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Friends, Family, and Foes: The Influence of Father's Social Networks

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Abstract

Fathers can play an important role in child development and family functioning. However, little is known about the influence of paternal perceptions of fatherhood involvement or the influence of fathers' peer networks. We explored the network characteristics (density, closeness, and degree centrality) and peer norms regarding sex, fatherhood, and other risk behaviors of 52 urban adult males in New Haven, Connecticut. Results identify that engagement in high-risk sexual behavior was associated with fatherhood involvement, with 88% of less involved fathers engaging in high-risk sexual behavior ($p = .004$). Denser networks were positively correlated with unfavorable peer norms such as cheating on a partner or drinking or using drugs ($p < .05$). Our findings suggest that peer networks are important to father's health and behavior and that father's behaviors may be affected by peer norms. Interventions designed for men may be strengthened by including peers in programming and by addressing norms and norm changing.

Keywords

fatherhood; involvement; parenting; behavior; social network

Historically, child development and sexual health research has not focused on urban, minority fathers (Coley, 2001; Logan, Cole, & Leukefeld, 2002). Evidence supporting fathers' positive contributions to child development has typically concentrated on married fathers who live with their children (Roggman, Boyce, Cook, & Cook, 2002). There is an increased interest in fathers and their role in family and child functioning, with more recent studies supporting the notion that fathers' positive involvement can benefit children and families (Pleck & Masciadrelli, 2004). In 2009, 41% of all births were to unmarried women (Martin et al., 2011). Fifty-three percent of Hispanic births and 73% of non-Hispanic Black births were nonmarital, compared with just 17% for Asian Pacific Islander and 29% for non-Hispanic White births (Martin et al., 2011). Coparenting can be complicated in such families and involvement from the father can be compromised. By age 5, three fifths of children born to unmarried couples will be raised by a custodial mother and a nonresident father (Carlson, McLanahan, & Brooks-Gunn, 2008). To this end, little is known about the influence of paternal perceptions of fatherhood involvement, the influence of peers, and the contextual factors of social networks that may contribute to a father's involvement with his child. These

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factors may be important as one in three children live in a biological father-absent home (Hamilton, Martin, & Ventura, 2011).

African American men have often defined their fatherhood role as a nurturer or financial provider, though more recently, they have considered more on their time spent with child and less on economic support (Paschal, Lewis-Moss, & Hsiao, 2011). Peer networks may be important in defining and necessitating their role as father, particularly among urban fathers. Moreover, fathers may engage in risky sexual behavior with the mother of their child and additional partners (Taylor et al., 2011). Other social factors may create difficult situations for child rearing; for example, fathers also may balance time and relationships with a child or partner from a previous and/or current relationship. These relationships and those with their friends can create complexity that may affect their involvement in their child's upbringing. Few studies have looked at the connection between fatherhood involvement and sexual risk behaviors.

Furthermore, general risk behaviors such as drinking, substance use, and "going out" with friends may relate to both sexual risk and a lack of fatherhood involvement. High-risk sexual behaviors may distract a father from his paternal duties, may result in other pregnancies that complicate existing family relations, and can lead to disease acquisition (Exner, 1999). An inclusive approach to sexual risk, peer norms, and involvement may strengthen father-child health, family health, and improve sexual health outcomes. The goal of this study is to describe and begin to understand the influence of peer networks on the individual risk behaviors and paternal involvement of urban heterosexual fathers.

Social networks are "naturally occurring groups that may comprise a referent group for a particular behavior and may be sources of social comparison, control, and influence" (Latkin, Forman, Knowlton, & Sherman, 2003, p. 467). They have emerged as key players in influencing an individual's health and health behaviors. Lifestyle behaviors such as smoking and obesity have been linked to an individual's interpersonal network (Fowler & Christakis, 2008) as well as health outcomes such as sexual risk and sexually transmitted infections (El-Bassel, Gilbert, Wu, & Chang, 2006; Harper, Gannon, Watson, Catania, & Dolcini, 2004). An individual's health and health behaviors can be influenced by those around him or her as studies show one's chance of engaging in a behavior increases if a friend engages in that same behavior (Fowler & Christakis, 2008). We use the term *peer networks* as this sample provided norms and behaviors for peers (i.e., not mothers, fathers, or grandparents who may typically be included in a traditional social network study). Network structure and size also affect the diffusion (or lack thereof) of a behavior across a community as adoption of a behavior is more likely to occur if it is reinforced by multiple members of an individual's social network (Centola, 2010). Discussing behaviors can also increase a person's likelihood and comfort engaging in an activity. In a study of HIV-related risk behaviors with urban injection drug users, Latkin et al. (2003) reported strong association between self-reported condom use and perceptions of friends talking about condoms and others' use of condoms, suggesting that individuals may base their own behaviors on interactions with network members who provide information, support, and social norms for the behavior. Discussions that occur within networks influence peer attitudes and norms, which ultimately affect behavior (Christopher, 2001). For fathers, close friends can be models for romantic relationships and behavior and may provide advice and information regarding dating and relationship maintenance (Harper et al., 2004).

Non-Hispanic Black men are also more likely to engage in HIV risk-related behaviors, including having multiple partners, inconsistent or no condom use, exchanging sex for drugs or money, and illicit drug use (Chandra, Billioux, Copen, & Sionean, 2012). Black men aged 25 to 44 years are more likely than White or Hispanic men to have five or more opposite sex

partners in the past year (Chandra et al., 2012) and African American men are eight times more likely than White males to be diagnosed with HIV (Office of Minority Health, 2012).

Little is known of the social networks of urban fathers, their engagement in risky behaviors, or the behaviors of their network members which may affect varied aspects of their personal and familial lives (Castillo & Fenzl-Crossman, 2010). Fatherhood involvement can be measured by affective, cognitive, or observable behavioral components such as time spent with children, which may be influenced by peer norms and network influences (Bradford, Hawkins, Palkovitz, Christiansen, & Day, 2002). Fowler and Christakis (2008) argue one implication of people's connectedness is that group-level interventions may be the most successful and efficient way to address and intervene with health behaviors, particularly in this understudied population. A better understanding of the influence of fathers' peer networks may help us create more effective and lasting prevention interventions among high-risk men or may provide support for integrating friends and family in prevention efforts.

Changing norms may be a viable approach to introducing and maintaining health protective behavior change (Latkin et al., 2003). Norms either supporting father involvement or the absence of other involved parents may affect a father's behaviors and actions, especially in social situations (Latkin et al., 2003). Bator and Cialdini (2000) identified two types of norms: injunctive (or proscriptive), that is, what significant others say you should do; and descriptive, that is, what significant others are doing. This study specifically queries injunctive and descriptive norms regarding fatherhood involvement, sexual risk, and other risk behaviors. Latkin et al. (2003) also note that research on norms has seldom focused on social acceptability of discussing social behaviors, hereafter referred to as transfer of information (Hersberger, 2003). This transfer of information can help strengthen and solidify norms and is therefore influential in behavior change.

Given the importance of norms on behavior, we explored whether network characteristics were associated with norms. A denser network may lead to more easily transferred behaviors via both network encouragement and network actions. In a more tightly knit network, behaviors are reinforced more often and can transfer with ease from one network member to another, affecting the likelihood of adoption by an individual (Centola, 2010). A multidisciplinary approach to family health may allow us to better understand the lives and impact of low-income, unmarried, minority fathers (Coley, 2001). Insight into the types of individuals fathers befriend or rely on for support in their roles as fathers could better direct future efforts to use peer norms and influence to affect health behaviors. This analysis seeks to better understand the influence of peer networks on risk behaviors among urban, minority fathers and explore ties between father involvement, sexual risk, and peer norms.

The aims of this study are to (a) describe urban fathers' peer networks; (b) describe fathers' sexual risk behaviors and their peer networks' risk behaviors; (c) describe how structural network measures (network density, degree centrality, closeness, count of isolates, and count of dyads) relate to sexual risk norms; and (d) better understand similarities and differences between fathers and characteristics of their networks based on sexual risk and father involvement.

Method

Study Sample and Procedures

Data are from a cross-sectional study investigating fathers' social networks in New Haven, Connecticut. The sample included 52 fathers who were recruited between January and March 2012, from a community-based organization's existing fatherhood group and a

couples-based study of pregnant and postpartum adolescent females and their partners. Potential participants were identified from the existing groups' databases. Men were contacted in-person or over the phone and asked if they would like to participate. Inclusion criteria included a father of a child (or children) younger than 16 years and English speaking. Written informed consent was obtained by a research staff member at the interview appointment. Participation was voluntary and confidential. The men completed structured interviews via an egocentric network computer-based survey program called EgoNet™. EgoNet allows respondents to answer a series of questions about themselves and then autopopulates a series of questions using the names of individuals the respondent listed as members of their peer network. All procedures were approved by the Yale University Human Investigation Committee and by the Institutional Review Board. Participants were reimbursed \$30 each for their effort.

Measures

Demographics—Participants were asked questions related to their demographic profile including age, race, years of education completed, the number of children they have, the number of women they have children with, and relationship status. Participants were also asked if they lived with their child (or children) or with any children that were not their own.

Participant sexual risk behavior—Sexual risk behavior was determined based on measures originally developed for the Multicenter AIDS Cohort Study (Joseph, Adib, Koopman, & Ostrow, 1990). Participants were asked the number of women they had sexual intercourse with in their life, the number of women they had sexual intercourse with in the past 6 months, concurrent partners (sex with someone during the same time period they were having sex with someone else), number of steady and casual sexual partners, and the frequency of condom use with casual and steady partners. Steady and casual partners were assessed by asking (only if the person reported having sex with more than one person in the past 6 months), “Of those partners you had sex with in the past 6 months, how many were steady partners (a partner you were/are committed to, that you call your girl/girlfriend)” and “Of those partners that you had sex with in the past 6 months, how many were casual partners?” Frequency of condom use with casual and steady partners ranged from 0 = *never* to 4 = *all the time*.

A sexual risk index was created based on responses to three questions pertaining to sexual risk behavior: “How many different women have you had sexual intercourse with during the past 6 months?,” “In the past 6 months did you ever have sex with someone over the same time period that you were having sex with someone else?,” “Of the times you had intercourse in the past 6 months, how often did you use condoms with casual partners?” Participants were deemed high risk if they had any of the following characteristics: more than one partner in the past six months, concurrent partners in the past 6 months, less than 100% condom use with a casual partner and were categorized as low risk if they did not report engaging in any of the three risk behaviors (Murphy, Brecht, Herbeck, & Huang, 2009). This index was created to allow us to compare two groups of fathers (high and low risk), and their networks, based on several questions that have been used as sexual risk indicators in similar studies (e.g., Murphy et al., 2009). Multiple partners in the past 6 months, concurrent partners, and inconsistent condom use are established risk behaviors in sexual health research (Barrington et al., 2009; Murphy et al., 2009).

Participant father involvement—Father involvement was assessed by a series of items adapted from the Fragile Families and Child Well-Being Study (Castillo, Welch, & Sarver, 2011). The scale examined the frequency of engagement between the father and his youngest child. Fathers were asked to identify the number of days in a given week they

engaged in the following seven activities with their youngest child: sang songs or nursery rhymes, played with their child, held their child, read stories, showed physical affection, supervised bedtime routines, or fed their child. These responses were averaged to obtain a number between 0 and 7 and a halfway cut point was set at 3.99 to divide the groups into less involved (0-3.99 days) and more involved (4-7 days). Only men with a child younger than 5 years responded to the involvement questions, as the questions pertained to activities geared toward young children.

Network size—Participants were asked, “About how many people would you say are in your social circle (that you talk to regularly, rely on, share things with),” to determine a self-established network size.

Name generator—To assess individual network members’ characteristics, a name generator prompted participants to think of the people they like to spend their free time with or talk about important things with. Apart from parents and grandparents, they listed the initials of five individuals. The initials were autoplace in subsequent questions for each of the five persons listed. For each network member, questions assessed their age, race, sex, relation to the participant, and the length of their relationship. The participant was also asked, to the best of their knowledge, each individual’s relationship status, HIV status, whether that person is a parent and if so, how many children he or she has.

Peer sexual injunctive norms—Injunctive sexual norms were assessed by asking whether in the past 6 months each network member encouraged or tried to get the participant to use condoms or to cheat on a partner, and if they helped him pick up women. Responses were on a 3-point scale from 1 = *never* to 3 = *frequently* (Lakon, Ennery, & Norton, 2006).

Peer sexual descriptive norms—Participants were asked whether each network member used condoms consistently, had two or more partners, had casual partners, or had ever cheated on a partner (Lakon et al., 2006).

Peer parenting descriptive norms—If a network member was reported to be a parent, participants then rated the level of involvement each individual takes in the raising of his or her child (or children) on a 3-point scale from 1 = *not at all involved* to 3 = *very involved*. No parenting injunctive norms were assessed. We instead asked the frequency of discussion regarding parenting (see “Transfer of Information” subsection).

Peer “other risk” injunctive norms—Other risk norms were assessed by asking whether in the past 6 months each network member encouraged or tried to get the participant to go to bars or to drink or use drugs. Responses were on a 3-point scale from 1 = *never* to 3 = *frequently* (Lakon et al., 2006).

Transfer of information—Participants indicated how many of their four closest friends talk about condoms on a 5-point scale ranging from 0 = *none* to 4 = *all* (Barrington et al., 2009). An additional question asked if the participant and each network member talked about his involvement in the raising of his child (or children) and whether they discuss parenting issues on a scale from 1 = *never* to 4 = *frequently*.

Structural network measures—We calculated metrics of network functioning using responses to the likelihood that network members will talk to each other independently from the participant, with responses ranging from 0 = *not at all likely* to 2 = *very likely*. *Network density* is the ratio of the total number of links (or likelihood of talking) in a network to the maximum number of possible links and *network degree centrality* measures the average

distribution of the degree centrality of all individuals in a network (Medical Decision Logic, 2007). Degree centrality is the number of personal connections each individual has. *Count of isolates* is the number of network members that do not connect to any other network member in each network (or are not at all likely to talk) and the *count of dyads* is the number of person-person ties in each network.

Maximum network density is 1.00. Structural network measures vary greatly within and between subpopulations though lower densities can imply that sources of information will be diverse or unique (Burt, 1992). Network density and closeness vary and are often inversely related to network size as an individual is restricted to the number of interconnected relationships he can maintain by time, energy, and so on (Wolfe Morrison, 2002).

Data Analysis

To describe the peer networks and sexual risk behaviors of fathers and their social contacts, we derived means, frequencies, or percentages and standard deviations for all continuous variables. To assess how structural network measures relate to peer descriptive and injunctive norms, correlations were performed for all network structure measures and injunctive and descriptive sexual norms, fatherhood norms, and transfer of information variables.

To understand similarities and differences between fathers and characteristics of their networks, chi-square analyses were run for all categorical variables while *t* tests were run for continuous variables. All analyses except demographics controlled for age, relationship status, and residential status. Chi-square analyses also tested for association between categories of sexual risk, fatherhood involvement, and time spent with child. All tests were run in IBM SPSS Statistics version 20. *P* values significant at .10 are reported due to the exploratory nature of the study and the small sample size (Cohen, 1992).

Results

Demographics

The majority of participants were African American (76.9%) or Latino (11.5%), with 3.8% White and 7.7% some other race or ethnicity. The average age of the sample was 30.19 years ($SD = 10.66$). Forty percent of men were reported to be in a relationship. More than half (53%) had more than one child, and 40% of men had children with two or more women. Almost half of fathers were nonresidential (48%), whereas 30% of men lived with all their children. Half the sample graduated high school with an additional 30% having completed some college coursework. The remaining 20% completed some high school. More than half the sample was unemployed (61.5%). Fathers saw their youngest child an average of 18.3 days ($SD = 11.4$) in the past month and 9.8 hours ($SD = 7.6$) in the past week. Table 1 reports additional sample characteristics.

Network Characteristics

On average, men reported almost five people in their social network. Seventy percent of participants' networks were male. Twenty-four percent of fathers' networks were composed of family members, 12% were known from work, 9% from school, and 31% were known from some other capacity. Fifty-three percent of network members listed were also parents whereas 40% of those were rated "Very Involved" with their child (or children). Average age of network members was about 29 years. Seventy percent of network members were men and more than half, 56% were in a relationship whereas 44% were reported to be single.

Transfer of Information

Thirty percent of respondents never discuss parenting issues with those in their network whereas 20% frequently do. Fathers talk about condoms with almost half of their close friends.

Structural Network Measures

Average network density was 0.60, network degree centrality 36.22, and 47.53 for closeness. Table 1 displays additional sample and network characteristics.

Examples of Networks

Networks varied in their structure and composition. Figure 1A represents a network with a density of 1.0. Each dot represents an individual and each line is an interpersonal connection. Every individual in the network is somewhat or very likely to talk to one another, independent of the respondent, resulting in a star shape. Figure 2A represents a density of 0.30 with one individual acting as a link to three others. Figures 1C, 1D, 2C, and 2D show descriptive and injunctive networks for high sexual risk/less involved fathers and low sexual risk/more involved fathers.

Descriptive and Injunctive Sexual Norms

Bivariate correlations between network measures and injunctive and descriptive peer norms are shown in Table 2. The more dense the network, the larger the proportion of network members that frequently encouraged the respondent to drink or use drugs, frequently helped him pick up women, and frequently encouraged him to cheat on a partner. No other structural network characteristics were significantly correlated with peer norms or influence.

Association of Risk Groups

The association of high-risk sexual behavior compared with level of father involvement based on participation in child-rearing activities is shown in Figure 3. Eighty-eight percent of less involved fathers engaged in high-risk sexual behaviors ($p = .004$) compared with 41% of more involved fathers. Figure 4 shows the association of sexual risk behavior and time spent with child. Seventy-three percent of fathers who spent less time with their child engaged in high-risk sexual behavior ($p = .087$). Figure 5 displays the association of father involvement and time spent with child. Seventy percent of less involved fathers reported less time spent with their child whereas 6% of more involved fathers did ($p < .001$).

Sexual Risk Category Characteristics

Individual characteristics and network characteristics among high and low sexual risk behavior groups are compared in Table 3. Men with low sexual risk had more children than those with high sexual risk behaviors ($p = .10$). Fathers with low sexual risk behaviors had more men in their network ($p = .10$) and knew a higher percentage of their network for more than 2 years ($p = .03$). More network members from the high sexual risk group encouraged the respondent to cheat on a partner ($p = .09$) and to drink or use drugs ($p = .009$). Network members from the high sexual risk group were also more likely to have ever cheated on a partner ($p = .10$) and to have two or more partners in the past year ($p = .01$).

Fatherhood Involvement Category Characteristics

Comparisons of fathers and their networks based on frequency of engagement in child-rearing activities are displayed in Table 4. Those that engaged less with their child were less educated ($p = .039$), more likely to be unemployed ($p = .067$), and less likely to have friends who were "Very Involved" in their child's life ($p = .039$). Network members of less

involved fathers encouraged them to drink or use drugs ($p = .033$), and were more likely to have two or more partners in the past year ($p = .0006$), and more likely to frequently have casual sexual partners ($p = .07$).

Discussion

Our results support the importance and influence of social networks on the health and family behaviors of urban fathers. These findings help further our understanding of network influence in several ways. First, by examining the associations between both injunctive and descriptive sexual and fatherhood norms, we highlight the importance of encouragement and the example set by a father's social network. This suggests that prevention programs may benefit from targeting both individual and peer norms. Fowler and Christakis argue that peer effects and health behaviors may deem prevention and treatment incredibly cost-effective (Fowler & Christakis, 2008). One proposed example shows that if \$500 is spent to help one person quit smoking and one of their friends also quits, and then one of that individual's friends quits, the initial funds have tripled their effectiveness (Fowler & Christakis, 2008). Tailored interventions may seek to help fathers understand how they are making sexual decisions, how their friends' behaviors may affect their behavior, and ultimately how their behaviors can affect their role as a father. In a sample of teenagers, those who believed that their peers were using condoms, were more than twice as likely to use condoms than those who did not believe that their peers used condoms (Diclemente, 1991). Inclusion of peer norms and gender norms in programming is essential to more effectively promote positive health behaviors (White, Greene, & Murphy, 2003).

Christopher (2001) asserts the importance of friends' discussions as key roles in the social construction of behavior. The number of friends in men's social circles ranged from 1 to more than 10, with 60% of the sample reporting four or fewer. Small network sizes may be a result of a father leaving a neighborhood or network as a result of becoming a parent and social support may be minimal. Prior research has shown that social support can affect men's parenting (Bunting & McAuley, 2004). Without support, fathers may feel alone and unsupported in their efforts. This highlights an opportunity to build support and community through programming. Additionally, 30% of fathers never talk about parenting issues with their networks. Previous work shows that talking about issues can enhance one's comfort and adoption of a behavior (Latkin et al., 2003). Unlike Harper's sample of African American adolescents (age 14-18 years), men in this sample did not openly talk about condoms with friends (Harper et al., 2004). Almost 40% did not talk to any of their contacts about condom use. Men may not feel comfortable talking about parenting issues or sexual protection with their networks, though peers can play a critical role in influencing behaviors (Harper et al., 2004) and these discussions could be fundamental to behavior change.

This lack of discussion was not due to a lack of risk, however. Our results show that 62% of urban, minority fathers exhibited high-risk sexual behaviors. Concurrent sexual partnerships and inconsistent condom use can increase the spread of infection through a network (Taylor et al., 2011). In addition, high-risk sexual behavior may be deleterious to the relationship with the mother of the child and could put the father at risk for both disease acquisition and pregnancy. In this sample, 40% of men had children with more than two women. Almost half of fathers in unmarried, urban couples do not live with their child 1 year after birth and 63% do not live with their child after 5 years, stressing the importance of parent's collaborating, even if living separately, to raise their child (Carlson et al., 2008). Complex family structures and sexual partnerships can complicate relationships and compromise time and resources, having a profound effect on child health and development. Whether parents maintain a romantic relationship, they may benefit from improving their ability to communicate across households (Carlson et al., 2008).

Sexual Risk and Father Involvement Group Characteristics

Peer sexual norms seemed to affect father's behaviors. Of those fathers who engaged in high-risk sexual behaviors, their friends were also more likely to engage in high-risk behaviors: having two or more partners in the past year and having casual partners, compared with those with no high-risk behaviors. Moreover, high-risk father's friends were more likely to encourage unfavorable behaviors: to cheat on a partner and to drink or use drugs. Both injunctive (encouraging or discouraging behaviors) and descriptive norms (acting by example) were significant between these groups. This may imply influence of behavior through both action and through encouragement (similar to Latkin et al., 2003).

Similarly, more involved fathers were more likely to have other involved parents in their networks. In addition to the fatherhood norms, sexual norms were associated with fatherhood involvement, with less involved fathers having more network members who had the descriptive norm of two or more partners, and the injunctive risk norms of encouraging the father to cheat on a partner and trying to get the father to drink or use drugs. These results suggest that networks are influencing fathers in similar ways regarding sexual risk norms. This may be important as Castillo and Fenzl-Crossman (2010) note that father's social networks are significantly and positively related to their involvement with their children as fathers may receive their greatest emotional, financial, and social support from family and friends (Castillo & Fenzl-Crossman, 2010). It may be that coresidential fathers, those who have a strong relationship with their partner, may be more involved fathers.

Network structure can also affect the transfer of behaviors or norms (Centola, 2010). Network density was positively correlated with descriptive and injunctive sexual norms. However, density was not significantly correlated with the frequency that men talked about fatherhood. Transfer of information may be reliant on something other than network structures such as the closeness of relationships or the frequency and type of interaction. Additionally, our results build on previous research that shows men are less likely to use condoms if they do not openly discuss using them and if their peers do not consistently use them (Latkin et al., 2003). As Centola (2010) importantly notes, individual adoption of behavior is more likely when it is reinforced from multiple contacts. Denser networks were associated with unfavorable peer norms such as cheating on a partner, going out, or drinking or using drugs.

Fowler and Christakis (2008) argue that networks magnify or capitalize behavior within the network. Community programs may seek to capitalize on dense networks, instead of introducing favorable sexual and parenting norms and behaviors and facilitating a space to discuss norms and influence among peers. Fathers' networks thus can benefit from the incorporation of favorable injunctive and descriptive sexual and fatherhood norms. Moreover, men may benefit from participating in programs with their friends. This could provide a comfortable and safe space for men to discuss parenting issues or risk behaviors with their peers. Group-level interventions may be more successful and effective than individual interventions because of individual's position in social networks (Fowler & Christakis, 2008).

Age, relationship status, and residential status may affect a father's paternal involvement and/or his engagement in sexual risk behaviors. Thus, there are alternative interpretations to these data. It is possible that some fathers are physically incapable of being involved in their child's life due to circumstance of proximity, living situations, poor relations with the child's mother, legal determinations of involvement or other such circumstances. In this sample, 19% of fathers reported being in a relationship with a woman other than the mother of their child, potentially distancing the father from his child. It is also possible that men's involvement with their social network compromised their intimate partnering and paternal

care (West & Konner, 1981). However, every effort must be made to include fathers in family programs and sexual health research, as they play a vital role in the lives of their children and partners (Carlson et al., 2008).

Limitations

This study has several limitations. First, the small sample size may have resulted in several null associations that would likely be significant with a larger sample size. This could limit the scope of our findings. Second, the sample is composed of men of varying age, relationship statuses, and number of children. Participants' age ranged from 18 to 50 years. Parenting experiences and engagement in sexual risk behaviors may differ for younger men versus older men. Similarly, men who are single may report different experiences than men who are married or in a committed relationship. The experiences of parenting may vary greatly for men depending on how many children they have and with how many women. Third, 65% of men answered the questions about parental involvement, excluding 18 men (those who did not have a child younger than 5 years) from the fatherhood involvement category and network analyses. This analysis loses robustness as the entire sample is not included. However, results were similar for the time spent with children categorization (not reported here), providing some evidence for the reliability of these results. Next, we analyzed networks of a finite size. To obtain greater breadth and diversity of network structural measures, more contacts may be queried or respondents may list an infinite number of people in their network though in this instance, that would have resulted in significant respondent survey burden. Another limitation of this study is that fathers were asked to list network members excluding their parents and grandparents. This limits our understanding of immediate family members' support and influence. Parents and grandparents were excluded as sexual risk behaviors were queried. We elected to highlight analyses significant at $p = .10$ as this was an exploratory analysis with a small sample size; however, these results could be supported with a larger sample size and more stringent statistical cutoff. Additionally, fathers reported their friends' behaviors and these were not verified by the individual. Last, our measures of father involvement were limited and did not measure cognitive, social, affective, monetary, and other forms of support (Bradford et al., 2002).

Conclusion

The number of children being born to and raised by unmarried parents has risen substantially in recent years accompanied by a shift in understanding of the role of fathers in child development (Cherlin, 2009). It remains, however, integrating fathers into family and community health can be beneficial. Father's social networks are significantly and positively related to their involvement with their children as fathers may receive their greatest emotional, financial, and social support from family and friends (Castillo & Fenzl-Crossman, 2010). Networks can also affect norms and the adoption of sexual risk behaviors. Harper et al. (2004) conclude that sexual health promotion efforts should use the power of adolescent peer networks to promote sexually healthy behaviors. These findings support the integration of peer networks in adult men. Similarly, it may be effective to disseminate information and norms through networks in an effort to create social norms that are supportive of risk reduction behaviors (Kelly, Kalichman, Sikkema, & Murphy, 1993).

There are a disproportionate number of men growing up without fathers and positive role models in their lives. In previous years, family programming was developed and centered on single motherhood and their parenting and sexual behaviors. However, more thought has been given to the patterns and behaviors and promiscuity among minority men. When studying relationships and the impact between father-figures and sexual behaviors, friends and extended family play a significant role in the family structure. Ultimately, social

networks are a source of influence, a means of support, and the foundation of social capital. It is imperative to look at the norms and influences in a community to best facilitate behavior change. Network utilization may be useful in creating interventions or programs for families, friends, or partners. It may also be effective to work with friendship groups to modify norms and constructs of father involvement. This may be more sustainable than individual-level interventions over time. Individual-, family-, network-, and community-level action can create happier, healthier families and communities.

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References

- Barrington C, Latkin C, Sweat M, Moreno L, Ellen J, Kerrigan D. Talking the talk; walking the walk: Social network norms, communication patterns, and condom use among the male partners of female sex workers in La Romana, Dominican Republic. *Social Science & Medicine*. 2009; 68:2037–2044. [PubMed: 19356834]
- Bator RJ, Cialdini RB. The application of persuasion theory to the development of effective proenvironmental public service announcements. *Journal of Social Issues*. 2000; 56:527–541.
- Bradford KP, Hawkins A, Palkovitz R, Christiansen SL, Day RD. The inventory of father involvement: A pilot study of a new measure of father involvement. *Journal of Men's Studies*. 2002; 10:183–193.
- Bunting L, McAuley C. Research review: Teenage pregnancy and parenthood: The role of fathers. *Child & Family Social Work*. 2004; 9:295–303.
- Burt, R. *Structural holes: The social structure of competition*. Harvard University Press; Cambridge, MA: 1992.
- Carlson M, McLanahan S, Brooks-Gunn J. Coparenting and nonresident fathers' involvement with young children after a nonmarital birth. *Demography*. 2008; 45:461–488. [PubMed: 18613490]
- Castillo J, Fenzl-Crossman A. The relationship between non-marital fathers' social networks and social capital and father involvement. *Child & Family Social Work*. 2010; 15:66–76.
- Castillo J, Welch G, Sarver C. Walking a high beam: The balance between employment stability, workplace flexibility, and nonresident father involvement. *American Journal of Men's Health*. 2011; 6:120–131.
- Centola D. The spread of behavior in an online social network experiment. *Science*. 2010; 329:1194–1197. [PubMed: 20813952]
- Chandra, A.; Billioux, VG.; Copen, CE.; Sioneau, C. *National Health Statistics Reports*. Vol. 46. National Center for Health Statistics; Hyattsville, MD: Jan 19. 2012 HIV risk-related behaviors in the United States household population aged 15–44: Data from the National Survey of Family Growth, 2002 and 2006–2010.
- Cherlin AJ. The origins of the ambivalent acceptance of divorce. *Journal of Marriage and Family*. 2009; 71:226–229.
- Christopher, F. *To dance the dance: A symbolic interactional exploration of premarital sexuality*. Lawrence Erlbaum; Mahwah, NJ: 2001.
- Cohen J. A power primer. *Psychological Bulletin*. 1992; 112:155–159. [PubMed: 19565683]
- Coley RL. (In)visible men: Emerging research on low-income, unmarried, and minority fathers. *American Psychologist*. 2001; 56:743–753. [PubMed: 11558359]
- DiClemente RJ. Predictors of HIV-preventive sexual behavior in a high-risk adolescent population: The influence of perceived peer norms and sexual communication on incarcerated adolescents' consistent use of condoms. *Journal of Adolescent Health*. 1991; 12:385–390. [PubMed: 1751507]

- El-Bassel N, Gilbert L, Wu E, Chang M. A social network profile and HIV risk among men on methadone: Do social networks matter? *Journal of Urban Health*. 2006; 83:602–613. [PubMed: 16755389]
- EXNER TM, GARDOS P, SEAL DW, EHRHARDT AA. HIV sexual risk reduction interventions with heterosexual men: The forgotten group. *AIDS & Behavior*. 1999; 3:347–358.
- Fowler JH, Christakis NA. Estimating peer effects on health in social networks: A response to Cohen-Cole and Fletcher; and Trogdon, Nonnemaker, and Pais. *Journal of Health Economics*. 2008; 27:1400–1405. [PubMed: 18692263]
- Hamilton, BE.; Martin, JA.; Ventura, SJ. National Vital Statistics Reports. Vol. Vol. 60. National Center for Health Statistics; Hyattsville, MD: Nov 17. 2011 Births: Preliminary data for 2010. Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_02.pdf
- Harper GW, Gannon C, Watson SE, Catania JA, Dolcini MM. The role of close friends in African American adolescents' dating and sexual behavior. *Journal of Sex Research*. 2004; 41:351–362. [PubMed: 15765275]
- Hersberger JA. A qualitative approach to examining information transfer via social networks among homeless populations. *New Review of Information Behaviour Research: Studies of Information Seeking in Context*. 2003; 4:95–108.
- Joseph JG, Adib SM, Koopman JS, Ostrow DG. Behavioral change in longitudinal studies: Adoption of condom use by homosexual bisexual men. *American Journal of Public Health*. 1990; 80:1513–1514. [PubMed: 2240345]
- Kelly JA, Kalichman SC, Sikkema KJ, Murphy DA. Psychological interventions are urgently needed to prevent HIV infection: New priorities for behavioral research in the second decade of AIDS. *American Psychologist*. 1993; 48:1023–1034. [PubMed: 8256875]
- Lakon CM, Ennery ST, Norton EC. Mechanisms through which drug, sex partner, and friendship network characteristics relate to risky needle use among high risk youth and young adults. *Social Science & Medicine*. 2006; 63:2489–2499. [PubMed: 16875770]
- Latkin C, Forman V, Knowlton A, Sherman S. Norms, social networks, and HIV-related risk behaviors among urban disadvantaged drug users. *Social Science & Medicine*. 2003; 56:465–476. [PubMed: 12570967]
- Logan T, Cole J, Leukefeld C. Women, sex, and HIV: Social and contextual factors, meta-analysis of published interventions, and implications for practice and research. *Psychological Bulletin*. 2002; 128:851–885. [PubMed: 12405135]
- Martin, J.; Hamilton, B.; Ventura, S.; Osterman, MJK.; Kirmeyer, S.; Mathews, TJ.; Wilson, EC. National Vital Statistics Reports. Vol. Vol. 60. National Center for Health Statistics; Hyattsville, MD: 2011. Births: Final data for 2009. Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_01.pdf
- Medical Decision Logic. EgoNet-QBuilder user manual. Author; Baltimore, MD: 2007.
- Murphy D, Brecht M-L, Herbeck D, Huang D. Trajectories of HIV risk behavior from age 15-25 in the National Longitudinal Survey of Youth sample. *Journal of Youth and Adolescence*. 2009; 38:1226–1239. [PubMed: 19669902]
- Office of Minority Health. HIV/AIDS data/statistics. 2012. Retrieved from <http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=3&lvlid=7>
- Paschal A, Lewis-Moss R, Hsiao T. Perceived fatherhood roles and parenting behaviors among African American teen fathers. *Journal of Adolescent Research*. 2011; 26:61–83.
- Pleck, J.; Masciadrelli, B. Paternal involvement by U.S. residential fathers: Levels, sources and consequences. In: Lamb, ME., editor. *The role of the father in child development*. 4th ed. Wiley; Hoboken, NJ: 2004. p. 222–271.
- Roggman L, Boyce L, Cook G, Cook J. Getting dads involved: Predictors of father involvement in early head start and with their children. *Infant Mental Health Journal*. 2002; 23:62–78.
- Taylor EM, Behets FM, Schenbach VJ, Miller WC, Doherty IA, Adimora AA. Coparenting and sexual partner concurrency among White, Black, and Hispanic men in the United States. *Sexually Transmitted Diseases*. 2011; 38:293–299. [PubMed: 21042233]
- West, M.; Konner, M. The role of the father: An anthropological perspective. In: Lamb, ME., editor. *The role of the father in child development*. 2nd ed. Wiley; New York, NY: 1981. p. 155–186.

- White, V.; Greene, M.; Murphy, E. Men and reproductive health programs: Influencing gender norms (Final report). Synergy Project, Social & Scientific Systems; Washington, DC: Dec. 2003
- Wolfe Morrison E. Newcomer's relationships: The role of social network ties during socialization. *Academy of Management Journal*. 2002; 45:1149–1160.

Figure 1.

Networks of a father who has high sexual risk and is less involved

Note. (A) A structural example of a network with density = 1.00. (B) Gender of network members: orange dots are males, black dots are females. (C) Descriptive sexual norm of whether each network member has casual partners: “Rarely” (green), “Sometimes” (yellow), or “Frequently” (red). (D) Injunctive sexual norm of how often network members have encouraged the father to use condoms: “Sometimes” (orange) and “Frequently” (black).

Figure 2.

Networks of a father who has low sexual risk and is more involved

Note. (A) A structural example of a network with density = 0.30. (B) Gender of network members: orange dots are males, black dots are females. (C) Descriptive sexual norm of whether each network member has casual partners: "Never" (green), "Rarely" (yellow), or "Frequently" (red). (D) Injunctive sexual norm of how often network members have encouraged the father drink or use drugs; the father responded "Never" for all network members.

Figure 3.

Association of high-risk sexual behaviors and fatherhood involvement

Note. Pearson $\chi^2 = 8.24$; $p = .004$.

Figure 4.

Association of high sexual risk behaviors and time spent with child

Note. Pearson $\chi^2 = 2.95$; $p = .087$.

Figure 5.

Association of fatherhood involvement and low time spent with child

Note. Pearson $\chi^2 = 15.07$; $p < .001$.

Table 1Sample Characteristics (*N* = 52)

	<i>M (SD)</i>
Age (years)	30.19 (10.66)
Race	<i>n (%)</i>
Black	40 (76.9)
Latino	6 (11.5)
White	2 (3.8)
Other	4 (7.7)
Relationship status	<i>n (%)</i>
Single	21 (40.4)
In a relationship	31 (59.6)
Employment	<i>n (%)</i>
Unemployed	32 (61.5)
Employed	20 (38.5)
Children	<i>n (%)</i>
1	24 (46.2)
2	13 (25.0)
3	9 (17.3)
4	6 (11.5)
No. of mother(s) of babies	<i>n (%)</i>
1	31 (59.6)
2+	21 (40.4)
No. of own children living with	<i>n (%)</i>
0	25 (48.1)
1	17 (32.7)
2	7 (13.5)
3	1 (1.9)
4	2 (3.8)
Education	<i>n (%)</i>
Less than 8 years	1 (1.9)
Some high school	10 (19.2)
High school graduate	25 (48.1)
Some college	14 (26.9)
College graduate	2 (3.8)

	<i>M (SD)</i>		
No. of days seen child in past month	<i>M (SD)</i>		
	18.3 (11.4)		
No. of hours per day spent with child	<i>M (SD)</i>		
	9.8 (7.6)		
Condom use with casual partners in past 6 months	<i>n (%)</i>		
N/A (no casual partners)	26 (50)		
Never	4 (7.7)		
A few times	5 (9.6)		
Sometimes	2 (3.8)		
Most of the time	4 (7.7)		
All the time	11 (21.2)		
No. of partners in whole life	<i>M (SD)</i>		
	33.85 (40.21)		
No. of partners in whole life	<i>n (%)</i>		
1-10	18 (34.6)		
11-20	11 (21.2)		
21-30	4 (7.7)		
31+	19 (36.5)		
No. of partners in past 6 months	<i>M (SD)</i>	Minimum	Maximum
	2.87 (3.87)	0	16
Partner overlap/concurrency	<i>n (%)</i>		
No	12 (48)		
Yes	12 (48)		
Don't know	1 (4)		
N/A (reported 1 or 0 partner in past 6 months)	27		
Transfer of information			
No. of friends talked to about condoms	<i>n (%)</i>		
0	19 (36.5)		
1	6 (11.5)		
2	9 (17.3)		
3	6 (11.5)		

	<i>M (SD)</i>		
4	12 (23.1)		
Network Characteristics			
Network Size	<i>M (SD)</i>	Minimum	Maximum
	4.7 (3.68)	1.0	20.00
Male			
	0.70 (0.25)		
Female			
	0.30 (0.25)		
Relation			
	% (<i>SD</i>)		
Family	24 (0.24)		
Work	12 (0.20)		
School	9 (0.16)		
Other	31 (.29)		
Age of alters			
	29.04 (8.43)		
Talk about parenting issues			
	% (<i>SD</i>)		
Frequently	19 (.21)		
Sometimes	29 (.25)		
Rarely	22 (.21)		
Never	30 (.29)		
Communication			
	% (<i>SD</i>)		
Call	34 (0.27)		
In person	45 (0.32)		
Text	11 (0.18)		
E-mail	4 (0.12)		
Other	5 (0.13)		
Percentage of network who are parents			
	53 (.27)		
Percentage of network paternal involvement			
	% (<i>SD</i>)		
Very involved	40 (0.26)		
Somewhat involved	13 (0.20)		
Not at all involved	8 (0.15)		

	<i>M (SD)</i>
Closeness to network members	% (<i>SD</i>)
Very close	52 (.34)
Close	24 (.22)
Somewhat close	17 (.22)
Not very close	6 (.11)
Not at all Close	2 (.06)
Proportion of network that never uses condoms	<i>n</i> (%)
0	26 (50.0)
0.20 (1/5)	16 (30.8)
0.40 (2/5)	4 (7.7)
0.60 (3/5)	3 (5.8)
0.80 (4/5)	2 (3.8)
1.00 (5/5)	1 (1.9)
Proportion of network that always uses condoms	<i>n</i> (%)
0	14 (26.9)
0.20 (1/5)	14 (26.9)
0.40 (2/5)	9 (17.3)
0.60 (3/5)	3 (5.8)
0.80 (4/5)	5 (9.6)
1.00 (5/5)	7 (13.5)
Network density	<i>M (SD)</i>
	0.60 (0.35)
Network degree centrality	<i>M (SD)</i>
	36.22 (41.05)
Network closeness	<i>M (SD)</i>
	47.53 (71.85)

Table 2

Correlations of Structural Network Measures and Peer Norms

	Network Density	Network Degree Centrality	Network Closeness	Count of Dyads
Injunctive sexual norms: Proportion of network that frequently				
Tried to get you to drink or use drugs	.27 *	-.13	-.02	-.11
Tried to get you to go out to clubs/bars	.11	-.20	-.13	-.13
Helped you pick up women	.30 *	-.26	-.05	-.11
Encouraged you to use condoms	.13	-.05	-.01	-.08
Encouraged you to cheat on a partner	.29 *	-.15	-.12	-.04
Descriptive sexual and fatherhood norms: Proportion of network that				
Always uses condoms	.04	-.13	-.10	.10
Frequently has casual sexual partners	.15	-.11	-.18	-.01
Is very involved in their child's life	-.04	.07	.17	.19
Transfer of information: Proportion of network that				
Frequently talks about parenting issues	-.02	-.12	-.03	.03
Frequently talks about involvement in raising children	.01	-.17	.01	.06
Talks about condoms	-.05	-.02	.17	-.02

*
 $p < .05$.

Table 3

Comparison of Sample by Sexual Risk Behavior

	Low sexual risk (<i>n</i> = 20)	High sexual risk (<i>n</i> = 32)	<i>p</i> ^a
<i>Demographics</i>			
Age in years; <i>M</i> (<i>SD</i>)	31.00 (12.29)	29.69 (9.67)	.688
Race; <i>n</i> (%)			.076
Black	14 (70)	26 (81)	
Latino	5 (25)	1 (3)	
White	0 (0)	2 (6)	
Other	1 (5)	3 (9)	
Education; <i>n</i> (%)			.518
Less than 8 years	1 (5)	0 (0)	
Some high school	3 (15)	7 (22)	
High school graduate	8 (40)	17 (53)	
Some college	7 (35)	7 (22)	
College graduate	1 (5)	1 (3)	
Employment; <i>n</i> (%)			.860
Unemployed	12 (60)	20 (63)	
Employed	8 (40)	12 (38)	
Relationship status; <i>n</i> (%)			.228
Single	6 (30)	15 (47)	
In a relationship	14 (70)	17 (53)	
No. of partners in life; <i>M</i> (<i>SD</i>)			
	24.05 (26.17)	39.97 (46.26)	.120
No. of children; <i>M</i> (<i>SD</i>)			.097
	2.25 (1.21)	1.75 (0.92)	
No. of mother(s) of babies; <i>n</i> (%)			.964
1	12 (60)	19 (59)	
2+	8 (40)	13 (41)	
<i>Network characteristics</i>			
% of network, Male; % (<i>SD</i>)	77 (22)	65 (26)	.102
% of network, length of relationship; % (<i>SD</i>)			
<1 year	7 (12)	12 (18)	.347
1-2 years	8 (12)	19 (19)	.027
>2 years	85 (20)	69 (25)	.029
% of network, parent; % (<i>SD</i>)	55 (34)	51 (23)	.997
% of network, very involved in raising their kids; % (<i>SD</i>)	41 (31)	39 (24)	.908
% of network ever encouraged condom use; % (<i>SD</i>)	57 (38)	65 (34)	.671
% of network ever encouraged you to cheat on a partner; % (<i>SD</i>)	11 (21)	25 (29)	.089
% of network, ever tried to get you to go out to clubs/bars; % (<i>SD</i>)	38 (30)	50 (35)	.235
% of network, ever tried to get you to drink or use drugs; % (<i>SD</i>)	13 (25)	40 (37)	.009
% of network, ever talk about parental involvement; % (<i>SD</i>)	69 (33)	76 (29)	.491

	Low sexual risk (<i>n</i> = 20)	High sexual risk (<i>n</i> = 32)	<i>p</i> ^a
% of network, ever talk about parenting issues; % (<i>SD</i>)	73 (29)	67 (29)	.356
Sexual risk of network (proportion of network); <i>M</i> (<i>SD</i>)			
Proportion of network has had two or more partners in the past year	0.27 (0.21)	0.45 (0.31)	.013
Casual partners (frequently)	0.04 (0.08)	0.12 (0.21)	.149
Ever cheated on a partner	0.77 (0.26)	0.65 (0.26)	.098
Condom use (never)	0.21 (0.33)	0.16 (0.17)	.716
Condom use (always)	0.40 (0.37)	0.35 (0.34)	.310
Network measures; <i>M</i> (<i>SD</i>)			
Network density	0.60 (0.32)	0.60 (0.37)	.776
Network closeness	57.56 (66.29)	47.59 (86.94)	.723
Network degree centrality	44.17 (44.68)	31.3 (38.51)	.378
Network size	5.40 (4.79)	4.28 (2.77)	.046
Count of isolates	0.75 (1.29)	1.09 (1.84)	.319
Count of dyads	0.25 (0.64)	0.00 (0.00)	.052

^a *p* value is for *t* test (continuous variables) or χ^2 test (categorical variables). All analyses except demographics controlled for age, relationship status, and residential status. *p* values .1 are given in boldface.

Table 4**Comparison of Sample by Fatherhood Involvement (Child-Rearing Activities)**

	Less involved (<i>n</i> = 17)	More involved (<i>n</i> = 17)	<i>p</i>^a
<i>Demographics</i>			
Age in years; <i>M</i> (<i>SD</i>)	27.47 (10.12)	25.71 (6.93)	.557
Race; <i>n</i> (%)			.050
Black	14 (82)	14 (82)	
Latino	0	3 (18)	
White	0	0	
Other	3 (18)	0	
Education; <i>n</i> (%)			.039
Less than 8 years	1 (6)	0	
Some high school	5 (29)	1 (6)	
High school graduate	9 (53)	7 (41)	
Some college	2 (12)	9 (53)	
College graduate	0	0	
Employment; <i>n</i> (%)			.067
Unemployed	14 (82)	9 (52)	
Employed	3 (18)	8 (47)	
Relationship status; <i>n</i> (%)			.163
Single	9 (53)	5 (29)	
In a relationship	8 (47)	12 (71)	
No. of partners in life; <i>M</i> (<i>SD</i>)	28.53 (40.18)	37.94 (43.81)	.519
No. of children; <i>M</i> (<i>SD</i>)	1.71 (0.99)	2.00 (1.27)	.457
No. of mother(s) of babies; <i>n</i> (%)			.724
1	10 (59)	11 (65)	
2+	7 (41)	6 (35)	
<i>Network characteristics</i>			
% of network, male; % (<i>SD</i>)	59 (27)	73 (23)	.083
% of network, length of relationship; % (<i>SD</i>)			
<1 year	12 (19)	7 (14)	.518
1-2 years	18 (17)	13 (16)	.160
>2 years	71 (26)	80 (23)	.159
% of network, parent; % (<i>SD</i>)	51 (27)	48 (30)	.851
% of network, very involved in raising their kids; % (<i>SD</i>)	31 (22)	48 (27)	.039
% of network, ever encouraged you to use condoms; % (<i>SD</i>)	71 (33)	65 (32)	.557
% of network, ever encouraged you to cheat on a partner; % (<i>SD</i>)	29 (29)	13 (21)	.159
% of network, ever tried to get you to go out to clubs/bars; % (<i>SD</i>)	60 (32)	51 (31)	.330
% of network, ever tried to get you to drink or use drugs; % (<i>SD</i>)	51 (37)	16 (27)	.033
% of network, ever talk about parental involvement; % (<i>SD</i>)	80 (0.24)	72 (0.37)	.455
% of network, ever talk about parenting issues; % (<i>SD</i>)	80 (0.23)	66 (0.31)	.316
Sexual risk of network; <i>M</i> (<i>SD</i>)			

	Less involved (<i>n</i> = 17)	More involved (<i>n</i> = 17)	<i>p</i> ^a
Two or more partners in past year	0.51 (0.30)	0.28 (0.25)	.006
Casual partners (frequently)	0.07 (0.12)	0.14 (0.24)	.071
Condom use (never)	0.12 (0.17)	0.13 (0.21)	.526
Condom use (always)	0.39 (0.36)	0.42 (0.38)	.120
Network measures; <i>M</i> (<i>SD</i>)			
Network density	0.65 (0.38)	0.53 (0.39)	.999
Network closeness	30.72 (48.75)	46.61 (58.05)	.639
Network degree centrality	29.4 (42.30)	32.4 (40.60)	.559
Network size	3.47 (2.34)	4.94 (3.47)	.056
Count of isolates	0.88 (1.69)	1.4 (2.12)	.870
Count of dyads	0.12 (0.49)	0.00 (0.00)	.866

^a *p* value is for *t* test (continuous variables) or χ^2 test (categorical variables). All analyses except demographics controlled for age, relationship status, and residential status. *p* values .1 are given in boldface.