

SURVIVING CHILDHOOD ABUSE

HEALTH RISK BEHAVIORS IN AN HIV-INFECTED CLINIC POPULATION

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ABSTRACT

Surviving Childhood Abuse: Health Risk Behaviors in an HIV-infected Clinic Population

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Background: Adverse childhood experiences (ACE) are common and are associated with emotional and physical illness and high risk health behaviors. There has been very little research on the long-term effects of ACE in HIV-infected individuals. The objectives of this study were to determine the prevalence of ACE and to examine the association between ACE and health risk behaviors relevant to HIV disease including non-adherence to HIV medications, substance use, and high risk sexual behavior. We hypothesized a high prevalence (>30%) of ACE and a strong positive association between ACE and health risk behaviors.

Methods: This was a cross-sectional study of a convenience sample, from 7/03 to 5/04, in 506 HIV-infected patients in two urban New Mexico HIV clinics. Each participant completed a self-administered questionnaire after informed consent. To measure ACE, we used the Childhood Trauma Questionnaire (CTQ), a validated instrument, which measures five types of maltreatment including sexual, emotional and physical abuse and emotional and physical neglect. Multivariate logistic regression analyses were used to examine the relationships between ACE and the outcome variables.

Results: The majority of the participants were male (90%) and gay or bisexual (81%). Forty-one percent had moderate to extreme sexual abuse. Thirty-seven percent had moderate to extreme emotional abuse and 27% moderate to extreme emotional neglect. Thirty percent had moderate to extreme physical abuse and 50% moderate to severe physical neglect. Seventy-nine percent of the participants were taking anti-retroviral medications and 36% were non-adherent. Thirty-one percent of the participants had considered themselves alcoholic and 35% had used 1 or more illicit drugs (excluding marijuana) in the last 4 months. Of the men who engaged in anal sex, 45% reported sometimes, rarely or never using condoms. ACE was associated with risk behaviors. Emotional abuse, the strongest predictor, was associated with medication non-adherence (only in those with symptomatic depression) (p = 0.001; OR 3.1). Emotional abuse was also associated with illicit drug use in the last 4 months (p = 0.001; OR 2.0). Physical abuse was associated with alcohol abuse (p = 0.0004; OR 2.7).

Conclusions: There is an unusually high prevalence of multiple types of ACE and health risk behaviors in this HIV-infected clinic population. ACE and health risk behaviors are significantly associated with each other, although these data cannot be causally interpreted. Further research exploring the prevalence and effects of trauma in HIV populations is warranted.

BACKGROUND

- Childhood trauma (including sexual, physical and emotional abuse and/or neglect) continues to be a major public health problem in the United States and worldwide.
- The sequelae of child maltreatment, both immediate and long-term, are profound and significant. There are well-established, strong associations between childhood trauma and mental health disorders in adulthood, especially depression, anxiety and posttraumatic stress disorder (PTSD).
- Only recently have researchers begun to look at associations between childhood trauma and other adult health risk behaviors and disease. There have been several recent, methodologically sound studies published linking childhood trauma with outcomes such as diabetes mellitus and coronary artery disease.
- Health risk behaviors that have been linked to childhood trauma include the use of alcohol and illicit drugs and sexual risk-taking in adulthood.
- There has been very little research on the long-term effects of childhood trauma in HIV-infected individuals.
- We hypothesized that there would be a positive relationship between childhood trauma and health risk behaviors relevant to HIV disease.

OBJECTIVES

- To determine the relationship between ACE and the following health risk behaviors: non-adherence to HIV therapy; substance use, including alcohol and illicit drugs; high-risk sexual behavior.
- To determine the prevalence of ACE in an HIV-infected clinic population.

METHODS

- DESIGN**
- Cross-sectional study using a convenience sample
- STUDY POPULATION**
- From July 2003 to May 2004, HIV-infected patients who received their primary care at the Truman Street Clinic in Albuquerque, New Mexico at the Southwest Care Center in Santa Fe, New Mexico were asked to participate in the study.
 - These participants were either approached by a member of the study team and asked to participate or recruited through flyers placed in both clinics.
 - All participants were HIV-infected, New Mexico residents, English or Spanish speaking, >18 years of age, and able to give informed consent.

- INSTRUMENTS AND MEASURES**
- Measuring adverse childhood experiences
 - Research on issues of childhood abuse and neglect has been hampered by lack of a standardized definition of abuse. We used the Childhood Trauma Questionnaire (CTQ) which inquires about five types of maltreatment – emotional, physical, and sexual abuse and emotional and physical neglect. The CTQ is a validated 28-item self-report inventory that provides brief, reliable screening for histories of abuse and neglect.
 - Measuring adherence
 - We used the SMAQ (simplified medication adherence questionnaire) to assess adherence to medications for those patients currently taking highly active antiretroviral therapy (HAART). The SMAQ has been validated in a large cohort of HIV-infected patients. It shows adequate levels of sensitivity and specificity when compared with other more objective measures.
 - Measuring health risk behaviors high-risk sexual behavior and substance abuse including alcohol, and illicit drugs
 - There are no validated questionnaires that encompass all of these particular health risk behaviors. We gathered information about current and past alcohol and illicit drug use. For analysis, alcohol abuse was defined as current alcohol use in combination with a “yes” response to the following question “Have you ever considered yourself an alcoholic?” Illicit drug use was defined as use of one or more of the following drugs in the last 4 months: cocaine, ecstasy, GHB, heroin, ketamine, LSD, methamphetamines, amyl nitrate. A sexual risk behavior score was calculated based on lifetime number of sexual partners, frequency of condom use, and willingness to disclose HIV status prior to sex.
 - Measuring Depression and Anxiety
 - The Hopkins Symptom Checklist (HSLC-25) was used to elicit information on symptoms of anxiety and depression, the most common affective disorders seen in our outpatient clinic population. A cutoff score on both subscales determines “clinically significant” depression and anxiety. The HSLC has been proven through extensive research to be a highly valid and reliable screening instrument.

Statistical Methods

- Multivariate logistic regression analyses were used to examine the relationship between adverse childhood experiences and the outcome variables: non-adherence, substance use, sexual risk behavior.

TABLE 1
SELECTED CHARACTERISTICS OF THE STUDY POPULATION (N=506)

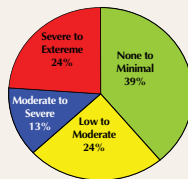
CHARACTERISTIC	PERCENT OF THE STUDY POPULATION
Age	
18 - 35	19%
36 - 50	61%
> 50	21%
Gender	
Male	90%
Female	9%
Transgender	1%
Race	
Caucasian Non-Hispanic	53%
Caucasian Hispanic	38%
Native American	6%
Other	3%
Education	
Less than High School	10%
Finished High School or GED	14%
Some Education after High School	39%
Completed College	19%
Graduate or Professional Degree	18%
Sexual Orientation	
Homosexual/Bisexual	81%
Heterosexual	19%
HIV Risk Factor	
MSM	71%
ASMA/IDU	6%
IDU	4%
Heterosexual Contact	16%
Other/Unknown	3%
Depression Score (Hopkins Symptom Checklist)	
Symptomatic (> 1.75)	52%
Anxiety Score (Hopkins Symptom Checklist)	
Symptomatic (> 1.75)	39%

TABLE 2
MULTIVARIATE LOGISTIC REGRESSION ANALYSIS OF FACTORS ASSOCIATED WITH NON-ADHERENCE TO HIV MEDICATIONS IN 158 HIV-INFECTED SUBJECTS WITH SYMPTOMATIC DEPRESSION

VARIABLE	ODDS RATIO *	95% CONFIDENCE INTERVAL	P-VALUE
Emotional Abuse			
Moderate to Extreme	3.1	1.6 – 6.2	0.001
None to Moderate	1.0		
Duration of HIV Disease**			
≤ 5 years	3.7	1.4 – 9.7	0.009
> 5 years	1.0		

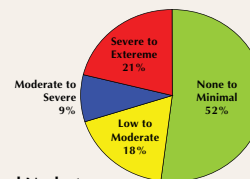
* Adjusted for the following variables: gender, age
 **The positive association seen between duration of HIV disease and non-adherence was also seen in the non-depressed subjects (data not shown)

Emotional Abuse

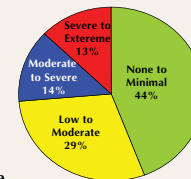


PREVALENCE OF ABUSE

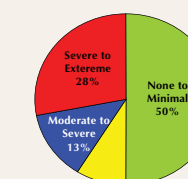
Physical Abuse



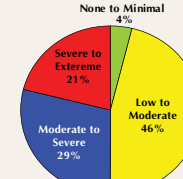
Emotional Neglect



Sexual Abuse



Physical Neglect



RESULTS

PREVALENCE OF SELECTED SUBSTANCE USE RISK BEHAVIORS

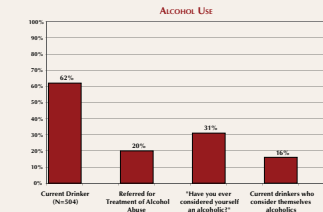


TABLE 3
MULTIVARIATE LOGISTIC REGRESSION ANALYSIS OF FACTORS ASSOCIATED WITH ALCOHOL ABUSE IN 454 HIV-INFECTED SUBJECTS

VARIABLE	ODDS RATIO *	95% CONFIDENCE INTERVAL	P-VALUE
Physical Abuse			
Moderate to Extreme	2.7	1.5 – 4.6	0.0004
None to Moderate	1.0		
Anxiety			
Symptomatic	2.7	1.4 – 5.4	0.005
Not Symptomatic	1.0		

* Adjusted for the following variables: depression, age

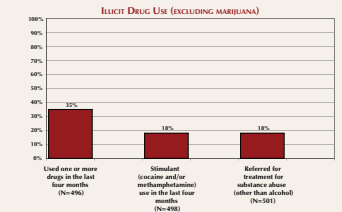


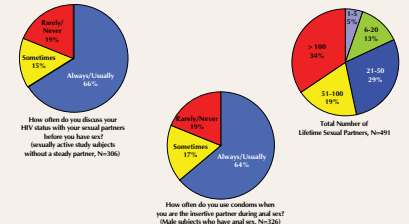
TABLE 4
MULTIVARIATE LOGISTIC REGRESSION ANALYSIS OF FACTORS ASSOCIATED WITH ILLICIT DRUG USE IN 460 HIV-INFECTED SUBJECTS

VARIABLE	ODDS RATIO	95% CONFIDENCE INTERVAL	P-VALUE
Emotional Abuse			
Moderate to Extreme	2.0	1.3 – 2.9	0.001
None to Moderate	1.0		
Age			
≤ 50 years old	2.3	1.3 – 4.0	0.003
> 50 years old	1.0		

SEXUAL RISK BEHAVIOR

In our study population, the calculated sexual risk behavior score was not significantly associated with any type of abuse or neglect. Increased sexual risk taking was significantly associated with being male, white (non-Hispanic), homosexual or bisexual, and level of education (data not shown). There was a direct linear relationship between level of education and sexual risk behavior score. Those who had obtained a graduate or professional degree had the highest risk scores. The prevalence of selected sexual risk behaviors is shown in the charts to the right.

PREVALENCE OF SELECTED SEXUAL RISK BEHAVIORS



CONCLUSIONS

- The prevalence of childhood abuse, emotional, physical and sexual, was very high in our HIV positive out-patient population.
- There was a significant relationship between childhood abuse and risk behaviors, including substance abuse, and non-adherence to HAART.
- Emotional abuse was the strongest predictor of risk behaviors in this population.
- Emotional abuse appeared to modify the relationship between depression and non-adherence (without a history of emotional abuse) a weak predictor of non-adherence.
- The data reinforces the notion that we should address the issues of childhood abuse as well as depression and anxiety in patients who continue to put themselves and others at risk, and who fail to adhere to multiple regimens.

Funded in part through the Institute of Public Health, University of New Mexico, with support from the Tobacco Settlement Increase Award for FY 2002/2003