprotected sex and sex with multiple partners leads to the spread of sexually transmitted infections (Bailey et al. 2008, 2011; King et al. 2012).

Distal Predictors Experimental condition was based on original condition assignment, regardless of whether parents attended any of the parenting sessions. Most measures of childhood variables were based on parent report from the project's baseline interview. In cases where a child participant had more than one parent enrolled in the study, data from the mother's baseline interview was used. Measures derived from the parent baseline interview included:

1. *Parent substance use* in the month prior to the baseline interview. Binary measures were based on parent self-report of use of alcohol, cocaine, heroin, marijuana, and benzodiazepines. Although all parent participants were in methadone treatment at the time of their baseline interview, a substantial percentage reported using other substances. For instance, 20 % reported using cocaine and 22 % reported using marijuana.

2. *Family conflict*, based on a three-item scale (example item "How often do people in your family get upset with one another?"; alpha=.74).
3. *Family bonding*, based on a nine-item scale (example item: "There is a feeling of togetherness in our family."; alpha=.63).
4. *Child internalizing problems,* a seven-item scale based on items from the Child Behavior Checklist (CBCL example item: "How often is your child unhappy, sad, or depressed?"; alpha=.71).
5. *Child externalizing problems,* a seven-item scale also using questions from the CBCL (example item: "How often does your child act cruel, mean, or like a bully to others?"; alpha=.80).

A measure of *adverse childhood events* was based on measures used by Felitti and colleagues (1998) that have been found to be predictive of long-term behavioral outcomes. Their measure included eight events: (a) physical abuse, (b) emotional abuse, (c) sexual abuse, (d) family substance abuse, (e) mother treated violently, (f) loss of a parent, (g) family mental illness, and (h) incarcerated family member. Each area was coded as having been adverse (1) or not (0), and an index of the total number of areas of adversity indicated the extent of adverse experiences. The average score on this index was 3.91, with a range from 1 to 6 (see Skinner et al. 2009 for more details). Not all of the areas from the ACE measure could be included. For instance, we did not have sound data on whether the participant's parents were divorced, or on any measure of neglect.

Proximal predictors were derived from the follow-up interview of the child and were used to capture major sources of heterogeneity in the life courses of this population. All of these measures were binary. They included:

1. *Parenthood.* Thirty percent of the sample reported having a child by the time of the follow-up interview.
2. *Substance use disorder* was measured by whether a participant met criteria for a diagnosis for substance abuse or dependence, based on the *Diagnostic and Statistical Manual (DSM) IV (*American Psychiatric Association 2000)*,* at any time in the 10 years prior to the follow-up interview. This included eight categories of substance use: alcohol, marijuana, opiates, sedatives, amphetamines, cocaine, hallucinogens, and inhalants. This was measured using the Composite International Diagnostic Interview (CIDI, Kessler et al. 2005). Fifty-nine percent of the sample met criteria for abuse or dependence.
3. *Having a spouse or partner* was based on whether the participant was married or reported having a "steady boyfriend or girlfriend" at the time of the follow-up interview. Fifty-seven percent of the sample had a partner according to this criterion.

4. *High school graduate.* For those participants who were age 19 or older at the follow-up, this was based on whether the participant reported having graduated from high school or having received a General Equivalency Diploma (69 %).

Race, gender, and *age* were included as covariates in multivariate analyses, with race being coded as Black versus non-Black. Black included anyone who endorsed African American ethnicity alone or in combination with other ethnicities (total *n*=37). We controlled for African American ethnicity due to potentially higher rates of STIs in this group (Kraut-Becher et al. 2008). For some analyses, age was coded into three developmental stages: adolescence (15–17), emerging adulthood (18–23), and early adulthood (24–29). We provide some descriptive information by developmental period and control for age in all the statistical models. This is essential given the vastly different sexual opportunities and behaviors characterized by each developmental period. Having no sexual experience is not uncommon in adolescence, whereas marriage is much more likely in emerging and young adulthood. Unfortunately, the sample size does not provide enough power to analyze the effects of the intervention or potential risk and protective factors within each developmental stage separately.

Analysis

As a first step, we examined rates of sex risk behavior by gender and by age category (< 18, 19–24, 24 >). We then examined overall differences on sex risk measures by experimental condition. The statistical significance of these differences was assessed with logistic regression models which adjusted for covariates of race, gender, and age. Because effects of the FOF intervention on substance use disorders were found to be moderated by gender (Haggerty et al. 2008), we tested whether intervention-by-gender interactions were predictive of sex risk measures. Since the 151 subjects came from 113 families, adjustments to the standard errors of model coefficients to account for clustering within families were made using the generalizing estimating equations method (GEE) (SAS Institute 2002). In examining other potential predictors of sexual risk behavior, we used logistic regression models predicting the binary measure of high-risk behavior based on whether participants reported both inconsistent condom use and multiple or casual sex partners. Models were run to assess overall bivariate associations; unique associations adjusted for demographic covariates of race, age, and gender; and unique associations adjusted for other potential predictors. Again, the GEE method was used to account for clustering of siblings within families. Finally, similar regression models were used to test for the effects within the intervention group of attending more FOF intervention sessions.

Results

Tables 1 and 2 display the prevalence of sex behaviors by gender and age groups, respectively. These prevalence rates are about one third higher than prevalence rates found in general population samples for this age span, with a majority of participants reporting that in the prior year they were sexually active; about a quarter reporting that they had multiple partners (males being significantly more likely to report multiple partners than females); and slightly less than 1 in 10 reporting that they had been diagnosed with a sexually transmitted infection. As a point of reference, 19 % of the FOF sample between the ages of 18 and 24 reported having more than two sexual partners in the prior year compared to 14 % of participants from the National Longitudinal Study of Adolescent Health when they ranged in age from 18 to 26 (Halpern et al. 2007). Only a few participants reported involvement in prostitution (*n*=3) or having a partner who was an IV drug user (*n*=2), and only one male participant reported having a same-sex partner.

Table 3 displays the prevalence rates of sex risk behaviors by experimental condition. There were no statistically significant differences between experimental and control subjects at the *p*<.05 level. Secondary analyses that assessed condition differences separately for males and females as well as for African American and non-African American study participants also found no significant differences.

Measures of family environment from when participants were children or adolescents were unrelated to the likelihood of high-risk sex, either in bivariate or multivariate analyses. Parenthood and educational attainment measured when participants were adults were also not significant predictors of high-risk sexual behavior. Meeting criteria for a substance use disorder was significantly positively related to high-risk sexual behavior and having a partner was significantly negatively related to high-risk sex, both in

Table 1 Sex risk behavior by gender

	Male (*n*=80) n (%)	Female (*n*=71) n (%)
Sexually active	63 (79)	59 (83)
> 2 partners	21 (26)	7 (10)*
Casual sex	27 (34)	17 (24)
STI	4 (5)	9 (13)
High-risk sex	19 (24)	12 (17)
Prostitution	2 (3)	1 (1)
Men sex with men	1 (1)	–
Sex with IV drug user	1 (1)	1 (1)

STI sexually transmitted infection

*p<.05

Table 2 Sex risk behavior by age group

	Adolecents < 18 Years (n=30) n (%)	Emerging adults 18–24 years (n=83) n (%)	Young adults >24 years (n=38) n (%)
Sexually active	14 (47)	71 (86)	37 (97)
> 2 partners	5 (17)	16 (19)	7 (18)
Casual sex	6 (20)	25 (30)	13 (34)
STI	1 (3)	7 (9)	5 (13)
High-risk sex	3 (10)	18 (22)	10 (26)
Prostitution	1 (3)	2 (2)	0 (0)
Men sex with men	1 (3)	0 (0)	0 (0)
Sex with IV drug user	2 (7)	0 (0)	0 (0)

STI sexually transmitted infection

bivariate and multivariate analyses. The estimates for the multivariate model that included these two variables and adjusted for demographic covariates as well as parenthood are shown in Table 4. Participants who met criteria for a substance use disorder were over 3 times more likely to report high-risk sex (odds ratio=3.5), while participants who had a partner were almost 3 times less likely to report high-risk sex (odds ratio=.36). No significant effects were found for the number of sessions attended in total or as a category (at least half) or a full dose (at least 24 sessions).

Discussion

This study examines the level of high-risk sexual behavior among children who grew up with heroin addicted parents. The overall levels of sex risk behavior are higher than in the general population, which we might expect given the elevated levels of adversity faced by the sample during childhood and the fact that a majority met criteria for a substance use disorder at some point in adolescence or early adulthood. However, not

Table 3 Sex risk behavior by experimental condition

	Control (n=69) n (%)	Experimental (n=82) n (%)
Sexually active	58 (84)	64 (78)
> 2 partners	13 (19)	15 (18)
Casual sex	20 (29)	24 (29)
STI	6 (9)	7 (9)
High-risk sex	14 (22)	17 (22)
Prostitution	2 (3)	1 (2)
Men sex with men	0 (0)	1 (1)
Sex with IV drug user	1 (1)	1 (1)

STI sexually transmitted infection

Table 4 Logistic regression model predicting likelihood of high-risk sex (df=1)

	b (se)
Age	0.15 (.07)
African American	0.85 (.47)
Male	-0.04 (.47)
Parenthood	-0.79 (.54)
Substance use disorder	1.24* (.55)
Partner	-1.03* (.39)

*$p<.05$

all of these children of methadone patients report risky sex practices. We see a modest difference from the proportion reporting more than two partners in the prior year in the Add Health study which involved a nationally representative universal sample. The FOF parents received methadone treatment in the early to mid 1990s, when HIV prevention at methadone clinics had become part of the standard treatment (Hartel and Schoenbaum 1998). It may be that children in both experimental and control conditions were at least somewhat protected from involvement in high-risk sex behavior due to their early exposure to these prevention measures.

This study also examined whether there were long-term effects of the Focus on Families intervention on high-risk sexual behavior. No statistically significant differences were found overall between experimental and control groups, nor were differences found in analyses for males and females separately. Although the intervention did not directly target sex risk behavior, the intervention had the potential to impact such behavior by its focus on common predictors of high-risk sex, drug use, and antisocial behavior. Other substance abuse prevention programs targeting early risk and protective factors have demonstrated important and significant "crossover" effects on risky sexual behaviors when the primary target of the prevention was drug use, delinquency, or other problem behaviors (Ellickson et al. 2009; Griffin et al. 2006; Lonczak et al. 2002). We did not find intervention effects on sex risk behavior among children of opiate addicted parents. Among high-risk youth, crossover effects may be less likely.

A significant predictor of high-risk sex behavior was whether a participant had met criteria for a substance abuse disorder at any point in their lifetime. Consequently, prevention programs aimed at reducing substance use disorders may thereby impact high-risk sex behavior. As reported elsewhere (Haggerty et al. 2008), male participants in the FOF intervention demonstrated a significant reduction in the risk of developing a substance use disorder compared to control group males (hazard ratio=0.53, $p=0.03$), while intervention versus control differences among females were nonsignificant. However, this did not translate into differences in sexual risk behavior.

Finally, we found no childhood variables that predicted later high-risk sex behavior in this sample. The children in the FOF project all were exposed to highly chaotic family environments. It appears that the variance in these environments within this sample may not have been sufficient to strongly predict later sex risk behavior. Studies of adverse childhood experiences suggest that exposure to three or more adverse experiences is detrimental. More than half of the children in this study were exposed to three or more of these experiences. A threshold effect could explain the lack of relationship between measures of early adversity and later risky behavior (Skinner et al. 2009).

It is noteworthy that one salient predictor of high-risk sex behavior was simply whether participants reported being in a committed relationship. While this is not surprising, it corroborates findings for universal populations that committed relationships are protective against a variety of risky or antisocial behaviors (Bachman et al. 1997; Sampson and Laub 1993). This study extends the findings from universal populations to a high-risk population and points to being in a committed relationship as an important protective mechanism in the life course.

Limitations

The study has several strengths, including the high rate of follow-up 12 years after the intervention and the inclusion of prospective data from earlier time points. There are, however, some notable limitations. First, the age span of the participants from adolescents to early adults and the relatively small sample size prohibits the investigation of specific age groups. In general, the power to conduct etiological analyses with this sample is low. The study was originally designed to examine intervention effects with follow-up assessments 12 and 24 months later. The 12-year follow-up was successful in contacting and assessing 85 % of the children. Selection bias in the original sample of parents and in the children who agreed to participate in the long-term follow-up could influence the results. Furthermore, it is possible that the intervention influenced other risky behaviors (e.g., substance use in males), which in turn influenced sexual behavior, but the sample is not large enough to reliably detect medium indirect effects (Fritz and MacKinnon 2007). Second, we had to rely primarily on parent reports of the early childhood predictors. Given the status of the parents, these reports may reflect the parent's disposition rather than an objective measure of the child's family environment.

Conclusions

The findings do provide insight into the lives of young people who have grown up with a drug-addicted parent.

Two findings are noteworthy. First, distal family predictors tend to have little association with high-risk sex during adolescence and young adulthood. Second, more proximal factors such as substance abuse disorder and whether someone is in a committed relationship are more predictive of high-risk sex behavior. Substance use was common in this sample and its relationship to risky sexual behavior could derive from a general tendency to take risks. It could also suggest an overall lack of health-related treatment and prevention services that would provide information and resources for reducing drug use and sex risk behavior. These findings point to the importance of focusing on the prevention of substance abuse and dependence and identifying adolescent and young adult children of substance abusers who are not in committed relationships as being at special risk for high-risk sexual behavior.

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