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Mother-son relationship as a risk factor for depressive symptoms among methamphetamine users

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Abstract

Retrospective reports of children's relationships with their parents have been associated with increased risk for depressive symptoms in adulthood. This study examined four dimensions of the current mother-child relationship (affection, criticism, over-involvement, conflict) in relation to depressive symptoms in a sample of 270 HIV-positive men who have sex with men (MSM). Depressive symptoms were positively associated with overt conflict or disagreement with mothers and perceived over-involvement by mothers, and inversely related to frequency of contact with mothers. These findings suggest that clinicians who treat HIV-positive methamphetamine-using MSM with depressive symptoms should evaluate issues in the mother-son relationship and consider family-based therapies as an adjunct to treatment.

Keywords

depressive symptoms; methamphetamine; men who have sex with men; HIV; maternal relationship

Introduction

Methamphetamine use is common among communities of men having sex with men (MSM) in the US (e.g., Clatts, Goldsamt, & Yi, 2005; Colfax et al., 2005; Halkitis et al., 2009). The prevalence of methamphetamine use along with adverse behavioral and psychological consequences has prompted concern for this high-need population. Depression is a common psychological symptom associated with methamphetamine use (Nakama et al., 2008; Zweben et al., 2004), and several studies have reported that methamphetamine users have higher rates of depressive symptoms compared to controls (Glasner-Edwards et al., 2009; Jaffe, Shoptaw, Stein, Reback, & Rotheram-Fuller, 2007). The acute phase of methamphetamine withdrawal is also characterized by high levels of depressive symptoms (McGregor, Srisurapanont, Jittiutikarn, Laobhripatr, Wongtan, & White, 2005). In previous work with heterosexual methamphetamine users, it was found that 40% met criteria for moderate to severe depression (Semple, Patterson & Grant, 2005), while in a study of methamphetamine-dependent men, Shoptaw, Peck, Reback, & Rotheram-Fuller (2003) reported that 28.4% met criteria for major depression. Methamphetamine users who have high levels of depressive symptoms also have greater substance use morbidity compared to

those with lower levels of depressive symptoms (Lubman, Allen, Rogers, Cementon, & Bonomo, 2007).

Effective treatment for depressive symptoms in methamphetamine-using MSM depends upon the identification of precipitating factors. To date, there has been little research on how familial relationships might influence the development and persistence of depressive symptoms in this population. Beck (1967, 1976) postulated that negative thoughts associated with adult depression, particularly feelings of worthlessness and hopelessness, can develop during childhood as a result of negative interactions between parent and young child. The present study focuses on dimensions of the current mother-child relationship and their influence on depressive symptoms in a sample of HIV-positive, methamphetamine-using MSM.

We chose to focus on the mother-son relationship rather than the parent-child relationship because of the former's distinctive characteristics. The mother-child relationship has no like or equal. Cain (1991) described relationships with mothers as permanent and irreplaceable. Both research and clinical experience suggest that the mother-child bond is stronger than that between father and child (Geiger, 1996). In addition, studies of gay men have revealed that sons are more likely to disclose sensitive personal information to mothers than they are to fathers (Miller & Boon, 2000). Understanding dimensions of the mother-son relationship and their impact on depressive symptoms could be critical in terms of HIV care, mental health care, and treatment for methamphetamine dependence.

In a study of depressed patients, Crook, Raskin, & Eliot (1981) found that compared to non-depressed controls, depressed participants rated their mothers higher on rejection, control through guilt, and hostile detachment. Depressed patients' mothers also scored higher on enforcement, hostile control, instilling of persistent anxiety, withdrawal of relations, and lower on acceptance of individuation compared to the mothers of controls. In another study of depressed patients, Perris, Eisemann, Ericsson, von Knorring, & Perris (1983) reported that males rated their mothers' overprotectiveness higher than did females, and that overall, males judged their mothers more negatively than they did their fathers (Perris et al., 1983). Perris and colleagues also reported that compared to controls, depressed patients rated their mothers lower in emotional warmth (Perris, Arrindell, Perris, Eisenmann, van der Ende, & von Knorring, 1986). In another study of patients with major depressive disorder, a history of maternal over-control was associated with lower probability of remission of depressive symptoms (Klein et al., 2009). In a non-clinical sample, retrospective reports of greater affection from mothers during childhood were associated with fewer depressive symptoms in adulthood (Jorm, Dear, Rodgers, & Christensen, 2003).

Although most studies conclude that retrospective accounts of maternal behavior during childhood differ between depressed patients and non-depressed controls, these findings must be interpreted with caution. It is impossible to know if parents actually behaved as reported and, if so, whether the parental behavior affected the child's experience of depression in adulthood or whether the child already had depressive features that influenced parent-child interactions (Perris et al., 1983). Thus, it may be more fruitful in adult samples to consider current rather than retrospective aspects of the mother-child relationship in relation to depressive symptoms.

Most of the literature on adult gay men's relationships with their mothers has focused on disclosure of sexual orientation and of HIV serostatus. The literature indicates that mothers are typically aware of their son's homosexuality and are among the most accepting family members (Fisher, Goldschmidt, Hays, & Catania, 1993; Myers, 1981). In terms of HIV serostatus disclosure, one study of gay and bisexual men reported that disclosure to mothers

was associated with increased social support and fewer depressive symptoms (Zea, Reisen, Poppen, Echeverry, & Bianchi, 2005). Kadushin (2000) also reported that gay men were more likely to disclose their HIV-positive serostatus to their mothers than to their fathers. Overall, these findings suggest that mothers serve as a primary base of support for their gay adult children (Kadushin, 1999).

The present study examines dimensions of the mother-adult son relationship and their association with depressive symptoms in a sample of HIV-positive, methamphetamine-using MSM. We hypothesized that higher levels of depressive symptoms would be associated with lower levels of maternal affection, higher levels of maternal over-involvement and criticism, and higher levels of mother-son conflict, even after controlling for frequency of contact and emotional support.

Methods

Sample Selection

These analyses used baseline data from a sample of 270 men who were enrolled in study to evaluate the long-term efficacy of a sexual risk reduction intervention for HIV-positive, methamphetamine-using MSM. Eligible participants were at least 18 years of age, self-identified as MSM, and reported having unprotected anal sex with at least one same-sex partner during the previous two months. Participants also reported using methamphetamine at least twice during the past two months, and at least once during the past 30 days. Recruitment strategies involved poster and media campaigns, street outreach, and referrals from community service providers and enrolled participants. The research protocol was reviewed and approved by the appropriate institutional ethics committee.

Measures

Dimensions of the Mother-Child Relationship—Four dimensions of the mother-child relationship were identified through qualitative interviews conducted with 25 HIV-positive, methamphetamine-using MSM (Semple, Patterson, & Grant, 2002). Thematic analyses (Miles & Huberman, 1984) revealed the following dimensions: 1) affection from mother; 2) maternal over-involvement; 3) criticism from mother; and 4) conflict with mother. Three subscales were developed to represent the first three relationship dimensions. All scale items were measured on a four-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). The *affection* subscale consists of five items (e.g., My mother seems to really love me) with an alpha of 0.83. The *over-involvement* subscale contains five items (e.g., My mother tries to tell me what to do) with an alpha of 0.79. The criticism subscale comprises five items (e.g., My mother puts me down) with an alpha of 0.80. Mean scores for each subscale were used. Participants were asked how much overt conflict or disagreement they had with their mother over the past year. Responses were measured on a four-point scale ranging from 0 (no disagreement) to 3 (quite a bit of disagreement). As a follow-up, participants were asked to identify the main source of conflict.

Depressive Symptoms—These were assessed using the Beck Depression Inventory-II (BDI-II) (Beck, Steer, & Brown, 1996). The BDI-II comprises 21 items, each of which has four graded statements that are ordered (0-3) to show increasing depressive symptoms. Summary scores ranged in value from 0 to 63. Cronbach's alpha for the BDI-II was 0.92.

Emotional Support—Perceived emotional support was measured using a seven-item scale developed by Pearlin, Mullan, Semple, & Skaff (1990). This measure assesses the availability of family members and friends who are perceived as caring, trustworthy, and uplifting (e.g., The people close to you let you know they care about you). Items were rated

on a four-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). The alpha coefficient for this scale was 0.91. Mean scores were used in these analyses.

Frequency of Contact—Participants were asked a single question regarding frequency of contact with their mothers (“How often do you visit or get together with your mother?”). Responses were coded on an 8-point scale ranging from 1 (never) to 8 (4 or more times a week).

Methamphetamine Use Variables—Methamphetamine use was measured as the number of grams of methamphetamine consumed in the past 30 days.

Health Variables—HIV symptoms were assessed using a single item (“In the past month, have you experienced any HIV-related symptoms?”). Responses were coded 1= yes and 0 = no.

Statistical Analysis

All variables of interest were examined for normality of distribution. Number of grams of methamphetamine yielded a positively skewed distribution, which was corrected with a log 10 transformation. Participants with living mothers were compared with those whose mothers were deceased in terms of sociodemographic and methamphetamine use variables. T-tests and contingency table analysis were used to examine group differences in continuous and categorical variables, respectively. For the subsample of MSM who had mothers with whom they had contact (N=167), we performed a hierarchical multiple regression with depressive symptoms as the dependent variable. Independent variables were entered into the regression model in three steps. In step 1, number of grams of methamphetamine and HIV symptoms were entered as control variables. In step 2, frequency of contact and emotional support were entered as independent variables (IVs). In step 3, dimensions of the mother-child relationship (conflict, affection, criticism, over-involvement) were entered as a block of IVs.

Results

Sample Description

The sample consisted of 270 HIV-positive, methamphetamine-using MSM, of whom 183 (67.8%) reported having a living mother. Among this subgroup, 16 participants reported no contact with their mothers. Thus, the analytic sample consisted of 167 HIV-positive MSM who were predominantly Caucasian (58.1%), gay-identified (82.0%), never married (83.2%), living with another adult in a non-sexual relationship or living alone (59.8%), unemployed (77.8%), with a two-year degree or some college (46.1%), and an income of less than \$10,000 per year (49.1%). The average age of participants was 38.4 years (SD = 7.8, median = 38.0). Mean number of grams of methamphetamine used in the previous 30 days was 11.3 (SD = 29.3, median = 3.5). The average score on the Beck-II Depression inventory was 18.5 (SD = 12.1, median = 18.0). Men whose mothers were alive were significantly younger and more likely to be employed compared to men whose mothers were deceased (see Table 1).

Dimensions of the Mother-Child Relationship

The majority of participants visited or got together with their mothers several times a year or less often (59%). Twenty-two percent visited with mother once a week or more often, and 9% visited 1 to 3 times per month. Ten percent “never” visited or got together with mother, although the majority of these individuals had telephone contact. In terms of disagreements or conflict, 57% of participants reported “just a little” or “some” disagreement in the past

year. Thirty percent reported no disagreement, and 13% reported quite a bit of disagreement. Five major sources of conflict with mothers were identified: 1) the participant's use of methamphetamine, alcohol, or both (33.0%); 2) the participant's lifestyle (22.0%); 3) the participant's lack of financial resources (19.3%); 4) interpersonal and communication issues (16.5%); and 5) concerns about other family members (9.2%). The mean score for conflict with mothers was 2.2 (SD = .99, median = 2.0). The mean score for perceived affection from mother was 3.5 (SD = .59, median = 3.8). The mean score on the perceived maternal over-involvement scale was 2.5 (SD = .80, median = 2.6), and the mean score on the perceived criticism from mother scale was 2.0 (SD = .76, median = 2.0).

Multiple Regression Analysis

In step 1 of the regression, HIV symptoms were positively associated with depressive symptoms, whereas number of grams of methamphetamine was unrelated to the outcome. In step 2, emotional support was inversely related to depressive symptoms and HIV symptoms remained significant. In step 3, frequency of contact with mother was negatively correlated with depressive symptoms, whereas conflict with mothers and perceived over-involvement by mothers were positively associated with depressive symptoms. Maternal affection and criticism were unrelated to depressive symptoms. Emotional support and HIV symptoms were no longer significant at this step in the regression (see Table 2).

Discussion

Research on family and health is important because family relationships are potentially modifiable in clinical settings. In our sample of HIV-positive, methamphetamine-using MSM, we identified two dimensions of the mother-son relationship—conflict with mothers and maternal over-involvement—as factors associated with increased depressive symptoms. Conflict with mothers had the strongest association with depressive symptoms. Mean level of conflict with mothers was modest, although its impact was significant, a finding that is consistent with other studies of family conflict and depressive symptoms (Semple et al., 1997; Semple, Strathdee, Zians, & Patterson, 2009). The older age of our sample suggests that many participants had elderly mothers; as previous studies have shown, levels of conflict with older parents are lower since family members tend to avoid conflict with the elderly (Semple, 1992; Suitor & Pillemer, 1988). There were no reports of conflict over the participant's HIV serostatus, suggesting perhaps a decrease in HIV stigma over the past decade (Zea et al., 2005).

However, conflict over drug use, sexual orientation, and gay lifestyle were common. These forms of disagreement are likely to be longstanding or recurring, which may explain their adverse effect on psychological well-being. Depressed participants who report conflict with their mothers might benefit from Cognitive Behavioral Therapy (CBT), through which they can learn to reframe conflict as an expression of maternal concern or to adopt self-regulation techniques that allow issues to be resolved through effective communication rather than overt disagreement (Beck, 1979). Future studies should seek to understand the interactional processes that characterize conflict between mothers and sons, with the goal of building more effective therapies for this target population.

Our data also yielded a positive relationship between perceived over-involvement of mothers and depressive symptoms. It is plausible that certain characteristics of the adult child promote or at least shape the mother's over-involvement. At a basic level, maternal motives are likely to be altruistic, in that the mother perceives the adult child as needing guidance. This may be particularly relevant in cases where the adult child has co-morbid HIV disease and drug dependence. Psycho-educational groups designed for mothers and sons may be a helpful component of treatment for managing issues stemming from maternal

over-involvement. Pomeroy, Rubin, & Walker (1996) described a psycho-educational group in which family members received information about social services, financial programs, medical treatment, and other resources. This approach might be effective in reducing maternal over-involvement by giving the mother confidence that her child has alternative, adequate sources of support. Groups can also provide a context for managing both conflict and the negative emotions that can result from perceptions of maternal over-involvement (Kadushin, 1999).

Frequency of contact was inversely related to depressive symptoms. Several explanations are possible. First, the participant may perceive his mother as supportive and thus be more open to regular contact with her. Miller and Boon (2000) reported that gay men whose mothers were accepting and non-judgmental in response to disclosure of sexual orientation had increased feelings of trust in the relationship. Fisher, Goldshmidt, Hays, and Catania (1993) also reported that maternal support may help HIV-positive persons to adjust to negative aspects of illness. Regular contact with a mother may thus be a marker for an emotionally satisfying relationship between mother and son, which is manifested in fewer depressive symptoms.

It is also plausible that contact with mothers is a function of need on part of the parent, the child, or both. Since our sample consisted of low-income drug users, it is not unreasonable to assume that contact with mothers could be motivated by needs for basic necessities such as food, money, shelter, or clothing. It is also possible that an adult son's concern for his elderly mother is the primary motivation for frequent contact. More research is needed to identify motivations for contact as well as the mechanisms that underlie the relationship between contact frequency and lower levels of depressive symptoms.

This study has a number of limitations. Most importantly, the sample consisted of men who volunteered for a sexual risk reduction intervention, which restricts the representativeness of the sample and limits the generalizability of the findings. In addition, data were gathered through self-report, a method that can be affected by reporting biases and inaccurate recall. Future studies should interview mothers or other significant family members in order to validate the adult children's reports. Also, this study did not assess mothers' perspectives on the parent-child relationship, even though previous studies have reported bi-directional influences (Crook, Raskin, & Eliot, 1981).

It is also important to note that participants were not evaluated for clinical levels of depression. Thus, no conclusions can be drawn about the link between mother-child relationship dimensions and depressive symptoms in clinically-diagnosed patients. Another limitation is that we did not assess the prevalence of substance use disorders (SUDs) or psychiatric symptoms in mothers. It is plausible that conflicts with mothers described as "interpersonal" have roots in maternal SUDs or mental health problems. Intergenerational links between SUDs and psychiatric disorders are strong (Hammen, Shih, & Brennan, 2004; Hicks, Krueger, Iacono, & McGue, 2004) and should be considered in future studies along with other intergenerational transmission factors, including childrearing practices, poverty, and abuse. Further, this study did not assess the degree of adversity that participants experienced in childhood in relation to their mothers. To disentangle the effects of early parent-child interactions from current ones, it is important to assess them together in relation to depressive symptoms. The cross-sectional nature of the current data also limits our ability to make statements regarding causality. Longitudinal data and prospective models are needed to assess the reciprocal nature of the mother-child relationship and depressive symptoms.

In summary, our findings suggest that it is potentially important for health care professionals to understand dimensions of the mother-child relationship when developing treatment plans for HIV-positive, methamphetamine-using MSM. Identifying aspects of support and conflict in the mother-child relationship may help with HIV care and drug treatment in the adult child. For patients with depressive symptoms, it may be necessary to address current issues in the mother-child relationship, including conflict and degree of maternal over-involvement. Treating depressive symptoms is likely to require modification of negative thoughts that may be rooted in both past and current relationship issues between mothers and sons (Beck, 1979).

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Table 1

Characteristics of the sample of HIV-positive, methamphetamine-using MSM

Variable	Mother Living (N = 183)	Mother Deceased (N = 87)	Test Statistic
<i>Sexual Orientation</i>			$\chi^2 = 0.60$
Gay	79.2%	79.3%	
Heterosexual	0.5	0.0	
Bisexual	18.6	19.5	
Not sure	1.6	1.1	
<i>Ethnicity</i>			$\chi^2 = 1.29$
Caucasian	54.6%	60.9%	
African American	24.6	21.8	
Latino	14.2	10.3	
Other	6.6	6.9	
<i>Education</i>			$\chi^2 = 3.23$
Less than high school	11.5%	11.5%	
High school or equivalent	26.2	26.4	
Two-year degree or some college	46.4	41.4	
Four-year college degree	8.2	14.9	
Graduate or advanced degree	7.7	5.7	
<i>Marital status</i>			$\chi^2 = 0.39$
Never married	83.1%	82.8%	
Married	1.6	0.0	
Separated	4.9	4.5	
Divorced	10.4	12.6	
<i>Living arrangement</i>			$\chi^2 = 9.79$
With same-sex spouse or steady	12.6%	12.6%	
With opposite-sex spouse or steady	0.5	1.1	
With other adults	31.1	20.7	
Alone	27.9	27.6	
Homeless	10.9	21.8	
Other	16.9	16.1	
<i>Income</i>			$\chi^2 = 7.96$
Less than \$10,000	50.8%	46.0%	
\$10,000-\$19,999	32.8	44.8	
\$20,000-\$29,999	5.5	3.4	
\$30,000-\$39,999	4.4	0.0	
\$40,000-\$49,999	2.2	3.4	
\$50,000 or more	4.4	2.3	
Employed	20.2%	11.5%	$\chi^2 = 3.1^*$
Age in years (mean, SD)	38.6 (7.7)	39.9 (8.1)	$t = 3.2^{***}$
Duration of methamphetamine use in years (mean, SD)	13.5 (8.1)	15.0 (9.8)	$t = 1.24$

Variable	Mother Living (N = 183)	Mother Deceased (N = 87)	Test Statistic
Number grams of methamphetamine used in past 30 days (mean, SD)	11.8 (29.7)	16.0 (57.3)	t = 0.79
Beck depression scores (mean, SD)	18.3 (12.0)	17.5 (12.7)	t = 0.53

*
p < .05

p < .001

Table 2

Depressive symptoms regressed on methamphetamine use and health variables (Step 1), contact and support variables (Step 2), and mother-child relationship variables (Step 3) (N=161)^a

Variable	Step 1		Step 2		Step 3	
	beta	sr ²	beta	sr ²	beta	sr ²
Grams of methamphetamine used	-.024	.001	-.004	.000	.016	.000
HIV symptoms	.241***	.058	.195***	.036	.133	.015
Frequency of contact with mother			-.117	.013	-.189*	.029
Emotional support from family and friends			-.166*	.027	-.126	.013
Maternal affection					-.085	.004
Maternal over-involvement					.191*	.023
Maternal criticism					-.070	.002
Conflict with mother					.215*	.028
R ²	.058		.101		.182	
Multiple R	.240		.318		.427	
Adjusted R	.046		.078		.139	
F (df)	4.83** (2,158)		4.39*** (4,156)		4.23*** (8,152)	

beta = standardized regression coefficient

* p < .05

** p < .01

*** p < .001 (2-tailed tests)

^a Six cases missing data.