

Precursors to maladaptive adult functioning:

An internet assessment of Men who have Sex with Men.

BY

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DISSERTATION

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LIST OF ABBREVIATIONS

CDC	Centers for Disease Control and Prevention
CSA	Childhood Sexual Abuse
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, fourth edition
HIV	Human Immunodeficiency Virus
MSM	Men who have Sex with Men
PCL-C	PTSD Checklist-Civilian Form
PCL-S	PTSD Checklist-Specific Form
PTSD	Posttraumatic Stress Disorder

SUMMARY

This study explored the association between childhood sexual abuse, posttraumatic stress disorder (PTSD) and adult functioning in a risky sample of Men who have sex with men (MSM). Four hundred eighty-five men participated in The Men's Health Survey, an online survey assessing MSM Health, stressful life events, sex, and coping. MSM were recruited from social media venues and internet message boards marketed toward men looking for sexual encounters in San Francisco, Los Angeles, Miami, New York, Chicago, Washington D. C., and Atlanta. Twenty nine percent of the sample ($n = 140$) reported non-consensual sexual activity before the age of 16. Twenty-eight percent ($n = 148$) of the total sample screened positive for symptoms of PTSD. PTSD scores varied significantly by participants' HIV status: 61% ($n = 50$) of HIV positive men screened positive for PTSD, versus 17% ($n = 54$) of HIV negative men and 38% ($n = 34$) of men with an unknown status. Ninety percent of HIV positive MSM with a history of Childhood sexual abuse screened positive for PTSD. Having a history of both childhood sexual abuse and PTSD predicted a fear of intimacy, poorer health outcomes, and drug abuse. Neither PTSD nor childhood sexual abuse were associated with sexual risk. Empirical models organizing these relationships were tested via structural equation modeling. PTSD mediated the relationship between childhood sexual abuse and fear of intimacy and poorer health outcome.

I. INTRODUCTION

A. Background

Recent evidence suggests a history of childhood sexual abuse is associated with post-traumatic stress disorder (PTSD) among Men who have Sex with Men (MSM). In the general population PTSD has been associated with negative health outcomes in adulthood, including substance abuse, and fears of intimacy, and sexual risk (Bensley, Van Eenwyk, & Simmons, 2000; Paul et al., 2001; Arias, 2004; Kendler et al., 2000; Jacquet, 1999); however, these relationships have not been demonstrated empirically among an MSM population. We evaluated the prevalence and characteristics of childhood sexual abuse and PTSD symptomology in a cohort of sexually active MSM. We tested whether a history of childhood sexual abuse and severity of abuse predicted PTSD symptomology among MSM. We assessed PTSD symptomology using traditional diagnostic criteria, and as a continuous score, to assess which method best predicted impairment. Finally, we suggested a cohesive empirical model to describe the relationship between childhood sexual abuse, PTSD, adult sexual risk, substance abuse, fear of intimacy, and health demoralization.

B. Childhood Sexual Abuse Sequelae

Childhood sexual abuse is a strong predictor of sexual risk among women (Senn et al., 2006). While general population men are at a substantially lower risk of childhood sexual abuse than are women, there is evidence that men who have sex with men show rates similar to women (Paul, Catania, Pollack, & Stall, 2001). The mechanisms contributing to a higher risk of childhood sexual abuse among MSM are not well understood (Safren, Reisner, Herrick, Mimiaga, & Stall, 2010).

Childhood sexual abuse has been associated with later HIV-risk behaviors among men and women. MSM who endorse childhood sexual abuse also report more sex partners, unprotected intercourse, trading sex for drugs or money, and sexually transmitted infections than do MSM without a sexual abuse history (Senn et al., 2006; Bartholow, Doll, Joy, & Douglas, 1994; Zierler et al., 1991; Parillo et al., 2001; Thompson, Potter, Sanderson, & Maibach, 1997; Wyatt et al., 2002; Batten, Follette, & Aban, 2001). In addition, people abused as children show difficulty forming intimate relationships, heightened sexual behavior and arousal, and inappropriate expressions of sexuality and prostitution (Thompson et al., 1997).

There is consistent evidence of increased HIV-risk behaviors among abuse victims in both clinic and community samples (Brennan, Hellerstedt, Ross, & Welles, 2007). Allers and Benjack (1991) report that 65% of their HIV positive sample of men and women were abused in childhood. Those with a history of abuse were twice as likely to report drug use. Men with a history of childhood sexual abuse had an eightfold increase in HIV-risk behaviors compared to men without a history (Bensley, Eenwyk, & Simmons, 2000). Similarly, women who reported early and chronic sexual abuse had a sevenfold increase in HIV-risk behaviors compared to women with no abuse histories (Wyatt et al., 2002; Bensley et al., 2000). Victims of childhood sexual abuse are also at risk for re-victimization and coercive sex (Wyatt et al., 2002), likely due to their increased reports of low self-esteem, feelings of powerlessness, and feelings of isolation (Thompson et al., 1997).

Abuse incidents do not affect all children uniformly (Friedrich, 1988; Friedrich, Urquiza, and Beile, 1986). The child's age, severity and frequency of abuse, relationship

of the perpetrator to the child, and number of perpetrators are key factors that influence the child's reaction to abuse. For MSM, abuse before the age of thirteen appears to induce worse psychological distress, substance abuse, and sexual risk behaviors later in life (Holmes & Slap, 1998). Earlier abuse may have a more lasting effect because young children do not have adequate coping skills or the ability to understand their abuse (Casey & Nurius, 2005; Ketring & Feinauer, 1999).

Children overall are most likely to experience abuse between ages 8 and 12; the average age is 9.6 years for girls and 9.9 years for boys (The National Resource Center on Child Sexual Abuse, 1994; Finkelhor *et al.* 1986). Evidence from MSM samples suggests the typical relationship between perpetrator and victim varies by age. For example, Strathdee *et al.* (1998) found 90% of HIV-negative gay and bisexual men who identified unwanted sexual contact before the age of 13 reported victimization by a male relative or family friend. Among those abused as adolescents, 30% were victimized by a male stranger and 19% were victimized by a family friend. In contrast, those victimized as adults most commonly cited a male date or boyfriend (44%) or a male stranger (34%) as the perpetrator. In the general population victimization by a close family member causes more lasting harm than by an acquaintance due to fears of family reactions, betrayal by presumed protectors, and the inability to escape the perpetrator both as a child and possibly as an adult (Cohen & Koenen, 2008). Evidence of the latter is that men abused as children are the most likely to have repeated, unavoidable exposure to their perpetrators (Spiegel, 2003).

Rates of childhood sexual abuse among MSM range from 10% (Bartholow *et al.*, 1994) to 65% (Brennan *et al.*, 2007; Paul *et al.*, 2001; Allers & Benjack, 1991). Variance

in prevalence estimates may stem in part from underreporting, but is more likely due to differing operational definitions of childhood sexual abuse. There is no unified definition of childhood sexual abuse (American Psychological Association, 2008); some researchers include exposure to sexually graphic images (e.g., pornography) in their assessment of abuse (Finkelhor, 1990), while others strictly limit it to penetration (Beitchman, et al., 1992).

In a 1984 review of the *National Incidence Study of Child Abuse and Neglect* (NIS-1), Finkelhor estimated the prevalence of male childhood sexual abuse in the general population as 3% to 4.8%. In a later 1990 study, Finkelhor, Hotaling, Lewis, and Smith estimated childhood sexual abuse among men at approximately 16%. Both studies used the same definition of abuse: unwanted sexual intercourse, oral sex or sodomy, a sexual act being performed in the victim's presence, being photographed nude, witnessing exhibitionism, or being inappropriately touched or kissed before age 18. Although there was a dramatic jump from the 1984 to the 1990 estimate, the 1990 estimate is still a much lower rate than the 27% of adult women that report a history of childhood sexual abuse when using the same definition of abuse (Finkelhor et al., 1990).

Prevalence estimates reported among MSM vary even more widely than among women. Childhood sexual abuse among MSM is typically reported more frequently than among men who do not have sex with men (Homes, Foa, & Sammel, 2005). Despite numerous methodological shortcomings, there are no obvious confounds to account for the differences between MSM and heterosexuals. Although it is possible that MSM feel less stigma and more openness to disclose a history of childhood sexual abuse than do

heterosexual men, even in anonymous surveys heterosexual men report incidences of childhood sexual abuse far less than MSM (Holmes et al., 2005).

Not all studies find that childhood sexual abuse leads to impairment. In their controversial article Rind, Tromovitch, and Bauserman (1998) found that college students with a history of childhood sexual abuse were only slightly less adjusted than other students. The negative effects they reported were neither pervasive nor intense, and were attributed to the abuse occurring in more stressful situations and a more stressful family environment rather than due to the abuse itself. Additionally, abused men appeared less harmed than abused women. However, this meta-analysis only assessed college students, a population of inherently higher functioning individuals (Ondersma et al., 2001) and did not address sexual activity, making its generalizability to other populations and studies unclear.

C. Theories of Childhood Sexual Abuse and Sexual Risk

There are competing theories as to why a history of childhood sexual abuse leads to sexual risk, although few have focused on MSM. One psychodynamic perspective emphasizes that victims of abuse feel compelled to expose themselves to situations that are similar to the original trauma in an attempt to assert mastery or control over the situation. Because such exposure does not solve the initial conflict, victims of prior sexual abuse are left with feelings of helplessness, guilt, and a negative sense of self (van der Kolk, 1989).

Other psychodynamic theorists view childhood sexual abuse as a severe form of "invalidation," discounting or rejecting the victim's natural emotional response. (van der Kolk, Perry, & Herman, 1991; Linehan, 1993). A history of emotional invalidation is

associated with chronic emotional inhibition in adulthood, including avoidant coping with stress (Krause, Medelson & Lynch, 2003) such as substance use, sexually risky behavior, or disordered eating.

A basic stress-coping perspective may be a rich source of hypotheses on sexual risk. Folkman, Chesney, Pollack, and Phillips (1992) showed that men who used sexual behavior to cope with stressful situations were more likely to engage in high-risk sexual practices than others were. High-risk sexual activity was also associated with limited emotional expression. Thus, men who were sexually abused as children are prone to avoidant coping strategies, which put them in danger for engaging in higher-risk sexual behaviors.

Miller (1999) proposed several specific mediators to explain the relationship between childhood sexual abuse and HIV-risk behavior among women. First, women may cope with childhood sexual abuse through substance use because drugs and alcohol are more readily available and immediately effective than are other coping options such as therapy. Second, women with a history of childhood sexual abuse may have long-term difficulties with sexual adjustment, make poor partner choices, and inaccurately perceive sexual risks, leading them to not implement risk reduction strategies or engage in self-protective behaviors. Third, such women often suffer from depression, PTSD, or dissociative disorders, all of which place them at risk for making imprudent sexual choices. Finally, Miller asserted that an abused woman's social environment, including limited social support, systematic selection of risky peers, and isolation, facilitates sexual risk. It is important to social contexts in developing HIV-risk preventative interventions,

although Miller's (1999) model has not previously been applied to men generally or MSM.

Theories of childhood sexual abuse derived from a social-cognitive perspective propose that self-efficacy for sexual safety is the most proximal cause of sexual risk. This view suggests that reduced self-esteem, feelings of powerlessness and isolation, and increased sexual arousal associated with abuse lessen self-efficacy for sexual safety (Thompson et al., 1997). Consistent with this view, women with a history of childhood sexual abuse have lower "sexual self esteem" than other women (Van Bruggen, Runtz, & Kadlec, 2006), consisting of negative self-concept of sexuality and less sexual assertiveness.

Childhood sexual abuse is also associated to "erotophobia," the fear of sexual contact and intimacy (Gerrard, Kurylo, & Reis, 1991; Fisher, Byrne, & White, 1983), which may make brief sexual encounters more appealing (Joseph, Dalglish, Williams, & Yule, 1997). Erotophobia may promote an avoidance of sexual health messages. Erotophobic individuals are less likely to plan for any sexual activity (Becker & Byrne, 1985; Fisher, Byrne, White, & Kelley, 1988), or to use effective contraception practices, (Gerrard, 1977), and they are more likely to be persuaded by weak sexual risk arguments (Helweg-Larsen & Howell, 2000) than others are.

Paul, Catania, Pollack, and Stall (2001) proposed one of the only theoretical models linking childhood sexual abuse to sexual risk among MSM. They proposed that childhood sexual abuse is psychologically and physically painful, and elicits a chronic flight or fight response. The child's lack of control elicits maladaptive conditions including "learned helplessness" (Seligman, 1972), low self-efficacy, and poor

boundaries within adult relationships. These characteristics can lead to self-destructive behaviors, including inaccurate perception of risk, lack of sexual assertiveness, and lack of impulse control. Victims may be rewarded for sexual passivity, reinforcing a sexually risky script. Paul et al. (2001) were unable to fully test this model although they did find MSM with a history of childhood sexual abuse were more likely to engage in unprotected anal intercourse with a non-primary partner or serodiscordant male than those without an abuse history, and this relationship was further mediated by substance use.

D. Post-Traumatic Stress Disorder

People exposed to trauma are vulnerable to Post-Traumatic Stress Disorder (PTSD). The higher intensity of the trauma and how directly the person was exposed (i.e., only heard about it, witnessed it, experienced it), the more likely a person is to develop PTSD, an effect well documented in women (Olf et al., 2007). The association between childhood sexual abuse and PTSD is rarely reviewed in men because they are traditionally thought to be less affected by trauma than women are. The association between childhood sexual abuse and PTSD is demonstrated in the military population as well. In the Department of Defense *Millennium Cohort Study*, (Sandweiss et al., in press), constituting approximately 85% men, military personnel with a history of childhood sexual abuse were two times more likely to develop PTSD while in the service than those without an abuse history (Sandweiss et al., in press). Thus, a history of childhood sexual abuse may prime adults for developing PTSD when an additional traumatic event is experienced.

Women have been thought to demonstrate more PTSD than men due to the type of trauma they experience, their young age of exposure, and perceptions of threats and

loss of control (Olf et al., 2007), but this is not substantiated. Lifetime prevalence of PTSD for men and women is very similar; however, the type of precipitating trauma differs (Breslau et al., 1997). Among women PTSD is usually a consequence of sexual abuse or domestic violence, while for men PTSD is typically associated with exposure to nonsexual violent events such as accidents, assaults, witnessing traumatic events, injury, or combat (Tolien & Foa, 2006). Violent, non-sexual events in women and childhood sexual abuse in men need further exploration.

There are gender differences in the presentation of PTSD. Women report more symptoms of numbing, avoidance and comorbid mood and anxiety disorders (Brady, 2006). In contrast, men are more likely to show irritability, impulsiveness, dissociative symptoms, and comorbid alcohol use disorders (Green, 2003). The features of impulsivity, dissociation, and comorbid substance abuse all put men with PTSD at a greater danger for sexual risk (Hutton et al., 2001).

It is important to assess PTSD- symptoms among HIV-infected men. PTSD is associated with high-risk sexual behavior and poorer outcomes from HIV reduction interventions among HIV-infected men (Sacks et al., 1992a; Sacks et al., 1992b; Ballargeon et al., 2003). Further, PTSD is associated with noncompliance to medication regimens (Chesney, 1994), more rapid decrease in CD4+/CD8+ cell ratios (Sledjeski, Delahanty, & Bogart, 2005), substance use that may dampen the immune system (Brief et al., 2004), and poorer overall health outcomes (Taylor & Francis, 2004). PTSD is found in 24-64% of HIV positive samples (Brief, et al., 2004; Kalichman, Sikkema, DiFonzo, Luke, & Austin, 2002; Katz & Nevid, 2005; Kelly et al., 1998, Kimerling et al., 1999; Israelski et al., 2007).

E. Structure of Posttraumatic Stress Disorder

PTSD is classified in the *Diagnostic and Statistical Manual* (DSM-IV; American Psychiatric Association, 1994) as an anxiety disorder characterized by three distinct clusters of symptoms that develop following exposure to an event perceived to be traumatic. These consist of re-experiencing the traumatic event (e.g., nightmares and other intrusive recollections), avoidance of cues associated with the event along with general emotional numbing (e.g., avoidance of people and/or places related to the traumatic event, restricted affect), and hyperarousal (e.g., sleep difficulties, exaggerated startle response). To receive a diagnosis of PTSD, an individual must be exposed to a traumatic event with an actual or perceived threat of harm. Further, the response must involve intense fear or helplessness, and the individual must experience at least one re-experiencing symptom, at least three avoidance and numbing symptoms, and at least two hyperarousal symptoms.

The DSM-IV conceptualization of PTSD has had many criticisms, including that it fails to account for interpersonal symptomology and focuses only on subjective distress. In addition, the DSM-IV was developed from expert formulations of diagnostic criteria, rather than empirical description of PTSD symptoms. In responses, several researchers have empirically tested the expert consensus, and found that it may not accurately assess PTSD (Asmundon et al., 2000; DuHamel et al., 2004; Palmieri & Fitzgerald, 2005; Marhsall, 2004; Simms, Watson & Duebbling, 2002; Buckley, Blanchard, & Hickling, 1998). This has been documented in both exploratory (i.e., Taylor et al., 1998) and confirmatory factor analysis studies of PTSD symptoms (i.e., Buckley,

Blanchard, & Hickling, 1998). In fact, the specific structure defined by the DSM has consistently failed to be replicated in factor analyses (Elklit & Shevlin, 2007).

The Taylor et al. (1998) analysis is one of the most often cited and methodologically sound articles on this topic. Through exploratory factor analysis of a 17-item symptom checklist they found the PTSD scale to comprise of three factors. The first was a general factor that comprised all the symptoms in the checklist. They labeled two more specific factors 'intrusions and avoidance' and 'hyperarousal and numbing.' In two different samples the general factor accounted for 13% to 38% of the variance, with each additional factor adding an additional 8% to 9% of the variance. This suggests that post-traumatic stress reactions arise from a general mechanism, with contributions from two specific psychological processes. Both avoidance and numbing are attempts to regulate trauma related stimuli; however, numbing is uncontrollable and automatic, whereas avoidance is active and purposeful (Taylor et al., 1998). Other investigators have linked these factors to sexual risk (Semple, Patterson, & Grant, 2000; Halkitis, Parsons, Wolitski, & Remien, 2003; McKirnan, Venable, Ostrow, & Hope, 2001; Chohen, Russel, Golub, & Mayer, 2006).

Asmundsen et al. (2000) tested five competing models of PTSD represented in the literature, as well as the current DSM-IV criteria. The model that comprised the best fit of the data compromised a general psychological factor and four specific factors, consisting of re-experiencing, avoidance, numbing, and hyperarousal.

This literature leaves open the question about how many components best characterize PTSD. Further, there have been few studies examining the effect of specific

components of PTSD symptoms on adult functioning such as sexual risk, substance abuse, health demoralization, and fear of intimacy.

As with all disorders within the DSM-IV, there is debate about whether PTSD is a categorical or dimensional disorder (Meehl, 1979). Haslam (2003) asserts in his review that dimensional models tend to be favored for the broad neurotic spectrum such as depression, anxiety, posttraumatic stress disorder, and for borderline personality disorder. In taxometric investigations PTSD appears to constitute a spectrum of extreme reactions to traumatic life events rather than a discrete clinical syndrome (Broman-Fulks et al., 2006).

Epidemiological studies indicate that 55% to 70% of people experience some form of violent or traumatic victimization in their lifetime (Kessler, Sonnega, Bromet, Hughs, & Nelson, 1995; Norris, 1992; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). A significant proportion of these individuals experience at least some symptoms of PTSD (Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992), and in many cases, symptoms are present up to a year after the event (Veronen & Kilpatrick, 1983). However, only 4% to 12% of victims ever meet the diagnostic threshold for PTSD (Kessler et al., 1995; Kilpatrick & Ruggiero, et al., 2003; Resnick et al., 1993). This is problematic because subclinical PTSD may be associated with clinically significant impairment in psychosocial and occupational functioning (Marshall et al., 2001).

We proposed to measure PTSD as a dimensional disorder. The use of a continuous measure can express the full range of PTSD symptom patterns and severity, while maximizing statistical power and minimizing information loss. Second, a dimensional solution for posttraumatic stress reactions avoids viewing posttraumatic

stress reactions as an all-or-nothing construct (Haslam, 1997). Thus, variables such as age of childhood sexual abuse or number of times trauma occurred are likely to be important in predicting the intensity and duration of an individual's posttraumatic stress reactions.

F. Etiology of Posttraumatic Stress Disorder

Learning-oriented theories of PTSD include a conditioning theory, wherein PTSD is analogous to a chronic phobia, and Seligman's (1975) learned helplessness theory emphasizing the uncontrollable and unpredictable nature of traumatic events. Neither theory fully explains the spectrum of PTSD symptoms, especially the re-experiencing of symptoms (Joseph et al., 1997), or the avoidant coping response.

In a review of neuroimaging literature, Francati, Vermetten, and Brenner (2007) concluded that several anatomical structures are altered in patients with PTSD, specifically in the prefrontal cortex (involving executive functioning), limbic system (controlling emotional regulation), and hippocampus (containing memory). These abnormalities are observed as the result of trauma from combat, motor vehicle accidents, natural disasters, rape, and childhood physical and sexual abuse. The mechanisms causing these functional brain changes are not well understood. The authors suggest individuals with PTSD have altered fear response mechanisms because of associating trauma with situations perceived as "safe." This pairing elicits numbed emotional reactions or avoidance of potential fear related stimuli. The fear response is an important part of human adaptation and readies the body for fight-or-flight, but in people with PTSD these danger cues are over-generalized. This is consistent with Paul, Catina, Pollack, and Stall's (2001) proposed model that describes childhood sexual abuse as psychologically and physically painful, thus eliciting a chronic flight-or-flight response.

People with active PTSD also show impairment in executive functioning and memory (Leskin & White, 2007), particularly men (Brewin et al., 2007). Benjamin et al. (1996) suggest that dysregulation of dopaminergic and serotonergic systems leads to disinhibition and poor decision-making in PTSD. Anderson et al. (2002) demonstrated through functional magnetic resonance imaging that repeated sexual abuse affects the blood flow and functioning of the cerebellar vermis, a small part of the cerebellum associated with substance abuse in primates. This structure is especially sensitive to stress hormones during childhood.

Engaging in sexual behavior may also serve as biological regulator of anxiety. In a recent study of male mice, oxytocin, the hormone released during orgasm, breastfeeding, and labor, produced an anxiolytic effect in both behavioral and autonomic markers of anxiety (Ring et al., 2006). This finding has yet to be replicated in humans; however, women that engage in breastfeeding have anecdotally been observed to have a reduction in stress and anxiety disorders (Altemus, 1995; Uvnäs-Moberg et al., 1990). Oxytocin is also called the “love hormone” because it facilitates bonding and trust. Thus, those who are experiencing a high level of anxiety due to PTSD and who have trouble trusting or bonding with partners may engage in sex to release oxytocin to regulate their anxiety and lack of trust.

G. Fear of Intimacy

There is a strong relationship between childhood sexual abuse and fears of intimacy from both empirical and anecdotal evidence. Jacquet (1999) concluded that both male and female survivors of childhood sexual abuse suffer lasting effects on romantic relationships, including problems with sexual intimacy, trust, conflict, negativity, and

commitment volatility. Survivors who do establish romantic relationships report they are less intimate or satisfying (DiLillo & Long, 1999). Childhood sexual abuse survivors are more likely to divorce (Mullen, Martin, Anderson, Romans, & Herbison, 1994), or to have never married or cohabitated (Bifulco et al., 1991) than others are. If married, individuals with a history of abuse are more likely to report marital discord, generalized fear, mistrust, and hostility in their relationships than are their counterparts without abuse histories (Astin, Lawrence, & Foy, 1993; Meiselman, 1978; Jehu, 1988; Courtois, 1979; Whiffen, Judd, & Aube, 1999).

Adults who were sexually abused as children often have problems forming lasting bonds with peers. They may view themselves as ‘damaged goods,’ and have difficulties discerning the differences between love and sex (Gill & Tutty, 1999). Children who experienced pain, fear, or guilt, but were told by their perpetrators that they were enjoying the experience have the most problems with intimacy and sexual dysfunction as adults (Leonard & Follete, 2002). Adult survivors of childhood sexual abuse may avoid people that resemble their perpetrator (Wyatt, 1990), and may avoid intimate relationships to avoid fears associated with closeness and possible re-traumatization because of flashbacks or somatic memories (Davino, 2001, Finkelhor & Browne, 1986).

Jackson et al. (1990) found that 65% of those who reported having sex with someone at least five years older than themselves prior to age 18 met criteria for a DSM-III defined sexual dysfunction. Fleming et al. (1999) concluded that increased severity of childhood sexual abuse, defined as penetration, predicted adult sexual dysfunction, intimacy difficulties, and greater dissatisfaction in relationships. Kinzl et al. (1995) and Davis et al. (2001) concluded that women abused multiple times as a child reported

pronounced difficulties with intimacy such as shame, guilt, disgust, and impairment of sexual pleasure. Many female survivors of childhood sexual abuse report problems with orgasm in particular. For men, sexual dysfunction may not be expressed as problems with orgasm or arousal as in the case for women, but may be expressed as sexual compulsion or engaging in sexual risk.

Greenberg (2002) proposed that survivors of childhood sexual abuse perceive emotional and physical intimacy as abusive, which leads to lessened trust, feelings of vulnerability, and greater likelihood of sexual dysfunction as adults. Similarly, Cole & Putnam (1992) suggested that incest disables the person's capacity for trust and safety, leading to distrust, insecurity, and suspiciousness in adult relationships.

Much of the literature on intimacy and PTSD among men revolves around the aftermath of war trauma, with most samples consisting of Vietnam veterans. In a study of veterans with PTSD, Riggs, Byrnes, Weathers, and Litz (1998) concluded that veterans with PTSD report more relationship distress, problems with intimacy, anxiety about intimacy, and problems in their relationships, and they had taken more steps toward separation and divorce than veterans without PTSD had. In addition, PTSD symptoms of avoidance and emotional numbing were highly related to poor relationship quality. A Cook et al. (2004) study of male World War II ex-prisoners found that although the ex-prisoners displayed considerable marital stability, over 30% of those with PTSD reported relationship problems compared with only 11% of those without PTSD. Those with PTSD reported poorer adjustment and communication with their partners and more difficulties with intimacy. These factors were also significantly associated with emotional numbing.

Traumatic experiences may cause a pervasive avoidance of interpersonal triggers similar to the traumatic event. Such avoidance may inhibit capacities that foster stable interpersonal relationships, such as self-awareness, intimacy, sexuality, and communication (McFarlane & Bookless, 2001). Twaite & Rodriguez-Srednicki (2004) found that individuals with reported histories of childhood sexual abuse endorsed more serious symptoms of PTSD than those who had witnessed a live terrorist attack.

We hypothesized that men who had experienced childhood sexual abuse would report a greater fear of intimacy than would those without histories of abuse. In addition, we hypothesized that men with more severe PTSD symptomology would experience greater dysfunction with intimacy. Support for these hypotheses would show the importance of CSA to how MSM form intimate relationships, and further explain why having casual relationships may be especially appealing.

H. Substance Abuse

The emotional numbing achieved by drug and alcohol abuse is a hallmark of both women with a history of childhood sexual abuse, and individuals suffering from PTSD (Litz & Gray, 2002). Alcohol and drug use increases vulnerability to victimization by distorting perceptions of danger and impairing judgment. Both these attributes may make them appear vulnerable to perpetrators. In a large epidemiological study, Kendler et al. (2000) concluded those with a history of childhood sexual abuse were three times more likely to engage in substance abuse than were those without a history of abuse. In a complementary study of African American women, Jasinski, Willaims, and Seigel (2000) found women victimized multiple times as children were four times more likely to engage in "problem" alcohol behaviors than were those victimized once in childhood.

Drugs and alcohol can blunt hyperarousal symptoms for those with PTSD. Among veterans with PTSD, rates of substance abuse range from 64-84% for alcohol and 40-44% for drugs (Escobar et al., 1983; Keane, Gerardi, Lyons, & Wolfe, 1988; Keane & Wolfe, 1990; Sierles, Chen, McFarland, & Taylor, 1983; Sierles, Chen, Messing, Besyner, & Taylor, 1986). The National Vietnam Veterans Readjustment Study concluded substance abuse was the most frequently occurring comorbid disorder in veterans with PTSD (Kulka et al., 1988). For female victims of assault, comorbidity rates between PTSD and substance abuse range from 25-39% (Cashman, Molnar, & Foa, 1995; Resick, Griffin, & Mechanic, 1996). In a study by Fullilove et al. (1993), an astonishing 99% of 105 female drug users reported lifetime exposure to at least one traumatic event and 59% reported PTSD symptomology. Stewart (1996) identified PTSD as a potential mediator between trauma exposure and substance abuse due to the strong correlation between substance abuse and trauma with PTSD symptom severity.

We hypothesized that childhood sexual abuse would be strongly associated with both adult PTSD symptoms and alcohol and drug abuse, and that PTSD would be an important proximal predictor of alcohol and drug abuse.

I. Health Demoralization

The Centers for Disease Control encourage service providers to become aware of adults or young adults who have been victims of child maltreatment in an effort to help stop future victimization and be mindful of possible long-term health consequences (Arias, 2004). Women with a history of sexual, physical, or emotional abuse had lower perceptions of their overall health, reported more physical health symptoms, reported more health risk behaviors, and had a greater amount of disability (Molnar, Buka, &

Kessler, 2001; Walker et al., 1999). In addition, childhood maltreatment has been associated with more distress about somatic symptoms (Runtz, 2002) and increased healthcare use (Finestone et al., 2000; Hulme, 2000). Even after mental health costs are removed, women who suffered from any form of childhood maltreatment had higher annual health care costs than those who had not been maltreated during childhood (Walker et al., 1999). Women with histories of sexual assault report higher rates of chronic diseases, including diabetes and arthritis (Golding, 1994), and irritable bowel syndrome (Leserman et al., 1996). Childhood trauma has also been associated with heart disease, stroke, cancer, emphysema, and hepatitis (Felitti et al., 1998).

Childhood sexual abuse is frequently linked with adult depression and anxiety, which are associated with many negative health outcomes (Boudewyn & Liem, 1995; Zoellner et al., 1992). Childhood sexual abuse has also been linked to poor health behaviors, including substance abuse (Miller, Downs, Gondoli, & Keil, 1987), and physical inactivity and smoking (Felitti et al., 1998). Women with a history of childhood sexual abuse frequently have increased pituitary-adrenal and autonomic responses to stress, leading to an increased vulnerability to detrimental health outcomes (Heim et al., 2000).

People who were sexually abused as children may also find themselves in abusive adult relationships. Intimate partner violence (i.e., actual or threatened physical, sexual, psychological, or stalking violence by current or former partners) is associated with many negative health effects, including physical injuries and psychosomatic symptoms like chronic pain and gastrointestinal disorders (Coker, Smith, Bethea, King, & McKeown, 2000; Smith et al., 2002).

Few studies have examined PTSD as a mediator of the relationship between childhood sexual abuse and poor health outcomes (Lang et al., 2006). However, PTSD is a possible mediator between general trauma and negative health consequences (e.g., Kimerling et al., 2000; Wolfe et al., 1994). Wagner et al. (2000) found PTSD was associated with physical health problems after controlling for trauma exposure. In a study of women who served in Vietnam, Kimerling, Clum, and Wolfe (2000) demonstrated that PTSD mediated the relationship between trauma and health problems. Breslau and Davis (1992) suggested the chronicity of PTSD predicts severity of physical complaints, while Zoellner et al. (2000) suggested severity of symptoms predicts negative health outcomes.

In a study by Kalichman et al. (2002), HIV-positive men and women with a history of sexual trauma had more HIV-related health problems and depression and anxiety than did HIV-positive men and women without a history of sexual trauma, after controlling for AIDS diagnoses, viral load, and CD4 counts. This suggests HIV positive individuals with a history of sexual assault have more physical and psychological hurdles to overcome than do those without a history of victimization.

Brief et al. (2004) suggested four theoretical pathways to explain how childhood trauma and PTSD affect health outcomes. These include neurobiological alterations across many bodily systems such as cardiovascular stress, poor attributions about health in general, engaging in health compromising behaviors such as smoking, and neurochemical and physiological changes that affect immunocompetence.

For this study, we empirically tested the direct and indirect relationships between childhood sexual abuse, PTSD, and health demoralization. We expected those with higher scores on a continuous model of PTSD symptoms would experience greater health

demoralization. In general, we hypothesized direct relationships between childhood sexual abuse, health demoralization and PTSD, and further hypothesized that PTSD would mediate the effect of childhood sexual abuse on substance abuse, sexual risk, health demoralization, and fear of intimacy.

II. METHOD

A. Participants

Between February 15, 2010 and July 1, 2010, 501 MSM participated in the online *Men's Health Survey*. We eliminated 16 surveys due to missing data, yielding a final sample size of $n = 485$. We recruited men from Internet message boards (e.g., Craigslist) marketed toward men looking for sexual encounters in San Francisco, Los Angeles, Miami, New York, Chicago, Washington D. C., and Atlanta. We also used social media for recruitment, including Facebook, Myspace, Google search ads, flyers, and word-of-mouth. A Google search for the domain address www.menshealthsurvey.com indicated the survey link was reposted on multiple university listservs and bulletins (e.g., Emory University and University of Georgia).

Men who use the Internet to find sex partners tend to engage in high risk sexual activities (Benotsch et al., 2002; Bull et al., 2001; Elford et al., 2001; Halkitis & Parsons, 2003; Kim et al., 2001; Reitmeijer et al., 2003; Tikkanen & Ross, 2003, McKirnan, Houston, & Tolou-Shams, 2006). As MSM who use the Internet to solicit sex comprise a potentially “hidden population,” researchers have been developing skills and techniques to actively pursue these men (DeGuzmann & Ross, 1999; Toomey & Rothenberg, 2000). Further, the internet facilitates anonymity, which may encourage participants to answer questions honestly about sensitive topics. We used an approach to internet recruitment developed by Fernandez et al. (2007) wherein we directly approached men in “chat rooms.”

The survey was administered on a customized web site. The launch page presented participants with the informed consent; participants needed to click on “yes” to reading the informed consent before continuing. The questionnaire contained 160 items, taking 30 to 45 minutes to complete. It included skip patterns to tailor the survey to participants’ previous responses. All items used standard checklists or rating scales

Data were analyzed using SPSS Statistics Version 17.0 (SPSS, 2008), and Mplus, Version 5 (Muthén, L. K., & Muthén, 2007). The typical indices of goodness-of-fit for Structural Equation Modeling (SEM) included a Root Mean Square Error of Approximation (RMSEA; Steiger & Lind, 1980) and Comparative Fit Index (CFI; Bentler, 1990). Models with a CFI goodness-of-fit index greater than .95 and RMSEA values below .06 indicate a well fitting model (Hu & Bentler, 1999). Participants’ age, ethnicity, education, income, and HIV status were entered into all regression equations and models as covariates.

B. Measures

Participant characteristics consisted of ethnicity, age, socioeconomic status (SES), education, "outness" of being MSM, HIV status, and annual income. “Outness” as MSM was assessed by asking, “How many of the people you know or see day to day know you have sex with men?”

Childhood Sexual Abuse (alpha = .58) was assessed using an adapted version of the Sexual Abuse Severity Score (Zink, Klesges, Stevens, & Decker, 2008). This was a cumulative scale measuring substantially different components of abuse; therefore, as expected, the alpha was lower than most unified scales.

The Sexual Abuse Severity Score combines six features of childhood sexual abuse: 1) age of first sexual abuse, 2) number of perpetrators, 3) degree of coercion, 4) the nature of the abusive behavior, 5) the victim's relationship to the perpetrator, and 6) the number of occurrences. The original scale ranged from 0 to 20. No alpha or reliability scores are available for the original scale (Zink, Klesges, Stevens, & Decker, 2008).

Recent literature has identified three aspects of perpetrators that also contribute to the severity of abuse: the perpetrator's gender, age, and whether the victim currently has contact with the perpetrator. We modified the Sexual Abuse Severity Score by including these items, weighted according to what the literature suggests is the most injurious. Table 1 shows the point allocations of the revised scale. The highest scores are for those that are younger, have more than one perpetrator, are coerced by physical force or weapons, had penetrative intercourse, had a perpetrator that was a close relative, and had a greater number of occurrences.

PTSD was assessed by the PTSD Checklist-Civilian Form (PCL-C; Weathers, Huska, & Keane, 1991) for those without a history of childhood sexual abuse, and by the PTSD Checklist-Specific Form (PCL-S; Weathers, Huska, & Keane, 1991) for those with a history of childhood sexual abuse (alphas = .95 and .97). The PCL is a 17-item self-report measure of the 17 DSM-IV-TR (American Psychological Association, 2000) symptoms of PTSD. Respondents rate how much they were "bothered by that problem in the past month" on a five-point scale ranging from 1 ("not at all") to 5 ("extremely"). The PCL-C and PCL-S ask identical questions about problems in relation to an identified "stressful experience." How the stressful experience is defined is how they differ. The PCL-S requires participants to respond to a specific event; in this case their 'most

distressing or severe childhood sexual abuse experience.' In contrast, the PCL-C asks about their 'most distressing or severe stressful life experience.'

The PCL yields a total score, ranging from 17 to 85, and cluster scores following the DSM-IV criteria for PTSD. A score greater than 40 denotes probable PTSD; however, previous studies have suggested that a score of 50 or greater on either version of the PCL represents a probable diagnosis of PTSD (Weathers, Litz, Herman, Huska, & Keane, 1993). PTSD clinics in the Veteran Affairs Hospitals also use a score of 50 as the diagnostic cut-point for PTSD (Gerrity, Corson, & Dobscha, 2007). Separate scores can be summed to obtain dysfunction scores for Criteria B, C, and D of the DSM-IV; however, this feature was not used in this study.

The PCL-S was developed by the National Center for PTSD. It is internally valid for the total score ($\alpha = .97$) and cluster subscales ($\alpha = .91-.92$; National Center for PTSD). It has demonstrated external validity by correlating highly with the Clinician-Administered PTSD Scale (CAPS; $\alpha = .95$), the 'gold standard' for PTSD diagnosis (Blake, Weathers, Nagy, Kaloupek, Charney, & Keane, 1995). A sample item is, "In the past month, how much have you been bothered by repeated, disturbing memories, thoughts, or images of your unwanted sexual experience?"

Sexual Risk ($\alpha = .86$) was assessed with standard measures of MSM sexual activity over the previous three months, including engagement in unprotected anal intercourse and "transmission risk", consisting of unprotected anal intercourse with a partner who was not known to be the same HIV status as the participant. We also asked participants if they have contracted a sexually transmitted infection (STI) in the past year.

Substance Use. We assessed alcohol use with the CAGE (alpha = .72), which has demonstrated validity in detecting alcohol abuse and dependence and has a test-retest reliability as high as .90 (Dhalla & Kopec, 2007). The CAGE consists of only four questions, including “Have you ever felt you should *cut down* on your drinking?” and “Have people *annoyed* you by criticizing your drinking?”

Participants reported their drug use by rating use of 10 substances (e.g., marijuana, crack cocaine, heroin, etc.) over the past 6 months on a 5-point frequency scale ranging from “Never” to “About every day.” We also assessed alcohol and drug use before and during sex. Sample items included, “In the past six months, within two hours before or during anal sex with a male, how often did you use alcohol?” For Model 1 and Model 2, we defined substance abuse as the number of drugs used, the continuous CAGE score, frequency of intoxication, number of drugs indicated, number of drug problems, and combining drugs with sex.

Health Demoralization was assessed using the RAND 36-Item Health Survey 1.0 (Hays, Sherbourne & Mazel, 1993; alpha = .79). The RAND 36 was constructed using the World Health Organization’s definition of health that includes physical, mental and social health. The Rand 36 contains subscales for physical functioning, physical problems that limit daily roles, emotional problems that limit daily roles, emotional well being/mental health, social functioning, energy/fatigue, pain, and general health perception. It is identical to the Short Form Survey (SF-36); however, the RAND 36 uses a simpler scoring method based on a standard score of 100. Both were adapted from the Medical Outcome Survey (Hayes & Shapiro, 1992; for scoring see http://www.rand.org/health/surveys_tools/mos/mos_core_36item_scoring.html).

The RAND 36 has consistently demonstrated good psychometric properties on all subscales ($\alpha > .85$; $r > .75$; Brazier et al., 1992). Sample items include: "In general, would you say your health is" "Excellent" (1) ... to ... "Poor" (5), and "Have you felt so down in the dumps that nothing could cheer you up?" "All of the time" (1) ... to ... "none of the time" (6).

Fear of Intimacy was assessed by the Fear-of-Intimacy Scale (Descutner & Thelen, 1991) ($\alpha = .72$). The Fear-of-Intimacy Scale contains 35 self-report items that ask the participants about possible distress surrounding close dating relationships. Scores range from 1 ("not at all characteristic of me") to 5 ("extremely characteristic of me"). Sample items include: "I would be afraid of sharing my private thoughts with (the close person they designated)" and "I have shied away from opportunities to be close to someone." It has excellent internal consistency ($\alpha = .93$; $r = .89$), and has been validated among a lesbian and gay sample (Greenfield & Thelen, 1997).

III. RESULTS

A. Participant characteristics

The sample was relatively young (M age = 36.65, SD = 12.72, range 19 to 82), and predominately white (75%, $n = 366$). Latino and African American participants accounted for 11.8% ($n = 57$) and 11.5% respectively ($n = 56$), Asians accounted for 5% ($n = 25$) of the sample, and Native Americans Hawaiians or Pacific Islanders accounted for 3% ($n = 13$), Eight percent of the sample ($n = 39$) reported their race as "other."

Seventeen percent of participants reported themselves to be HIV-infected, 65% reported that they were HIV-negative at their last HIV test, and 18% reported not knowing their HIV status. Of men who reported being HIV-uninfected, the mean time

since their last HIV test was 27.1 months, or a little over 2 years. African-Americans were most likely to report being HIV-infected (41%), followed by Native Americans (40%), Latinos (17.5%) and Caucasians (13.5%), $X^2 = 31.67$ ($n = 81$, $df = 6$, $p < .001$).

Sexual risk was common: 72 % ($n = 341$) of participants reported unprotected anal intercourse in the previous 3 months, and 44% ($n = 211$) engaged in UAI with a partner whose HIV status was different from theirs or unknown (“transmission risk”). Forty percent ($n = 194$) reported an STI diagnosis during the last year. UAI was more common among HIV-infected men than men with unknown or negative sero-status, 81.8% versus 69.6%, $X^2 = 5.99$ ($n=472$, $df=2$, $p = .05$).

B. Childhood sexual abuse

Twenty nine percent of the sample ($n = 140$) reported non-consensual sexual activity before the age of 16. This figure varied dramatically by participants’ HIV status: 70% ($n = 57$) of HIV-infected participants reported childhood abuse, versus 20% ($n = 62$) of the HIV-uninfected participants and 24% ($n = 21$) of those with an unknown HIV status $F(1, 442) = 44.437$, $p < .01$, $OD = 1.44$. Reports of childhood sexual abuse varied by participants’ ethnic group. African-Americans were most likely to report childhood sexual abuse (60.7%), followed by Latinos (43.8%), and Caucasians (21.6%), $X^2 = 30.39$ ($n = 472$, $df = 6$, $p < .001$). Those with a history of childhood sexual abuse were more likely to have a lower educational level $F(1, 477) = 19.48$, $p < .001$. Severity scores ranged from 1-91, with an average severity score of 11.1 ($SD = 20.83$), meaning participants had a large range of the amount of abuse they reported (see table 2).

For men who report having a history of childhood sexual abuse, the average age of first abuse was 8.97 years ($SD = 3.30$, median = 8, range 1-17 years). Participants

reported abuse from a median and mode of 1 person ($M = 2.15$, $SD = 3.25$, range 1-25 people). Table 2 shows the type of abuse the participants endured, and the relationship the participants had to the perpetrator. Forty-three percent ($n = 212$) of participants reported experiencing verbal abuse, 31.5% ($n = 154$) reported physical abuse, and 30.7% ($n = 150$) reported emotional neglect before the age of 16. Fifty-one percent of participants ($n = 247$) reported no abuse history.

A history of childhood sexual abuse was not associated with income $F(1, 481) = 3.63$, *ns*, or time spent in jail, $F(1, 477) = 1.62$, *ns*. Men who reported childhood sexual abuse reported earlier sexual debut, M age = 17.8 ($SD = 8.5$) v. 19.8 ($SD = 8.8$), $F(1, 481) = 11.81$, $p < .01$, $OD = .89$, but did not identify as MSM earlier $F(1, 483) = .825$, *ns*, or come out to others as MSM earlier, $F(1, 467) = .430$, *ns*.

From previous studies we expected men who were abused to have difficulties with intimacy, which may be manifested in their being less likely to have a primary partner and more likely to have multiple sex partners. However, abuse was not associated with having a primary partner, $F(1, 479) = 0.24$, *ns*, or having a greater number of partners, $F(1, 479) = 2.46$, *ns*. Also contrary to our prediction, men who reported early sexual abuse were not more likely to engage in unprotected anal intercourse in the last 3 months, $F(1, 467) = .017$, *ns*, transmission risk in the last 3 months, $F(1, 467) = .017$, *ns*, or have an STI in the last year $F(1, 473) = 1.28$, *ns*.

C. PTSD

We initially tested the factorability of the 17 PCL-C and PCL-S items, to test whether there were several empirically separable components of PTSD symptoms. All items correlated at least .87 with at least one other item, suggesting factorability, and the

Kaiser-Meyer-Olkin measure of sampling adequacy was .972, well above the recommended value of .6. We used principle components analysis to identify and compute composite coping scores for the factors underlying the PCL. However, the initial Eigenvalues showed the first factor to explain 87% of the total variance, and the second factor to account for 2.9% of the variance, clearly suggesting a single-factor solution. Cronbach's alpha score for the full 17-item scale was .80. Deleting the "reexperiencing" items (i.e. 'Suddenly *acting or feeling* as if a stressful experience *were happening* again (as if you were reliving it)?' and 'Having *physical reactions* (e.g., heart pounding, trouble breathing, or sweating) when *something reminded* you of a stressful experience from the past?') would increase the Cronbach's alpha score to .89. Because of the clinical utility of the reexperiencing items, we retained them for the summary PCL score.

Twenty-eight percent ($n = 138$) of the total sample had a PCL-C or PCL-S score higher than 50 (overall $M = 35.57$, $SD = 18.9$, median = 28). PTSD scores varied significantly by participants' HIV status: 61% ($n = 50$) of HIV positive men screened positive for PTSD symptoms, versus 17% ($n = 54$) of HIV negative men and 38% ($n = 34$) of men with an unknown status, $X^2 = 69.01$ ($n = 488$, $df = 2$, $p < .05$).

Of those with a history of childhood sexual abuse, 56% ($n = 79$) screened positive for PTSD symptoms, versus 16.5% ($n = 57$) of those without a history of childhood sexual abuse, $X^2 = 78.60$ ($n = 488$, $df = 1$, $p < .01$, OR = 4.36, 95% CI = 3.44 – 9.25). The intersection of HIV status and childhood sexual abuse had a dramatic effect on PTSD rates. Of those who were HIV positive, 61.7% screened positive for probable PTSD, compared to 17.0% of HIV negative participants, and 37.2% for those with an unknown HIV status. Table 3 illustrates the differences of the 138 men who screened positive for

experiencing PTSD symptoms by report of childhood sexual abuse and HIV status.

Table 4 depicts rates of HIV status and history of childhood sexual abuse in the total sample.

TABLE III

HIV STATUS AND REPORTS OF CHILDHOOD SEXUAL ABUSE AMONG THE 138 MEN WITH PTSD SYMPTOMS

	Any report of CSA	No reported CSA
HIV-infected	90%, n = 45	10%, n = 5
HIV-negative	38.8%, n = 21	61.1%, n = 33
Unknown status	41.1%, n = 14	58.8 %, n = 20

TABLE IV

HIV STATUS AND REPORTS OF CHILDHOOD SEXUAL ABUSE IN THE TOTAL SAMPLE

	Any report of CSA	No reported CSA
HIV-infected	70%, n = 57	30%, n = 24
HIV-negative	19.6%, n = 62	80.4%, n = 255
Unknown status	24.4%, n = 21	75.6%, n = 65

Logistic regression showed main effects of HIV status $X^2 = (11.16, 6)$, OR = 2.4, $p = .000$, and childhood sexual abuse $X^2 = (78.2, 6)$, OR = 4.36, $p = .000$, on the likelihood of a clinical level of PTSD. The interaction of HIV-status by CSA report was statistically significant, $X^2 = (78.9, 6)$, OR = 4.37, $p = .001$. HIV-infected men who

reported any CSA were substantially more likely to show a clinically diagnosable PTSD symptom level than were HIV-infected men who did not report CSA, and HIV-negative or –unknown men, independent of CSA status.

D. Childhood Sexual Abuse and Adult Sexual Risk

We predicted that Childhood sexual abuse would be directly associated with PTSD symptoms, and directly associated with drug or alcohol use, overall health demoralization, intimacy, and sexual risk. We further predicted that PTSD itself would be associated with the adult functioning variables. See table 5.

As hypothesized, men who had experienced childhood sexual abuse reported a greater fear of intimacy than would those without histories of abuse. In addition, men who experienced childhood sexual abuse reported more alcohol abuse, drug abuse, drug problems, and greater amount of health demoralization. A history of childhood sexual abuse also predicted PTSD. Surprisingly, childhood sexual abuse did not predict sexual risk.

TABLE V

LOGISTIC REGRESSIONS: MAIN EFFECTS OF CHILDDHOOD SEXUAL ABUSE
AND PTSD

Predictor	Childhood Sexual Abuse				PTSD			
	X^2	B	<i>SE B</i>	e^B	X^2	B	<i>SE B</i>	e^B
PTSD score	87.50***	1.71	.25	5.64				
Drug problems	57.02***	.44	.22	1.55	55.99***	.33	.226	1.40
Alcohol abuse	21.59*	1.02	.28	2.77	9.61	.29	.269	1.34
Unprotected anal sex	7.73	.03	.26	1.03	7.90	.11	.249	1.11
HIV trans. risk	14.30	-.04	.24	.06	14.34	.04	.23	1.05
Recent STI	24.10*	.22	.24	1.25	23.06**	-.39	.23	.70

Note: Controls are Participants' age, ethnicity, education, income, and HIV (omitted from the table). e^B = exponentiated *B*.

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

TABLE VI

LINEAR REGRESSION ANALYSES SHOWING AMOUNT OF VARIANCE IN
FEAR OF INTIMACY ACCOUNTED FOR BY CSA AND PTSD

Predictor Variables	F	Unstandardized β	Standardized β	ΔR^2	<i>t value</i>	<i>p value</i>
CSA	15.73	9.17	.414	.13	9.10	.000
PTSD	26.39	11.56	.52	.243	13.27	.000

Note: Controls are Participants' age, ethnicity, education, income, and HIV (omitted from the table).

TABLE VII

LINEAR REGRESSION ANALYSES SHOWING AMOUNT OF VARIANCE IN
GENERAL HEALTH ACCOUNTED FOR BY CSA AND PTSD

Predictor Variables	F	Unstandardized β	Standardized β	ΔR^2	<i>t</i> value	<i>p</i> value
CSA	8.80	17.01	-.32	.08	-6.71	.000
PTSD	20.70	-26.93	-.50	.232	-12.42	.000

Note: Controls are Participants' age, ethnicity, education, income, and HIV (omitted from the table).

As hypothesized, PTSD predicted how often participants used drugs and had drug abuse problems, health demoralization, and fear of intimacy. PTSD did not predict alcohol abuse and sexual risk.

Our models tested the relationship among childhood sexual abuse, PTSD, and adult functioning, as measured by health demoralization, sexual risk, fear of intimacy, and substance abuse. Childhood sexual abuse and PTSD were single scores, as was fear of intimacy. Substance abuse, sexual risk, and health demoralization were latent variables.

The latent variable of "substance abuse" was comprised of rates of drug use, levels of drug problems, and CAGE alcohol abuse scores. The latent variable of "sexual risk" represented rates of transmission risk and unprotected anal intercourse in the previous three months, and a self-report of any STI in the previous year. Table 6 shows the factor loadings for each of these latent variables. "Health demoralization" was

constructed of the psychological distress, physical distress, and general health subscale of the SF-36. “Fear of Intimacy” was the score obtained on the fear of intimacy scale.

TABLE VIII

FACTOR LOADING OF LATENT VARIABLES		
	Substance Abuse	Sexual Risk
Substance Abuse		
Drug Problems	.78	
Number of Drugs Used	.89	
Alcohol Abuse	.68	
Sexual Risk		
Unprotected Anal Intercourse		.87
Any STI in the last year.		.77
Transmission Risk		.71

The first model used a binary assessment of childhood sexual abuse, and used a continuous measure of PTSD symptoms. These results are given in Figure 1. The second model replicated this analysis using a severity score measure of childhood sexual abuse depicted in Figure 2.

The hypothesized model shown in Figure 1 contained covariates of participants’ age, ethnicity, income, HIV status, ‘outness’ as gay, and zip code. The hypothesized model partially met the Hu & Bentler (1999) goodness of fit criteria (RMSEA = .161, CFI = .981). This means the model is in the acceptable range, yet does not have ideal predictive power. To improve model fit we re-ran the model after removing non-significant paths from PTSD to sexual risk, and from PTSD to substance abuse. All other paths were left intact.

Fit statistics for our conditional structural model yielded a very well fitting model that met all of the Hu & Bentler (1999) goodness of fit criteria (RMSEA = .000, CFI = 1.00). Significant paths connected childhood sexual abuse to PTSD and PTSD to general health and fear of intimacy.

The second hypothesized model, shown in Figure 2, showed a very similar picture to Model 1. The hypothesized model again partially met the Hu & Bentler (1999) goodness of fit criteria (RMSEA = .138, CFI = .98), and although acceptable, it did not have optimal predictive power. After we removed the non-significant paths from PTSD to sexual risk and substance use the fit statistics yielded a very well fitting model that met all of the Hu & Bentler (1999) goodness of fit criteria (RMSEA = .000, CFI = 1.00). Significant paths again connected childhood sexual abuse to PTSD and PTSD to general health and fear of intimacy. Thus, we directly replicated the results of a model based on a binary measure of childhood sexual abuse with an alternative model that used a severity scale of childhood sexual abuse. We tested several alternative structural models of these constructs based on other theoretical perspectives, but none of them were an adequate fit to the data.

To investigate whether PTSD mediated the relation between childhood sexual abuse and adult health and fear of intimacy, we first tested a model with direct paths from childhood sexual abuse to PTSD, general health, drug use, and fear of intimacy. This was a well fitting model that met all of the Hu & Bentler (1999) goodness of fit criteria (RMSEA = .000, CFI = 1.00). To examine if PTSD specially mediated these relationships we tested a path model with bootstrapped standard errors (using 5000 iterations). Results indicated that, PTSD mediated the effect of the severity of childhood sexual abuse on fear

of intimacy ($b = .125$, $SE = .019$, $\beta = 6.73$, $p < .001$), general adult health ($b = -.316$, $SE = .045$, $\beta = -7.08$, $p < .001$), physical health ($b = .294$, $SE = .056$, $\beta = 5.26$, $p < .001$), and psychological health ($b = .360$, $SE = .063$, $\beta = 5.74$, $p < .001$). These findings further clarify the crucial effect of PTSD on general health and fear of intimacy in adult functioning.

IV. DISCUSSION

This study addressed the relationship among childhood sexual abuse, post-traumatic stress disorder, and four key spheres of adult functioning among men who have sex with men: sexual risk, substance abuse, and attitudes toward physical health and intimacy. Critically evaluating these constructs and models are the first steps of informing specialized interventions for MSM with a history of childhood sexual abuse. Currently, there is not a published, tested, unifying model for this relationship among MSM. Without an empirical model, there is not an explanation of why these variables are related, or how to proceed in intervening on these variables.

Based on previous risky samples, we expected between 25 to 40% of the sample to report unwanted sexual activity before age 16. Although our data supported this with 29% of the overall sample endorsing experiencing childhood sexual abuse, there were dramatic differences between the rates based on serostatus. HIV positive participants were much more likely to have a history of CSA than their HIV negative or unknown serostatus counterparts.

One of the most distinctive aspects of this study was the high frequency of probable PTSD in this population. The overall amount of PTSD in this sample, 28%, is very similar to the lifetime prevalence reported from the National Vietnam Veterans

Readjustment Study (NVVRS) of combat Veterans from Vietnam. The most alarming finding was that 90% of the HIV positive men with a history of abuse have a positive PTSD screen. Both CSA and HIV are different types of trauma at different stages of life that may potentially create an additive effect for the presentation of the sequelae of trauma. This is consistent with what Terr (1991), Seigel (2000), and Herman (1992) describe as complex PTSD. The initial trauma of CSA may have primed these men for the development and presentation of PTSD once diagnosed with HIV. This compounding of trauma creates collateral damage in these men's lives including creating a fear of intimacy, health demoralization, and drugs abuse.

Rates of PTSD in HIV positive men in other samples vary from 24-64% (Brief et al., 2004; Kalichman, Sikkema, DiFonzo, Luke, & Austin, 2002; Katz, & Nevid, 2005; Kelly et al., 1998, Kimerling, *et al.*, 1999; Israelski, *et al.*, 2007), which is consistent with our finding that 61% of HIV positive men in our sample reported probable PTSD. In fact, Reisner, Mimiaga, Safren & Mayer (2009) reported that 60% of their HIV infected MSM sample met criteria for PTSD. However, none of the previous studies reported the prevalence of PTSD in an HIV positive sample with a childhood history of trauma.

The high rate of PTSD among HIV positive men in both this sample and others makes it clear that future studies should analyze these models in an exclusive HIV positive sample.

The modified proposed models met all of the criteria presented by Hu & Bentler (1999) to denote a well-fitting model. In models 1 and 2, there were significant paths from childhood sexual abuse to PTSD, and then from PTSD to fear of intimacy and health demoralization. As predicted, both direct and indirect paths were present between

childhood sexual abuse and two of the four indices of adult functioning scores: fear of intimacy, and health demoralization. Surprisingly, paths to transmission risk, unprotected anal intercourse, having an STI in the last year, and measures of substance use needed to be deleted from the final model for it to meet the Hu & Bentler (1999) goodness of fit criteria.

There is a strong relationship between childhood sexual abuse and substance abuse, and PTSD and substance abuse in the literature; however, this consistently observed relationship was not supported in our structural model. A direct path from childhood sexual abuse to substance abuse was supported, as was a direct path from PTSD to substance abuse, but their interrelationship was not supported by the model. This means PTSD did not intervene on the relationship between childhood sexual abuse and drug abuse, and both PTSD and childhood sexual abuse are autonomous predictors of drug abuse. A fourth variable, such as anxiety, depression, or avoidant coping style may better explain these relationships and should be included in future models.

Although this sample was very sexually risky, consistent with our sampling approach, there was enough variance in the variables comprising the risk composite for us to have detected an effect if PTSD was, in fact, associated with unsafe sex. Neither a direct model – where we examined the direct effects of Childhood sexual abuse on the health outcomes – nor the mediated model incorporating PTSD showed any effects on sexual risk.

For future studies, a less risky sample of MSM should test these models. Additionally, it is important to evaluate these models in both a general population of men

and women to see if this phenomenon is unique to a risky MSM sample, or if this is a general model to describe childhood sexual abuse, PTSD, and adult functioning.

Because PTSD is frequently overlooked in males who are not in the military, it is imperative for MSM with HIV to be screened for PTSD and a history of childhood sexual abuse. These screenings would ideally occur in the HIV primary care setting to decrease the potential barriers of disclosure, and allow their treatment team to understand their health demoralization risk factors, and provided adequate referrals for psychological treatment.

Unfortunately the empirically supported treatments for PTSD (i.e. Cognitive Processing Therapy, Resick & Schnicke, 1996; Prolonged Exposure Therapy, Foa, Hembree & Rothbaum, 2007) were developed for adult traumas, and have had limited success in treating childhood sexual abuse (Hendriks et al., 2010). New effective PTSD interventions for this population need to be developed that focus on intimacy and health.

Fear of intimacy is also a complicated picture. Although participants are reporting a greater fear of intimacy, participants with a history of childhood sexual abuse report the same rate of having a primary partners and having non-primary partners than those without an abuse history. This reported fear of intimacy may be causing interpersonal conflicts within their relationships, but it is not affecting engaging in relationships or finding partners.

For our mediational analysis, we chose Bootstrapping because it does not violate the assumptions of normality. PTSD mediated the relationships between childhood sexual abuse and abuse and fear of intimacy, general adult health, physiological, and psychological health. The only components not mediated in the final conditional model

were the variables surrounding drug use. This is surprising because of the strong relationship between PTSD and drug use in the PTSD literature. It is possible that another psychological factor, such as depression, will better explain the relationship between childhood sexual abuse and drug use.

Both the childhood abuse severity score and the binary index of childhood sexual abuse were excellent predictors of PTSD and adult functioning. This means the mere presence of a history of childhood sexual abuse may be equally as important to the severity of the trauma that occurred during childhood. Having a single item that has a similar predictive power as a large severity scale is much more parsimonious for a large survey, and causes less participant fatigue.

Unlike previous studies, the factor structure of the PCL in our survey indicated there was only one unified factor. This means there was a limited amount of variability in participants reporting distress on the symptoms of avoidance, reexperiencing, numbing, and hyperarousal. Because of this lack of variability, the data did not support further analyses to examine if avoidance, reexperiencing, numbing, and hyperarousal would independently predict sexual risk, health demoralization, fear of intimacy, or substance abuse.

Unfortunately, the PCL does not capture some of the common symptoms of PTSD. These include the psychotic symptoms of paranoia, delusions, hallucinations, and dissociative flashback episodes. The psychotic symptoms are a combination of reexperiencing and hyperarousal, and when present, are some of the most distressing and debilitating symptoms of PTSD. These symptoms in particular may greatly affect adult functioning and were unable to be examined in the current study and warrant further

investigation in future studies to help identify how these symptoms in particular lead to adult impairment.

This overlooked population needs additional representation in research to inform new effective interventions. This vulnerable, potentially hidden population has an array of adult functioning concerns. This study takes the first step in understanding the sequelae of childhood sexual abuse among a sexually risky MSM sample, and allows researchers and clinicians to start identifying the underpinnings on where to intervene.

A. Limitations

There are several limitations of the present study. This study used an internet survey that collected cross-sectional data. Because this is a cross-sectional sample, true mediation analyses could not be performed. This study should be replicated in a longitudinal sample to further test these relationships. In addition, this was not a typical sample of MSM. This sample was specifically recruited for their high-risk behaviors in internet arenas. Only participants who indicated engaging in sexual activity with a man in the last year were admitted to the study. Therefore, this may not be a representative sample of MSM. However, because of the large number of participants this study it is assumed to be representative of a very risky cohort of MSM.

This was also a very long and potentially emotionally taxing survey taking between 30-45 minutes to complete, that asked personal and possibly distressing questions, with only a nominal incentive. Many men refused the incentive and wrote personal correspondence thanking the investigators for showing interest in this topic in this community, and many directly stated that the opportunity to participate in a study on this topic was their only needed incentive. This suggests that it is probable that the men

who completed the survey may have felt a personal connection to the topic.

TABLE I**SEXUAL ABUSE SEVERITY SCORE**

Age of first sexual abuse	Points
<3	9
3-4	8
5-6	7
7-8	6
9-10	5
11-12	4
13-14	3
15-16	2
17	1
Number of perpetrators	
1	1
2	2
.	.
.	.
50	50
Maximum coercion ever experienced	
High (i.e., physical force or weapons)	4
Moderate (i.e., threats, bribes or verbal force)	2
None	0
Most severe abuse ever experienced	
Attempted intercourse, intercourse, or inserting an object	4
Fondling or being fondled, touching other's sex organ, or sex organ being touched	2
Request of sex, kissing, other showing sex organ, or others looking at your sex organ	1
Number of occurrences of abuse	
1	1
2	2
.	.
.	.
50	50
Perpetrator's gender	
Male	2
Female	1
Age difference of victim and perpetrator	
<5 Years	1
5 - 10 years	2
>10 years	3
Victim currently has contact with perpetrator	
Yes	1
No	0

TABLE II**ABUSE REPORTED**

<u>Type of Abuse</u>	<u>Type of Abuse</u>
Physical Force	49 (35%)
Weapon Involved	18 (13%)
Threats	60 (43%)
Bribes	67 (48%)
Verbal Force	79 (56%)
Attempted Intercourse	28 (20%)
Intercourse	51 (36%)
Insertion of Objects	94 (67%)
Oral Sex	35 (25%)
Touching of Sex organs	104 (74%)
Touching someone else's sex organs	93 (66%)
Kissing	65 (46%)
Requesting Sex	26 (19%)
Requesting showing of sex organs	31 (22%)
Looking at participant's sex organs	50 (36%)
Looking at someone else's sex organs	47 (34%)
Viewing Pornography	24 (17%)
Requesting Sexual Conversations	27 (19%)
<u>Who Abused participant</u>	
Man	132 (94%)
Woman	11 (8%)
Parent	4 (3%)
Aunt/Uncle	24 (17%)
Close Family relative	26 (19%)
Sibling	11 (8%)
Cousin	31 (22%)
Stranger	7 (5%)
Teacher	2 (1%)
Pastor/Priest	11 (8%)
Other Child	28 (20%)
Other person not listed (i.e. babysitter)	28 (20%)
Still Have Contact	28 (20%)

Figure 1. Hypothesized model of childhood sexual abuse, PTSD and adult functioning using the complete sample

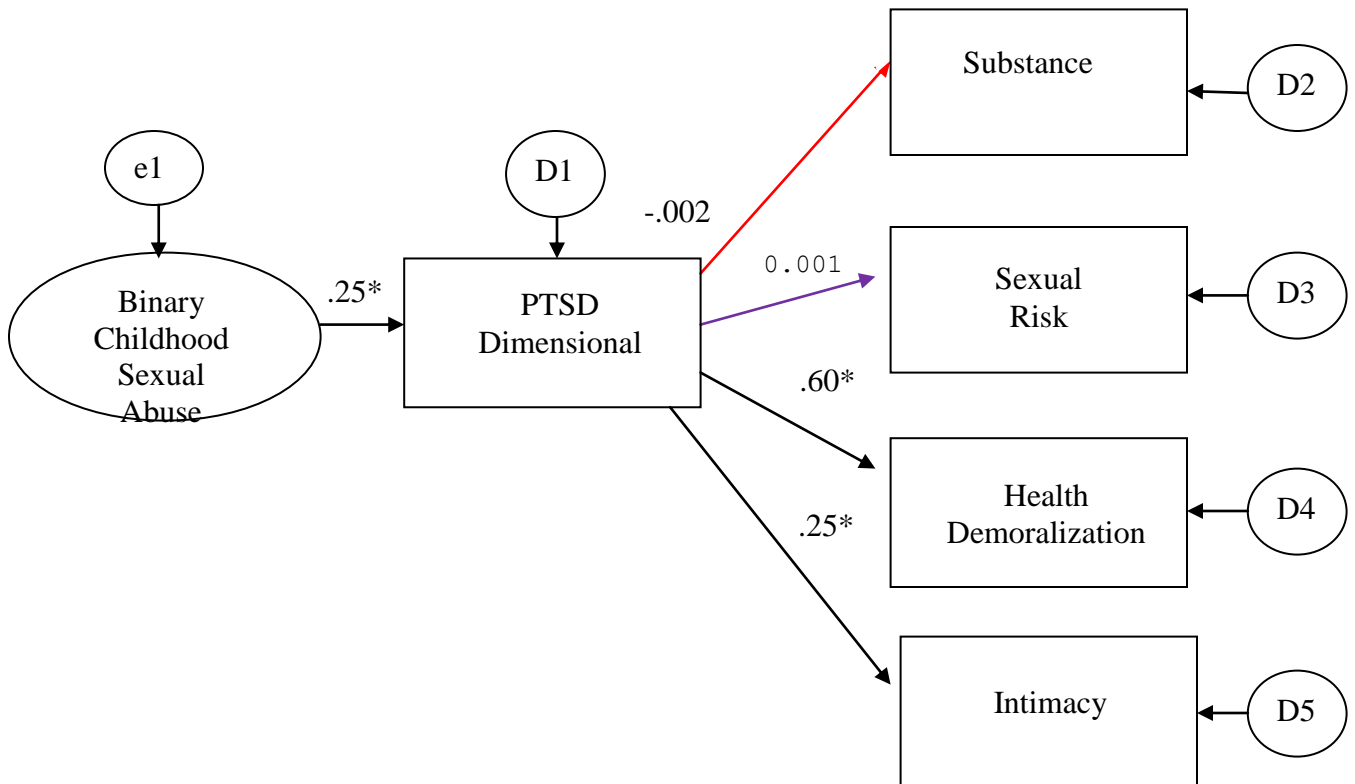


Figure 2. Hypothesized model of severity of childhood sexual abuse, PTSD and adult functioning.

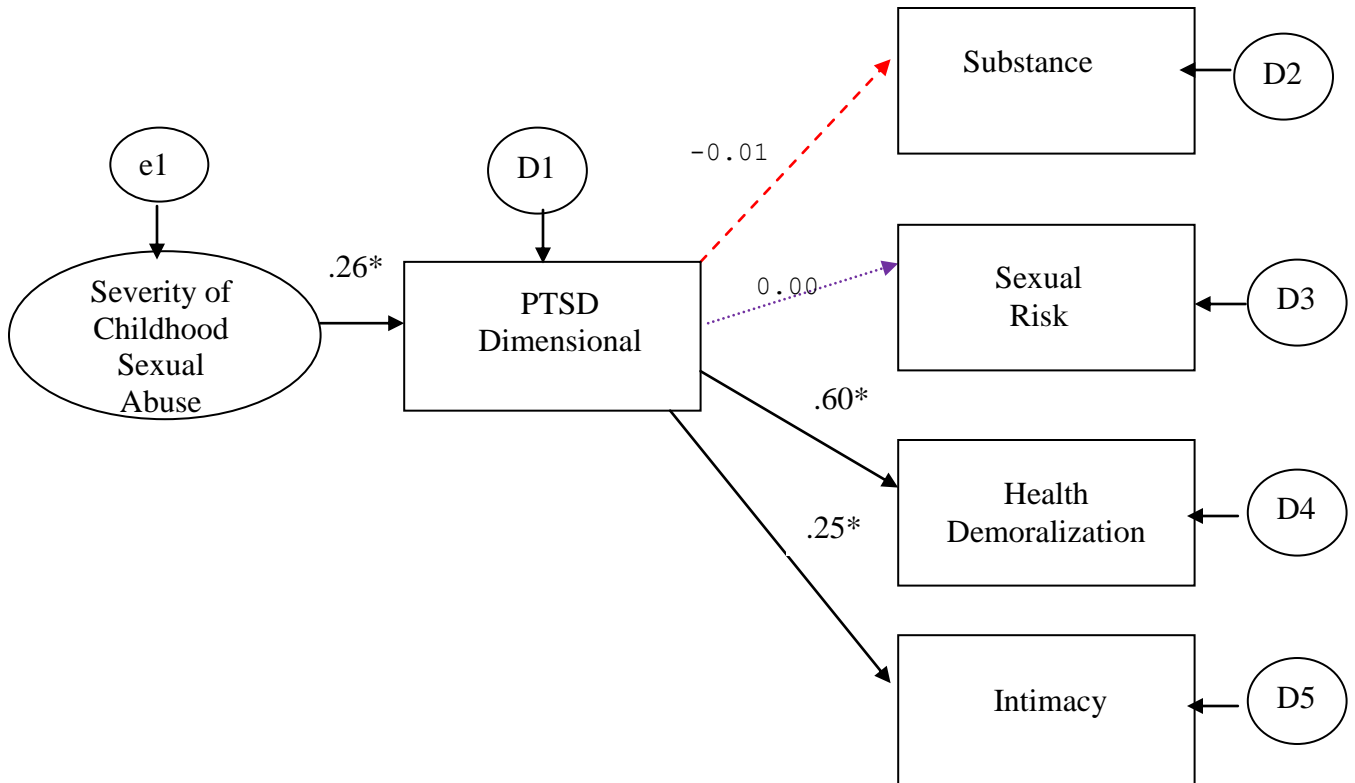
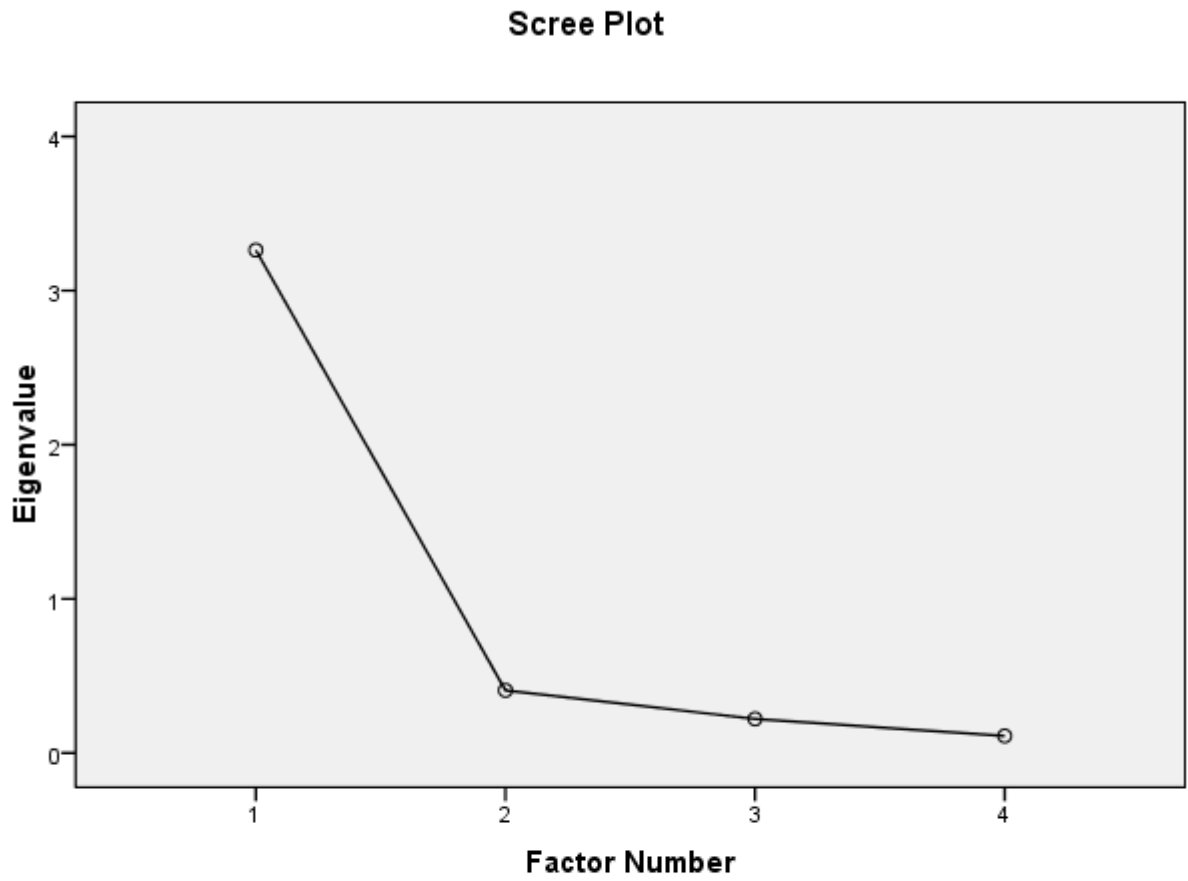


Figure 3. Factor Structure of PTSD.



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APPENDIX A

CAGE

1. Have you ever felt you should *cut* down on your drinking?

- Yes
- No

2. Have people *annoyed* you by criticizing your drinking?

- Yes
- No

3. Have you ever felt bad or *guilty* about your drinking?

- Yes
- No

4. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (*eye-opener*)?

- Yes
- No

APPENDIX B

Drug Use

Example of Drug Use Frequency:

1. How often have you used Methamphetamines, other amphetamine (Crystal Meth, Speed, Tina)?

1	=Less than once a month
2	=Once a month
3	=2 or 3 days a month
4	=Once a week
5	=2 or 3 days a week
6	=4 to 6 days a week
7	=Every Day
9997	=Don't Know
9998	=Refuse to Answer

Drug Problems

1. Do you use more than one drug at a time?

0	=No
1	=Yes
9998	=Refuse to Answer

2. Are you always able to stop using drugs when you want to?

0	=No
1	=Yes
9998	=Refuse to Answer

3. Have you had "blackouts" or "flashbacks" as a result of drug use?

0	=No
1	=Yes
9998	=Refuse to Answer

4. Do you ever feel bad or guilty about your drug use?

0	=No
1	=Yes
9998	=Refuse to Answer

5. Does your partner ever complain about your involvement with drugs?

0	=No
1	=Yes
9998	=Refuse to Answer

6. Have you neglected your friends and family because of your drug use?
- 0 =No
1 =Yes
9998 =Refuse to Answer
7. Have you engaged in illegal activities in order to obtain drugs?
- 0 =No
1 =Yes
9998 =Refuse to Answer
8. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?
- 0 =No
1 =Yes
9998 =Refuse to Answer
9. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?
- 0 =No
1 =Yes
9998 =Refuse to Answer

APPENDIX C

Childhood Sexual Abuse

1. Before you were 16 years old, were you ever pressured, forced, or intimidated into doing something sexually that you did not want to do?

0 =No
1 =Yes
9998 =Refuse to Answer

If, no skip the following questions.

- 1b. How old were you when you were pressured, forced, or intimidated into doing something sexually that you did not want to do?

Item manually entered _____

- 2b. How many people pressured, forced, or intimidated into doing something sexually that you did not want to do before you were 16?

Item manually entered _____

- 3b. How many times were you pressured, forced, or intimidated into doing something sexually that you did not want to do before you were 16? If you are unsure, please estimate.

Item manually entered _____

- 4b. Was there any **physical force** when you pressured, forced, or intimidated into doing something sexually that you did not want to do before you were 16?

0 =No
1 =Yes

9998 = Refuse to Answer

- 5b. Was there a **weapon** involved when you pressured, forced, or intimidated into doing something sexually that you did not want to do before you were 16?

0 =No
1 =Yes

9998 = Refuse to Answer

- 6b. Was there any **threats** when you pressured, forced, or intimidated into doing something sexually that you did not want to do before you were 16?

0 =No
1 =Yes

9998 = Refuse to Answer

- 7b. Was there any **bribes** when you pressured, forced, or intimidated into doing something sexually that you did not want to do before you were 16?

0 =No
1 =Yes

9998 = Refuse to Answer

- 8b. Was there any **verbal force** when you pressured, forced, or intimidated into doing something sexually that you did not want to do before you were 16?

0 =No
1 =Yes

9998 = Refuse to Answer

- 9b. Please think about the **most severe** time you were pressured, forced, or intimidated into doing something sexually that you did not want to do before you

were 16. Please indicate which of the following occurred. Please check all that apply.

- Attempted Intercourse
- Intercourse
- Insertion of any object
- Touching of your sex organs
- Touching of someone else's sex organs
- Requesting kissing
- Requesting sex
- Requesting Showing of your sex organs
- Looking at your sex organs
- Looking at others sex organs
- Looking at explicit images or porn

10b. Who pressured, forced, or intimidated into doing something sexually that you did not want to do before you were 16?

- Man
- Woman
- Parent
- Uncle/Aunt
- Close Family Friend
- Sibling
- Cousin
- Stranger
- Teacher
- Pastor/Priest
- Step Parent

11b. Do you still have contact with this person? Yes No

APPENDIX D

Fear of Intimacy Scale

1	2	3	4	5
not at all	slightly	moderately	very	extremely
characteristic of me	characteristic of me	characteristic of me	characteristic of me	characteristic of me

Part A Instructions: Imagine you are in a *close, dating* relationship. Respond to the following statements as you would *if you were in that close relationship*. Rate how characteristic each statement is of you on a scale of 1 to 5 as described below, and put your responses on the answer sheet.

Note. In each statement "O" refers to the person who would be in the close relationship with you.

1. I would feel uncomfortable telling O about things in the past that I have felt ashamed of.
2. I would feel uneasy talking with O about something that has hurt me deeply.
- X3. I would feel comfortable expressing my true feelings to O.
4. If O were upset I would sometimes be afraid of showing that I care.
5. I might be afraid to confide my innermost feelings to O.
- X6. I would feel at ease telling O that I care about him/her.
- X7. I would have a feeling of complete togetherness with O.
- X8. I would be comfortable discussing significant problems with O.
9. A part of me would be afraid to make a long-term commitment to O.
- X10. I would feel comfortable telling my experiences, even sad ones, to O.
11. I would probably feel nervous showing O strong feelings of affection.
12. I would find it difficult being open with O about my personal thoughts.
13. I would feel uneasy with O depending on me for emotional support.
- X14. I would not be afraid to share with O what I dislike about myself.
15. I would be afraid to take the risk of being hurt in order to establish a closer

relationship with 0.

16. I would feel comfortable keeping very personal information to myself.
- X17. I would not be nervous about being spontaneous with 0.
- X18. I would feel comfortable telling 0 things that I do not tell other people.
- X19. I would feel comfortable trusting 0 with my deepest thoughts and feelings.
20. I would sometimes feel uneasy if 0 told me about very personal matters.
- X21. I would be comfortable revealing to 0 what I feel are my shortcomings and handicaps.
- X22. I would be comfortable with having a close emotional tie between us.
23. I would be afraid of sharing my private thoughts with 0.
24. I would be afraid that I might not always feel close to 0.
- X25. I would be comfortable telling 0 what my needs are.
26. I would be afraid that 0 would be more invested in the relationship than I would be.
- X27. I would feel comfortable about having open and honest communication with 0.
28. I would sometimes feel uncomfortable listening to 0's personal problems.
- X29. I would feel at ease to completely be myself around 0.
- X30. I would feel relaxed being together and talking about our personal goals.

Part B Instructions: Respond to the following statements as they apply to your past *relationships*. Rate how characteristic each statement is of you on a scale of 1 to 5 as described in the instructions for Part A.

31. I have shied away from opportunities to be close to someone.
32. I have held back my feelings in previous relationships.
33. There are people who think that I am afraid to get close to them.
34. There are people who think that I am not an easy person to get to know.
35. I have done things in previous relationships to keep me from developing closeness.

Note. X denotes items reversed for scoring.

APPENDIX E

PCL-S

Below is a list of problems and complaints that people sometimes have in response to a stressful life experiences. You endorsed that before you were 16 years old, you were pressured, forced, or intimidated into doing something sexually that you did not want to do. Please read each question carefully, then select the response that best describes how much you have been bothered by your most distressing or severe childhood sexual abuse experience in the past month.

PCL1. Repeated, disturbing *memories, thoughts, or images* of the stressful experience?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL2. Repeated, disturbing *dreams* of the stressful experience?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL3. Suddenly *acting or feeling* as if the stressful experience *were happening again* (as if you were reliving it)?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL4. Feeling *very upset* when *something reminded you* of the stressful experience?

- 1 = Not at all

- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL5. Having *physical reactions* (e.g. heart pounding, trouble breathing, sweating) when something reminded you of the stressful experience?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL6. Avoiding *thinking about* or *talking about* the stressful experience or avoiding *having feelings* related to it?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL7. Avoiding *activities* or *situations* because they *reminded* you of the stressful experience?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL8. Trouble *remembering* important parts of the stressful experience?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL9. Loss of interest in activities that you used to enjoy?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL10. Feeling *distant* or *cut off* from other people?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL11. Feeling *emotionally numb* or being unable to have loving feelings for those close to you?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL12. Feeling as if your *future* will somehow be *cut short*?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL13. Trouble *falling* or *staying asleep*?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL14. Feeling *irritable* or having *angry outbursts*?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL15. Having *difficulty concentrating*?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL16. Being “*super alert*” or watchful or on guard?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL17. Feeling *jumpy* or easily startled?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

APPENDIX F

PCL-C

Think of the most stressful experience from your past. Below is a list of problems and complaints that people sometimes have in response to a stressful life experiences. Please read each one careful, then select the response that best describes how much you have been bothered by that problem in the past month.

PCL1. Repeated, disturbing *memories, thoughts, or images* of a stressful experience from the past?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL2. Repeated, disturbing *dreams* of a stressful experience from the past?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL3. Suddenly *acting or feeling* as if the stressful experience *were happening again* (as if you were reliving it)?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL4. Feeling *very upset* when *something reminded you* of a stressful experience from the past?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL5. Having *physical reactions* (e.g. heart pounding, trouble breathing, sweating) when something reminded you of a stressful experience from the past?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL6. Avoiding *thinking about* or *talking about* a stressful experience from the past or avoiding *having feelings* related to it?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL7. Avoiding *activities* or *situations* because they *reminded* you of a stressful experience from the past?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL8. Trouble *remembering* important parts of a stressful experience from the past?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL9. Loss of interest in activities that you used to enjoy?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL10. Feeling *distant* or *cut off* from other people?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL11. Feeling *emotionally numb* or being unable to have loving feelings for those close to you?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL12. Feeling as if your *future* will somehow be *cut short*?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL13. Trouble *falling* or *staying asleep*?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL14. Feeling *irritable* or having *angry outbursts*?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL15. Having *difficulty concentrating*?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL16. Being "*super alert*" or watchful or on guard?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

PCL17. Feeling *jumpy* or easily startled?

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely
- 98 = Refuse to Answer

APPENDIX G

RAND 36-Item Health Survey 1.0 Questionnaire Items

The following questions will ask you about your current health

1. In general, would you say your health is:

- 1 = Excellent
- 2 = Very Good
- 3 = Good
- 4 = Fair
- 5 = Poor
- 98 = Refuse to Answer

2. **Compared to one year ago**, how would you rate your health in general **now**?

- 1 = Much better now than one year ago
- 2 = Somewhat better now than one year ago
- 3 = About the same
- 4 = Somewhat worse now than one year ago
- 5 = Much worse now than one year ago
- 98 = Refuse to Answer

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

3. **Vigorous activities**, such as running, lifting heavy objects, participating in strenuous sports

- 1 = Yes, Limited a lot
- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

4. **Moderate activities**, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf

- 1 = Yes, Limited a lot
- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

5. Lifting or carrying groceries

- 1 = Yes, Limited a lot
- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

6. Climbing **several** flights of stairs

- 1 = Yes, Limited a lot
- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

7. Climbing **one** flight of stairs

- 1 = Yes, Limited a lot
- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

8. Bending, kneeling, or stooping

- 1 = Yes, Limited a lot
- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

9. Walking **more than a mile**

- 1 = Yes, Limited a lot

- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

10. Walking **several blocks**

- 1 = Yes, Limited a lot
- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

11. Walking **one block**

- 1 = Yes, Limited a lot
- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

12. Bathing or dressing yourself

- 1 = Yes, Limited a lot
- 2 = Yes, Limited a little
- 3 = No, Not limited at all
- 98 = Refuse to Answer

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health? (Circle One Number on Each Line)

13. Cut down the amount of time you spent on work or other activities

- 0 = No
- 1 = Yes
- 8 = Refuse to Answer

14. **Accomplished less** than you would like

- 0 = No
- 1 = Yes
- 8 = Refuse to Answer

15. Were limited in the **kind** of work or other activities

0 = No
1 = Yes
8 = Refuse to Answer

16. Had **difficulty** performing the work or other activities (for example, it took extra effort)

0 = No
1 = Yes
8 = Refuse to Answer

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

17. Cut down the **amount of time** you spent on work or other activities

0 = No
1 = Yes
8 = Refuse to Answer

18. **Accomplished less** than you would like

0 = No
1 = Yes
8 = Refuse to Answer

19. Didn't do work or other activities as **carefully** as usual

0 = No
1 = Yes
8 = Refuse to Answer

20. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

- 1 = Not at all
- 2 = Slightly
- 3 = Moderately
- 4 = Quite a Bit
- 5 = Extremely
- 98 = Refuse to Answer

21. How much bodily pain have you had during the past 4 weeks?

- 1 = None
- 2 = Very Mild
- 3 = Mild
- 4 = Moderate
- 5 = Severe
- 6 = Very Severe
- 98 = Refuse to Answer

22. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

- 1 = Not at all
- 2 = Slightly
- 3 = Moderately
- 4 = Quite a Bit
- 5 = Extremely
- 98 = Refuse to Answer

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks . . .

23. Did you feel full of pep?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good bit of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

24. Have you been a very nervous person?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good bit of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

25. Have you felt so down in the dumps that nothing could cheer you up?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good bit of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

26. Have you felt calm and peaceful?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good bit of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

27. Did you have a lot of energy?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good it of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

28. Have you felt downhearted and blue?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good it of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

29. Did you feel worn out?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good it of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

30. Have you been a happy person?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good it of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

31. Did you feel tired?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good it of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

32. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

- 1 = All of the time
- 2 = Most of the time
- 3 = A good it of time
- 4 = Some of the time
- 5 = A little of the time
- 6 = None of the time
- 98 = Refuse to Answer

How TRUE or FALSE is each of the following statements for you.

33. I seem to get sick a little easier than other people

- 1 = Definitely True
- 2 = Mostly True
- 3 = Don't Know
- 4 = Mostly False
- 5 = Definitely False
- 98 = Refuse to Answer

34. I am as healthy as anybody I know

- 1 = Definitely True
- 2 = Mostly True
- 3 = Don't Know
- 4 = Mostly False
- 5 = Definitely False
- 98 = Refuse to Answer

35. I expect my health to get worse

- 1 = Definitely True
- 2 = Mostly True
- 3 = Don't Know
- 4 = Mostly False
- 5 = Definitely False
- 98 = Refuse to Answer

36. My health is excellent

- 1 = Definitely True
- 2 = Mostly True
- 3 = Don't Know
- 4 = Mostly False
- 5 = Definitely False
- 98 = Refuse to Answer

APPENDIX H
SEXUAL BEHAVIOR

The following questions ask about your sexual behavior in the last three months. Some questions ask about all your partners, and others ask only about certain partners.

MALE PARTNERS

- G3. In the last 3 months, with how many male partners have you had insertive or receptive anal sex?**
SBMENN Num male partners have you had ia or ra 3
0 - 996 = range
998 = Refuse to Answer

If "0" ONLY answer question G3X

- G3X. How many months has it been since you last had insertive or receptive anal sex with a male?**
SBFEMN Num of months female partners have you had vaginal or anal sex 3
0 - 995 = range
996 = It has been more than 5 years
997 = I've never had sex with a man
998 = Refuse to Answer

If Answers are 997 skip to disqualification text.

Primary Partners

- G4A. In the past 3 months, did you have or have you had one primary or main male partner, that is, a partner you would call your boyfriend, spouse, significant other, or life partner?**
PMP primary male partner 1
0 = No
1 = Yes
8 = Refuse to Answer

If No Skip to G5

- G4B. How many months have you been with your primary male partner?**
PMPLong primary male partner-how long with
0 - 996 = range
998 = Refuse to Answer

- G4c. What is the HIV status of your primary male partner?**
PMPHIV primary male partner-HIV status 1
0 = HIV positive
1 = HIV negative
2 = Don't know his HIV status
8 = Refuse to Answer

G4D. Did your primary male partner TELL you his status and you had no reason to doubt him? 1
PMPHIVtold primary male partner-how told HIV Status
 0 = Yes
 1 = No
 2 = I'm not sure of his status
 8 = Refuse to Answer

IF Answer "1" skip to G4dx

G5Dx. What information made you sure about his status? Check all that apply
PFPHIVwhy primary male partner-how assumed status
 0 = The type of sex he wanted, such as wanting to use a condom or acts she is into
 1 = Personal characteristics, such as his age or how he looked
 2 = Where you met him, such as internet or particular bar or setting
 3 = What you heard about him, such as where he lives or where he works
 4 = Saw him at an HIV clinic
 5 = Saw medication for HIV
 6 = Other **OPEN ANSWER-- FILL IN DIALOG BOX**
 98 = Refuse to Answer

G4e. How did you TELL your primary male partner about your status? 1
PMPHIVme primary male partner-how told HIV Status
 0 = Explicitly told him myself
 1 = He knows because of an educated guess
 2 = I'm not sure if he knows my status
 3 = He does not know my status
 8 = Refuse to Answer

G4f. In the past 3 months, how many times have you had insertive anal sex with your primary male partner without a condom? By insertive anal sex, we mean you fucked him. 3
MPrimeI Insertive anal sex
 0 - 996 = range
 998 = Refuse to Answer

G4g. In the past 3 months, how many times have you had receptive anal sex with your primary male partner without a condom? By receptive anal sex, we mean you fucked him. 3
MPrimeR Receptive anal sex
 0 - 996 = range
 998 = Refuse to Answer

G4f. You told us you had (answer to G3) number of partners. (One or Zero depending on G4a) of those was a primary partner meaning you had (Answer to G3-1) total partners. Is this correct?

- 0 = No
- 1 = Yes
- 8 = Refuse to Answer

If No Skip to GFX

Gfx. Okay, let's correct the number of partners you have had in the last 3 months. In the last 3 months, with how many male partners have you had insertive or receptive anal sex?

SBMENN Num male partners have you had ia or ra

0 - 996 = range

8 = Refuse to Answer\

3

SEXUAL BEHAVIOR WITH ALL OTHER PARTNERS

Now I would like to ask you about the HIV status of these [Response to A2a] men, other than your most recent primary partner.

G5. Of these [Response to G31-1 or Gfx] men, how many did you believe were HIV positive and had no reason to doubt it?

9998 Refuse to Answer

If G5 is greater than Gfx then READ: "You cannot enter a number that is greater than &[Gfx], which is the number of men, other than your most recent primary partner, with whom you've had anal sex. Please re-answer this question." skip to B1.

If B1 is equal to 9998, then skip to instruction before D1.

TOT_P = A2a - B1

If TOT_P is equal to 0, then skip to B4.

B2. Of the remaining [TOT_P] men, how many did you believe were HIV negative and had no reason to doubt it?

9998 Refuse to Answer **Skip to AA1**

If B2 is greater than A2a then READ: "You cannot enter a number that is greater than &[SA2A], which is the number of men, other than your most recent primary partner, with whom you've had anal sex. Please re-answer this question." skip to B2.

If B2 is equal to 9998, then skip to instruction before C1.

TOT_PN = A2a - B1 + B2

B3. So, you had [TOT_PN] partners whose HIV status you did not know or were unsure of? (Choose one)

- 1 Yes
- 2 No, I want to change my answer
- 8 Refuse to Answer

If B3 is equal to 2 then READ: "You indicated you would like to change your answers. Please re-enter information about the HIV status of your partners." skip to B1.

If B3 is equal to 8, then skip to instruction before C1.

If B1 is equal to 0 or B1 is equal to 9998, then skip to instruction before B5.

B4. Of the [Response to B1] HIV positive men, how many actually TOLD you they were HIV positive and you had no reason to doubt it?

9998 Refuse to Answer **Skip to AA1**

B5. Of the [Response to B1] HIV positive men, how many did YOU tell your HIV status to?

9998 Refuse to Answer **Skip to AA1**

If B4 is greater than B1 then READ: "You cannot enter a number that is greater than &[SB1], which is the number of partners you believe to be HIV positive. Please re-answer this question." skip to B4.

If B2 is equal to 0, then skip to instruction before C1.

If TOT_P is equal to 0, then skip to instruction before C1.

B6. Of the [Response to B2] HIV negative men, how many actually TOLD you they were HIV negative and you had no reason to doubt it?

9998 Refuse to Answer **Skip to AA1**

If B5 is greater than B2 then READ: "You cannot enter a number that is greater than &[SB2], which is the number of partners you believe to be HIV negative. Please re-answer this question." skip to B5.

B7. Of the [Response to B1] HIV negative men, how many did YOU tell your HIV status to?

9998 Refuse to Answer **Skip to AA1**

B7. Of the [Response to B3] HIV unknown men, how many did YOU tell your HIV status to?

9998 Refuse to Answer **Skip to AA1**

SEXUAL BEHAVIOR WITH HIV-POSITIVE PARTNERS

If B1 is equal to 0 or B1 is equal to 9998, then skip to instruction before C4.

SEXUAL BEHAVIOR WITH HIV-POSITIVE PARTNERS

These next question ask about your [Response to B1] HIV-positive partners who were NOT your most recent primary partner(s). So, please think about all of the men, other than your most recent primary partner, you had any anal sex with in the last three months who were HIV-positive.

C1. How many of your [Response to B1] HIV-positive partners who were NOT your primary partner did you have ANY unprotected anal sex with?

-
- 0000 zero **Skip to instruction before C2**
- 9998 Refuse to Answer **Skip to instruction before C2**

If C1 is greater than B1 then READ: "You cannot enter a number that is greater than &[SB1], which is the number of partners you believe to be HIV positive. Please re-answer this question." skip to C1.

C1a. Of these [Response to C1] men, with how many did you have any unprotected anal sex with while you were drunk or buzzed on alcohol within 2 hours before or during sex?

-
- 9998 Refuse to Answer **Skip to AA1**

If C1a is greater than C1 then READ: "You cannot enter a number that is greater than &[SC1], which is the number of HIV+ partners with whom you've had unprotected anal sex. Please re-answer this question." skip to C1a.

C1b. Of these [Response to C1] men, with how many did you have any unprotected anal sex with after using non-prescribed drugs within 2 hours before or during sex?

-
- 9998 Refuse to Answer **Skip to AA1**

If C1b is greater than C1 then READ: "You cannot enter a number that is greater than &[SC1], which is the number of HIV+ partners with whom you've had unprotected anal sex. Please re-answer this question." skip to C1b.

READ: Now we are going to ask you some more questions about the [Response to B1] HIV-positive men with whom you had anal sex in the last 3 months. For these remaining questions, we are going to ask you about the number of times you had anal sex with these men.

C2. In the last three months, how many times were you *the top* (you had insertive anal sex) with your [Response to B1] HIV-positive male partners? This would be with or without a condom, and whether or not you ejaculated.

-
- 0000 zero **Skip to C3**
- 9998 Refuse to Answer **Skip to C3**

C2a. How many of these [Response to C2] times was a condom used from start to finish?

-
- 9998 Refuse to Answer **Skip to AA1**

If C2a is greater than C2 then READ: "You cannot enter a number that is greater than &[SC2], which is the number of times you were the top with your HIV positive male partners. Please re-answer this question." skip to C2a.

UNPRO2 = C2 - C2a

If UNPRO2 is equal to 0, then skip to C3.

C2b. Think of the [UNPRO2] times you were *the top* (you had insertive anal sex) and did **not** use a condom from start to finish with your [Response to B1] HIV-positive male partners. How many of these times were you drunk or buzzed on alcohol within 2 hours before or during sex?

9998 Refuse to Answer **Skip to AA1**

If C2b is greater than UNPRO2 then READ: "You cannot enter a number that is greater than &[UNPRO2], which is the number of times you were the top and did not use condoms with your HIV+ partners. Please re-answer this question." skip to C2b.

C2c. Think of the [UNPRO2] times you were *the top* (you had insertive anal sex) and did **not** use a condom from start to finish with your [Response to B1] HIV-positive male partners. How many of these times did you use non-prescription drugs within 2 hours before or during sex?

9998 Refuse to Answer **Skip to AA1**

If C2c is greater than UNPRO2 then READ: "You cannot enter a number that is greater than &[UNPRO2], which is the number of times you were the top and did not use condoms with your HIV+ partners. Please re-answer this question." skip to C2c.

C3. In the last three months, how many **times** were you *the bottom* (you had receptive anal sex) with your [Response to B1] HIV-positive male partners? This would be with or without a condom, and with or without ejaculation.

0000 zero **Skip to instruction before C4**

9998 Refuse to Answer **Skip to instruction before C4**

C3a. How many of these [Response to C3] **times** was a condom used from start to finish?

9998 Refuse to Answer **Skip to AA1**

If C3a is greater than C3 then READ: "You cannot enter a number that is greater than &[SC3], which is the number of times you were the bottom with your HIV positive male partners. Please re-answer this question." skip to C3a.

UNPRO3 = C3 - C3a

If UNPRO3 is equal to 0, then skip to instruction before C4.

C3b. Think of the [UNPRO3] times you were *the bottom* (you had receptive anal sex) and did **not** use a condom from start to finish with your [Response to B1] HIV-positive male partners. How many of these times were you drunk or buzzed on alcohol within 2 hours before or during sex?

9998 Refuse to Answer **Skip to AA1**

If C3b is greater than UNPRO3 then READ: "You cannot enter a number that is greater than &[UNPRO3], which is the number of times you were the bottom and did not use condoms with your HIV positive male partners. Please re-answer this question." skip to C3b.

C3c. Think of the [UNPRO3] times you were *the bottom* (you had receptive anal sex) and did **not** use a condom from start to finish with your [Response to B1] HIV-positive male partners. How many of these times did you use non-prescription drugs within 2 hours before or during sex?

9998 Refuse to Answer **Skip to AA1**

If C3c is greater than UNPRO3 then READ: "You cannot enter a number that is greater than &[UNPRO3], which is the number of times you were the bottom and did not use condoms with your HIV positive male partners. Please re-answer this question." skip to C3c.

SEXUAL BEHAVIOR WITH HIV-NEGATIVE PARTNERS: MEN

If TOT_P is equal to 0, then skip to instruction before D1.

If B2 is equal to 0 or B2 is equal to 9998, then skip to instruction before C7.

READ: **SEXUAL BEHAVIOR WITH HIV-NEGATIVE PARTNERS** These next questions ask about your [Response to B2] HIV-negative partners who were NOT your most recent primary partner(s). So, please think about all of the men you had anal sex with in the last three months who were HIV-negative.

REMEMBER...

When we ask about the times you were a top, we mean a top during anal sex (insertive anal sex, you fucked, your penis was in a man's rectum). When we ask about the times you were a bottom, we mean a bottom during anal sex (receptive anal sex, getting fucked, a man's penis was in your rectum). Some questions refer to condom use. Include the times you used a male condom or an anal condom (Reality condom). Sex with a condom means that the condom was put on before you began having anal sex and the condom was not taken off until you were done.

C4. How many of your [Response to B2] HIV-negative partners who were NOT your primary partner did you have ANY unprotected anal sex with?

— — — —			
0000	zero		Skip to instruction before C5
9998	Refuse to Answer		Skip to instruction before C5

If C4 is greater than B2 then READ: "You cannot enter a number that is greater than &[SB2], which is the number of partners believed to be HIV negative. Please re-answer this question." skip to C4.

C4a. Of these [Response to C4] men, with how many did you have any unprotected anal sex with while you were drunk or buzzed on alcohol within 2 hours before or during sex?

— — — —			
9998	Refuse to Answer		Skip to AA1

If C4a is greater than C4 then READ: "You cannot enter a number that is greater than &[SC4], which is the number of HIV- partners with whom you've had unprotected anal sex. Please re-answer this question." skip to C4a.

C4b. Of these [Response to C4] men, with how many did you have any unprotected anal sex with after using non-prescribed drugs within 2 hours before or during sex?

— — — —			
9998	Refuse to Answer		Skip to AA1

If C4b is greater than C4 then READ: "You cannot enter a number that is greater than &[SC4], which is the number of HIV- partners with whom you had unprotected sex. Please re-answer this question." skip to C4b.

READ: Now we are going to ask you some more questions about the [Response to B2] HIV-negative men with whom you had anal sex in the last 3 months. For these remaining questions, we are going to ask you about the number of times you had anal sex with these men.

C5. In the last three months, how many times were you *the top* (did you have insertive anal sex) with your [Response to B2] HIV-negative male partners? This would be with or without a condom, and whether or not you ejaculated.

— — — —			
0000	zero		Skip to C6
9998	Refuse to Answer		Skip to C6

C5a. How many of these [Response to C5] **times** was a condom used from start to finish?

— — — —

9998 Refuse to Answer **Skip to AA1**

If C5a is greater than C5 then READ: "You cannot enter a number that is greater than &[SC5], which is the number of times you were the top with your HIV negative male partners. Please re-answer this question." skip to C5a.

UNPRO4 = C5 - C5a

If UNPRO4 is equal to 0, then skip to C6.

C5b. Think of the [UNPRO4] times you were *the top* (you had insertive anal sex) and did **not** use a condom from start to finish with your [Response to B2] HIV-negative male partners. How many of these times were you drunk or buzzed on alcohol within 2 hours before or during sex?

— — — —

9998 Refuse to Answer **Skip to AA1**

If C5b is greater than UNPRO4 then READ: "You cannot enter a number that is greater than &[UNPRO4], which is the number of times you were the top and did not use a condom with your HIV- partners. Please re-answer this question." skip to C5b.

C5c. Think of the [UNPRO4] times you were *the top* (you had insertive anal sex) and did **not** use a condom from start to finish with your [Response to B2] HIV-negative male partners. How many of these times did you use non-prescription drugs within 2 hours before or during sex?

— — — —

9998 Refuse to Answer **Skip to AA1**

If C5c is greater than UNPRO4 then READ: "You cannot enter a number that is greater than &[UNPRO4], which is the number of times you were the top and did not use a condom with your HIV+ partners. Please re-answer this question." skip to C5c.

C6. In the last three months, how many **times** were you *the bottom* (did you have receptive anal sex) with your [Response to B2] HIV-negative male partners? This would be with or without a condom, and with or without ejaculation.

— — — —

0000 zero **Skip to instruction before C7**

9998 Refuse to Answer **Skip to instruction before C7**

C6a. How many of these [Response to C6] **times** was a condom used from start to finish?

— — — —

9998 Refuse to Answer **Skip to AA1**

If C6a is greater than C6 then READ: "You cannot enter a number that is greater than &[SC6], which is the number of times you were the bottom with your HIV negative male partners. Please re-answer this question." skip to C6a.

UNPRO5 = C6 - C6a

If UNPRO5 is equal to 0, then skip to instruction before C7.

C6b. Think of the [UNPRO5] times you were *the bottom* (you had receptive anal sex) and did **not** use a condom from start to finish with your [Response to B2] HIV-negative male partners. How many of these times were you drunk or buzzed on alcohol within 2 hours before or during sex?

— — — —

9998 Refuse to Answer **Skip to AA1**

If C6b is greater than UNPRO5 then READ: "You cannot enter a number that is greater than &[UNPRO5], which is the number of times you were the bottom and did not use a condom with your HIV negative male partners. Please re-answer this question." skip to C6b.

C6c. Think of the [UNPRO5] times you were *the bottom* (you had receptive anal sex) and did **not** use a condom from start to finish with your [Response to B2] HIV-negative male partners. How many of these times did you use non-prescription drugs within 2 hours before or during sex?

— — — —

9998

Refuse to Answer

Skip to AA1

If C6c is greater than UNPRO5 then READ: "You cannot enter a number that is greater than &[UNPRO5], which is the number of times you were the bottom and did not use a condom with your HIV positive male partners. Please re-answer this question." skip to C6c.

SEXUAL BEHAVIOR WITH PARTNERS WITH UNKNOWN HIV STATUS

If TOT_P is equal to 0, then skip to instruction before D1.

If TOT_PN is equal to 0 and B3 is equal to 1, then skip to instruction before D1.

If B2 is equal to 9998, then skip to instruction before D1.

If B3 is equal to 8, then skip to instruction before D1.

SEXUAL BEHAVIOR WITH PARTNERS WITH UNKNOWN HIV STATUS *These next questions ask about your [TOT_PN] partners whose HIV status you did not know who were NOT your most recent primary partner(s). So, please think about all of the men you had anal sex with in the last three months whose HIV status you did not know.*

C7. How many of your [TOT_PN] partners who were NOT your primary partner and whose HIV status you did not know did you have ANY unprotected anal sex with?

— — — —

0000 zero **Skip to instruction before C8**

9998 Refuse to Answer **Skip to instruction before C8**

If C7 is greater than TOT_PN then READ: "You cannot enter a number that is greater than &[TOT_PN], which is the number of partners whose HIV status you did not know. Please re-answer this question." skip to C7.

C7a. Of these [Response to C7] men, with how many did you have any unprotected anal sex with while you were drunk or buzzed on alcohol within 2 hours before or during sex?

— — — —

9998 Refuse to Answer **Skip to AA1**

If C7a is greater than C7 then READ: "You cannot enter a number that is greater than &[SC7] which is the number of men with whom you had unprotected anal sex. Please re-answer this question." skip to C7a.

C7b. Of these [Response to C7] men, how many did you have any unprotected anal sex with after using non-prescribed drugs within 2 hours before or during sex?

— — — —

9998 Refuse to Answer **Skip to AA1**

If C7b is greater than C7 then READ: "You cannot enter a number that is greater than &[SC7] which is the number of men with whom you had unprotected anal sex. Please re-answer this question." skip to C7b.

READ: Now we are going to ask you some more questions about the [TOT_PN] partners in the last 3 months whose HIV status you did not know. For these remaining questions, we are going to ask you about the number of times you had anal sex with these men.

READ: **REMEMBER...** **When**
we ask about the times you were a top, we mean a top during anal sex (insertive anal sex, you fucked, your penis was in a man's rectum). When we ask about the times you were a bottom, we mean a bottom during anal sex (receptive anal sex, getting fucked, a man's penis was in your rectum). **Some questions refer to**
condom use. Include the times you used a male condom or an anal condom (Reality condom). Sex with a condom means that the condom was put on before you began having anal sex and the condom was not taken off until you were done.

C8. In the last three months, how many **times** were you *the top* (did you have insertive anal sex) with your [TOT_PN] partners *whose HIV status you did not know*? This would be with or without a condom, and whether or not you ejaculated.

— — — —
0000 zero **Skip to C9**
9998 Refuse to Answer **Skip to C9**

C8a. How many of these [Response to C8] **times** was a condom used from start to finish?

— — — —
9998 Refuse to Answer **Skip to AA1**

If C8a is greater than C8 then READ: "You cannot enter a number that is greater than &[SC8], which is the number of times you were the top with your partners whose HIV status you did not know. Please re-answer this question." skip to C8a.

UNPRO6 = C8 - C8a

If UNPRO6 is equal to 0, then skip to C9.

C8b. Think of the [UNPRO6] times you were *the top* (you had insertive anal sex) and did **not** use a condom from start to finish with your [TOT_PN] partners *whose HIV status you did not know*. How many of these times were you drunk or buzzed on alcohol within 2 hours before or during sex?

— — — —
9998 Refuse to Answer **Skip to AA1**

If C8b is greater than UNPRO6 then READ: "You cannot enter a number that is greater than &[UNPRO6], which is the number of times you were the top and did not use a condom with your unknown HIV status partners. Please re-answer this question." skip to C8b.

C8c. Think of the [UNPRO6] times you were *the top* (you had insertive anal sex) and did **not** use a condom from start to finish with your [TOT_PN] partners *whose HIV status you did not know*. How many of these times did you use non-prescription drugs within 2 hours before or during sex?

— — — —
9998 Refuse to Answer **Skip to AA1**

If C8c is greater than UNPRO6 then READ: "You cannot enter a number that is greater than &[UNPRO6], which is the number of times you were the top and did not use a condom with your unknown HIV status partners. Please re-answer this question." skip to C8c.

C9. In the last three months, how many **times** were you *the bottom* (did you have receptive anal sex) with your [TOT_PN] partners *whose HIV status you did not know*? This would be with or without a condom, and whether or not you ejaculated.

— — — —
0000 zero **Skip to instruction before D1**
9998 Refuse to Answer **Skip to instruction before D1**

C9a. How many of these [Response to C9] **times** was a condom used from start to finish?

— — — —
9998 Refuse to Answer **Skip to AA1**

If C9a is greater than C9 then READ: "You cannot enter a number that is greater than &[SC9], which is the number of times you were the top with your partners whose HIV status you did not know. Please re-answer this question." skip to C9a.

UNPRO7 = C9 - C9a

If UNPRO7 is equal to 0, then skip to instruction before D1.

C9b. Think of the [UNPRO7] times you were *the bottom* (you had receptive anal sex) and did **not** use a condom from start to finish with your [TOT_PN] partners *whose HIV status you did not know*. How many of these times were you drunk or buzzed on alcohol within 2 hours before or during sex?

— — — —

9998

Refuse to Answer

Skip to AA1

If C9b is greater than UNPRO7 then READ: "You cannot enter a number that is greater than &[UNPRO7], which is the number of times you were the bottom and did not use a condom with your unknown HIV status partners. Please re-answer this question." skip to C9b.

C9c. Think of the [UNPRO7] times you were *the bottom* (you had receptive anal sex) and did **not** use a condom from start to finish with your [TOT_PN] partners *whose HIV status you did not know*. How many of these times did you use non-prescription drugs within 2 hours before or during sex?

— — — —

9998

Refuse to Answer

Skip to AA1

If C9c is greater than UNPRO7 then READ: "You cannot enter a number that is greater than &[UNPRO7], which is the number of times you were the bottom and did not use a condom with your unknown HIV status partners. Please re-answer this question." skip to C9c.STDs

APPENDIX I
UNIVERSITY OF ILLINOIS
AT CHICAGO

Office for the Protection of Research Subjects (OPRS)
Office of the Vice Chancellor for Research (MC 672)
203 Administrative Office Building
1737 West Polk Street
Chicago, Illinois 60612-7227

Approval Notice
Initial Review (Response To Modifications)

August 3, 2009

Christine Holland, MA
Psychology
Dept. of Psychology
1007 West Harrison, M/C 285
Phone: (818) 913-2418

RE: **Protocol # 2009-0532**
“Precursors to Adaptive and Maladaptive Adult Functioning: An Internet Assessment of Men Who Have Sex with Men”

Dear Ms. Holland:

Your Initial Review application (Response To Modifications) was reviewed and approved by the Expedited review process on July 30, 2009. You may now begin your research.

Please note the following information about your approved research protocol:

<u>Protocol Approval Period:</u>	July 30, 2009 - July 29, 2010
<u>Approved Subject Enrollment #:</u>	500
<u>Additional Determinations for Research Involving Minors:</u>	These determinations have not been made for this study since it has not been approved for enrollment of minors.
<u>Performance Site:</u>	UIC
<u>Sponsor:</u>	LGBT Seed Grant Program
<u>PAF#:</u>	Not applicable
<u>Grant/Contract No:</u>	Not applicable
<u>Grant/Contract Title:</u>	Not applicable
<u>Research Protocol:</u>	

- a) Precursors to Adaptive and Maladaptive Adult Functioning: An Internet Assessment of Men Who Have Sex with Men; Version 2; 07/05/2009

Recruitment Materials:

- a) Recruitment Script for Chat Room Interactions; Version 2; 07/08/2009
- b) Project Recruitment Text for Message Boards; Version 2

Informed Consents:

- a) Informed Consent; Version 2; 07/08/2009

- b) A waiver of documentation has been granted under 45 CFR 46.117 for the online questionnaire (online consent obtained via information sheet)

- c) A waiver of consent has been granted under 45 CFR 46.116(d) for recruitment purposes only

Your research meets the criteria for expedited review as defined in 45 CFR 46.110(b)(1) under the following specific category:

(7) Research on individual or group characteristics or behavior (including but not limited to research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Please note the Review History of this submission:

Receipt Date	Submission Type	Review Process	Review Date	Review Action
06/10/2009	Initial Review	Expedited	06/26/2009	Modifications Required
07/27/2009	Response To Modifications	Expedited	07/30/2009	Approved

Please remember to:

→ Use your **research protocol number** (2009-0532) on any documents or correspondence with the IRB concerning your research protocol.

→ Review and comply with all requirements on the enclosure,
"UIC Investigator Responsibilities, Protection of Human Research Subjects"

Please note that the UIC IRB has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

Please be aware that if the scope of work in the grant/project changes, the protocol must be amended and approved by the UIC IRB before the initiation of the change.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact OPRS at (312) 996-1711 or me at (312) 996-2014. Please send any correspondence about this protocol to OPRS at 203 AOB, M/C 672.

Sincerely,

Sandra Costello
Assistant Director, IRB # 2
Office for the Protection of Research

Subjects

Enclosures:

- 1. UIC Investigator Responsibilities, Protection of Human Research Subjects**
- 2. Informed Consent Document:**
 - a) Informed Consent; Version 2; 07/08/2009
- 3. Recruiting Materials:**
 - a) Recruitment Script for Chat Room Interactions; Version 2; 07/08/2009
 - b) Project Recruitment Text for Message Boards; Version 2

cc: Gary E. Raney, Psychology, M/C 285
David McKirnan, Psychology, M/C 285

UNIVERSITY OF ILLINOIS
AT CHICAGO

Office for the Protection of Research Subjects (OPRS)
Office of the Vice Chancellor for Research (MC 672)
203 Administrative Office Building
1737 West Polk Street
Chicago, Illinois 60612-7227

Exemption Granted

November 23, 2010

Christine Marie Holland, MA
Psychology
5901 East 7th Street (06/116B)
Long Beach, CA 90822
Phone: (818) 913-2418

RE: Research Protocol # 2010-1009
“Precursors to Adaptive and Maladaptive Adult Functioning: An Internet Assessment of Men Who Have Sex with Men (Previously UIC Research Protocol #2009-0532)”

This application is the resubmission of UIC Research Protocol #2009-0532, which was closed on August 3, 2010 due to an extended lapse of IRB approval.

Please note that your (Christine Holland) current investigator training period will expire on February 20, 2011 **unless Investigator Continuing Education has been completed. If the investigator training period expires, you will no longer have approval to conduct this research. For additional information, please refer to the following OPRS web-site:**
http://tigger.uic.edu/depts/ovcr/research/protocolreview/irb/education/2-2-2/ce_requirements.shtml

Dear Christine Holland:

Your Claim of Exemption was reviewed on November 23, 2010 and it was determined that your research protocol meets the criteria for exemption as defined in the U. S. Department of Health and Human Services Regulations for the Protection of Human Subjects [(45 CFR 46.101(b))]. You may now begin your research.

Please note the following regarding your research protocol:

Exemption Period: November 23, 2010 – November 22, 2013
Sponsor: Chancellor’s Committee on the Status of Lesbian, Gay, Bisexual, and Transgender Issues

PAF#: Not available
Grant/Contract No: Not available
Grant/Contract Title: Not available
Performance Site: UIC
Subject Population: Data Analysis only
Number of Subjects: 501 previously enrolled subjects (UIC Research Protocol #2009-0532)

The specific exemption category under 45 CFR 46.101(b) is:

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

You are reminded that investigators whose research involving human subjects is determined to be exempt from the federal regulations for the protection of human subjects still have responsibilities for the ethical conduct of the research under state law and UIC policy. Please be aware of the following UIC policies and responsibilities for investigators:

1. Amendments You are responsible for reporting any amendments to your research protocol that may affect the determination of the exemption and may result in your research no longer being eligible for the exemption that has been granted.
2. Record Keeping You are responsible for maintaining a copy all research related records in a secure location in the event future verification is necessary, at a minimum these documents include: the research protocol, the claim of exemption application, all questionnaires, survey instruments, interview questions and/or data collection instruments associated with this research protocol, recruiting or advertising materials, any consent forms or information sheets given to subjects, or any other pertinent documents.
3. Final Report When you have completed work on your research protocol, you should submit a final report to the Office for Protection of Research Subjects (OPRS).

Please be sure to:

→Use your research protocol number (listed above) on any documents or correspondence with the IRB concerning your research protocol.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact me at (312) 355-2908 or the OPRS office at (312) 996-1711. Please send any correspondence about this protocol to OPRS at 203 AOB, M/C 672.

Sincerely,

Charles W. Hoehne, B.S., C.I.P.
Assistant Director, IRB # 2
Office for the Protection of Research Subjects

Enclosure(s): None

cc: Gary E. Raney, Psychology, M/C 285
David McKirnan, Psychology, M/C 285

VITA

Christine M. Holland, M.A.

5901 E. 7th Street

Long Beach, CA 90822

(818) 913-2418

ChristineHolland@gmail.com

EDUCATION

- 2011 **Ph.D. in Clinical Psychology** (expected December 2011)
University of Illinois at Chicago (APA Accredited), Chicago, IL
Dissertation successfully defended April 2011
Dissertation: Precursors to adaptive and maladaptive adult functioning: An internet assessment of Men who have Sex with Men
Minor Area: Health Measurement
- 2007 **M.A. in Clinical Psychology**
University of Illinois at Chicago, Chicago, IL
M.A. Thesis: Time Since Diagnosis and Sexual Risk Behavior
- 2003 **B.A. in Psychology, Minor in Quantitative Research**, Suma Cum Laude
California State Polytechnic University, Pomona, CA

CLINICAL EXPERIENCE

- 2003 - 2011 **Total face-to-face intervention/assessment hours: 3864**
Total supervision hours: 1085
Trained in: Cognitive Behavioral Therapy, Dialectical Behavioral Therapy, Motivational Interviewing, Acceptance and Commitment Therapy, Prolonged Exposure, Cognitive Processing Therapy, Seeking Safety
Theoretical Orientation: Cognitive Behavioral Therapy, Motivational Interviewing, Dialectical Behavioral Therapy, and Evidence-Based Practice
Training Model: Scientist –Practitioner
- 2010 - 2011 **Clinical Psychology Pre-doctoral Internship**
Chief Intern
VA Long Beach Health Care System
Department of Psychology (APA accredited)
- Rotations:** PTSD & Substance Abuse (Supervisor: Deidre Lopez, Ph.D.);

Infectious Disease/Oncology/Hemataology/Nephrology & Hospice Services (Supervisor: Adrienne House, Ph.D.); PTSD and Mindfulness (Supervisor: John Huang, Ph.D.); Smoking Cessation/ Weight Reduction Program (Supervisor: Barry Rabin, Ph.D.); Assessment and Psychotherapy (Supervisor: Kenneth Cole, Ph.D.)

2009 – 2010

Clinical Psychology Pre-Intern

California State Polytechnic University Pomona, Ennis W. Cosby Child Family Services Friendmobile. Pomona, CA,

Roles: Individual Therapist, Group Therapist, Family Therapist, Psychological Assessments, Intake Clinician

Supervisors: Lori Barker, Ph.D., Felicia Friendly Thomas, Ph.D., Erika Dejonghe, Ph.D.

Presenting problems: trauma, suicidality, childhood abuse, depression, homelessness, anxiety, conduct disorder, ADHD

Population: children and families in crisis in the community of Pomona, CA (ages 3-62)

2003 – 2009

Clinical Psychology Practicum

University of Illinois at Chicago, Department of Psychology, Office of Applied Psychological Services, Chicago, IL

Roles: Individual Therapist, Psychological Assessments, Couples Therapist, Intake Clinician

Supervisors: Gloria Balague, Ph.D., Nancy Dassoff, Ph.D., Audrey Ruderman, Ph.D., Jon Kassell, Ph.D., Debjani Mukherjee, Ph.D.

Presenting problems: depression, anxiety, binge eating, time-management, stress and coping, grief, assertiveness, sexual dysfunction, and various axis II ailments.

Population: University, grade school, and high school students, community members (ages 12-56)

2005 – 2008

Clinical Psychology Extern

Mount Sinai Hospital, Sinai Urban Health Institute, HIV Program, Chicago, IL

Roles: Individual Therapist, Group Therapist, Couples Therapist, Intake Clinician

Supervisor: Sheela Raja, Ph.D.

Presenting problems: depression, anxiety, borderline personality disorder, phobias, grief, substance abuse, self-esteem, sexual risk, medication adherence, domestic violence, and sexual dysfunction.

Population: HIV positive men and women seen at infectious Disease Clinic at Mount Sinai of Chicago (ages 19 to 82)

CLINICAL RESEARCH EXPERIENCE

- 2004 - 2007 Howard Brown Health Center, Department of Research, Treatment Advocacy Program, Chicago, IL Research Associate
Supervisors: Scott Cook, Ph.D., David McKirnan, Ph.D., Jenny Hopwood, LCSW, Jason Bird, Ph.D.
Presenting problems: depression, anxiety, borderline personality disorder, grief, self-esteem, domestic violence, sexual risk, medication adherence, substance abuse, and sexual dysfunction
Population: HIV positive men seen in primary care at Howard Brown Health Center, TRIAD, Uptown Clinic/Chicago Department of Health, and a private primary care practice in Chicago, IL (ages 19 to 68)

CLINICAL SUPERVISION EXPERIENCE

- 2004-2005 University of Illinois at Chicago, Department of Psychology, Office of Applied Psychological Services, Chicago, IL, Student Mentor Supervisor to first year intake clinicians
- 2008 Department of Psychology, University of Illinois at Chicago, Chicago, Illinois: Direct Supervision to Undergraduate Students in Psychology of Interviewing Course

TEACHING EXPERIENCE

- 2008 Department of Psychology, University of Illinois at Chicago, Chicago, Illinois: Instructor, Abnormal Psychology
Midterm course student evaluations:
Rate the Course: N = 36, Mean = 4.53, SD = .506, min=4 max=5
Rate the Instructor: N = 36, Mean = 4.89, SD = .39, min=4 max=5

Final course student evaluations:

Rate the Course: N = 40, Mean = 4.85, SD = .36, min=4 max=5

Rate the Instructor: N = 40, Mean = 4.95, SD = .22, min=4 max=5

- 2003 – 2009 Department of Psychology, University of Illinois at Chicago, Chicago, Illinois: Head Teaching Assistant, Introduction to Psychology
- 2003, 2006, 2008 Department of Psychology, University of Illinois at Chicago, Chicago, Illinois: Teaching Assistant, Abnormal Psychology
- 2008 Department of Psychology, University of Illinois at Chicago, Chicago, Illinois: Teaching Assistant, Psychology of Interviewing
- 2004 and 2008 Department of Psychology, University of Illinois at Chicago, Chicago, Illinois: Teaching Assistant, Statistical Methods in Behavioral Science
- 2003 Department of Psychology, University of Illinois at Chicago, Chicago, Illinois: Teaching Assistant, Psychological Testing
- 2008 Department of Dentistry, University of Illinois at Chicago, Chicago, Illinois: Teaching Assistant, Communications Skills
- 2002 Department of Psychology and Sociology, California State Polytechnic University, Pomona, Pomona, California: Teaching Assistant, Introduction to Psychology, 2002

RESEARCH AND RELATED WORK EXPERINCE

- 2010 Department of Family Medicine at the David Geffen School of Medicine at UCLA, Center for HIV Identification Prevention, and Treatment Services (CHIPTS), Senior Community Health Program Representative for CDC HIV Cacity Building Initiative.
- 2005 – 2008 HIV Task Force, Mount Sinai Hospital, Sinai Urban Health Institute, Infectious Disease Clinic, HIV Program, Chicago, IL
- 2007 – 2010 Private Research Assistant-Geraldine Piorkowski
- 2003 – 2007 Howard Brown Health Center, Chicago, Illinois, Research Assistant/Retention Specialist—Treatment Advocacy Program
- 2003 – 2010 University of Illinois at Chicago, Chicago, Illinois, Researcher Assistant—

Dr. David. J. McKirnan

- 2002 – 2003 California State Polytechnic University, Pomona, Pomona, California,
Research Assistant — Dr. Aubrey Fine
- 2001 – 2003 California State Polytechnic University, Pomona, Pomona, California,
Research Assistant — Dr. Lori Barker Hackett
- 2001 California State Polytechnic University, Pomona, Pomona, California—
Ronald E. McNair Scholar
- 2000 - 2001 California State Polytechnic University, Pomona, Pomona, California,
Research Assistant — Dr. Jill Nemiro

HONORS

- 2010 – 2011 Chief Psychology Intern, VA Long Beach Health Care System
- 2009 University of Illinois at Chicago Chancellor’s Committee on the Status
of Lesbian, Gay, Bisexual, and Transgender Issues, Research Grant
- 2003 Suma Cum Laude, California State Polytechnic University
Pomona, Pomona, CA
- 2003 California State Polytechnic University, Pomona, Department of
Psychology’s Professional Development Award
- 2003 Chi Omega Fraternity, Academic Excellence Award (Regional Award)
- 1999 – 2003 Chi Omega Fraternity, Academic Excellence Award (Chapter Award)
- 1999-2003 Chi Omega Fraternity, Commitment to Community Service Award
(Chapter Award)
- 2003 Panhellenic Counsel, Academic Achievement Award
- 2001 Ronald E. McNair Scholar
- 2001 Golden Key National Honor Society
- 2000 Psi Chi, National Psychology Honor Society
Office held: President 2001-2002

- 2000 California State Polytechnic University Pomona, International Scholar, London, England
- 1999 Order of Omega, National Greek Honor Society
- 1999 Alpha Lambda Delta National Honor Society
- 1999 National Honor Society
- 1999 – 2003 President's List, academic year
Dean's List: Spring 2000, 2001, 2002, 2003
Dean's List: Winter 2000, 2001, 2002, 2003
Dean's List: Fall 1999, 2000, 2001, 2002
- 2002 Outstanding Presenter at the New Directions Undergraduate Research Conference
- 2000 Los Angeles Unified School District Service Award
- 1998-1999 Peer Counselor, Flintridge Preparatory School, La Cañada, CA
- 1999 American Legion Award, Flintridge Preparatory School, La Cañada, CA

JOURNAL ARTICLE

Holland, C., Lobos, D., Lopez, I. (2002) Eating behaviors amongst college students: A look at gender and ethnic differences. In *Special Collections Edition* at UC Riverside.

BOOK CHAPTERS

Fine, A., Karpova, N., Thorn, N., **Holland, C.**, Kotkin, R. (2003). Parenting children with learning and attention disorders: Concerns and directions for therapeutic intervention. In A. H. Fine, & R. A. Kotkin (Eds.), *Therapist's guide to learning and attention disorder*. (pp. 237-259). San Diego, CA, US: Academic Press.

CONFERENCE PROCEEDINGS

DuBois, S., **Holland, C.**, McKirnan, D. Fingerhut, D., Bird, J., Alvy, L. (August 2009). Patterns of Health Disorganization Among HIV-Positive MSM. Poster presented at the American Psychological Association Annual Convention, Toronto, Canada.

- Holland, M., **Holland, C.** (August 2009). Latino Parenting Grandparents. Poster presented at the American Psychological Association Annual Convention, Toronto, Canada.
- Holland, C.**, McKirnan, D., Fingerhut, D., Bird, J., & DuBois, S. (May 2008). HIV Medication Status and Sexual Risk. Symposium presented at the Midwest Psychological Association Annual Conference, Chicago, IL.
- Raja, S., Allgood, K., McKirnan, D., **Holland, C.**, & Glick, N. (December 2007). Prevention with Positives in Urban Clinic Settings: The Treatment Advocacy Program-Sinai. 2007 National HIV Prevention Conference, Atlanta, Georgia.
- Bird, J., Fingerhut, D., McKirnan, D., **Holland, C.** (November 2007). Ethnic Differences in HIV Disclosure and HIV Transmission Risk. Poster presented at the American Public Health Association Annual Convention, Washington, D.C.
- Barker-Hackett, L., **Holland, C.**, Chaichanasakul, A., & Awopetu, B. Y. (August 2006). Expert or ally: Who's a better diversity trainer? Poster presented at the American Psychological Association Annual Convention, New Orleans, Louisiana.
- Barker-Hackett, L., **Holland, C.**, Vaughn, A. A., & Martinez, J. C. (August 2005). Development and evaluation of the Multicultural Attitude Scale. Poster presented at the American Psychological Association Annual Convention, Washington, DC.
- Houston, E., McKirnan, D. J., Veluz, A. K., Dyslin, K., **Holland, C.**, Hosto, L. (December 2005). Patterns of domestic violence among urban men who have sex with men. Symposium presented at the American Public Health Association Annual Convention, Philadelphia, PA.
- Holland, C.**, Barker-Hackett, L. (May 2003). "Effects of speaker race and gender on participants' responses to diversity training. Poster presented at the Western Psychological Association Annual Convention, Vancouver, Canada.
- Holland, C.** (November 2002). The effects of speaker's race and gender on effectiveness of diversity training. Symposium presented at the Southern California Conference for Undergraduate Research, Pasadena, CA.
- Holland, C.** (July, 2002). The effects of speaker's race and gender on effectiveness of diversity training. Symposium presented at the Ronald E. McNair Scholar's Symposium, Pomona, CA.
- Holland, C.**, Lobos, D., Lopez, I. (May 2002) Eating behaviors amongst college students: A look at gender and ethnic differences. New Directions Undergraduate Research Conference, Riverside, CA.

INVITED PRESENTATIONS

Holland, C. (March 2011). PTSD and HIV: Clinical considerations. Mental Health Grand Rounds. VA Long Beach Health Care System, Long Beach, CA

Holland, C. (February 2007). Borderline Personality Disorder in Primary Care. Mt. Sinai HIV Task Force Meeting. Mt. Sinai Hospital, Chicago, IL

Holland, C., Veluz-Wilkins, A. K. (October 2005). Psychopharmacology and HIV. Howard Brown Research Roundtable, Chicago, IL.

CONTINUING EDUCATION TRAINING

Sexuality Seminar. VA Long Beach Health Care System, Long Beach, CA
May 2011

Child Abuse Prevention Seminar. University of California Los Angeles,
Los Angeles, CA, October 2, 2010.

“WAIS-IV Administration Training,” PsychCorp./Pearson. University of
Illinois at Chicago, December 9, 2009.

“Substance Abuse Treatment and LGBTQ People.” Howard Brown Health
Center. October 10, 2008. Certificate of Completion

“HIV Care for the Mental Health Clinician, Parts 1 and 2,” October 3,
2008, American Psychiatric Association Office of HIV Psychiatry, 1 APA
credit.

“Motivational Interviewing Training Session.” Howard Brown Health
Center, June 10 and June 11, 2008. Certificate of Completion.

"The Impact of HIV Infection on Neurocognitive Function: Is Earlier
Treatment With HAART Indicated?" ACCESS Medical Group,
September 20, 2006, Chicago, IL, 1 continuing education credit.

“Optimizing Care for the HIV-Hepatitis Coinfected Patient”, Part 2, July
27, 2006, Chicago, IL, ACCESS Medical Group, 1 continuing education
credit.

“Optimizing Care for Latino Patients With HIV Disease”, July 12, 2006,
Chicago, IL, ACCESS Medical Group, 1 continuing education credit.
“HIV in Adolescents and Young Adults: Antiretroviral Therapy Update”.
February 23, 2006, Chicago, IL, ACCESS Medical Group, 1 continuing
education credit.

"Topics in HIV Psychiatry," November 17, 2005, Chicago, IL, ACCESS Medical Group, 1 continuing education credit.

"Understanding HIV Therapy: Tolerability and Metabolics", October 20, 2005, Chicago, IL, ACCESS Medical Group, 1 continuing education credit.

"Optimizing Care for the HIV-Hepatitis Coinfected Patient", Part 1, August 24, 2005, Chicago, IL, ACCESS Medical Group, 1 continuing education credit.

"HIV and Urban Women," May 26, 2005, Chicago, IL, ACCESS Medical Group, 1 continuing education credit.

PROFESSIONAL AFFILIATIONS

Midwestern Psychological Association
American Psychological Association student affiliate
Association for Women in Psychology
Western Psychological Association
American Public Health Association

LANGUAGES

Spanish: 4 years of instruction. Able to read proficiently, able to speak and write at a novice level.