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Associations Between Sexual Abuse and Negative Health Consequences Among High-Risk Men Who Have Sex with Men

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This study evaluated whether a history of sexual abuse could differentiate negative health consequences among men who have sex with men (MSM; N = 148) enrolled in a risk counseling program. More than half (51.4%) reported an experience of sexual abuse. A history of sexual abuse was associated with increased psychological distress, increased rates of alcohol (AOR = 2.91; $p < .01$) and/or drug abuse (AOR = 2; $p < .01$) treatment, increased risk of housing instability (AOR = 2.13; $p < .05$), and increased risk for suicidality (AOR = 4.3; $p < .001$). Findings demonstrate that screening for sexual abuse may be useful in determining the service needs of high-risk MSM.

KEYWORDS *MSM, sexual abuse, substance abuse treatment, mental health, suicide, homelessness*

INTRODUCTION

Rates of Sexual Abuse Among Men Who Have Sex with Men

Meta-analysis of international data sources estimated the rate of childhood sexual abuse for all males to be 7.9% (Pereda, Guilera, Forns, & Gómez-Benito, 2009), while similar methods in another study calculated the median estimated rate of childhood sexual abuse among men who have sex with men (MSM) to be 22.7% (Rothman, Exner, & Baughman, 2011). Each study in the meta-analyses set their own age criteria for childhood sexual abuse;

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however, abuse before the age of 18 was the most common delineation. Sexual minority individuals have been estimated to be 3.8 times more likely to experience childhood sexual abuse as their nonsexual minority counterparts, with gay/bisexual males experiencing the largest disparity in odds (Friedman et al., 2011). Adult sexual assault (primarily defined in prior studies as sexual assault that occurred at 18 years of age or older) prevalence for males in the United States has been estimated to be between 1.4% and 3% (Basile, Chen, Lynberg, & Saltzman, 2007; Black et al., 2011; Gonzales, Schofield, & Schmitt, 2006), while sexual assault against adult gay and bisexual males displayed a median rate in the literature of 14.7% (Rothman et al., 2011), an apparent association also corroborated by meta-analytic methods (Peterson, Voller, Polusny, & Murdoch, 2011). Overall, evidence suggests the median rate of lifetime sexual abuse (i.e., ever experiencing sexual abuse) among MSM to be near 30% (Rothman et al., 2011), far above the rate of 1.4% observed among the United States male population (Black et al., 2011).

Sexual Abuse and Deleterious Health Outcomes

A large United States study revealed that men who experience sexual abuse are more likely to report various negative health outcomes such as mental health concerns, lower life satisfaction, and lower feelings of emotional and social support (Choudhary, Coben, & Bossarte, 2010). Gay and bisexual males who have been sexually abused also score higher on measures of depression, are more likely to display symptoms of posttraumatic stress disorder, and report higher levels of general psychological distress than those who had never been abused, with repeat victims showing particularly poor outcomes (Heidt, Marx, & Gold, 2005). Childhood sexual abuse has been linked to major depression, antisocial personality disorder, substance abuse, substance dependence, suicidal ideation, and suicidal behavior (Fergusson, Boden, & Horwood, 2008; Semple, Strathdee, Zians, McQuaid, & Patterson, 2011), and individuals who experience childhood sexual abuse are more likely to be raped as adults (Balsam, Lehavot, & Beadnell, 2011).

Adult MSM who have experienced childhood sexual abuse exhibit deleterious mental health symptoms such as increased anxiety, in addition to increased high-risk sexual behaviors that put them at risk for HIV including increased engagement in sex work, increased frequency of sex while intoxicated, greater numbers of sex partners, more frequent episodes of unprotected (including serodiscordant) sex, and higher rates of HIV infection (Senn, Carey, & Venable, 2008). Gay and bisexually identified men as well as other MSM who were abused either as children or adults have shown elevated levels of psychological distress and substance use (Arreola, Neilands, Pollack, Paul, & Catania, 2008; Semple et al., 2011), including higher rates of self-reported suicidality (Yu et al., 2009). Among MSM, the age at which the

first sexual abuse episode occurred (i.e., childhood sexual abuse versus adult sexual assault) appears to have only minor effects on sexual risk outcomes (Hequembourg, Bimbi, & Parsons, 2011), implying that abuse at any stage of the life course is associated with poorer health outcomes.

The literature clearly demonstrates that MSM who experience sexual abuse at any time in their lives are at higher risk for sundry physical and mental health consequences. Given such associations, service providers working with high-risk MSM may look to adopt routine sexual abuse screening to help identify participants at highest risk for these negative health consequences, and/or to target such participants for augmented (e.g., trauma focused) service delivery. When examining existing evidence, however, the effectiveness of such a screening tool may be drawn into question, as associations that apply to broad samples of MSM may not hold for samples of high-risk MSM. As such, it is unclear whether sexual abuse screening could effectively discriminate health consequences among highly impacted samples of MSM already characterized by elevated physical and mental health risks, such as those seeking risk-reduction services and enrolled in case management counseling. To address this issue, our analyses prospectively assessed whether self-reported lifetime sexual abuse was associated with increased severity and/or prevalence of negative health consequences among high-risk MSM (i.e., at risk for acquisition or transmission of HIV or other sexually transmitted infections) enrolled in a community-based Comprehensive Risk Counseling Services (CRCS; formerly Prevention Case Management) program. Though rates of substance abuse, psychological distress, housing instability, and other risk factors are increased in such samples, it was hypothesized that lifetime sexual abuse would still successfully differentiate negative health sequelae (i.e., would be significantly associated with higher rates of severity and/or prevalence of negative health consequences) among this sample of high-risk MSM.

METHODS

Participants

From June 2005 through July 2012, participants were recruited from a community-based, low-intensity, health education/risk-reduction HIV prevention program serving high-risk, substance-using MSM in the Hollywood and West Hollywood area of Los Angeles County. Potential participants were eligible for the health education/risk-reduction HIV prevention program if they self-reported sex with a male and any substance use in the previous 12 months. Potential participants were recruited to the health education/risk-reduction program through street- and venue-based outreach. Outreach procedures have been reported elsewhere (Bowers, Branson, Fletcher, & Reback, 2011; Reback, Fletcher, Shoptaw, & Grella, 2013; Reback,

Shoptaw, & Grella, 2008). All participants enrolled in the low-intensity health education/risk-reduction HIV program who requested a higher level of intervention services were referred to the CRCS program. However, in addition to being within the eligible target population, that is, a self-reported MSM and any substance use in the previous 12 months, potential participants for the CRCS program must also self-report multiple, complex needs and be at risk for infection or transmission of HIV. Thus, the analytic sample (i.e., those enrolled in the CRCS program) is comprised of MSM at extremely high risk for HIV infection/transmission.

Procedure

Following provision of informed consent, a screening intake form was completed to collect data on risk behaviors and assess needs. Once eligibility and need was established a comprehensive assessment was conducted to collect baseline data including demographics, recent substance use and sexual risk behaviors, physical and mental health history, and levels of psychological and emotional distress, and to assess acuity level. Participants earned a low-level incentive for attendance and the completion of certain identified goals; the incentive amount was deemed appropriate and not excessive given the vulnerable population. Specifically, participants received \$5 upon completion of the baseline comprehensive assessment during program enrollment. After completing baseline assessments, participants met with the counselor to assess areas of behavioral change and to create a participant-centered prevention plan. Participants were compensated with a \$10 incentive per session, up to a maximum of five sessions, and a \$5 bonus after achieving their first identified behavioral change goal. Participants also received incentives for completing a 30-, 60-, and 90-day post-intervention follow-up evaluation (\$5, \$15, and \$10, respectively). The maximum participants could earn was \$90. All incentives were provided in gift certificates; no cash was transmitted. All program materials for both the health education/risk-reduction program and the CRCS program were approved by the funding agency.

Intervention

The goal of the CRCS program was to identify and address the HIV risk behaviors (i.e., drug and sexual risk behaviors including sex while high or intoxicated, engagement in exchange sex, unsafe injection protocols, and unprotected anal intercourse with a partner whose HIV status was unknown or opposite of their own) of particularly high-risk participants whose behavior change needs were unmet by the low-intensity health education/risk-reduction intervention. CRCS was provided through one-on-one counseling sessions—up to five sessions—to help the participant assess his own personal risk, and create an individualized plan to initiate and

maintain behavior change. The CRCS sessions were approximately 60 minutes in length and were conducted weekly. The CRCS counselor received weekly clinical supervision from a licensed clinical psychologist. Using a participant-centered approach, the CRCS counselor worked with each participant to choose realistic and attainable behavior change goals and to develop a participant-centered service plan. The CRCS counselor worked with the participant to focus on decreasing the behaviors that put him at increased risk for HIV transmission and acquisition.

Measures

ADDICTION SEVERITY INDEX (ASI)

The ASI (McLellan et al., 1985) was administered to determine addiction-related problem severity profiles. Subsections of this instrument included assessments for lifetime sexual abuse, housing status in the previous three years, and lifetime suicidality. Current substance use was assessed for the previous 30 days. Reliability and validity scores for the ASI have been shown to be robust, even among highly impacted samples (e.g., those with comorbid substance abuse and mental health problems; Hodgins & El-Guebaly, 1992). Reliability statistics for the current study are not reported, as only single-question items (rather than scales) were used in the present analyses. Group membership (i.e., sexually abused versus never sexually abused) was determined by participants' answer to a specific question on the ASI: "In your lifetime, did anyone abuse you sexually (i.e., force sexual advances or acts upon you)?" Participants that answered "yes" to that question were assigned to the sexually abused group; all others were assigned to the never sexually abused group. The ASI was administered at baseline to determine the severity of participants' reported addiction-related problems.

BRIEF SYMPTOM INVENTORY (BSI)

The BSI (Derogatis & Melisaratos, 1983) is a self-report symptom scale that is a shortened version of the Symptom Checklist-90 (SCL-90-R; Derogatis, 1977). Reliability scores for the BSI are consistently high, and range from 0.75 (psychoticism) to 0.89 (depression) on the individual subscales (Boulet & Boss, 1991); criterion and convergent validity have also both been established using the SCL-90-R (Derogatis & Melisaratos, 1983) and the Minnesota Multiphasic Personality Inventory (Boulet & Boss, 1991). In the present study, Cronbach's alpha on the individual subscales ranged from 0.75 (psychoticism) to depression (0.87). The BSI was administered at baseline as an indicator of current psychological state (including psychosis) and emotional functioning.

Statistical Analyses

The purpose of the analyses presented here was to determine whether reports of lifetime sexual abuse among program attendees were associated with increased self-reports of psychological distress, alcohol/drug use, housing instability, and/or suicidality at program initiation. If such associations were uncovered, screening for lifetime sexual abuse at baseline would help counselors identify program participants at particularly elevated risk for these negative health sequelae. Given this research design, only participants' baseline data was included in the analyses.

Descriptive statistics are provided for all variables; means and standard deviations are supplied for continuous variables, while counts and their corresponding percentages are provided for all nominal variables. Bivariate associations between lifetime sexual abuse and sociodemographics (Table 1) employed chi-square analyses to contrast nominal variables across groups (except where cell tabulations produced sample sizes of five or less individuals, in which case Fisher's exact analyses were carried out), and student's t-tests to contrast continuous variables across groups. Bivariate associations between lifetime sexual abuse and psychological symptom complaints (Table 2) are carried out using student's t-tests. Multivariate associations of lifetime sexual abuse with relative rates of entrance into alcohol and/or drug abuse treatment (Table 3) were carried out using negative binomial regressions. Multivariate associations between lifetime sexual abuse and a recent pattern of unstable housing and/or lifetime suicidality (Table 3) were carried out using logistic regressions. All multivariate models controlled for participant sociodemographics (e.g., race/ethnicity, age, and sexual identity). Results were considered significant beginning at $\alpha = .05$ and all significance tests were two-tailed.

RESULTS

Sociodemographic Characteristics

As a whole, the sample was racially diverse (50.7% Caucasian/White and 49.3% non-Caucasian/White). Omnibus chi-square and Fisher's exact analyses revealed that when stratified by sexual abuse status, no significant differences in racial/ethnic identification were observed. However, participants reporting prior sexual abuse reported marginally higher rates of Caucasian/White identification and correspondingly lower rates of African-American/Black and multiracial/other racial identification than participants reporting no prior sexual abuse. Rates of sexual identification were nearly uniform, with 64.5% of sexually abused participants and 61.1% of non-sexually abused participants reporting a gay sexual identity. Student's t-tests revealed significant differences in participant ages across groups, with

TABLE 1 Participant Sociodemographic and Substance Use Profiles by Lifetime Sexual Abuse

Characteristic	Category	Never Sexually Abused (<i>n</i> = 72) <i>n</i> (%) or Mean (<i>SD</i>)	Sexually Abused (<i>n</i> = 76) <i>n</i> (%) or Mean (<i>SD</i>)	Total (<i>N</i> = 148) <i>n</i> (%) or Mean (<i>SD</i>)	Sig.
Race/Ethnicity					
	Caucasian/White	32 (44.4%)	43 (56.6%)	75 (50.7%)	ns
	African American/Black	25 (34.7%)	20 (26.3%)	45 (30.4%)	
	Hispanic/Latino	8 (11.1%)	11 (14.5%)	19 (12.8%)	
	Multiracial/Other	7 (9.7%)	2 (2.6%)	9 (6.1%)	
Sexual Identity					
	Gay	44 (61.1%)	49 (64.5%)	93 (62.8%)	ns
	Bisexual	28 (38.9%)	27 (35.5%)	55 (37.2%)	
Age	Years	40.3 (9.2)	36.3 (7.9)	38.2 (8.8)	**
Educational Attainment					
	< HS	17 (23.6%)	18 (23.7%)	35 (23.7%)	ns
	HS/GED	26 (36.1%)	26 (34.2%)	52 (35.1%)	
	Some College/Tech School	18 (25.0%)	27 (35.5%)	45 (30.4%)	
	College/Tech School Grad	11 (15.3%)	5 (6.6%)	16 (10.8%)	
Housing Status (Past 3 Years)					
	Lives Alone	13 (18.1%)	14 (18.4%)	27 (18.2%)	ns
	Lives w/ Friends/Family	15 (20.8%)	11 (14.5%)	26 (17.6%)	
	Lives w/ Partner	9 (12.5%)	9 (11.8%)	18 (12.2%)	
	Lives in Controlled Environment	8 (11.1%)	2 (2.6%)	10 (6.8%)	
	No Stable Arrangement	27 (37.5%)	40 (52.6%)	67 (45.3%)	
Suicidal Thoughts	Lifetime	29 (40.3%)	56 (73.7%)	85 (57.4%)	***
Alcohol Abuse Treatment	#/Times	0.42 (1.2)	1.22 (3.3)	0.83 (2.5)	*
Drug Abuse Treatment	#/Times	1.70 (2.9)	3.61 (9.3)	2.68 (7.0)	ns
Substance Use, Past 30 Days					
	Alcohol	43 (59.7%)	45 (59.2%)	88 (59.5%)	ns
	Cocaine	17 (23.9%)	17 (22.4%)	34 (23.1%)	ns
	Methamphetamine	38 (52.8%)	44 (57.9%)	82 (55.4%)	ns
	Marijuana	39 (54.2%)	48 (63.2%)	87 (58.8%)	ns
	Polysubstance Use	48 (67.6%)	50 (65.8%)	98 (66.7%)	ns

* $p < .05$. ** $p < .01$. *** $p < .001$; all significance tests 2-tailed.

participants reporting prior sexual abuse being an average of 4 years younger than participants with no abuse history (36.3 versus 40.3; $p \leq 0.01$). Most of the sample reported a high school diploma/GED or greater level of educational attainment (76.3%). Statistical contrasts revealed no significant differences in educational attainment or housing status across groups, though

TABLE 2 Participant Symptom Complaints by Lifetime Sexual Abuse

Symptom Category	Never Sexually Abused (<i>n</i> = 72) Mean (<i>SD</i>)	Sexually Abused (<i>n</i> = 76) Mean (<i>SD</i>)	Total (<i>N</i> = 148) Mean (<i>SD</i>)	Sig.
Somatization	.55 (.62)	.71 (.68)	.63 (.65)	ns
Obsessive-Compulsive Disorder	.93 (.69)	1.27 (.86)	1.11 (.80)	**
Interpersonal Sensitivity	.82 (.81)	1.16 (1.03)	.99 (.94)	*
Depression	.98 (.88)	1.24 (.96)	1.11 (.93)	ns
Anxiety	.84 (.72)	.98 (.77)	.91 (.75)	ns
Hostility	.62 (.67)	.90 (.83)	.77 (.77)	*
Phobic Anxiety	.55 (.64)	.90 (.90)	.73 (.80)	**
Paranoid Ideation	1.11 (.95)	1.32 (.95)	1.22 (.96)	ns
Psychoticism	.80 (.75)	.98 (.85)	.90 (.85)	ns
Global Severity Index	.80 (.57)	1.04 (.65)	.92 (.62)	*

* $p \leq .05$. ** $p \leq .01$; all significance tests 2-tailed.

a higher percentage of participants reporting prior sexual abuse reported a pattern of housing instability over the prior 3 years (52.6% versus 37.5%; ns). More than half the sample reported serious thoughts of suicide (57.4%), with participants reporting lifetime sexual abuse exhibiting a significantly elevated rate (73.7% versus 40.3%; $p \leq 0.001$).

Substance Use

Participants who reported lifetime sexual abuse reported significantly more episodes of alcohol abuse treatment than participants not reporting lifetime sexual abuse (1.22 versus 0.42; $p = .05$). Prior episodes of drug abuse treatment were common in the sample as a whole ($M_{DrugTx} = 2.7$; $SD = 7.0$), though the groups did not reveal significant differences. Substance use was also common, with more than half the sample reporting recent use of alcohol

TABLE 3 Multivariate Associations of Lifetime Sexual Abuse with Substance Abuse Treatment, Homelessness, and Suicidal Ideation (*N* = 148)^a.

Outcome Variable	Predictor	IRR/OR	(95% CI)	Sig.
Alcohol Abuse Treatment (#/Times) ^b	Lifetime Sexual Abuse	2.91	(1.3–6.8)	**
Drug Abuse Treatment (#/Times) ^b		2	(1.2–3.5)	**
Recent Pattern of Unstable Housing (Yes/No) ^c		2.13	(1.0–4.3)	*
Suicidal Thoughts/Actions (Yes/No) ^c		4.3	(2.1–8.9)	***

^aControls (all 4 models): race/ethnicity, age, sexual identity; ^bnegative binomial regression; ^clogistic regression.

* $p < .05$. ** $p < .01$. *** $p < .001$; all significance tests 2-tailed.

(59.5%), methamphetamine (55.4%), and/or marijuana (58.8%). There were no significant differences in recent substance use patterns when contrasting specific substances across the groups.

Psychological Health

As shown in Table 2, when compared to participants reporting no history of sexual abuse, participants reporting lifetime sexual abuse displayed significantly greater symptom severity levels in the obsessive-compulsive (1.27 versus 0.93), interpersonal sensitivity (1.16 versus 0.82), hostility (0.90 versus 0.62), and phobic anxiety (0.90 versus 0.55) subscales of the BSI. The difference in participant depression scores across groups was trending toward significance ($p < 0.1$). Participants reporting lifetime sexual abuse also displayed significantly higher scores (1.04 versus 0.80) on the Global Severity Index (GSI), a summary measure of psychological distress. When compared to published normative population data from the BSI, both groups (i.e., regardless of prior sexual abuse status) evidenced symptoms of psychological distress less severe than psychiatric outpatients, and more severe than non-patients (Derogatis & Melisaratos, 1983).

Multivariate Analyses

Table 3 reveals that, when controlling for participant sociodemographics, participants reporting lifetime sexual abuse entered alcohol abuse treatment at nearly three times the rate (incidence rate ratio [IRR] = 2.91; 95% confidence interval [CI] = 1.3–6.8), and entered drug abuse treatment at twice the rate (IRR = 2.0; 95% CI = 1.2–3.5) of the high-risk MSM who did not report lifetime sexual abuse. In addition, participants who reported lifetime sexual abuse were estimated to be more than twice as likely to report a recent pattern of housing instability (odds ratio [OR] = 2.13; 95% CI = 1.0–4.3), and were more than four times as likely to report having experienced serious suicidal ideation (OR = 4.3; 95% CI = 2.1–8.9).

DISCUSSION

More than half (51.4%) the participants reported a history of lifetime sexual abuse. This prevalence is markedly higher than the rate found in studies of other populations, even other populations of MSM (Rothman et al., 2011). This elevated rate is likely driven in part by the high-risk nature of the sample (i.e., substance-using MSM seeking to attain behavioral change goals and lower HIV risk behavior); less impacted populations would likely exhibit

lower rates of lifetime sexual abuse, closer to the national rate for MSM. Even given the universally high-risk nature of the participants and the inflated prevalence of self-reported sexual abuse, however, experience of lifetime sexual abuse was still associated with significant increases in multiple negative health consequences, including worsened psychological symptom complaints, increased episodes of both alcohol and drug abuse treatment, increased likelihood of unstable housing, and increased likelihood of suicidal ideation. It is also noteworthy that participants who reported lifetime sexual abuse were significantly younger than participants who did not report lifetime sexual abuse; though the average participant who did not report abuse was 40 years, the average participant who reported lifetime sexual abuse was only 36 years. Thus, those who experienced lifetime sexual abuse sought the services of a comprehensive risk counseling program at a significantly younger age to help them address their unmet needs and assist them in achieving behavioral goals. Taken together, these findings support the assertion that baseline screening for lifetime sexual abuse could help service providers identify individuals at particularly high risk for some of the most damaging health consequences common to MSM seeking risk-reduction services.

The experience of sexual abuse was associated with elevated scores across several psychological symptom domains; MSM reporting abuse exhibited elevated obsessive-compulsive disorder, interpersonal sensitivity, phobic anxiety, and hostility complaints. Service programs for high-risk MSM, including Comprehensive Risk Counseling Services (CRCS), are often focused on goal-oriented risk reduction. Increased psychological distress and other mental health co-factors stand as yet additional obstacles to achieving such goals, and may increase risk for related health concerns like substance abuse, increased sexual risk behavior, housing instability, and suicidal ideation.

The number of times participants reported previous entry into alcohol/drug treatment also differed based on history of sexual abuse. When controlling for covariates, participants who reported lifetime sexual abuse entered drug abuse treatment at twice the rate, and alcohol abuse treatment at nearly three times the rate, of those who did not report lifetime sexual abuse. These findings may indicate that the substance abuse/dependence profiles of MSM reporting lifetime sexual abuse are more severe than those not reporting lifetime sexual abuse or, alternatively, that MSM reporting lifetime sexual abuse are more likely to relapse (or relapse more quickly) than their counterparts, thereby necessitating the elevated rates of entry into treatment.

Housing instability and suicidal ideation were both more likely among participants who reported lifetime sexual abuse. Housing instability can increase HIV risk (Clatts, Goldsamt, Yi, & Gwadz, 2005), and/or rates of

substance use among MSM (Cochran, Stewart, Ginzler, & Cauce, 2002), revealing intersecting and reinforcing influences of risk factors facing communities of MSM. In addition, almost three-quarters of those who reported lifetime sexual abuse also reported suicidal ideation; this rate is significantly higher than those who did not report lifetime sexual abuse and vastly higher than national prevalence estimates. After multivariate adjustment, participants who reported lifetime sexual abuse were estimated to be between two and nine times more likely to have reported suicidal thoughts than participants who did not report sexual abuse. Taken together, the findings presented here illustrate the potential effectiveness of sexual abuse screening as a tool to identify MSM most at risk for multiple, intersecting negative health consequences.

Limitations and Conclusions

This analysis was limited by its reliance on self-reported data, which can be subject to the caprice of participant recall as well as the possible desire to mitigate negative opinions. In addition, all program participants were enrolled in a low-intensity health education/risk reduction and requested the assistance of a CRCS counselor. Thus, all participants self-selected enrollment into the CRCS program. This convenience sample (i.e., lack of random selection of participants) limits the power of the inferential analyses, as does the likelihood that some outcome variables may share error covariance (e.g., rates of entrance into alcohol abuse treatment may be correlated with rates of entrance into drug abuse treatment). Furthermore, the highly specialized sample (i.e., substance-using MSM enrolled in a CRCS program) and lack of a formal sampling plan may limit generalizability as those receiving services from a health education/risk-reduction program are typically disenfranchised, low income, and homeless or marginally housed. However, given that high-risk MSM populations are often targeted for HIV prevention, risk reduction, and/or counseling interventions, findings that aid in improving future intervention development are noteworthy; these findings provide evidence that lifetime sexual abuse can distinguish health risk profiles even among samples of universally high-risk, substance-using MSM.

Sexual abuse history, as operationalized here, was measured with a single yes/no question. Our results indicated that among MSM, the answer to this question at baseline was significantly associated with increased severity and/or prevalence of multiple negative health consequences common to MSM seeking risk-reduction services. Service providers working with high-risk MSM and equipped with this knowledge may be better able to assess and assist in the mental health, substance use, and housing needs of their participants.

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