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## Relationship Satisfaction and Communication Among Urban Minority HIV-Positive and HIV-Negative Mothers: The Influence on Daughter's Alcohol Use

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### Abstract

Family relationships influence children's beliefs and behaviors. This work examined qualities associated with communication about alcohol among 176 mothers and the influence of this communication on daughters' alcohol use. Path analyses by maternal HIV status indicated significant differences. Relationship satisfaction was associated with self-efficacy for both HIV-positive ( $\beta = 0.545, p < .001$ ) and HIV-negative ( $\beta = 0.557, p < .001$ ) mothers. Maternal self-efficacy was associated with communication for both HIV-positive ( $\beta = 0.364, p < .01$ ) and HIV-negative ( $\beta = 0.310, p < .05$ ) mothers; maternal attitudes toward alcohol use were associated with communication among HIV-negative mothers ( $\beta = 0.20, p < .05$ ). Relationship satisfaction was indirectly related to daughter's alcohol use in HIV-positive dyads ( $\beta = 0.153, p < .05$ ). In families with interfamilial and environmental stressors, investing in the mother–daughter relationship, in part by discussing issues related to alcohol use, is protective in nature.

### Keywords

alcohol communication; relationship satisfaction; HIV-affected families; family environment

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Health-related behaviors are often understood as a function of individual choice, thereby excluding the influence of partners and families on a range of behaviors (Hutchinson & Wood, 2007). This limited perspective has resulted in an incomplete understanding of risky behaviors and may isolate individuals instead of promoting the effective use of family as a resource for information and skills. Individual adolescents are nested within multilevel systems (Bronfenbrenner, 1979; Hutchinson & Wood, 2007); adolescent behaviors take place in complex environments influenced by family, community, and the larger society.

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The interactions within these systems shape the alcohol behaviors of adolescents. The more proximal (and direct) a process is to an individual, the more influential it is likely to be (Bronfenbrenner, 1979). Family factors are more strongly associated with adolescent behavior than are distal factors (e.g., media); families are instrumental in meeting the developmental needs of children and adolescents. Family communication provides the foundation through which children acquire skills and competencies related to substance use negotiation (Miller-Day, 2002); parent–child communication about alcohol and parent–child relationship satisfaction are therefore considered critical in managing adolescent substance use (Liddle et al., 2001; Miller-Day, 2002; van der Vorst, Burk, & Engels, 2010). However, among vulnerable families (i.e., living in high-risk environments, HIV-affected, etc.), intrafamilial and environmental stressors may impede parental influence behaviors. While several studies have examined the influence of parental alcohol communication on adolescents' alcohol use behavior (Luk, Farhat, Iannotti, & Simons-Morton, 2010; Martyn et al., 2009; Miller-Day, 2002; Miller-Day & Kam, 2010; Song, Smiler, Wagoner, & Wolfson, 2012; Spijkerman, van den Eijnden, & Huiberts, 2008; van der Vorst et al., 2010), no study was identified that has investigated key factors associated with maternal communication about alcohol. Using an interactive conceptual framework informed by a family expansion of the Theory of Planned Behavior (Hutchinson & Wood, 2007), the purpose of this study is to understand the qualities associated with mother–daughter communication about alcohol. In particular, we explore how maternal attitudes about alcohol use and self-efficacy associate with maternal communication about alcohol, and daughter's reports of alcohol use in the past 30 days for HIV-positive and HIV-negative families. This allows for the identification of components critical to successful parent–child communication about alcohol and provides direction for future family-level interventions that aim to reduce adolescent alcohol use.

### Alcohol Use in Adolescent Girls

Alcohol is the most commonly used substance among adolescent girls in the United States; 74% reported drinking at least once by the end of high school, including 43% who reported drinking during the past month (Centers for Disease Control and Prevention, 2010). Compared with male peers, alcohol has been found to have a qualitatively different effect on adolescent girls both physically and psychologically. Increased rates of alcohol use among girls are associated with risky sexual behavior, accidents, mental health problems, unintended pregnancy, and delinquency (Dauber, Hogue, Paulson, & Leiferman, 2009; Schinke, Cole, & Fang, 2009). While rates of drinking are well established by gender group, fewer studies have focused specifically on teenage girls (Dauber et al., 2009). We do know that once girls start abusing substances, there is a greater likelihood of drug dependency (Schinke et al., 2009).

Extant studies have found that that greater frequency and quality of general parent–child communication are negatively associated with adolescent substance use, and this is especially true for teenage girls (Luk et al., 2010). However, parents often lack the skills or report being uncomfortable with discussing sensitive issues such as alcohol use. There are also differences in communication by child gender; mothers more commonly talk to sons more about alcohol as compared with daughters (van der Vorst et al., 2010). The common

misperception that adolescent girls do not drink as much as boys likely influences frequency and quality of parent–child communication about alcohol use (van der Vorst et al., 2010). This is of particular concern, as family, relative to peer and structurally related factors, are disproportionately associated with substance abuse among adolescent girls (Schinke et al., 2009). While we know African American adolescent girls are more likely to be alcohol abstainers or experimenters (Dauber et al., 2009), adolescents in families experiencing stressors of chronic illness (i.e., HIV infection) may experience increased alcohol use (Brook, Brook, Rubenstone, Zhang, & Finch, 2010; Marelich, Murphy, Payne, Herbeck, & Schuster, 2012; Mellins et al., 2007).

## Parent–Child Relationship Satisfaction and Communication

Parent–child communication is often reported as the most salient family factor in determining alcohol use among adolescent girls (Spijkerman et al., 2008; van der Vorst et al., 2010). However, directionality of outcomes remains inconsistent. The ambiguity of these findings is perhaps an indication that family processes that are protective against adolescent alcohol use are not limited to risk communication. For example, parent–child communication is intimately connected to relationship quality (Finkenauer, Engels, Branje, & Meeus, 2004). Feeling close to one’s parents and being able to share vulnerabilities is associated with children being more receptive to parental influence and communication (Kuntsche & Silbereisen, 2004). Parent–child relationship satisfaction might not only predicate communication but also indicate a greater possibility that the child will perceive this communication as relevant. Stronger bonding with one’s parents may further reflect a greater receptivity to adopting consistent familial norms and values (Hirschi, 1969). As such, a positive parent–child relationship is critical to the development of a strong self-concept and consequently to the prevention of alcohol problems (Kuendig & Kuntsche, 2006). Furthermore, greater connectedness may result in increased parental communication self-efficacy, which is important for actual parent–child communication. However, even with high amounts of parent–child relationship satisfaction, other mediating factors might also influence the quality and effectiveness of parent–child communication. For example, even in cases where an adult reports a high level of parent–child connectedness, if a parent smokes or drinks he/she might be reluctant to engage in alcohol-specific communication. Parents also serve as behavioral role models; as such, if parents drink, their children are more likely to drink (Latendresse et al., 2008).

## Familial HIV

HIV-positive parents face several issues, some unique to having HIV/AIDS. These include fear, physical symptoms, disclosure to children and social networks, and depression (Armistead, Tannenbaum, Forehand, Morse, & Morse, 2001; Brackis-Cott, Mellins, & Block, 2003; Lee & Rotheram-Borus, 2002). Although literature suggests that disclosure of a chronic illness lowers anxiety levels of children and increases communication within the family disclosure of HIV infection can be associated with a great deal of stress and anxiety (Brackis-Cott et al., 2003; Lee & Rotheram-Borus, 2002; Schrimshaw & Siegel, 2002). Disclosure can provoke emotional reactions including anger, sorrow, and worry (Serovich, Kimberly, & Greene, 1998) or, conversely, improve the parent–child relationship (Marcenko

& Samost, 1999; Tompkins, Henker, Whalen, Axelrod, & Comer, 1999). For example, disclosure is closely linked to stigma. Because of the internal and external stigmatization (Lichtenstein, Laska, Clair, 2002; Rao, Pryor, Gaddist, & Mayer, 2008), parents are often request that their status remain a family secret. Children who hide parental HIV from others report experiences of stress, loneliness, and lack of support outside the immediate family (Bogart et al., 2008).

Because of this, children in families living with HIV are more likely to experience role changes, caretaking, and premature parentification. Roles undergo frequent changes as parents' abilities to perform certain functions fluctuate; these roles are often reconfigured to compensate for, and to respond to, a family member's illness (Fair, Spencer, Wiener, & Riekert, 1995). Children of HIV-positive parents are more likely than their peers to report adopting parental roles including parenting siblings (Tompkins, 2007; Witte & de Ridder, 1999), parenting parents (Bauman et al., 2006), and performing more adult responsibilities (Tompkins, 2007). While some report early parentification in children of HIV-positive parents as predicting externalized problem behaviors (i.e., substance use among others; Burton, 2007; Sang, Cederbaum, & Hurlburt, in press; Stein, Riedel, & Rotheram-Borus, 1999), others report no significant correlation between parentification and maladaptive behaviors (Murphy, Greenwell, Resell, Brecht, & Schuster, 2008; Stein, Rotheram-Borus, & Lester, 2007; Tompkins, 2007). While inconclusive, these role stresses may place children of HIV-positive parents at greater risk for engagement in risk behaviors like alcohol use (Chabon, Futterman, & Hoffman, 2001).

## Theoretical Framework

The Theory of Planned Behavior provides a structure for researchers to understand attitudes toward behavior. The theory posits that behavioral intentions (viewed as the immediate antecedents to behavior) are a function of salient information or beliefs about the likelihood that performing the behavior will lead to a specific outcome (Fishbein & Ajzen, 1975; Madden, Ellen, & Ajzen, 1992). However, as their actions relate to alcohol use (and other risk behaviors), adolescents are nested within multilevel systems (Bronfenbrenner, 1979). Their behaviors are influenced by interactions within the dyad (partner system), the family, community, and larger society, as well as the interactions among and between these various systems (Hutchinson & Wood, 2007). Therefore, an expanded model of individual behavior is best suited for understanding the individual factors that influence alcohol use. This family expansion of the Theory of Planned Behavior (Hutchinson & Wood, 2007) allows for the researcher to conceptualize how parental influences may affect parenting influence behaviors (e.g., communication) and how these parental behaviors can act as an external influence on alcohol use among adolescents. As noted by Hutchinson and Wood (2007), including parental influences is consistent with the ecological view (parents being one of the proximal external influences on adolescent behaviors). This model accommodates the influences on, and behaviors of, both parents and youth, helping elucidate the interactions between the two. Two constructs from the Theory of Planned Behavior, and the expanded model, important to these analyses are behavioral beliefs (which we call attitudes) and control beliefs (which we label as self-efficacy). A description of these variables is below.

Behavioral beliefs are best understood as positive or negative attitudes toward performing a specific behavior (Ajzen, 2002). Attitudes are based on an individual's beliefs about performing the behavior, weighted by his/her evaluation of the consequences of performing or abstaining from the behavior (Fishbein & Ajzen, 1975). These attitudes are thought to have a direct effect on behavioral intentions. Control beliefs (perceived behavioral control) is the degree to which a person feels the choice to either perform or abstain from a behavior is under their control. The concept of perceived behavioral control emerges from Bandura's (1986) work on self-efficacy, which is defined as a person's beliefs about his/her ability to produce designated levels of performance (Bandura, 1994). Self-efficacy can determine how a person thinks, motivates, and behaves. Defined generally, self-efficacy and perceived behavioral control appear to differ. Self-efficacy, however, is defined as the belief that one can successfully accomplish a behavior required to perform an act (Bandura, 1998), a definition that is consistent with the definition for perceived behavioral control, which refers to an individual's belief in their capability to organize and execute a behavior (Ajzen, 2002). Thus, control belief (perceived behavioral control) encompasses confidence in one's ability to carry out a specific behavior.

## Summary

Although there is a growing body of research on the influence of parental factors on adolescents' engagement in different risk behaviors, very few have investigated these processes among HIV-positive mothers with HIV-negative children (Cederbaum, 2012; Cederbaum, Hutchinson, Duan, & Jemmott, 2013; Mellins et al., 2007). Perhaps the social contexts within which these families reside (greater exposure to high poverty, greater HIV seroprevalence, and higher rates of substance abuse and family disruption) place these youth at a higher probability of engaging in risky behaviors (Mellins et al., 2007). Although previous work explored substance use among children of HIV-affected mothers has largely recruited only families with an HIV-positive mother (Mellins et al., 2007; Rosenblum et al., 2005), in this study we are able to examine the contextual influence of HIV status by comparing HIV-infected with HIV-negative mother-daughter dyads. The proposed research utilizes Hutchinson and Wood's (2007) family extension of the Theory of Planned Behavior. This interactive framework accommodates the influences on, and behaviors of, both parents and youth, helping elucidate the interactions between the two. Specifically, the extent to which maternal perception of the mother-daughter relationship and maternal attitudes about alcohol use and self-efficacy about alcohol communication affect the ability to communicate with daughters about alcohol. Based on this research question, we proposed the following three hypotheses: (1) relationship satisfaction will be positively associated with maternal attitudes about alcohol use and self-efficacy about alcohol communication, (2) relationship satisfaction will be associated with maternal alcohol communication, and (3) relationship satisfaction will be indirectly associated with daughter' alcohol use in the past 30 days through the role of maternal attitudes about alcohol use, communication self-efficacy, and actual maternal communication. Differences between HIV-positive and HIV-negative families are expected, but this part of the analysis is only exploratory given the inconclusive findings of other noted above.

## Method

Data for these analyses were collected via a self-administered survey; non-probability sampling was employed. Adult participants were recruited through service organizations and health providers in Philadelphia, PA, Newark, NJ, and New York City from July 2008 to June 2009. These data were compiled as part of a larger study examining maternal HIV status, mother–daughter sexual risk communication, monitoring, and role-modeling and adolescent HIV-related intentions and behaviors (Cederbaum et al., 2013). In this study, we utilize maternal background demographic variables, maternal reports of attitudes about alcohol use and self-efficacy about alcohol communication, and maternal report of communication regarding alcohol. Data on daughter's 30-day alcohol use were collected from the adolescent daughter who participated with the identified mother in the study. Study approval was provided by the institutional review boards at the University of Pennsylvania and University of Southern California.

### Sample and Sampling Procedures

As part of the main study, a sample of HIV-positive and HIV-negative mother–daughter dyads was recruited using flyers, with follow-up by agency practitioners. The convenience sample was accessed through 11 community-based organizations and health centers. Inclusion criteria for adult women were (a) a diagnosis of symptomatic HIV, AIDS, or HIV-negative; (b) self-identify as African American or Hispanic; (c) coresidence at least 50% of the time with a HIV-negative daughter between the ages of 14 and 18 who is aware of the mother's HIV status; and (4) English speaking. When the adult reported having multiple daughters within the inclusion age, the adolescent closest in age to 16 (in months) was selected to participate. Monolingual Spanish speakers were excluded from the study for a couple of reasons. First, this study took place in the Northeast where African American women make up the vast majority of HIV cases among women (Pennsylvania Department of Public Health, 2010; State of New Jersey Department of Health, 2011). We ended up including Hispanic woman with support of a second grant to meet the request of agencies which felt that limiting recruitment to African American women only (as funded by the first grant) was exclusionary. All Hispanic women participants were either of Puerto Rican or Dominican descent. Second, in addition to the make-up of the population we were recruiting from, any differences in the level of acculturation captured by non-English speakers in a sample of this size would not have been possible to control for and was outside of the scope of the funding.

Adult participants provided written consent for themselves and their daughters; minor participants provided assent. Individuals were compensated for their participation (\$20 for mothers and \$15 for daughters). The final sample included 176 mothers (see Table 1); 37% of the sample ( $n = 65$ ) were HIV-positive mothers. The mean age for mothers was 40.89 years. The majority of the women self-identified as African American (86.3%), all other women as Hispanic (non-Black). Nearly 65% of the mothers were high school graduates, and 47% were currently employed. Adolescent daughters' mean age was 15.8 years.

## Instrumentation

Along with demographic questions, the survey instrument was composed of scales previously validated with urban adult women and adolescents (Jemmott & Jemmott, 1991; O'Leary, Jemmott, & Jemmott, 2008). The questionnaires were completed individually by each mother and daughter. This was done separately but simultaneously. Surveys were completed either at the recruitment site or in participants' homes (depending on individual preference). To reduce memory problems, respondents were asked to remember specific behaviors during a relatively brief period (3 months) (Jemmott, Jemmott, Braverman, & Fong, 2005).

## Measures

Our main independent variable, relationship satisfaction, was measured using an 11-item scale (Jaccard, Dittus, & Gordon, 1998; Landesman & Jaccard, 1986). Relationship satisfaction includes maternal beliefs about time spent together with daughter, communication, conflict resolution, emotional support, and fun. Internal reliability for this measure was  $\alpha = .94$ . Maternal attitudes about alcohol use role modeling were assessed by responses to the statement, "I believe that drinking in front of my daughter is [blank]" (1 = *never OK* to 5 = *always OK*). Maternal alcohol communication self-efficacy was measured by asking, "How easy or hard is it for you to talk to your daughter about not using alcohol or drugs" (1 = *very hard* to 5 = *very easy*). Actual communication was modeled after the Parent-Teen Sexual Risk Communication Scale (Hutchinson, 2007). Respondents were asked, "How much information did you share with your daughter about how important it is to NOT use drugs or alcohol." Answers ranged on a 5-point scale from 1 = *nothing* to 5 = *everything*. The use of single-item measures is "quite common and consistent" with the Theory of Planned Behavior constructs (Courneya & Friedenreich, 1999, p. 116; see also Flewelling & Bauman, 1990; Kavanaugh & Schwartz, 2009). Our outcome of interest, adolescent alcohol use, was asked of daughters (the only item asked of the child and not the mother). Specifically, adolescents were asked, "Have you drunk alcohol in the past 30 days?" Because of the known correlates between depressive symptoms and alcohol use (Katon et al., 2010; Marmorstein, 2009) and the increased stress that living in an HIV-infected family can have, we also controlled for (along with demographics) daughter's depressive symptoms using the short version of the Center for Epidemiologic Studies Depression Scale (Lorig, Sobel, Ritter, Laurent, & Hobbs, 2001). The 10 items are asked about how the individual has felt or behaved in the past week (7 days) rated on a scale from 0 to 3 with answers as follows: (0) *rarely or none of the time* (less than 1 day); (1) *some or a little of the time* (1–2 days); (2) *occasionally or a moderate amount of time* (3–4 days); and (3) *all of the time* (5–7 days). The observed range of the 10-items are 1 to 30 (mean score 12.9). Internal reliability is .84 (Lorig et al., 2001); reliability of the measure among adolescent girls in this study was  $\alpha = .818$ .

## Analytical Approach

Using Mplus 5.0 (Muthén & Muthén, 1998), we examined the direct and indirect associations of relationship satisfaction on maternal behavioral and self-efficacy, as well as communication about alcohol use. We specified a path analysis with two simultaneous

models—HIV-positive and HIV-negative mothers. We accounted in these models for the expected high correlation of measures of daughters and their mothers using the “Cluster” specification. In an attempt to understand indirect relationships between mother–daughter relationship satisfaction and daughter’s alcohol use, we specified the path analysis in two steps conducted simultaneously. In the first step, we tested our first two hypotheses. In Hypothesis 1, we examined the extent to which relationship satisfaction was directly related to maternal attitudes about alcohol use and self-efficacy (ease of communication about alcohol). In Hypothesis 2, we examined the extent to which relationship satisfaction was directly related to maternal communication. In the second step, we tested Hypothesis 3. This hypothesis proposed an indirect relationship between relationship satisfaction and daughters’ alcohol use through the role of attitudes about alcohol use, alcohol communication self-efficacy, and actual communication mentioned above.

Optimal full information maximum likelihood was used to address missing data (Cheung, 2007). Model fit was estimated using chi-square ( $\chi^2$ ), the comparative fit index (CFI; Bentler 1990), and the root mean square error of approximation (RMSEA). As conventional indicators of good fit, we used CFI > .90 and RMSEA < .05, and the estimator used in this analysis was the mean and variance adjusted chi-square test of model fit (Hu & Bentler, 1999). To capture comprehensive patterns in the data, we developed the initial model by testing for specific or nonstandard paths guided by the Lagrangian multiplier tests (Chou & Bentler, 1990). To improve model fit and account for robust relationships highlighted in the literature, the final model included correlated relationships between daughter’s age and alcohol use and attitudes and self-efficacy (Spijkerman et al., 2008; van der Vorst et al., 2010).

## Results

Correlations, means, standard deviations, and ranges were assessed for all variables. For HIV-positive and HIV-negative mothers, self-efficacy accounted for 30% and 31% of the variance, respectively.

In addition, communication accounted for 29% of the model in the HIV group only. The simultaneous multigroup model with HIV-positive and HIV-negative dyads explained 31% and 60% of the variance, respectively ( $\chi^2 = 24.441$ ,  $df = 22$ ,  $p = .324$ ; RMSEA = .036; CFI = .976; see Table 2). Path analyses are depicted in Figures 1 and 2 as this is a two-model analysis (HIV-positive and HIV-negative mothers).

Hypothesis 1 was partially supported. We posited that relationship satisfaction would be positively associated with maternal attitudes and self-efficacy about alcohol communication. Mother–daughter relationship satisfaction was only associated with alcohol communication self-efficacy. This relationship was statistically significant for both HIV-positive ( $\beta = .545$ ,  $p < .001$ ) and HIV-negative ( $\beta = 0.557$ ,  $p < .001$ ) mothers, supporting Hypothesis 1. Relationship satisfaction did not influence mothers’ attitudes. Mother–daughter relationship’s influence on actual alcohol communication trended toward significant but only for HIV infected families.



We found limited support for Hypothesis 2, in which we posited that relationship satisfaction would be associated with maternal alcohol communication. This relationship was only found in the HIV-positive mother–daughter dyads and merely trended toward significance ( $\beta = 0.216, p < .10$ ). Partial support was found for Hypothesis 3, where we theorized that relationship satisfaction will be indirectly associated with daughter’ alcohol use in the past 30 days through the role of maternal attitudes, self-efficacy, and maternal communication. Relationship satisfaction was indirectly associated with daughter’s alcohol use only among HIV-positive dyads ( $\beta = 0.153, p < .05$ ).

## Discussion

This work sought to understand the maternal factors associated with mother–daughter communication about alcohol use, as well as actual alcohol use among adolescent girls in HIV-positive and HIV-negative families. For both groups, relationship satisfaction was the most important influence on ease of maternal alcohol communication. This finding supports the work of others (see review by Markham et al., 2010) who note the importance of family connectedness in reducing adolescent risk taking. While this concept may seem simple, in families with multiple interfamilial and environmental stressors, quality mother–daughters relationships may be difficult. Importantly, relationship satisfaction influenced maternal self-efficacy about alcohol communication with daughters. Self-efficacy can determine how a person thinks, motivates, and behaves, and encompasses confidence in one’s ability to carry out a specific behavior (Ajzen, 2002). As such, it is an important precursor to actual communication. Although many parents may believe that this type of communication is important, they do not always have the knowledge and skills to engage their children in risk behavior communication.

Here we see that mothers’ investment in their relationship with their daughter’s, through communication about alcohol was associated with positive outcomes: less alcohol use. While self-efficacy was significant for both groups, the models presented here highlight that the conceptual model was a better fit for HIV-infected families. While for HIV-negative family only 31% of the model variance is explained, for HIV-positive families, this model explains 60% of the variance. This finding highlights the increased importance of examining the factors that influence maternal alcohol communication in HIV-infected families. For HIV-infected families, relationship satisfaction, ease of communication, and communication all significantly influenced adolescent alcohol use. This may be because of HIV status disclosure (requirement for this study). Mellins et al. (2007) found that while HIV status alone was not predictive of alcohol use, knowledge of mother’s status was.

HIV-positive parents have been found to communicate more often about risk topics and express greater comfort doing so (O’Sullivan, Dolezal, Brackis-Cott, Traeger, & Mellins, 2005). As compared with HIV-negative mothers, HIV-positive mothers may feel more comfortable discussing alcohol use with their children. O’Sullivan et al. (2005) found children of HIV-positive mothers reported greater comfort discussing drug-related topics than their peers with HIV-negative parents. Triggers include their own experiences with drug and alcohol abuse that is often linked to their HIV exposure. Because of this, HIV-positive mothers express a deep sense of responsibility for risk reduction communication,

including the importance of openness and sharing their lived experiences (Cederbaum, 2012), which may explain the findings here. Communication among this group, therefore, may be less predicted by beliefs, but rather triggered by experiences. However, this may not be the case for all HIV-infected families. Although communication may increase with HIV-diagnosis, Faithful (1997) found that the imminence of death made it difficult for HIV-positive women to set limits for their children. Unresolved grief also contributed to their failure to take responsibility for their children's behavior and compromised their ability to discipline the children (Faithful, 1997). To that end, it is important that future work account for the experiences of mothers in best understanding their prompts for alcohol communication; helping women explore their experiences, and how these experiences influence their beliefs, may help increase the likelihood of alcohol-related communication with children.

Overall, these findings contribute to the literature on how mothers can influence the risk engagement of their children. While like previous work we did not find a direct effect of parental communication on adolescent alcohol use (Jackson, Henriksen, & Dickenson, 1999), particularly adolescent females (Luk et al., 2010; van der Vorst et al., 2010), relationship quality, as noted by others (Kuntsche, van der Vorst, & Engels, 2009; Martyn et al., 2009; Morrison Gutman, Eccles, Peck, & Malanchuk, 2010) was an important influence on behavior. This work contributes uniquely to the literature by highlighting model fit for HIV-positive, as compared with HIV-negative families, noting specifically the suppressing effects of including both groups in one model. By separating our analysis by serostatus, we found that the model was only a moderate fit for HIV-negative dyads while, in contrast, significantly predictive of the experiences of HIV-infected dyads. This is an important methodological finding in examining differences within special populations.

Based on the findings in these analyses, continued work to understand the factors that influence maternal communication behaviors are needed. Others have noted that there are important differences in parenting behaviors by ethnicity, behaviors that may place minority adolescents at greater risk for a number of negative outcomes (Perrino, Gonzalez-Soldevilla, Pantin, & Szapocznik, 2000). Minority parents are found to communicate less with their adolescents about sensitive issues such as substance use and sexuality (Baumeister, Flores, & Marin, 1995). Particularly, while there has been extant work on the content of family communication (i.e., topics discussed), very few studies have looked at the process through which such communication takes place, especially within the context of African American and Hispanic familial and cultural traditions (Pluhar & Kuriloff, 2004). For example, Pluhar and Kuriloff (2004) found that among African American families, risk communication tended to focus on storytelling and might indicate a unique cultural tradition in the process of adolescent socialization. Among Hispanic families, prior research has found that parents prefer to utilize more indirect communication strategies, such as discussing the hazards of risky behaviors when their children are within a hearing shot instead of directly broaching the topic with their children (Rafaelli & Green, 2003). Therefore, the cultural process of risk communication and the barriers that parents might face in initiating these discussions is an issue that needs further exploration.

## Limitations

While the findings of this study contribute to our understanding of the factors that influence mother–daughter alcohol communication and adolescent alcohol use, there are limitations. Our sample was limited to a self-selected sample of 176 mother–daughter dyads. Participants were fairly homogeneous, coming from low-income urban communities. Second, we note that all measures were from the perspective of mothers (except for actual alcohol use); this lends to potential underreporting or overreporting of maternal influence behaviors. We acknowledge that some of our measures (i.e., maternal attitudes and self-efficacy) relied on one survey item to measure a complex issue. However, other studies have relied on similar measures showing robust preliminary results (Courneya & Friedenreich, 1999; Flewelling & Bauman, 1990; Kavanaugh & Schwartz, 2009). Not having data on timing of communication, frequency of communication, or age of first communication is another limitation that will be important to explore in future work. Finally, while we proposed a path analysis to understand direct and indirect relationships, we did not intend to test or extend our findings to causal or time specific relationships given our cross-sectional data.

## Conclusion

This study is unique in that it is believed to be the first to examine the factors that influence maternal communication about alcohol use with their adolescent daughters and the influence of these variables on daughter’s actual use of alcohol. While, except for daughter’s reports of alcohol use, we present only data from mothers here because of our desire to understand the factors that influence mother–daughter communication about alcohol, mother–daughter data from hard-to-access populations like low-income urban Black and Hispanic HIV-positive and HIV-negative women are distinctive. The participation of these groups in studies provides insight into their unique needs and gains knowledge from groups at increased risk for negative outcomes from alcohol use. More specifically, findings from this study provide useful direction for preventing alcohol use among adolescents living in high-risk urban environments. Mothers need help creating opportunities to talk with their daughters about alcohol and other drug use (through maximizing the number of opportunities a child has to communicate with her mother about alcohol use) and to teach their daughters negotiation skills to abstain from alcohol. This may be difficult particularly among parent–child dyads that have experienced multiple separations because of involvement in the substance abuse treatment, justice, and child welfare systems. Some dyads may be merely working on the basics—getting to know one another and mending fractured relationships. Beyond providing knowledge and skills to parents, increasing parent–child connectedness (e.g., through openness to risk discussions or use of “teachable moments”) is also needed to increase the likelihood of parent–child risk-related communication. Families will need to be supported in discussing past behaviors, familial disruptions, and proximal and distal pressures. At the same time, families need to be given tools and guidance to rebuild fractured relationships. Building relationships with children is an ongoing and iterative process. Parents can be supported in sharing with their children goals and hopes for them, as well as providing opportunities for their children to share pressures (actual or perceived) from peers, community, and media. Last, interventions will

need to allow participants to discuss how their families have been fractured and promote communication about alcohol and other drug risk reduction activities among youth as a primary focus in relationship building.

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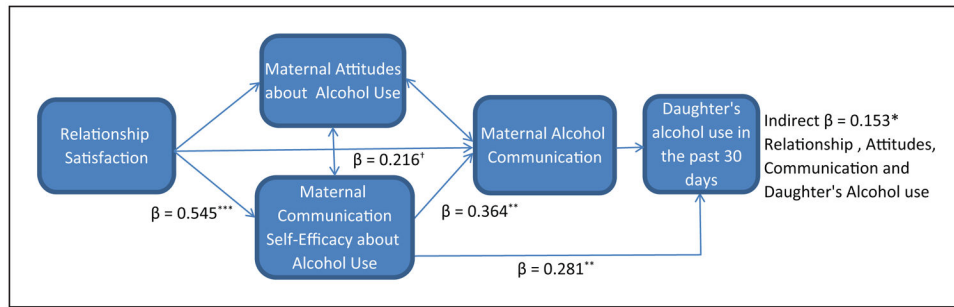
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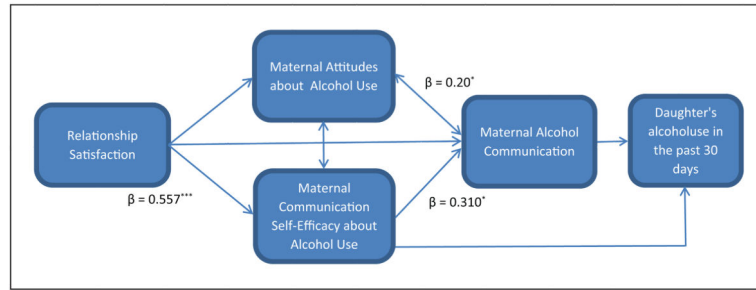


**Figure 1.**

Path analysis for HIV-positive mothers and daughter's alcohol use.

*Note.* Only statistically significant relationships are indicated with standardized beta coefficients. Relationships are direct, unless otherwise specified.

\*\*\* $p < .001$ . \*\* $p < .01$ . \* $p < .05$ .



**Figure 2.**

Path analysis for HIV-negative mothers and daughter's alcohol use.

*Note.* Only statistically significant relationships are indicated with standardized beta coefficients. Relationships are direct, unless otherwise specified.

\*\*\* $p < .001$ . \*\* $p < .01$ . \* $p < .05$ .

**Table 1**

## Demographics for Mothers and Daughters.

Variable	Total sample (N = 176)	HIV+ (N = 65), mean/%	HIV- (N = 111), mean/%
Mothers			
Age	40.89 (27–70)	41.77 (30–70)	40.31 (27–64)
Race			
African American	86.3%	76.7%	91.6% ***
Latina	17.2%	22.2%	14.1%
Ever married, yes	30.5%	40%	25.5% ***
Level of education **			
Less than high school	35.9%	46.9%	29.4%
High school graduate	42.5%	32.8%	48%
Vocational education/college	21.6%	20.3%	22.5%
Are you HIV+	37.1%	—	—
Ever used alcohol—Yes	80.1%	83.1%	79.1%
Daughters			
Age	15.8 (14–19)	15.88 (14–19)	15.78 (14–19)
Race—African American	87.5%	77.6%	92.7%
Ever used alcohol—Yes	39.2%	43.1%	37.3%

\*  $p < .05$ .\*\*  $p < .01$ .\*\*\*  $p < .001$ .

Table 2

Correlations, Means, Standard Deviations, and Ranges.

	1	2	3	4	5	Mean	SD	Range
1. Mother/daughter relationship satisfaction						41.68	8.07	10–50
2. Maternal attitude about alcohol use	.055	—				4.51	0.934	1–5
3. Alcohol communication self-efficacy	.549***	.159*	—			4.31	0.901	1–5
4. Alcohol communication	.287***	.405***	.108	—		4.41	0.844	1–5
5. Daughter alcohol use—30 day <sup>a</sup>	.021	.092	.058	.015	—	0.028		

<sup>a</sup>Variable is dichotomous and mean represents percentage.\*  $p < .05$ .\*\*  $p < .01$ .\*\*\*  $p < .001$ .