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David W. Pantalone

A Mixed Methods Approach to Investigate Partner Violence
in HIV-Positive Outpatients

David W. Pantalone

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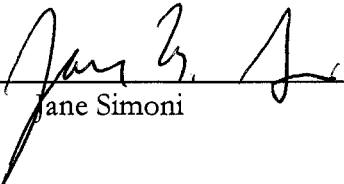
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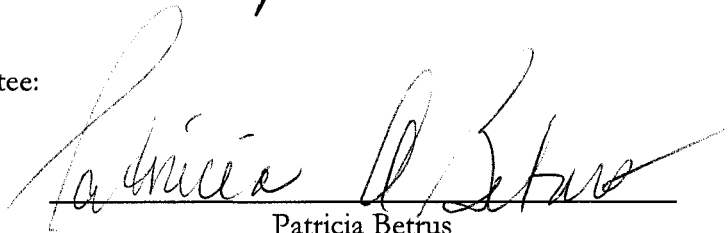
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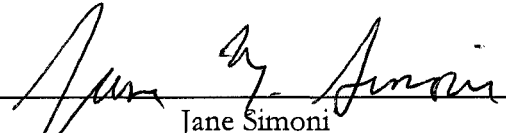


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Abstract

A Mixed Methods Approach to Investigate Partner Violence
in HIV-Positive Outpatients

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Individuals with HIV face a variety of long-term physical and mental health issues related to their HIV disease, including indefinite antiretroviral treatment with numerous side effects, the stigma around HIV status disclosure, and high rates of anxiety and depression. Affecting up to 67% of HIV-infected outpatients in recent studies, partner violence (PV) may be a significant barrier to achieving optimal health for this population, given the overlapping risk factors for the two phenomena, including elevated rates of poverty and drug use. With high prevalence and well-documented decrements in physical and mental health as consequences in HIV-negative samples, it is possible that PV exacerbates potentially negative health outcomes in HIV-positive individuals because of their increased psychological and immunological vulnerability. The present inquiry attempts to increase understanding of the overlapping epidemics of PV and HIV through a mixed methods approach. Qualitative methods were employed to elucidate further key aspects of PV as they intersect in the lives of HIV-positive individuals receiving outpatient medical care. Results of the qualitative study informed the development and refinement of the survey study to follow, a cross-sectional study conducted on a demographically similar sample of HIV-positive outpatients. This dissertation reports the results of this inquiry in the following three chapters: (1) a comprehensive literature review of U.S.-based studies of PV among HIV-positive individuals through February January 2007; (b) a qualitative study (N=28) detailing the lived experience of HIV-positive men who have sex with men who experienced PV; and (c) a survey study measuring the prevalence of physical, sexual, and psychological PV. Further, data from the survey study were used to test a theoretical model that hypothesizes mental health as a mediator between interpersonal violence experienced and physical health and functioning.

TABLE OF CONTENTS

	Page
List of Figures.....	ii
List of Tables.....	iii
Chapter 1: Literature Review.....	1
Introduction and Study Aims	1
Methods and Organization of Review	13
Results	16
Discussion	26
Chapter 2: Qualitative Study	49
Introduction and Study Aims	49
Methods	51
Results and Discussion	57
Conclusions	91
Chapter 3: Survey Study.....	100
Introduction and Study Aims	100
Methods	103
Results	117
Discussion	125
References.....	146
Appendix A: Qualitative Interview Guide	155
Appendix B: Medical Record Extraction Form	159

LIST OF FIGURES

Figure Number	Page
1. Qualitative Results Schematic.....	98
2. Theoretical Model.....	144
3. Trimmed Model.....	145

LIST OF TABLES

Table Number	Page
1. Relative Frequency of Partner Violence in HIV+ Women and MSM	42
2. Relative Frequency of Partner Violence by Type and Sex/Sexual Orientation	47
3. Qualitative Demographics.....	99
4. Survey Demographics	138
5. Survey Descriptives	139
6. Rates of Partner Violence by Type of Violence and Timeframe.....	140
7. Responses to HIV-Specific Partner Violence Questions	141
8. Bivariate Correlation Matrix.....	142
9. Model Comparison.....	143

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DEDICATION

This work is dedicated to the millions of men and women
living with HIV in the United States and throughout the world.
If it helps, then this work was worth it.

CHAPTER 1 – LITERATURE REVIEW

INTRODUCTION AND STUDY AIMS

A. Partner Violence and HIV: Co-Occurring Public Health Problems

1. Partner Violence. Violence is an important health problem in the United States (U.S.) and around the world. Morbidity and mortality related to interpersonal violence specifically affects at least 25% of women in the U.S. in nationally representative surveys and results in an estimated \$4.1 billion dollars in direct health care costs and \$1.8 billion in indirect costs due to lost productivity (CDC, 2004). Clearly, interpersonal violence is a common and important public health problem that results in significant psychological and physical distress for its victims and a high burden placed on the health care system.

One of the most common and insidious forms of violence is partner violence (PV), which can occur in any recurrent or steady romantic or sexual partnership (Campbell, 2002). A large, representative study (Tjaden & Thoennes, 2000) estimated that one-fourth of all women in the U.S. will experience physical or sexual abuse at the hands of a romantic partner at some point in their lives. Many argue that PV is a social epidemic whose proportions we, as a society, continue to deny (e.g., Nieves-Rosa et al., 2000). Historically, PV has been studied under the rubric of “violence against women” (Kilpatrick, 2004), employing terminology that implies heterosexuality. In recent years, however, PV research has been conducted using broader definitions of partnerships. PV studies have been conducted in both opposite-sex and same-sex relationships and unmarried and/or

cohabitating couples have been investigated. Prevalence estimates abound; however, while each estimate may have acceptable internal validity for their particular sample, generalizability across studies is questionable based on the methodological heterogeneity (discussed further below, but includes highly variable definitions of each type of PV as well as differences in assessment instrument and technique, sampling venue and strategy, timeframe investigated, etc.) that limits cross-study comparisons. Setting aside the question of how often PV occurs or how many people experience PV across their lifespan, the PV literature has focused its attention on both factors that predispose a partner to becoming a victim of PV, and the variety of medical and mental health issues that result. PV can directly undermine a victim's health and serve as a barrier to accessing health care services (Sowell et al., 2002).

2. Partner violence and HIV infection. The role of PV as a risk factor for, or a consequence of, HIV infection is an open, empirical question. For some victims, one health-related consequence of PV may be the acquisition of HIV, either as an intentional attack against the victim (Letellier, 1996) or as an indirect result of the power and control exerted by the perpetrator (Relf, 2001). There is a sizeable and growing body of research looking at this phenomenon (e.g., El-Bassel et al., 1998), i.e., the ways in which partner violence is a risk factor for HIV infection among HIV-negative individuals. Research in this area shows that the environmental context of poverty and substance use can drive the desperation that normalizes PV and makes alternative methods of coping with stress in romantic partnerships seem impossible (Seals, 1996; El-Bassel et al., 2000). Also, PV may increase an HIV-negative woman's risk of acquiring HIV through forced or coercive sexual intercourse or by limiting

her ability to negotiate HIV preventive behaviors like the use of barrier protection during intercourse (Maman et al., 2002). Data in this area seem to indicate that HIV prevention and substance use treatment programs need to take the possibility of PV into account in their implementation (Greenwood et al., 2002).

For some women and men with HIV, PV may follow from the diagnosis and disclosure of their HIV. Individuals living with HIV or AIDS can be victims of violence in their own romantic relationships and, moreover, PV in the lives of HIV-positive individuals could be potentially more devastating in terms of their health, with an HIV-positive victims' increased susceptibility to mental and physical health problems. Additional risk factors include, because of their physical illness, a potentially higher need for physical caretaking and emotional support from romantic partners as well as social support given by friends and family. Finally, an HIV-positive victim of PV may have fears of abandonment that are intensified through a negative self-image and hopeless view about obtaining a non-abusive relationship later (Relf, 2001).

Like PV, HIV/AIDS remains a contemporary public health issue. Interestingly, there are many overlapping risk factors for HIV and PV and, likely as a result, both PV and HIV disproportionately affect women and men who have sex with men (MSM). Though the growth of the epidemic has slowed in North America in the past decade, since the introduction of powerful anti-HIV medications called highly active antiretroviral therapy (ARV) and access to medical care, the number of people living with HIV/AIDS has exploded (Maman et al., 2000). A record number of individuals are living with HIV, what has now become a more manageable illness rather than the near-death sentence it was as few

as a dozen years ago. Presently, almost a half-million individuals in the U.S. are living with HIV, according to the best available estimates of the Centers for Disease Control and Prevention (CDC); it is estimated that 93% of the total cases of the epidemic are outside of the U.S., with the majority clustered in the developing world (CDC, 2004; UNAIDS, 2004).

Although historically HIV has been a disease spread mostly among MSM, the CDC recently estimated that only 45% of current HIV infections are due to male-to-male sex with the remaining half of infected individuals exposed through intravenous drug use (27%) or heterosexual sex (20%) (CDC, 2004). Cumulatively, however, only 23% of infected individuals are women, and 65% are MSM. Therefore, women and MSM represent the populations with both the most HIV cases and the highest risk for PV.

Scientific study of the intersections of these two major public health problems is essential to determine the scope of the problems as well as to ascertain potential intervention targets. To build effective screening, prevention, and intervention programs to address the PV faced by all victims, including those with HIV, it is first necessary to enumerate accurately the prevalence of PV types for population subgroups, including both HIV-positive women and MSM, and to identify the basic characteristics of the victims and perpetrators (Greenwood et al., 2002). This knowledge will inform the decisions of intervention scientists concerning where to focus their limited attention and resources while maximizing utility.

Since HIV-positive individuals face a myriad of long-term medical and psychosocial issues related to their disease, experiencing PV is likely a serious deterrent to making health-promoting choices. Critical issues for HIV-positive individuals include stigma around HIV

status disclosure, the need to make treatment decisions in the face of limited or conflicting data, continual adherence to complicated medication regimens with numerous side effects, and the highly prevalent anxiety and depression in this population (Remien & Rabkin, 2001). Adding PV to this mix is likely to impede access to health care (Relf, 2001), which is essential, and the additional stress is likely to exacerbate mental health problems (Schnurr & Green, 2004) and hasten disease progression (Kiecolt-Glaser & Newton, 2001).

The consequences of PV among HIV-negative individuals are well documented, including decrements in a variety of physical and mental health areas (Zierler et al., 1996; Resnick et al., 1997; Campbell, 2002), but the extent to which research on HIV-negative individuals generalizes to HIV-positive individuals is unclear because of the added nuances that HIV brings to a relationship, especially serodiscordant relationships, and because of the inherent psychological and immunological vulnerability in this population. Scant research has been published that explores the details and dynamics of abusive relationships among HIV-positive individuals (Relf, 2001; Relf et al., 2004), although there has been a call for continued study of the extent to which HIV-infected individuals in treatment experience their condition as a "reason" for the initiation or maintenance of the PV they face (Zierler et al., 2000).

3. Same-sex versus opposite-sex PV in HIV-negative samples. A comprehensive review, published in 1999, compared the current research on PV among lesbian and gay couples to that of heterosexual couples (Burke & Follingstad, 1999). In discussing their conclusions, the authors take care to note that the extant literature about same-sex couples is mired in methodological flaws of the PV literature in general *plus* the problem of sampling a

hidden population (MSM). From the data available, rates of abuse and battering by intimate partners does not appear to differ between male-female, female-female, and male-male couples, although it is not clear whether the frequency or severity is comparable across these groups (Burke & Follingstad, 1999). Notably, although there is prolific research on opposite-sex couples to date, including research on treatment programs for both victims and perpetrators, through 1999 there was only one published report of such treatment programs for same-sex couples, i.e., one multi-modal intervention for lesbian batterers. Clearly, the authors conclude and we agree that there is a need for theoretically driven, appropriately sampled and well-controlled empirical studies in this area. (Toro-Alfonso et al., 2004).

B. Purpose of this Review

The goals of this review are as follows: (1) to review available prevalence estimates for different types of PV among HIV-positive women and men who have sex with men (MSM) including, for comparison and context, accepted prevalence rates for HIV-negative women and MSM to compare the magnitude of the problem in these communities and to address the question of whether HIV is an additional risk/vulnerability factor; (2) to review the literature on physical and mental health correlates or consequences of the multiple domains of PV in the lives of HIV-positive women and MSM and to compare these findings with the equivalent literature for HIV-negative individuals; and (3) to critically examine the existing PV literature with HIV-positive individuals and to make suggestions for the future of the field.

C. Definitions

To understand the current state of research in this field, it is important to acknowledge the historical roots of the study of violence against intimate, romantic, dyadic partners, i.e., the movement to study “violence against women” (Kilpatrick, 2004). In recent years, the scope of violence within romantic partnerships has expanded to include same-sex couples. PV has been a significant problem for many couples for many years, but certain advances have led to an increase in the number of cases identified, including an increased number of battered women’s shelters, development of criminal justice initiatives that encourage the arrest of perpetrators, increased sensitivity of couple therapists to past or potential violence among treatment-seeking couples, and increased surveillance in community samples (Rathus & Feindler, 2004).

One drawback to the prolific work on PV is an inability to compare directly studies that seem to focus on the same phenomenon because of considerable variation in the definitions of the PV examined. Most authors use the terms partner violence, intimate partner violence, couple violence, domestic violence, marital violence and spousal abuse interchangeably; nuances aside, there is near universal agreement in the field about the overarching constructs of PV even though the specific terminology differs (Rathus & Feindler, 2004). The field has agreed at a general level on the important concepts but not on the nuances of even key definitions (i.e., partner, abuse, etc.). Difficulty comparing PV studies because of shifting definitions is especially problematic in prevalence and outcome studies, when one study’s physical PV is not the same as another study’s physical PV; the result, sadly, is a decreased ability for the field’s literature to grow together as a whole.

1. Definitions of intimate partnership. Historically, PV has been called “spousal violence” and “wife beating” both by clinicians and researchers, and thus, the research has been guided by such narrow definitions of who could be the victim of abuse in a relationship. Only more recently has the field as a whole acknowledged that non-married romantic dyads can behave in abusive ways toward each other, and that victims who are not lawfully wed can nonetheless have difficulty in escaping from a violent partner (Kilpatrick, 2004). Awareness of the scope of PV has increased among married couples, certainly, but additionally among cohabitating, dating, gay and lesbian, and adolescent couples as well (Rhatigan et al., 2005)

This important definitional issue arises in same-sex relationships where, until recently, marriage or a lawfully recognized civil union has been impossible. “Partner” can be used to define opposite and same-sex couples who are in relationships on a continuum from causally dating to civil unions or marriage (Griffin & Koss, 2002). Partners could be cohabitating or not, although sometimes individual studies add this as a criterion, e.g., the National Violence Against Women Survey (Tjaden & Thoennes, 2000). Currently, PV research that acknowledges and legitimizes same-sex partnerships uses as a definition of a partnership, “two people in an intimate relationship” (e.g., Campbell, 2002). This definition represents the construct of an intimate, romantic partnership discussed herein.

2. Definitions of violent acts. With the field’s goal of the eventual elimination of PV, the most important advance will be the statement and refinement of conceptual definitions of PV (Rhatigan et al., 2005). Thus far, the lack of standardization has resulted in a profound difficulty in understanding the scope and severity of the problem of PV (Maman et al.,

2000). By not knowing how authors define partners and abuse, construct validity is limited and the accuracy and interpretation of findings is difficult to assess and cannot be compared (Burke & Follingstad, 1999). For these reasons, the following section on definitions is necessary.

Interpersonal violence versus partner violence. Yet another terminological issue present in the field of violence in personal relationships is the existence of the implied and stated differences between “interpersonal violence” and “partner violence.” In general, interpersonal violence is an umbrella term that encompasses a variety of types of violence (physical, sexual) carried out by a variety of perpetrators (partners, acquaintances, strangers). In addition to PV, interpersonal violence also can refer to acquaintance rape, physical assault by a stranger, etc. Some studies in the literature assess the type of abuse experienced by an individual but do not assess the relationship between the victim and the perpetrator; studies of this type cannot help us to determine the prevalence of PV although they do give us more global information about the variety of ways that women and MSM are victimized throughout their lives.

Relationships and roles: Victims and perpetrators. Historically, women have been studied as victims of PV and men as perpetrators (Kilpatrick, 2004). More recently, there has been a movement by some to study the potential bi-directionality in violence, i.e., the idea that relationships with PV are likely to involve both partners using abusive tactics to exert power and control over each other. While this idea seems plausible *prima facie*, this movement fails to take into account (in opposite sex couples) the inherent power differential between men and women in society and the typical differences in strength and size across

sexes (e.g., Coker et al., 2000). In teasing apart acts of self-defense from mutual battering, perpetrators are differentiated by their intent and their emotional reactions following the violence (Burke & Follingstad, 1999). It is important, also, to recognize that a dynamic of violence can begin with a single act (or threat) and can be sustained indefinitely with the threat of additional violence; therefore, acts of aggression by the “victim” may seem topographically to be a mutually violent act. However, in reality, these acts could be desperate attempts by a longstanding victim to assert any power in a relationship. Empirical evidence shows that the roles of perpetrator and victim, when considering the broader dynamics of the relationship as well as the overall pattern of PV, are relatively static (Campbell & Weber, 2000).

Types of abuse: Physical, sexual, and psychological or emotional. In contrast to abuse, which can refer to a single, discrete violent incident, battering refers to a pattern of violent behavior that functions to achieve and maintain control in a dyad. Battering can include physical, sexual, or psychological aggression. It is typically unidirectional and, importantly, battering occurs within a context of coercive control which includes psychological and symbolic battering (Relf, 2001; Rathus & Fiendler, 2004). That is, battering can begin with a single act of violence, and can then continue indefinitely with threats and promises of future violence.

To date, the majority of research has investigated physical abuse or sexual abuse of a romantic partner. Physical abuse is defined as an act that has the intent or perceived intent to cause physical harm, including but not limited to instances when a perpetrator throws something; pushes, grabs, or shoves a victim; slaps, kicks, bites, or chokes a victim; hits a

victim with an a fist or another object; threatens or uses a gun, knife or other weapon (Straus et al., 1996). Sexual abuse is defined as any forced or coercive sexual contact including refusal to use condoms or to allow contraception use (Campbell & Lewandowski, 1997; Maman et al., 2000). Some authors include sexual abuse such as rape, for example, under the category of physical abuse, while others define it as sexual abuse. When reviewing the results of a given study, it is essential to understand the nuances in each author's definitions.

In recent years, it has become especially important that the field embrace an enhanced concept of PV that includes non-physical abusive tactics as well. Investigators have begun the study of psychological, verbal, or emotional abuse (used interchangeably in this review), in which abusers make demeaning or humiliating comments in public or in private, or threaten future physical violence (Coker et al., 2000; Rhatigan et al., 2005). It is recognized that psychological intimidation, coercion, and degradation almost always accompany such violence and are often tacitly included with physical and sexual assault under the broader notion of PV (Campbell, 2002).

There is still disagreement in the field, however, about whether the threat of physical violence is better classified as physical or psychological PV, e.g., whether raising a fist but not actually hitting someone counts as physical or psychological PV. Similarly, violent acts such as destroying something in the vicinity of someone but not throwing it directly at them, for example, have been differentially classified in various studies (Burke & Follingstad, 1999; Kilpatrick, 2004). A majority of researchers and practitioners now include psychological as well as sexual abuse in their overall conception of PV, and appreciate the impact of all three

forms of violence on the victim, the perpetrator, children and other family members, and friends, as well as on society overall (Rhatigan et al., 2005).

Some authors have made even finer distinctions about the ways in which perpetrators can exert power and control over victims. Some authors write about economic or financial abuse, where a perpetrator withholds financial resources from a victim in order to constrain or control his/her behavior, or to prevent the victim from leaving (Bornstein, 2006). One study of PV among MSM chronicled the existence of material abuse, which they defined as the destruction, discard, or mutilation of objects, materials, property, or possessions of the victim (Letellier, 1996). Other authors consider all of these non-physical, non-sexual forms of PV (i.e., modeling violence with the objects around them) as falling within the umbrella of psychological abuse, which also includes being ridiculed in front of others, forced to get high or drunk, or being stalked (Greenwood et al., 2002).

Behavioral versus subjective definitions of PV. Some studies characterize each category of PV or even “partner abuse” more generally, through the use of an enumeration of specific behavioral acts that did or did not occur (i.e., “My partner hit me,” with response choices of either true or false). This strategy likely improves reliability of measures, ensures congruence between violence definitions held by researchers and respondents, and yields data that can be useful in many research contexts (Rathus & Feindler, 2004). Asking about the occurrence of specific, behaviorally defined violent acts provides easy to understand information about literal presence or absence of events from a respondent’s history, to the best of their knowledge, and is often implemented to circumvent the imprecision and

subjectivity possible when respondents are asked about such abstractions as "assault" (Tjaden & Thoennes, 2000).

Straightforward counts alone may not be sufficient to capture important details about a particular individual's or couple's pattern of violence (Rhatigan et al., 2005). Asking about whether or not specific behaviors have occurred, while important in prevalence studies, does not tap the idea of a victimized identity and the ensuing cognitive frame which, some research has shown, is an important mediator of the effects of interpersonal violence on health and mental well-being. However, there exists considerable variation in the types of behaviors considered abusive from individual to individual, e.g., a participant may indicate being slapped routinely by a partner but may not experience this behavior as aggressive (Rathus & Feindler, 2004; Smith et al., 1995). Also, fear, shame, stigma, or denial may play a role in distorting self-perception and, thus, research findings based thereon. Thus, it is possible some affirmative responses given by respondents to behaviorally specific questions may involve incidents that the respondents did not consider to be assaultive (Tjaden & Thoennes, 2000).

METHODS AND ORGANIZATION OF REVIEW

A. Scope

Overall, there exists a dearth of information on PV among HIV-positive individuals. The work that exists focuses mostly on women in the U.S. or in Africa. Little empirical work exists on MSM in general, let alone HIV-positive MSM. Because of contextual differences –

both societal and research-related, including shifting definitions and mores – concerning PV even within one culture, i.e., the U.S., it is likely that we would find different prevalence rates of PV from another geographic area (e.g., Sub-Saharan Africa; UNAIDS, 2004). If, for example, psychological violence is tolerated more generally by the culture, we would expect higher rates and more negative mental health consequences to ensue. As a result of these realities, and because a major aim of this review is to compare prevalence rates of women to those of MSM, we have chosen to restrict this analysis to U.S.-based studies only.

B. Methods and Inclusion Criteria

We searched the major online databases in the social and health sciences (PsycINFO, PubMed, CINAHL, ERIC, Sociological Abstracts, Social Sciences Abstracts, Social Sciences Citation Index) for English publications from 1981 (the first year AIDS cases were documented in the U.S.) through February 2007. Search terms included various combinations of the terms [HIV or AIDS], [partner or domestic or couple or marital or spousal or spouse], and [abuse or battering or violence or aggression]. We consulted with experts in the field and inspected all relevant review articles, as well as the reference lists of each empirical study, to locate additional potential studies for the review. Unpublished dissertations and master's theses were excluded due to the difficulty and cost of obtaining them. Literature reviews and book chapters were excluded because they were not peer-reviewed and/or did not contain empirical data. The cumulative results of this literature review are presented in Tables 1 and 2.

For inclusion, authors must have reported data on intimate partner violence among HIV-positive women, MSM, or both. Therefore, studies that reported only interpersonal violence more generally were excluded from the comparison because they did not adequately assess or report the relationship between the perpetrator and the victim, one of the key defining factors of PV. Three of the articles listed reported on different variables asked of the same sample (see Table 1 note for details). Additionally, some studies reported on samples of both HIV-positive and HIV-negative individuals, and these were included; if we had limited our review to only studies of fully HIV-positive samples then we would be reporting on six studies. For the mixed-status studies, whenever possible the results for the HIV-positive respondents were reported rather than those of the combined sample. When no explicit breakdown of results by serostatus was given, we reported on the results for the whole sample and note if the authors reported any significant differences by serostatus between the groups.

The review concludes with a discussion of the findings, a summary of the methodological limitations, and recommendations for future research on these and related topics and, to the extent possible, a discussion of practical implications for medical and mental health providers.

RESULTS

A. Overall summary and descriptives of the studies

The literature search identified 16 studies meeting criteria for inclusion in this review. Only recently has there been an increase in studies examining partner violence and its correlates among HIV-positive individuals. Still, very few studies examine both of these constructs with an HIV-positive population, and fewer still collect or report the data in a way that addresses the relations between PV and health or mental health related correlates. The cumulative results of our literature review are summarized and presented by study in Table 1 and by timeframe and sex/sexual orientation group in Table 2.

B. Relative Frequency and Correlates for HIV-Positive Women and MSM

1. Physical PV. Recall that, although the definitions used in individual studies varied, the phenomenon of physical PV is generally understood to be physical violence perpetrated by a current (or past, depending on the item construction and timeframe investigated) romantic partner. This definition typically does not include sexual violence (e.g., forced or coercive sex, rape) unless specified since sexual violence is typically measured separately. All 16 studies reported data on physical PV among HIV-positive individuals. Lifetime rates of physical PV against HIV-positive were up to 62% for women (Burke et al., 2005) and 39% for MSM (Shelton et al., 2005); the combination of physical and sexual PV in a sample of HIV-positive women was 66% (Cohen et al., 2000) with no comparable data available for MSM. Several of these studies reported comparisons between the HIV-positive and HIV-

negative participants, and in all but one study there were no significant differences between rates of PV experienced (the exception is Greenwood et al., 2002).

Several studies asked HIV-positive respondents about physical PV that they experienced more recently. For a multiethnic sample of women, 32% reported experiencing physical PV in their most recent relationship (Axelrod et al., 1999). For a nationally-representative sample of MSM, 29% of HIV-positive respondents reported physical PV in the past five years, which was significantly higher than the rates reported (21%) for HIV-negative respondents (Greenwood et al., 2002). A few studies examined the question of whether or not the physical PV that HIV-positive women experienced was after their diagnosis, and one expanded its focus to include PV occurring before diagnosis as well. Results showed that 34% of HIV-positive women sampled experienced physical PV before their diagnosis (Gielen et al., 2000) and that 15% (Gielen et al., 2000) and 21% (Zierler et al., 2000) experienced violence afterwards; 11% report experiencing physical PV both before and after (Gielen et al., 2000). The Zierler et al. (2000) study found, additionally, that 12% of MSM reported physical PV post-diagnosis.

Further, some studies that investigated multiple types of PV did not report separately the relative frequencies for each type of PV. The unique combinations of PV that they report, unfortunately, are not able to be compared to other studies. In the past six months, a study of pregnant women (Koenig et al., 2002) report that 7% of their sample experienced physical or sexual PV. For HIV-positive women in the past year, physical and sexual abuse was reported by 28% (Cohen et al., 2000) and 42% (Gielen et al., 2002) in different samples. One study also reported rates, in the past year, of 17% for combined physical and

psychological PV and 19% for the full combination of physical, sexual, and psychological PV (Gielen et al., 2002). Other studies reported other unique combinations as well (see Table 1).

In order to better understand the problem of physical PV in HIV-positive individuals, we can look to the relatively well-developed literature on physical PV against women in general (ostensibly reporting on predominantly HIV-negative women). The “best” (sample best approximating a random sample) prevalence estimates available to date come from the National Violence Against Women (NVAW) Survey, a collaboration of the CDC with the U.S. Department of Justice. Conducted from November 1995 to May 1996, interviewers used random-digit dialing to collect data from 8,000 women and 8,000 men age 18 and older. Physical violence as assessed by the Conflict Tactics Scale (Strauss et al., 1996), and results indicated that 22.1% of surveyed women and 7.4% percent of surveyed men (irrespective of partnership with same or opposite sex) reported being physically assaulted by an intimate partner at some point in their lives (Tjaden & Thoennes, 2000). The survey also found that 1.3 percent of surveyed women, compared with 0.9 percent of surveyed men, were physically assaulted by a current or former intimate partner in the previous 12 months. When NVAW data are separated out into men who report that, during their lifetime they have cohabitated with a same-sex intimate partner (proxy for MSM status), the rate goes up to 14% (Tjaden, Thoennes, & Allison, 1999).

In sum, using the available data, we are able to compare women and MSM in the following abuse type and timeframe categories: lifetime physical, PV 62% for women and 35-39% for MSM; lifetime sexual, PV 22% for women and 12-32% for MSM; psychological PV in the past year, 21% for women and 73% for MSM; and combined physical and sexual

in the past six months, 7-28% for women and 17% for MSM. The results appear equivocal, with some studies indicating that women face higher rates of abuse and some indicating that MSM do, although the methodological rigor of a few of the studies of MSM is questionable (e.g., the 73% figure from Craft & Serovich, 2005) and some of the studies of women employed representative sampling techniques.

2. Sexual PV. In the field in general, sexual PV is considered to be mutually exclusive of violent acts that would otherwise fall under the rubric of physical PV. Therefore, sexual PV is essentially understood to be physical violence of a sexual nature, including but not limited to, forced or coercive sex, unprotected sex against a victim's request, or rape perpetrated by a current (or past, depending on the item construction) romantic partner. Twelve studies reported data on sexual PV among HIV-positive individuals. Lifetime rates of sexual PV were reported in 11 of the studies. For MSM, rates were reported as 12% by one study (Nieves-Rosa et al., 2000) and "approximately one fifth" in another study investigating pregnant women (McDonnell et al., 2003). These results were corroborated by another manuscript coming from the same dataset, with lifetime sexual PV reported as 22% (Burke et al., 2005). Several studies reported on the combination of physical and sexual PV in women, reporting that up to 66% of the samples endorsed being a victim of one or both of these domains of PV (Cohen et al., 2000).

Three studies reported on sexual PV in a more circumscribed timeframe, and four additional studies presented data with some combination of physical, sexual, and psychological. Thirteen percent of HIV-positive women reported that, before receiving their diagnosis, they experienced sexual PV; 4% reported sexual PV post-diagnosis, and 4%

reported sexual PV both before and after (Gielen et al., 2000). Among MSM, 6% reported sexual PV in the past five years (Greenwood et al., 2002). For the combination of physical and sexual violence among HIV-positive women, 7% reported sexual PV in the past six months (Koenig et al., 2002), 28% reported sexual PV in the past year (Cohen et al., 2000).

In the general population, individuals, using a definition of PV rape (rather than a more general sexual PV) that included only “forced vaginal, oral, and anal sex that was completed or attempted,” the NVAW survey found that 7.7 percent of surveyed women and 0.3 percent of surveyed men were raped by a current or former intimate partner at some time in their life, while 0.2 percent of surveyed women were raped by a current or former intimate partner in the previous 12 months; the number of MSM rape victims ($n < 5$) was insufficient to reliably calculate annual prevalence estimates for men overall (Tjaden & Thoennes, 2000). The combination of PV rape and physical PV together was found in 15% of male NVAW survey respondents who report ever cohabitating with a same-sex partner (Tjaden, Thoennes, & Allison, 1999).

In sum, using these data and considering lifetime experiences of sexual PV, rates are variable among MSM (12% and 32%), with HIV-positive women coming in at the mean of those reports (22%). While 12-32% of HIV-positive MSM reported lifetime sexual PV, we were unable to locate a comparable lifetime statistic for HIV-negative MSM (Tjaden, Thoennes, & Allison, 1999; Nieves-Rosa et al., 2000), although one study that used a past five year timeframe indicated that 5% of HIV-negative MSM reported sexual PV (compared to 6% HIV-positive in the same sample; Greenwood et al., 2002).

3. Psychological PV. The most recent arrival to the literature, psychological or emotional PV, is the broadest category of violence, including demeaning or humiliating comments, threats, stalking, or the destruction of a victim's property (e.g., Burke & Follingstad, 1999; Rhatigan et al., 2005). Seven studies reported data on psychological PV among HIV-positive individuals. Lifetime rates of psychological PV were reported by 33% of urban, Latino MSM (Nieves-Rosa et al., 2000). No comparable statistic was reported for HIV-women.

In the past year, 21% of a sample of HIV-positive women in Baltimore, Maryland, reported experiencing psychological PV (Gielen et al., 2002). In another study, 15% of HIV-positive women surveyed before their HIV diagnosis characterized their current male partner as “verbally or emotionally abusive” (Koenig et al., 2002). In another sample of women who reported on psychological PV, 29% reported experiencing this type of abuse before diagnosis, 15% reported psychological PV after their diagnosis, and 13% reported experiencing psychological PV both before and after their diagnosis (Gielen et al., 2000). Among a national sample of HIV-positive MSM, Greenwood and colleagues (2002) found 39% reported experiencing psychological PV in the past five years. In a study of HIV+ MSM participating in ongoing HIV clinical and behavioral studies in Columbus, Ohio, 73% of their small sample ($N=51$) reported psychological PV in the past year as measured by the Psychological Aggression subscale of the Conflict Tactics Scale (Strauss et al., 1999).

In comparing HIV-positive individuals to HIV-negative individuals in the general population, we see lifetime rates of psychological PV that are higher for women (55% vs. 12.5%) (Coker et al., 2000; McDonnell et al., 2003). Although the authors of the NVAWS

report state in the methodology section that the survey did, in fact, collect data on “emotional abuse by current and former spouses and cohabiting partners,” no data on emotional or psychological PV was reported in the body of the text (Tjaden & Thoennes, 2000). Instead, for comparison, we look to another high-quality prevalence study reporting on a sample of 1401 women receiving primary care medical services in 1997-1998 (Coker et al., 2000). In this sample, 12.5% of women reported lifetime emotional PV and 7.5% reported emotional PV in their current or most recent relationship. Like with sexual PV, we are not able to find a comparable rate of psychological PV for HIV-negative MSM to assess against the 33% lifetime rate found for HIV-positive MSM (Nieves-Rosa et al., 2000); the closest estimate in the literature comes from the study by Greenwood and colleagues (2002), who report 35% of their sample of HIV-negative MSM experienced psychological PV in the past five years.

C. Health and Mental Health Consequences

Surprisingly, only five of the 16 studies located for this review (Axelrod et al., 1999; Bogart et al., 2005; Burke et al., 2005; Galvan et al., 2004; Newcomb & Carmona, 2004) explicitly address the potential health and mental health outcomes (or correlates in cross-sectional work) of PV. The remaining studies report on relative frequency (only a few are representative samples and thus are truly “prevalence” studies) and risk factors, but not health-related correlates or consequences.

Three of the studies focused exclusively on women. The work by Axelrod and colleagues (1999), using a multiethnic sample of women in Los Angeles, California, found

more depressive symptoms and more anxiety in HIV-positive compared to HIV-negative victims of PV; no significant differences were found for PTSD symptoms. Collapsing across HIV status, women endorsing PV versus those not endorsing PV reported significantly more depressive symptoms, more anxiety, and more PTSD symptoms (Axelrod et al., 1999). Two other studies of HIV-positive women examined mental health correlates of PV. This includes the work by Newcomb and Carmona (2004) and Burke and colleagues (2005). The findings of these studies are complementary, in that they both found strong positive associations between PV and substance abuse, including more alcohol problems and more cocaine use, when compared to HIV-negative PV victims. Additionally, the work by Newcomb revealed significant relations between PV experienced and severity of depressive symptoms.

Two of the studies report on different analyses of the HIV Cost and Services Utilization Study (HCSUS), a nationally representative sample of HIV-positive women and men (MSM and heterosexual) receiving non-emergency medical care in the mid to late 1990s (Bogart et al., 2005; Galvan et al., 2004). The authors do not consistently report physical and mental health associations by sex and sexual orientation group, so there may be some subgroup differences that are not captured here. However, the findings they do report are consistent with those of the studies on women listed above. More frequent or more severe PV (not broken down by type) was found to be significantly associated with substance dependence, binge drinking episodes, and meeting criteria for DSM-IV diagnoses (Galvan et al., 2004). The analyses by Bogart and colleagues (2005) echo the substance abuse findings, reporting odds ratios of 1.2 and 1.3 for the increased likelihood of having a substance abuse

problem for PV victims versus non-victims. Also, the Bogart paper reports on the association between PV experienced and unprotected sexual behaviors. Odds ratios reported were that PV victims versus non-victims were 2.6 times more likely to report unprotected sex.

Despite the lack of studies focusing on HIV-positive victims of PV, and specifically with so few studies focusing on the physical and mental health correlates of PV for HIV-positive MSM specifically, there exists substantial research on health and mental health outcomes for HIV-negative women. Evidence suggests that, in addition to embarrassment and stigma because of their victimized status, victims of PV experience a host of acute and chronic health problems related to their physical and mental health even after the abuse has ended, including poor health status, poor quality of life, as well as high utilization of health services (Danielson et al., 1998; Maman et al., 2000; Resnick et al., 1997). On this point, the trend in the data is clear: victims of PV consume more medical services than the general population, including more prescriptions and additional hospital admissions. In one sample, battered women sought medical care three times more often than non-battered women, and they generated 92% more costs per year than non-battered women (Campbell, 2002). Interestingly, it was the additional mental health services – rather than primary health care services – that generated the majority of the additional costs.

Victims of PV frequently face injuries that are acute as well as chronic. Acute problems are often the direct result of physical or sexual violence, while chronic problems may be related to psychological violence as well as fear of incurring future physical or sexual violence (Resnick et al., 1997). Examples of studies and case studies documenting broken

bones and bruises resulting from PV are widespread (e.g., Coker et al., 2002), although many victims report that even when they present with blunt physical trauma they may explain it to providers by some other means (Campbell, 2002). The same is true for victims of sexual abuse, who can present with a host of gynecological and sexual problems, including vaginal bleeding or infection, genital irritation, painful intercourse, urinary tract infections, and sexually transmitted diseases. These injuries could be the result of forced sexual intercourse or other serious forms of sexual abuse including verbal sexual degradation, refusal to use condoms, or refusal to allow contraception use (Campbell & Lewandowski, 1997). Although most battered women in the U.S. state that they have been physically injured as a result of PV, less than half say that they sought health care specifically for those injuries (Campbell, 2002). The result is that many injuries that remain untreated, possibly exacerbating the initial injury and leading to the rise of secondary health problems.

The injuries, fear, and stress associated with PV of all types – physical, sexual, and psychological/emotional – can result in chronic health problems such as headaches or back pain, or recurring central nervous system symptoms such as fainting or seizures (Schnurr & Green, 2004). The presence of physical PV has been associated with a history of chronic disease as well as victims' perceptions that their illnesses interfere with their daily life, although the exact pathway has not been established (Coker et al., 2002). Causes are likely recurrent injury, stress, neurological damage, or some combination thereof (Resnick et al., 1997). Other research on chronic health problems associated with PV has linked significant increases in cardiac symptoms (e.g., hypertension and chest pain) and gastrointestinal symptoms (e.g., loss of appetite, eating disorders, or diagnosed gastrointestinal disorder like

irritable bowel syndrome) (Campbell, 2002). A few correlational studies have begun to explore the psychoneuroimmunology of PV, with the data pointing to higher incidence of colds and influenza ostensibly resulting from suppressed immune system function (Cole et al., 2003). However, this hypothesis about increased stress from PV directly decreasing functioning of the immune, endocrine, and autonomic systems has yet to be tested directly (Campbell, 2002; Resnick et al., 1997).

DISCUSSION

A. Findings: An Analysis of the Extant Literature

Even with a host of methodological caveats (see below), the 16 published studies to date for both women and MSM with HIV indicate that PV is present at the same or higher levels than in an HIV-negative population, and that this PV has the potential to exacerbate health problems and create serious barriers to adequate health care for HIV-infected individuals (e.g., Cohen et al., 2000; Greenwood et al., 2002). It remains unclear whether HIV is a risk or a protective factor, as the results that related PV to disease progression (i.e., sickness) are mixed. In particular, lifetime prevalence of up to 66% for physical or sexual PV was reported by HIV-positive women, and up to 55% of HIV-positive women reported experiencing psychological PV. Even in the past year, studies show a range of 17% to 42% for the various types of violence. These rates are higher than those generally reported by women (irrespective of HIV status) in emergency rooms, drug treatment facilities, sexually transmitted disease clinics, and primary care settings (e.g., Coker et al., 2002).

Additionally, these rates seem to be higher than those of MSM. However, it is difficult to draw firm conclusions because of the small number of studies that have been completed and, among those, the small number of participants surveyed. Only four studies were conducted specifically to measure PV among HIV-positive MSM. This is disappointing, although the disappointment is mitigated by the realization that there are also few studies of MSM-PV in general (Burke & Follingstad, 1999; Relf, 2001). Even today, the majority of PV research is conducted by under the rubric of ‘violence against women’ and society overall continues to hold a stereotypical view of men as perpetrators and women as victims of abuse (Kilpatrick, 2004).

B. Implications for Research

1. Methodological issues. Any conclusions alluded to above should be read with an important caution: the 16 studies presented here are fraught with a variety of methodological difficulties that limit the generalizability of the findings, i.e., there are threats to both reliability and validity. Some of these issues include limitations related to the study of PV in general, while others concern the conduct of research on any hidden population (i.e., HIV-positive, MSM, transgender). As examples, the field of PV has been stunted by the lack of standardized definitions, and much HIV and LGBT research suffers from a host of sampling issues related to a low base rate in the general population. Also, the secrecy and embarrassment that are inherent in the phenomenon of PV (as well as HIV) hampers our ability to accurately characterize the prevalence and dynamics of PV relationships. Because of the shame that victims so often report (Lane et al., 2004) and the historical legacy of

society's "blame the victim" attitude (Plichta, 2004), victims tend to underreport crimes against them, especially when committed by an intimate (Resnick et al., 1997). Overall, however, the methodological shortcomings present in the field of PV hamper the study of both same-sex and opposite-sex couples and both HIV-positive and HIV-negative individuals. What follows is a brief discussion of the major methodological limitations of the HIV-positive PV literature to date.

Assessment instruments. In the 16 studies presented in this review, only two studies (Craft & Serovich, 2005; Gielen et al., 2002) used a full measure established within the field and with demonstrated psychometric properties (CTS2; Strauss et al., 1996). Several other studies presented data from a standardized assessment instrument that the investigators modified. For example, one study (Greenwood et al., 2002) used the CTS (Straus & Gelles, 1979) but changed the response pattern to indicate the past five years rather than the past year; investigators rightly noted that, since it was a landmark study in the MSM PV field, they did not know what prevalence rates they would find and, thus, did not want to use too short a timeframe for fear of ending up with null findings. Several other studies (e.g., Axelrod et al., 1999; McDonnell et al., 2005) used an investigator-shortened CTS (Straus & Gelles, 1979), cutting down the subscales or administering certain subscales but not others. Of the remaining studies that provided specific information about the questions administered, the number of items asked ranged from two to seven items. These studies used investigator-created measures or did not adequately specify the source of their instrument. Reasons for not using a standardized assessment instrument were generally not discussed in the published reports. However, one can imagine that reducing participant

burden was one consideration, especially in studies with PV as one among many potential outcomes.

There are a variety of PV assessment questionnaires that have been developed and evaluated in a diverse array of samples, many of which would be appropriate for HIV-positive individuals experiencing PV (for an exhaustive discussion of assessment instruments, see Rathus & Fiendler, 2004). Some questionnaires focus in depth on one form of abuse alone while some focus on the co-occurrence of multiple types. The most well-recognized of these is the Conflict Tactics Scale (CTS; Straus & Gelles, 1979) or the revised Conflict Tactics Scale (CTS2; Straus et al., 1996), which measure, for example, the frequency of behaviors considered indicative of physical and psychological abuse that a victim has experienced or perpetrated. Other popular assessment questionnaires include the Abuse Assessment Screen (AAS, brief physical and fear of partner; McFarlane et al., 1992), the Index of Spouse Abuse (ISA, physical and nonphysical abuse; Hudson & McIntosh, 1981), and the Women's Experience with Battering scale (WEB, subjective experiences of battering; Smith et al., 1995). Consistent with the rest of the field, there is not agreement or a standardized assessment instrument used by most studies. In the few nationally-representative studies on opposite-sex PV, the CTS was used (e.g., Tjaden & Thoennes, 2000) although the CTS2 is gaining popularity, with its revised subscales and measurement of both partners' behaviors. The research on same-sex and HIV-PV literatures, however, has shown little fidelity to the standard measures of the PV field. Indeed, even with the existence of many assessment instruments with gender neutral language (so that they do not have to be modified), the majority of studies attempting to estimate prevalence in these specialized

populations have not used the standardized instruments. As a result, it has not been possible to make direct comparisons across samples and, hence, to judge whether these already stigmatized populations face even more victimization at the hands of their partners than they might otherwise.

Assessment format and methods. Fifteen of the 16 HIV-PV studies presented here employed face-to-face or telephone-administered PV assessment techniques. With these methods, participants were asked to self-report a history of PV as well as other questions with a range of content, from neutral to stigmatized. Only one study, that of Shelton and colleagues (2005), used computer assisted interview techniques. In general, benefits of interviewer-administered surveys include a generally high response rate to the items asked, the ability for the interviewer to gauge the respondent's understanding of the terminology and the question being asked, and the ability of the interviewer to effectively probe to clarify an ambiguous response (Rhodes et al., 2002). Drawbacks abound, however. In addition to requiring training and ongoing staff resources to administer questionnaires live, there is a lack of perceived respondent anonymity and the chance that interviewer bias can be introduced. Even the most professional interviewers can give verbal or non-verbal cues to their respondents. Additionally, in general, people tend to underreport socially undesirable beliefs or behaviors (and conversely over-report socially desirable behavior), such as perpetration or victimization of PV or substance use. This is especially true when respondents are interacting with an interviewer, and may be even more of a concern as the behaviorally specific questions are also face valid (a benefit as far as specificity is concerned) with potentially feared and stigmatized content. As a result, respondents may alter their

answers in order to impress or please the interviewer (Webster & Holt, 2004). Even with the benefits afforded by interviewer-administered survey instruments, at least one study reported on “intimate partner violence” in the analysis but, upon closer examination of the questions, used the qualified “by a partner or someone important to you,” but did not collect additional information on whether the perpetrator was indeed a partner or another close person, like a roommate or best friend (Zierler et al., 2000).

Fifteen of the 16 studies reported here (and the vast majority of PV studies on non-HIV samples) involve cross-sectional designs and self-report measures of PV. Only one study had a longitudinal design, following HIV-positive and HIV-negative Latina women over a one year period (Newcomb & Carmona, 2004). Cross-sectional designs limit our ability to draw conclusions about direction or causality in the constructs investigated, and self-report measures are subject to various types of response bias and to social desirability. As mentioned previously, not all self-report measures define PV acts in behaviorally specific terms and some that do fail to make examples readily available during the entire assessment period, i.e., definitions are given briefly at the beginning of the session and then assumed they will be remembered by a potentially emotionally aroused respondent (Burke & Follingstad, 1999). Unfortunately, more objective measures of violence are impossible to implement in a cross-sectional design and impractical for a longitudinal design. Self-reports of PV prevalence may be underestimates, for fear of people finding out, authorities being involved, or a correct or misinterpretation of local reporting requirements (Kilpatrick, 2004). Conversely, self-reports may be overestimates if they represent behaviors emitted solely for the purpose of self-defense and are not tagged and parsed out in the analysis (Burke &

Follingstad, 1999). One protection, in this case, is that respondents may be influenced toward the true estimate because of enhanced recall, i.e., the salience of abuse is probably higher than for many other health problems, especially if recent (McDonnell, et al., 2003).

Timeframe. Another important methodological issue is the timeframe in which PV is investigated in a given study, and across studies. For prevalence studies to date that examine HIV-positive individuals, eight collected data on lifetime experiences with PV (Cohen et al., 2000; Nieves-Rosa et al., 2000; McDonnell et al., 2003), while the remaining studies used a variety of timeframes related to chronological time (past six months, year, five years), relationship status (current partner), or HIV diagnosis (only before, only after, or both). The state of the field can leave investigators frustrated, as there are so few studies overall, and we cannot then *prima facie* compare the prevalence estimates because of the different timeframes investigated. Indeed, of the 80 cells in Table 2, only one study contributes to 30 cells, two studies contribute to six cells, and three studies contribute to two cells. Note that 41 cells remain blank. For a field in its infancy (HIV-PV), it seems important first to establish (a) a solid lifetime measurement for each type of PV (physical, sexual, psychological), and (b) for researchers interested in the question of PV as a cause/result of HIV infection, ascertaining a victim's experiences with PV both before and after diagnosis is important. Overall, it seems prudent for researchers to utilize a timeframe that is relevant to the particular research question being examined.

Sampling strategy and venue. Only one study investigated PV using a nationally representative sample recruited by random-digit dialing (Greenwood et al., 2002). Another study recruited a probability-based sample of HIV-positive individuals in care as part of a

larger study about HIV medical care provision (Zierler et al., 2000). The other samples were the report of one time point from a larger cross-sectional or longitudinal trial or a purposive cross-sectional study. Besides the variation in time frame and domains of PV investigated by the major survey instruments, PV research in general –the studies reported here are no exceptions – has involved sampling at locations as varied as domestic violence shelters and the waiting rooms of primary care physicians (e.g., Maman et al., 2000). For this limitation, as well, conclusions about prevalence cannot be accurately made without reference to sampling strategy employed. Same-sex PV studies are often criticized as being overestimates of the true prevalence because sampling designs encourage snowball sampling (resulting in a lack of representativeness; Waldner-Haugrud et al., 1997), convenience samples (Nieves-Rosa et al., 2000) or venue-based sampling (Harms, 1995), which limit generalizability to MSM who frequent those gay venues and, probably, those who identify as gay (Relf, 2001).

National PV experts (e.g., Burke & Follingstad, 1999) have continued to make the suggestion that representative samples may be best attempted through national census data rather than the continuation of convenience or targeted samples and, thus, one potential future direction could be to lobby for helpful, relevant questions in the census or in other recurring national probability surveys. Several major federally-funded collaborations, including the NVAW Survey co-designed by the U.S. Department of Justice and the CDC, have attempted to assess the prevalence of various types of PV in nationally representative samples (Tjaden & Thoennes, 2000). For victims of violence in opposite-sex couples, these results may be accurate or illuminating. However, administrators of government surveys have seemed reluctant to inquire about sexual orientation. One might surmise that pervasive

homophobia and potential political consequences are motivations for continuation of the status quo. Additionally, these nationally-representative studies did not report HIV status (probably it was not assessed), so no data are available about the present research question.

Also, this type of nationally-representative study, due to the very nature of its representativeness, may lack an adequate number of HIV-positive individuals anyway, due to the low base rate of HIV in the general population and the typical demographic factors of HIV-positive individuals (unstable housing, low income, more transient lifestyle so possibly less likely to have a phone) that may make this population difficult to find and thus difficult to study successfully. Finally, in the PV literature in general, there is a call for eliciting data from non-White, less educated, and less politically oriented individuals (Burke & Follingstad, 1999), although in the HIV-PV literature the majority of work has been done with just such populations; it is a problem in the other direction but with similar consequences, i.e., results in decreased external validity.

2. Recommendations for future research. A consistent theme of the 16 papers is a call for more methodologically sound investigations of partner violence among HIV-positive individuals, and for concerted efforts to replicate and extend previous findings to determine to what extent the data are robust and replicable (Burke & Follingstad, 1999; Relf, 2001). The field of PV in general, and specifically the HIV-PV field, currently suffers from a lack of direction. There is neither a clear research trajectory for the future of the field, nor has there been a movement to replicate previous findings, even to the extent of using measures that examine the same timeframe, let alone using the same measure for multiple studies. National crime statistics show us that, for women, the majority of the total crimes committed against

them are perpetrated by current and former intimates; therefore, for HIV-positive women (and MSM as well), violence prevention strategies ought to focus on how an individual can protect himself/herself from romantic partners if necessary (Tjaden & Thoennes, 2000).

While additional work in PV assessment techniques is needed, there currently exist assessment instruments for investigators to use. What the field lacks, most of all, are answers to the important content questions asked on the instruments. The following two sections briefly outline the major research needs for (a) prevalence, outcome, and treatment studies; and (b) for research on the mechanisms by which PV affects victims' physical and mental health.

Prevalence, outcome, and treatment studies. The recommendations to follow are true for HIV-PV, certainly, but are not strikingly different from those that would be offered to the field of PV overall. With the field's goals of a more complete understanding of the phenomenon of PV – en route to its eventual elimination – investigators agree that the most important advance is the statement and refinement of conceptual definitions of PV (e.g., Rhatigan et al., 2005).

Standardized definitions and timeframes must be used to facilitate comparisons across studies and fields. More acceptable measures of PV that employ strict behavioral definitions should be developed, or currently available measures should be modified to assess multiple domains of violence reliably. Investigators should be encouraged to use definitions and questioning strategies that are consonant with their research aims.

Psychometric properties should be established and measures refined until they perform adequately while minimizing participant burden. In assessment, definitions should be

presented repeatedly to respondents to ensure understanding, maximize recall, and minimize the chances of under-reporting. Sufficient detail should be gathered from respondents to tease apart acts of self-defense from the true occurrence of mutual battering, e.g., perpetrators can be differentiated by the intent of their actions and by their emotional reactions following the violence (e.g., Burke & Follingstad, 1999). The presence of violence should be ascertained, certainly, as well as the frequency and severity. Additionally, empirical data are lacking on the consequences of PV against women, MSM, and HIV-positive women and MSM, including their injury rates, the use of medical services, and the most typical physical and mental health sequelae (e.g., Tjaden & Thoennes, 2000; Relf, 2001).

Ideally, PV researchers would initiate collaborations with violence researchers in other subspecialties (e.g., rape, child abuse) because of the frequent co-occurrence of multiple types of violence experienced across the lifespan (Plichta, 2004). Also, collaborations across disciplines (e.g., psychology, nursing, criminology) are likely necessary in order to promote standardization of definitions and data collection instruments and would likely benefit the field in other ways, i.e., by bringing together multiple theoretical perspectives on the etiology and consequences of PV. Researchers are encouraged to use representative samples whenever possible or at least should employ sampling methods that maximize generalizability within a given sub-population using their available resources.

Expanding research with these methodological improvements could help with intervention development, giving investigators information about what types of PV to target and improving the ability to identify patient characteristics that reliably predict PV in order to discern individuals most in need of an intervention, with an eye toward conserving

resources. Also, there exists a lack of treatment studies in general for same-sex PV, and certainly for HIV-positive victims of PV of both sexes. Successful treatment outcome studies with empirical support in samples of HIV-negative women should be evaluated for acceptability and eventual efficacy for HIV-negative MSM and HIV-positive women and MSM as well.

Studies of the mechanism of PV's effect on physical and mental health. In 2004, a review of the PV field notes that there are only four studies that have attempted to build and empirically test a model of the relation between PV experienced and physical and mental health consequences (Plichta, 2004). It is clear that, for example, physical PV can result in acute physical injury and, as the research grows, research indicates negative mental health outcomes are related to recurrent psychological PV (Briere & Jordan, 2004). Rather than viewing these relations in isolation or as separate processes – which is unrealistic since many victims of physical or sexual PV also experience psychological PV as well – some investigators have begun to assemble and test models of the relations between multiple domains of PV and a variety of physical and mental health outcomes. The models to date have had modest sample sizes (under 300) and have been recruited from newspaper ads or single sites (Plichta, 2004). Outcomes varied from a participant's appraisal of physical health to anxiety and PTSD symptoms to facial pain. Overall results of the models with empirical support show that PV has both direct and indirect effects on health, and that the effects are mediated by other factors, including stress, self-care agency, social support, and somatization (Plichta, 2004).

This is one area in particular that is ripe for cross-disciplinary investigation and cross-type comparisons of abuse experiences. Models of the effects of PV on health would be remiss to neglect the potential contributions of child abuse (e.g., Cohen et al., 2000) and adult physical and sexual assault by non-partners (Danielson et al., 1998) to the health and mental health burden that an individual carries. Pulling back to the more general interpersonal violence literature, violence researchers put forth a theoretical model that posits relations between key violence variables and a variety of physical health factors (acute, chronic, immunologic) mediated by stress and other mental health constructs (Resnick et al., 1997). Individually, each link in the model is well supported by the existing literature, however, the model in its entirety has yet to be tested. Also, there is a growing literature on romantic relationships in general (i.e., not PV-specific) and the physical and mental health benefits that relationships confer (e.g., Kiecolt-Glaser et al., 1996). Additionally, within this relationship literature, a model has been proposed and not yet empirically tested (Kiecolt-Glaser & Newton, 2001) and, surprisingly, the hypothesized model includes virtually all of the same variables in the model by Resnick and colleagues (1997). Psychoneuroimmunologists (Kiecolt-Glaser) and clinical-health psychologists (Resnick) clearly have much specialized knowledge and experience to share on this topic. PV researchers from all disciplines would be best served by consulting research and researchers in both the “normal” and “pathological” relationship arenas.

C. Implications for Practice

With so few studies and so much research yet to be conducted, it is difficult to make recommendations about evidenced-based practices for front-line medical and mental health providers. However, with rates of PV among HIV-positive individuals at least as high as those of HIV-negative individuals, we can certainly encourage HIV prevention and treatment programs to take into account the possibility of PV in the lives of the clients served. Similarly, programs designed to provide services for PV victims need to acknowledge the potential for HIV-positive women and MSM to access their services because of the overlapping risk factors for the two epidemics, HIV and PV (Relf, 2001).

The intervention studies present in the literature were tested on female victims of PV with male partners. The first barrier to enhancing screening and assessment, as far as MSM-PV is concerned, is increasing provider knowledge that MSM-PV exists. However, providing health-care services to LGBTs is often complicated by provider insensitivity, bias, homophobia, lack of understanding, and lack of training (Relf, 2001), in addition to the provider insecurities that go along with PV screening in general (Zink et al., 2004).

One major barrier to any potential intervention efforts on the part of providers is distressing news from the research: patients are loathe to report partner violence to providers unless the provider asks specifically (e.g., Battaglia, Finley, & Liebschutz, 2003), and providers often refrain from asking because they are concerned about the limits of their own training and their ability to follow up (e.g., Ross, Walther, & Epstein, 2004). A review of 12 studies identified barriers to PV screening endorsed by health care providers: lack of provider education about PV; lack of time; lack of effective interventions; and patient-related

factors including the patient not disclosing first and fear of offending the patient (Waaen et al., 2000). Another notable finding from Waaen's work was that, in the intervention studies designed to increase provider screening, education interventions alone did not significantly increase screening or identification rates. Successful provider interventions were multi-faceted, incorporating education along with one or more additional reminder strategies, e.g., clinical guidelines or protocols, appointing a staff member as a PV victim advocate, short debriefings at the end of each clinic day for a 12-week period. These more comprehensive interventions were associated with significant increases in screening rates (Waaen et al., 2000). These and other issues are significant barriers to assessment and subsequent intervention with PV victims. The benefits of provider screening alone have not been researched quantitatively, but several qualitative reports had noted that even discussions with providers alone are therapeutic, if they are conducted in a concerned, non-judgmental way (e.g., Rhodes et al., 2002).

D. Concluding Remarks

Irrespective of HIV status, the existing body of work in PV makes it clear that intimate partner violence should be classified as a major public health and criminal justice concern in the U.S. The study of the experiences of HIV-positive individuals with PV is a field in its infancy. The 16 studies reported in this review have given us enough information to determine that additional study is needed to better understanding both basic and more nuanced questions about the phenomenon of PV among HIV-positive men and women. We have learned that PV among HIV-positive individuals may indeed be an important public

health problem and, further, it is certainly a thorny research area. Further research and funding for studies of the prevalence, physical and mental health consequences, and mechanisms of PV's effect on health should be pursued, and PV should be investigated in combination with other forms of interpersonal violence in childhood and in adulthood.

Table 1. U.S.-Based Studies of the Relative Frequency of PV Among HIV+ Women and MSM.

Client	Recruitment Year, Location, M&M (9) Data Collection	Demographics (Age, Sex, Race/Ethnicity, Marital Status, Education)	Study Design (Cross-sectional, Longitudinal, Case-control, Cohort)	Measures (Physical, Psychological, Social)	Outcome (Prevalence, Incidence, Risk Ratio)	Other Findings (Prevalence, Incidence, Risk Ratio)	Other Findings (Prevalence, Incidence, Risk Ratio)
(1) Gielen, McDonnell, Burke, & O'Campo, 2000	Outpatient primary HIV care clinic, outpatient drug tx clinic in Baltimore, MD (Project WAVE); 1997-1999	N=310 HIV+ 94% Af Am	Researcher created (5 items) & 1/1 questions concerning dates of violence and of HIV diagnosis. Interviewer administered	all 3: 34% only before dx, 16% only after dx, 17% both before and after dx	67%, as an adult	34% before dx, 15% after, 11% both	29% before dx, 15% after, 13% both
(2) McDonnell, Gielen, & O'Campo, 2003	Hospital-based clinics, homeless shelter, outpatient drug tx center, community center, Baltimore, MD (Project WAVE); Dates N/R	N=310 HIV+ N=301 HIV- 91% Af Am mean age=36	Researcher created (# items N/R), Interviewer administered	58% HIV+ vs. 66% HIV-	56% HIV+ vs. 64% HIV-	55% HIV+ vs. 55% HIV-	
(3) Gielen, McDonnell, & O'Campo, 2002	Outpatient primary HIV care clinic, outpatient drug tx clinic in Baltimore, MD (Project WAVE); 1997-1999	N=188 HIV+ N=257 HIV- Currently in a relationship at the time of interview 75% <40 years old	CTS2 (32 items), Interviewer administered	62%, past year, 44%, freq (>13 events) @ all 3: 19% HIV+ 20% HIV-	62%, past year, 44%, freq (>13 events) @ all 3: 19% HIV+ 20% HIV-		Past year: @ psychologi cal: 21% HIV+ 19% HIV-

Table 1. U.S.-Based Studies of the Relative Frequency of PV Among HIV+ Women and MSM (continued).

(4) Koenig, Whitaker, Royce, Wilson, Callahan, & Fernandez, 2002	Prenatal care units of health ☐ epis. and clinics in NY, CT, FL, and NC; 1996-1998	N=336 HIV+ N=298 HIV- Pregnant women at >24 weeks: 70% Af Am 20% Latina	Researcher created (4 items), Interviewer administered	-	@ Past 6 months combined physical and sexual: 7% HIV+, 11% HIV-	-	-	-	-	-	-	-	-	-	-	@ Current male partner: 15% HIV+, 17% HIV-
(5) Cohen, Deamant, Barkan, Richardson, Young, Holman, Anastos, Cohen, & Melnick, 2000	Outpatient clinics in NYC, Chicago, IL, Washington, DC, San Francisco & Los Angeles, CA, & HI (multi-site longitudinal study, Women's Interagency HIV Study; WHIS); 1994-1995	N=1288 HIV+ N=357 HIV- 64% Af Am 21% Latina	Researcher created (5 items), Interviewer administered	-	Ever, combined sexual & physical: 66% HIV+ 67% HIV- Past year, combined sexual & physical: 28% HIV+ vs. 21% HIV-	-	-	-	-	-	-	-	-	-	-	-
(6) Axelrod, Myers, Durrvasula, Wyatt, & Cheng, 1999	Public and private HIV clinics in Los Angeles, CA; DATES N/R (Women and Families Project)	N=275 HIV+ N=140 HIV- 36% Af Am 31% Latina	Abbreviated CTS (7 items) & Wyatt Sexual Abuse Scale (13 items, pt indicated relationship if pep was a partner) Interviewer administered	-	-	-	-	-	-	-	-	-	-	-	-	32% HIV+ vs. 27% HIV-, in most recent relationship
(7) Newcomb & Carmona, 2004	Community settings (clinics, hospitals, AIDS organizations in and around Los Angeles, CA (Latina subsample from the Women and Families Project); DATES N/R	N=79 HIV+ N=34 HIV- 100% Latina (HIV+ sample recruited and HIV- sample recruited to match demographically)	Abbreviated CTS (5 items), Interviewer administered	-	-	-	-	-	-	-	-	-	-	-	-	66% total sample, 1+ instance in the past 6 months (being HIV+ a predictor of reporting PV but raw data N/R)
(8) Burke, Thierman, Gielden, O'Campo, & McDonnell, 2005	Outpatient clinics, homeless shelter, drug rx center, community center in Baltimore, MD (Project WAVE); 1997-1999	N=310 HIV+ 60% <40 yrs old 95% Af Am N=301 HIV- 77% <40 yrs old 98% Af Am	Researcher created (2 items), Interviewer administered	63% HIV+ (phys or sexual) vs. 66% HIV- ever @	Physical & sexual, ever: both, 20% HIV+ vs. 19% HIV- @ either, 63% HIV+ vs. 66% HIV- @	Any physical: 62% HIV+ vs. 63% HIV- Physical only: 41% HIV+ vs. 45% HIV- @	Any sexual: 22% HIV+ vs. 22% HIV- Sexual only: 1% HIV+ vs. 3% HIV- @	-	-	-	-	-	-	-	-	-

Table 1. *U.S.-Based Studies of the Relative Frequency of PV Among HIV+ Women and MSM (continued).*

Key: CTS2 = Revised Conflict Tactics Scale (Straus, Hamby, Boney-McCoy, & Sugarman, 1996); @ = no significant differences between HIV+ and HIV- respondents on this variable; dash = manuscript did not report data corresponding to this cell.

Note that Gielen et al. (2000), Gielen et al. (2002), McDonnell et al. (2003), Burke et al. (2005), and McDonnell et al., (2005) present data from the same sample (Project WAVE; Women, AIDS, and the Violence Epidemic).

Note that Zierler et al. (2000), Galvan et al. (2004), and Bogart et al. (2005) present data from the same sample (HCSUS; HIV Cost and Services Utilization Study).

Note that Axelrod et al. (1999) and Newcomb & Carmona (2004) present data from the same sample (WFP; Women and Families Project).

Articles reporting studies of PV among HIV+ individuals with data collected outside of the U.S. are not presented here because they fall outside the scope of the present review. Articles focused on HIV+ victims of violence that did not report on violence victimization specifically perpetrated by a relationship partner are not presented here; include Zierler et al. (1996), Vlahov et al. (1998), Sowell et al. (1999), Gielen et al. (2001), Sowell et al. (2002), Eisenman et al. (2003), and Liebschutz et al. (2005).

Table 2. *Estimates of Relative Frequency from U.S.-Based Studies of Partner Violence Among HIV+ Women and MSM by Type of Violence by Sex/Sexual Orientation Group.*

Timeframe/type of PV	HIV+ Women	HIV+ MSM
Lifetime		
physical	62% (8)	35% (14), 39% (15)
sexual	22% (8)	12% (14), 32% (15)
psychological	-	33% (14)
physical only	41% (8)	-
sexual only	1% (8)	-
physical & sexual	20% (8), 66% (5,9)	-
physical or sexual	43% (9), 58% (2), 63% (8)	-
any	67% (1), 58% (2)	45% (16)
Past 5 years		
physical	-	29% (13)
sexual	-	6% (13)
psychological	-	39% (13)
one or more of physical, sexual, psychological	-	25% (13)
Any	-	43% (13)
Past year		
physical	-	45% (16)
sexual	-	33% (16)
psychological	21% (3)	73% (16)
physical & psychological	17% (3)	-
physical & sexual	28% (5), 42% (3)	-
physical, sexual, & psychological	19% (3)	-
any	-	45% (16)
Past 6 months		
physical	32% (6)	-
sexual	-	-
psychological	-	-
physical and sexual	7% (4), 20% (12), 28% (5)	17% (12)

Table 2. *Estimates of Relative Frequency from U.S.-Based Studies of Partner Violence Among HIV+ Women and MSM by Type of Violence by Sex/Sexual Orientation Group (continued).*

Timeframe/type of PV	HIV+ Women	HIV+ MSM
Before diagnosis		
physical	34% (1)	-
sexual	13% (1)	-
psychological	29% (1)	-
After diagnosis		
physical	15% (1), 21% (10)	12% (10)
sexual	4% (1)	-
psychological	15% (1)	-
Both before and after diagnosis		
physical	11% (1)	-
sexual	4% (1)	-
psychological	13% (1)	-
Current or most recent partner		
physical	-	-
sexual	-	-
psychological	15% (4)	-
Lifetime but not in the past year		
physical	-	-
sexual	-	-
psychological	-	-
physical or sexual	23% (9)	-

Key: Reference to the manuscript contributing the rate to the cell are listed in parentheses immediately after the rate itself.

Note: The manuscripts by Newcomb & Carmona (2004) and Galvan and colleagues (2005) are listed in Table 1 but do not contribute to Table 2, as the authors do not report relative frequency rates of PV by sex/sexual orientation group.

CHAPTER 2 – QUALITATIVE STUDY

INTRODUCTION AND STUDY AIMS

The purpose of this qualitative study was to enhance our understanding of the phenomenon of partner violence in a sample of HIV-positive MSM who are engaged with medical care in an HIV/AIDS primary care clinic. Existing research on the abusive relationships of HIV-positive MSM has begun to identify prevalence rates (e.g., Greenwood et al., 2002) but no published work has examined the relationship dynamics as they relate to HIV status. Data from theoretical papers (Relf, 2001) and clinical vignettes (Cook, 2006) suggest that one partner may utilize his partner's HIV-positive status as a means to inflict emotional abuse, to assert control or to establish dominance. This type of "HIV-specific abuse" has been hypothesized but has not been investigated empirically. Additionally, no published manuscripts report on the phenomenological experience of the abused individual living with HIV, the dynamics of the relationship that culminated in violence, and especially about perceptions of the contributing role of HIV in the onset or maintenance of violence victimization.

Because this phenomenon is not well-described or understood, qualitative methods are most appropriate for the study of HIV-specific abuse. To initiate description of HIV-positive MSM who have experienced PV, semi-structured interviews were conducted with HIV-positive MSM who had previously experienced PV and discussed it with a health care provider. The aims of the study were to explore the following research concerns:

Aim 1. To understand the problem of PV victimization among HIV-positive MSM from the perspective of the men affected by it.

Aim 2. To investigate the factors contributing to the initiation of PV in the romantic relationships of HIV-positive MSM.

Aim 3. To report on the specific ways in which HIV has influenced the PV that participants reported experiencing.

Aim 4. To identify how PV has affected the men's physical and mental health.

Aim 5. To document the novel domain of HIV-specific PV.

To thoroughly address all five research concerns in one paper would be inadvisable, due to the tremendous amount of data generated through the qualitative interviews (>900 transcript pages). The present analyses present data that summarize key findings from aims #2 and #3. Here we present excerpts from the interviews organized to provide data on the ways in which HIV and other factors influence the initiation of PV and the maintenance of PV relationships. The goal of this line of research is to provide a richer understanding of the phenomena of PV among MSM living with HIV which we hope, in turn, generates future research questions and potential hypotheses in this area as well as provides some insight into potential intervention targets.

METHODS

A. Procedures

1. Human subjects protection. This study received continuous approval from the University of Washington's Institutional Review Board for the entirety of data collection, analysis, and publication (05-6995-G). To further protect the privacy and confidentiality of the data provided by the participants, researchers applied for and received a Certificate of Confidentiality issued by the National Institute of Mental Health.

2. Recruitment site and patient population. Participants were recruited (further details presented below), from the Madison HIV/AIDS Clinic (Madison) at Harborview Medical Center in Seattle, Washington, an academic medical center affiliated with the University of Washington. Madison is the largest comprehensive provider of HIV-related primary care services in the Seattle region. Established in 1985, Madison is the principal clinical site under the UW Center for AIDS and STD for teaching, research, and clinical care in HIV. The clinic serves an urban, medically underserved population of over 1,900 patients including ethnic minorities (44%), women (18%), intravenous drug users (25%), and homeless individuals (9%). Approximately 77% of the clinic population is fully or partly funded by public sources and 46% report an income below the federal poverty level.

3. Sample size. Determining an appropriate sample size for a qualitative research project is difficult to specify. Several factors must be considered, including the aims of the intended research product, the nature of the topic, the quality of the informant's data, the sampling strategy employed, and the study design (Morse, 2000). Noted qualitative

researcher Sandelowski (1995) writes, “An adequate sample size in qualitative research is one that permits – by virtue of not being too large – the deep, case-oriented analysis that is a hallmark of all qualitative inquiry, and that results in – by virtue of not being too small – a new and richly textured understanding of experience” (p. 183). In the present study, our phenomenon of interest was specific and our target population was relatively difficult to recruit. Our methods (detailed below) allowed us to probe deeply into the respondents’ experiences, yielding relatively rich data. It is possible that more interviews would have yielded different results; however, our team discovered surprising homogeneity in many areas of data collected from our sample.

4. Quantitative measures. The questionnaire asked participants about their age, racial and ethnic identity, gender identity, sexual identity, length of time since coming out as non-heterosexual (if applicable), Likert-scale ratings of lifetime sexual behavior with and sexual attraction to men versus women, current partnership status, religion, education, income, living situation, and parental status. Survey data were entered into an electronic database by a research assistant and double checked for accuracy by a different staff member. Descriptive statistics were run using SPSS 14.0 (SPSS, Inc., Chicago IL).

5. Interview guide development. To develop the interview guide, the extant literature on the topic was reviewed. An initial outline and list of basic and probing questions was developed. The format, order, and content of the questions were reviewed and revised by experts in qualitative methods (Dr. Helene Starks), traumatic victimization (Dr. Lori Zoellner), and HIV mental health (Drs. Steven Safren & Jane Simoni). The interview guide is reproduced in its entirety in Appendix A.

6. Eligibility criteria and procedures. Participants were biologically male (but could currently identify with any gender), over 18 years old, English-speaking, currently receiving HIV-related care at the clinic site, and had previously discussed experiences of same-sex PV with a health care provider. Participants also agreed to audio recording of the interview with the stipulation that any part of the conversation could be redacted from the transcripts at the participant's request.

Potential patients were approached by a research nurse recruiter during the enrollment period (December 2005 through March 2006) when reporting for any clinic appointment. Based on an "opt in" database of research-related information about clinic patients, the recruiter was able to identify potential participants. The recruiter would meet privately with each patient and describe all of the available studies for which a given patient was qualified. Because of the format of the recruitment efforts, no data on rates or reasons for refusal were collected systematically. Anecdotally, however, the recruiting nurse reported that the most common reason given was lack of time and no patient refused on the basis of not wanting to discuss abuse.

Eligible patients who were interested in participating were given the investigator's contact information. Individuals who phoned, were scheduled, and reported for an interview were formally screened for eligibility using the Abuse Assessment Screen (AAS), a brief violence assessment instrument comprising five face-valid questions about abuse shown empirically to compare favorably to longer research instruments (McFarlane et al., 1992). Patients whose AAS was positive for abuse were deemed eligible for the study; all screened patients met eligibility criteria and were enrolled.

Patients reviewed the informed consent with the interviewer, a male doctoral student in clinical psychology. In order to reassure patients about the confidentiality of their responses during the ensuing interview, attention was given specifically to issues of exceptions to confidentiality. Violence between adults is not reportable in Washington State, only intention to harm one's self or someone else and current or recent child abuse or elder abuse. The interview was conducted in a private interview room onsite at the clinic, and was audio recorded on a digital recording device. Before the interview, participants were asked to fill out a paper-and-pencil demographics questionnaire.

Questions posed to participants followed a structured outline format with individualized follow-up questions. Questions asked early in the interview were more general and, once an adequate rapport had been established, questions addressed more sensitive content. Each participant was asked to discuss the role of HIV in his life, give a brief overview of his romantic relationship history, and then describe the context and dynamics of one specific relationship in which PV occurred since having been diagnosed with HIV. At the close of each interview, participants were paid \$25 in cash for their time and travel, and given a list of free or low-cost resources related to housing, employment, and those focused on the medical and mental health needs of people living with HIV.

7. Transcription. Audio recordings were initially transcribed verbatim by a study staff member. Each transcript was then reviewed for accuracy by a different research assistant and any discrepancies were noted. Finally, a third staff member reviewed and reconciled the discrepancies and finalized the transcripts.

B. Data Analysis

1. Analysis of quantitative measures. Univariate statistics were run on the demographic variables, examining frequency distributions, measures of central tendency, and variation. Results of these analyses are presented in Table 3.

2. Analysis of qualitative data. To provide context for the analysis to follow, it is important to note that the data collection, analysis, and reporting were conducted using a team-based process. The analytic team consisted of a doctoral student, a postdoctoral fellow, and a senior undergraduate student. The doctoral student developed the interview guide and conducted all of the interviews.

Analysis was guided by the theory and methods of content analysis (e.g., Krippendorff, 2004). Content analysis is “a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns” (Hsieh & Shannon, 2005, p. 1279). The goal of content analysis is to add to the collective understanding of a given phenomenon by classifying a large amount of relevant text into thematic categories that represent the central ideas present in the data. In this approach, the voices of the participants are placed at the center of the analysis, and it is the ideas and patterns generated through their comments that guide the analysis and eventual coding (Morgan & Krueger, 1993). This methodology was most appropriate for this project because of the lack of description or theory present in the existing literature concerning our phenomenon of interest – experiences of PV in the relationships of HIV-positive MSM (Morse & Field, 1995).

Content analysis involves a close reading of the text to determine relevant codes, categories, and themes. No codes, categories, or themes were specified *a priori*. The team began the analytic process by reading through the transcripts to get a general sense of the topics in the data and worked to refine the research questions that could be addressed. To develop an initial template of categories (comprised of multiple related codes), team members each read transcripts of three interviews to determine what content emerged as interesting or important. Each member generated a preliminary list of codes by highlighting relevant text from the transcript that captured key elements and giving the code a descriptive label; codes could represent either explicit or inferred communication (Krippendorff, 2004).

Then, the iterative process of reading, coding, categorizing, discussing, and refining ideas began. The group met and reviewed each of the three transcripts line by line, discussing codes and potential categories. This process was repeated with two additional batches of three transcripts until a total of nine transcripts had been reviewed in this manner and until the researchers agreed on a relatively settled coding scheme. The result, thus, was a list of codes and categories (e.g., relationship characteristics, HIV, abuse, disclosure) generated from the individual readings of independent coders as well as the culmination of multiple discussions together.

For the final coding stage, each transcript was independently reviewed and coded completely by two researchers. The coded transcripts were then compared and any discrepancies were discussed and resolved through consensus (Hill, Thompson, & Williams, 1997). During the course of the data analysis, research team meetings changed focus from a discussion of potential codes and categories to a discussion of themes, i.e., different ways of

organizing the categories into conceptually meaningful groupings to address empirical questions about the experiences of HIV-positive MSM who have experienced PV (Morse & Field, 1995). The use of various forms of triangulation – multiple sources of data (i.e., participants), multiple readings, multiple coders, and the iterative process of consensual agreement – enhances the verification and validity of the analysis (Patton, 2002). The most robust themes were identified and organized conceptually. Final codes, categories, and themes were entered into the computerized qualitative data analytic program Atlas.ti (Muhr, 2004) to assist with data organization. Exemplars from the text were identified to capture the meaning of each theme.

RESULTS AND DISCUSSION

A. Participants

For full demographic information, see Table 3. Study participants ($N = 28$) had a mean age of 44 years. Most identified their gender as male ($n = 24$, 86% of the sample) and the remainder as male to female transgender. There was considerable heterogeneity in terms of racial identity: 46% White ($n=13$), 29% Black or African American ($n=8$), 14% biracial or multiracial ($n=4$), and 11% American Indian or Native American ($n=3$). Seven percent ($n=2$) of the total sample identified their ethnicity as Latino. The predominant sexual orientation label was gay ($n=23$, 82%). Remaining participants self-identified as bisexual, two-spirit, or wrote in a unique self-identification. In terms of sexual behavior in the past year, the majority of the sample reported sex mostly or exclusively with men ($n=23$, 82%). A

significant minority of the participants were in a relationship at the time of the interview (n=12 or 43%); all partnered participants were involved with men or male-to-female transgender individuals. Overall, participants reported low levels of education and low incomes; 46% (n=13) noted that the highest grade completed in school was 12th or less and 56% reported a total annual income of less than \$10,000.

B. Overview of Findings

Data analysis revealed numerous themes emerging from close examination of the men's stories. Surprisingly, the men reported that HIV played a circumscribed role in the violent relationships that they described. Rather than an acute catalyst for violence in a given situation, HIV infection seems to be more of a contextual or background factor. From the men's stories, we can surmise that the same factors predisposing them to acquire HIV also may have placed them at risk for victimization by a relationship partner. Featured most prominently among the ideas emerging from the data were the interrelated constructs of social isolation, the normalization of violence, and (as expected) the experience of acquiring and living with HIV.

These three themes seemed to result from a constellation of life experiences (e.g., childhood abuse or neglect, poverty, rejection based on sexual orientation disclosure) common among the men. Taken together, the themes appeared to influence the beliefs, feelings, and behaviors that facilitated the men's participation in violent partnerships. Intermediate factors include, in general, the experience of stigma related to their HIV-infection and an intense fear of being alone. These factors combine to perpetuate beliefs and

patterns of interaction related specifically to romantic relationships including: inadequate screening of potential partners due to an attentional bias towards HIV-status and away from other important characteristics; fear about the lack of availability of suitable dating partners; interpreting aggressive or jealous behaviors as benign or positive; and a strong desire for an idealized romantic relationship from a partner who can serve as “protector” against the adversity in the man’s life.

Put simply, due to the men’s backgrounds and their infection with HIV, becoming involved in violent relationships seems more likely (given risk factors for PV, for example). Also, more notably, once they are involved in a violent partnership, the men reported being especially hesitant to leave the relationship, thus exposing them to additional violence. We know from years of research and clinical experience with victims of partner violence (e.g., Bornstein, 2006) that there exist significant barriers to leaving (structural, psychological, financial) and it may be that, for these men, HIV functions as an additional barrier. The results that follow are organized into two sections including, first, a presentation of the findings related to the men’s background and vulnerability factors and, second, a discussion of some of the specific factors that lead from a troubled background to the initiation and maintenance of violent partnerships. Note that, while these constructs are presented as seemingly separate or discrete entries, this is for ease of presentation and heuristic value alone. The factors work together in combination as a dynamic system, with no one factor seeming to drive the system more than any others.

C. Detailed Findings – Distal Factors: Background and Vulnerability Factors

1. Past exposure to potentially traumatic events. Common experiences reported by the participants include chaotic childhoods, histories of multiple abuse experiences, mental health and substance abuse problems, societal marginalization, and negative consequences of disclosing one's sexual minority or transgender identity. Having had one or more of these distressing experiences was common among the men. These interrelated factors appeared to create a context in which the men are more likely to acquire HIV and to experience further violence.

Childhood neglect. Complicated family situations involving unstable relationships in the lives of their adult caretakers were frequently reported by the respondents. These situations – raised in single parent households, cared for by distant relatives, being raised in the foster system – may have resulted in neglect of the respondents and early adoption of adult roles.

Because I always felt, growing up and stuff, I was so... My mom was married five times and I was so responsible for everyone else's feelings, being too concerned about what other people are gonna think, and carrying my burden and carrying my fear. (pt 03)

When I was a kid? I ain't never been a kid... I was grown, I've been, I guess, my mama... I've been going to bars since I was like 5, 6, 7 years old. I'm 9 years old going to bars, at the after hours clubs with my mother. I started going to bars alone when I was 13. (pt 26)

Unstable connections with adults during the men's formative years could have contributed to a skills deficit in romantic relationships, because of a lack of models of healthy, loving partnerships. Additionally, one consequence of the men's childhood situations may be a penchant for insecure attachments which could affect their motivation and ability to extricate themselves from abusive relationships later.

Witnessing partner violence. Some of the experiences noted by the respondents involved violence perpetrated by one parent against the other. This modeling, about how to settle disagreements and what kinds of behavior are acceptable in a relationship, may have resulted in skewed perceptions about the acceptability of violence in the men's romantic relationships later.

He came in drunk with – and like most drunks, he wound up whoopin' on her. And, at one point, she just wouldn't get whooped on no more. And she knocked him out with a skillet! And that's pretty much the last time we saw him. You ever heard the sound a head makes when it hits a skillet? (pt 20)

Yeah, I watched him beat my mom so many times and it killed me always, 'cause, um, one day he hit me and my mom knocked him clean out! And I couldn't understand. It was so easy, too. I mean, it was one punch – and she straight knocked him out! But she would never defend herself. (pt 12)

Abuse from parents or other adults. Many of the respondents discussed experiences during their childhood that would objectively be considered abuse. Identified perpetrators varied and included parents or adult caretakers as well as other family members or neighbors.

The way I was raised, my dad used to beat me when I came home – for getting beat up at school. I don't let people beat me up anymore. (pt 16)

Some respondents identified abuse perpetrated by a parent on other children in the family, which contributed to the chaotic and unstable environment.

They were pulling me out of class a lot because, at this point, they were investigating my dad for possible molestation of my sister. (pt 19)

For some of the men, other significant adults mistreated them. For a minority of the men, the abuse they discussed was quite severe and they were able to identify the skills deficits that they would carry into adulthood.

But all my aunts and uncles and stuff, they were evil to me and they made my life a living hell... They did things to me like send people over to kill my dogs on my birthday. Um, they were like, I, my family was very sick, and very much into control... For all intents and purposes they raised me to be ignorant in several aspects of life that a healthy, well-adjusted person just isn't. (pt 12)

One participant even talked about partner violence that he experienced in what he considered to be a romantic relationship (although, given the age disparity, the relationship would technically be statutory rape by most accepted definitions of the term).

Well, I'll start chronologically I guess, when I was about 13 or 14, I was dating a 27 year old ex-con who was out on-, he was paroled or whatever, and uh, he was what they called back then "manic depressive," which I believe is bipolar now. And he would just work himself up into an emotional tizzy-fit and then punch me in the mouth. (pt 17)

Violence in the community. In addition to violence in the home, some of the violence about which the respondents spoke was violence they experienced or witnessed in their neighborhood or local community. Growing up in settings where violence was common – including gang activity, as an example – is unlikely to provide the kind of structure that helps children develop skills to effectively negotiate social and professional situations.

My brother and I were both in a gang... and he was all messed up on coke, and drugs... He died, like, right where the radiator is, in front of me. I couldn't – even today – I mean, it still messes with me. And it happened 20 years ago, 19 years ago, exactly. (pt 20)

Consequences of childhood experiences. Many of the men linked the stressful experiences in their childhood to their mental health as adults. Some of the abuse experiences led to the men's conceptions of themselves as "loners" which may, directly or indirectly, have contributed to the profound sense of social isolation that was so commonly reported.

I think that the fact that I was so, so tormented as a child... I mean, I jokingly say this but it's half kidding, half serious – the movie, "Carrie," with Sissy Spacek, was sort of based on my life. Just how she was so tormented and ostracized for, you know... So, you kind of learn to be on your own and be a loner and be okay with that, to a point. Um, and that carries on to this day, I'm very content just doing my own gig. (pt 04)

For many men, the scars of childhood abuse that they retain are in the form of patterns of depressive, negative thinking about themselves.

Um... just low self esteem. I've, I've always, I mean, and that goes back to – not relationship abuse – but abuse growing up. If you're told you're shit your whole life, you basically, that's all you know... the old tapes, you know. I say, I've read enough self help books, too, growing up. It's those old tapes that run through your head, they're, it's, they're very hard to erase. (pt 04)

As a consequence of these experiences – chaotic childhoods, parents struggling with their own relationship and substance use issues – some men left home to strike out on their own. They found, though, that the vestiges of their early lives would not be left behind, as they may have hoped.

I mean, I grew up on the street. I'm, I grew up on the street, like I told you. When I was like 14 years old, I ran away from home and I started hitting the streets, Portland, Portland to Seattle. (pt 09)

I haven't had contact with my family since I was about 14. That's when, let's see, '86, that's when my twin brother got shot. That's what triggered all the messed up stuff in my head. (pt 20)

Adult abuse experiences. Many participants reported abuse in multiple relationships throughout their lives. For some, the abuse was perpetrated by family members and started early in their lives. Many experienced stressful or traumatic events as an adult. All of the men interviewed had been in romantic relationships where they were victims – and some perpetrators as well – of partner violence. However, the men also reported being physically or sexually assaulted as adults by non-partners. In the following vignette, the victim (pt 18) was on a first date with a man who he met from the internet. This violent sexual assault happened before he had become HIV-positive.

It was, his, by the way he talked about things, and like I said, he had a soft demeanor. He was a nice guy and very attractive and, uh... it was right after we laid down in my bed and we were watching TV, then he started doing some petting. Then when things started getting hot and heavy he turned me over on my stomach and – which I'm not used to – and uh, he tried doing it that way, but he didn't have any lube on. And, uh, but he did have a condom on, but no lube, and it hurt like hell, you know, with no lube! And, uh, so I asked him to put some lube on, which he did, 'cause I had some there. And then he started doing his thing and, but, he wouldn't let me bend up so I could do my thing.

And then he suddenly pull-, pulled himself out, and, uh, he tied me down with leather straps, top and bottom, where I couldn't move! And then, uh, he got out his, uh, sling that he had – that I didn't know he brought with him, 'cause he went out to his car to get it – and he came back in and he put, uh, lube on the end of it and then he started shoving the pole of the sling – not the sling, but the whip, is what he had. Started shoving it, up, in. It hurt like hell! I was screaming at him, and then he took the whip and uh, started whipping my back with it, whipping my head.

And, uh, that's what I call physical abuse as well as mental abuse! Because he had told me at that time that uh, he didn't really care about me, he just wanted to get his rocks off. And that was enough for me to go through that, and uh, and not, not see him again.

And, uh, he was nice enough to take his rubber off and put it in the toilet. And I picked it up with a pair of scissors and looked at it to see if any-, anything had broken. And nothing had broken, so I knew I was safe. But, uh, I had to get myself cleaned up, and then I just, I went to bed, and I cried myself to sleep. (pt 18)

What is ultimately most surprising about this incredibly graphic depiction of date rape is the respondent's comment, "And that was enough for me to go through that, and uh, and not, not see him again." For this participant, it occurred to him that someone (the interviewer,

perhaps) might think that after being raped, there might be a second date. This comment, and others like it, point to the idea (discussed later) about the men's high threshold for what level of violence is acceptable.

Some respondents discussed the ways in which the relationships they have with their parents as adults were abusive as well. For one participant, he brought home a new romantic partner for his family to meet. This quote explains his father's reaction.

And, um, my dad looked him straight in the eyes and he goes, "What are you doing with my son? You know he's sick and diseased, don't you?" ... That that was just my dad; he's a bastard like that. He used to go around saying what a bitch my mother was. After she died, he was the second person I called right after it happened. And he just said, "So, what do you want me to do about it?" I don't know, it's never been... that was kind of my last attempt at having anything to do with him. (pt 12)

Although many of the men reported chaotic childhoods replete with abuse experiences, these experiences were not universal. A few men who discussed their backgrounds noted that one of the first major life stressors was discovering their HIV-positive serostatus.

Well, it was good, I mean, um, I had a good upbringing, and I was like I think twenty-four, twenty-five, when I found out [about being HIV-positive]. I was just, living, you know, having a good time... (pt 06)

2. Societal marginalization. In addition to specific, identifiable experiences of interpersonal victimization that the men reported, many respondents also talked about structural factors that may have contributed to their acquisition of HIV and their experiences in violent partnerships later. Some of these factors include poverty, involvement in street life, commercial sex work, legal problems, and an overall sense of a foreshortened future.

Poverty. One such factor is poverty. The experience of living with limited resources and few economic opportunities – in a culture of deprivation, both as children and adults – seems to affect the men’s relationships. In childhood, these experiences may have resulted in some men taking on adult responsibilities early.

I don’t know, I, I just been in – I’ve been independent or what is, independent or dependent? All my life, really, since I was 14. Always had to work and, ‘cause my family ain’t have a lot of money, my dad had to raise 12 kids, know what I mean? Yeah, I always had to work. I had to work at the Piggly Wiggly to buy my school clothes and which... My dad bought some, don’t get me wrong, but extra things like, like the boys with parents that was teaching school... So, I had to go make that money myself, you know what I mean? (pt 23)

Other men did not mention their financial circumstances until they talked about their diagnosis with HIV. In Washington State, being diagnosed with HIV makes an individual eligible for state assistance. For some men with significant health problems, this is likely to be very beneficial. However, living on a fixed income and under prohibition from additional employment keeps the men close to (or below) the poverty line and prevents them from securing any substantial savings.

Marginal housing and experience with street life. Many men discussed having unstable housing situations intermittently throughout their lives. The experiences the respondents shared – and the consequences reported – ranged from sleeping on the sofas and floors of the apartments of friends and acquaintances to, literally, living under a bridge.

“Okay, I was homeless for basically ten years. When, now when I say homeless I wasn’t, there wasn’t one day that I slept under a bridge or outside. I either couch surfed with friends um, or had a boyfriend I would stay with.” (pt 04)

Like I said, I had quit my job. I left my apartment and I slept underneath the bridge with that man for over 11 years – until finally I got up and says, "I can't take it no more!" (pt 08)

There was high potential for the men, living on the street during their youths, to be exploited by older people. A significant proportion of the men reported an involvement in street life. Their experiences included living on the street, involvement in drug culture, and developing friendships primarily or exclusively with other people living on the street, thus limiting social capital and social mobility. These experiences may have influenced the men's psychological and sexual development, i.e., fostered a sense of dependence or a desire for someone else to care for them.

I had run away from home. I was in Los Angeles. I needed a place to stay. Old Henry there is offering me a place and it's gonna be the park bench otherwise, so let's go to Henry's place and, you know, I'm obviously gonna have to fool around with this man but hopefully I'll get a little cash out of it, or maybe some breakfast in the morning. (pt 17)

Commercial sex work. A large proportion of men reported that they had, at times, traded sex for money, shelter, or drugs. For some respondents, family and financial obligations were motivating their choice of part-time work and, for some men, this practice of "hustling" started early in their lives.

No, not really because my lifestyle, being a prostitute all these years. I was surprised I didn't catch it before. I was turning tricks since the age of 13. (pt 26)

I was living with my paternal grandmother. She was recovering from surgery which amputated part of her leg, and I was her primary caretaker. I was a journalism and art history major, working at a newspaper during the day. And working as a male escort at night and on the weekends. And an unknowing alcoholic and drug addict... (pt 15)

One consequence of involvement in illegal activities like hustling is, for some, continued involvement in street life.

I was trying to stop turning tricks and I was trying to do more constructive things. Um, I think maybe at this point I actually had stopped turning tricks, but I'd done that for so long, that the pimp was still in the picture. (pt 15)

None of the men who reported commercial sex work indicated that they felt particularly stigmatized about it, nor that they felt proud of it. The men recounted the information nonchalantly which may suggest that hustling is not stigmatized in the men's communities.

Legal involvement. Respondents also reported involvement in the legal system. Many of the participants had been arrested and many had experience in the court system because of restraining orders placed during their violent relationships. A number of the men reported having served time in jail or prison.

And then I got busted because I was downtown with some friends and, and I got busted with drugs. And then I went to, I went to this minimum camp they sent me to, to do two years for possession. And I went and did that and, while I was there at the camp they, I told them that I was HIV positive, and they prescribed the medication for me and stuff like that. And I was in there and then I was REALLY, really bummed out because – here I am, locked up in prison and I got HIV! (pt 11)

Sense of foreshortened future. Having lives that involved so much abuse and chaotic conditions – coupled with few positive, longstanding relationships – seems to have resulted in many of the men, irrespective of their HIV-positive status, believing that they would not live long lives. This sense of the inevitability of an early demise was very common and is likely a result of the stressful, violence-filled experiences of their pasts.

Um, you know I never thought I'd make it past 28. See, 28 is the age – cause that's when Jim Morrison, Janis Joplin and Jimi Hendrix all died, at the same age – so I figure, okay, well, you know [laughs]... And, actually, I think Kurt Cobain too, I think he was 28. Um, so I, you know, I was like, "Who cares?" (pt 04)

3. Substance abuse. Another extremely pervasive theme in the data was the role of substance use in the men's lives. Both the form and function of the substance use varied. For some, contact with alcohol and illegal drugs started in childhood, with substance-abusing parents. For others, substance use became a relatively effective short-term coping strategy, allowing the participants to escape from the realities of their lives. Drinking alcohol and using drugs seemed almost inevitable, given their living situations and the context of their lives.

The area we lived, you know, 'cause the building I lived in, you know, downstairs they sold drugs. And in the back they sold drugs, of the house, you know. It was, like, crazy. Then the prostitutes just come over to get their drugs, too. (pt 10)

Some men began using or abusing substances in adolescence. Given the lack of parental oversight and the early adoption of adult roles (discussed above), it is unsurprising that experimentation with, or regular use of, drugs and alcohol began at an early age for this group .

I picked up a drink when I was 17. I said, "This is what my body always needed!" I said, "My goodness, I finally found it!" I finally found the answer. (pt 08)

Many participants noted that, once substance use had been initiated, the frequency of use went from only occasional to rather frequent use. Patterns of use typically fluctuated depending on other ongoing events in the men's lives.

Uh, me and Michael, as I said, living outside as long as we have – we were using alcohol for a release, you know? To, in order for me to go to sleep at night, I'd have to be pretty well intoxicated. (pt 08)

'Cause what we did, it was nothing but drugs. Nothing but drugs and prostitutes, and it was just like, "Wow!" So, it got really wild... (pt 10)

Many of the men discussed how their substance use was yet another problem added to a lengthy list. Substance use can lead to abuse, and for some the abuse plunged them further into street life.

And it was probably too much, I mean – clearly too much for me, too. I mean, but just because you only use maybe twice a month you're still tired and hung over, the like, even if you use it for one day, you get four days of like recoup. So, yeah. Yup. It was a definite learning experience. (pt 04)

Most participants discussed their use of substances at some point during the interview. The most typical function identified by the men was to help them cope with their other problems. (mental health problems, financial problems). Using drugs and alcohol to cope with poverty was one situation mentioned by several men. Some men specifically mentioned substance use as a means to cope with PV or physical pain more generally.

No, and the drugs also helped numb that, so... I mean it's weird. It's like, you know it, like, drugs are bad, yes. But at the same point, it definitely buffered the whole thing... I was numb at the time. (pt 04)

Uh, and you're always struggling for food, you're always struggling for this and that. Subsequently, it led me into a depressed, more depressed state where I was drinking so, just to ignore the problem. (pt 08)

Well, like, when he hit me in the head with the laser printer, I used meth all day long the next day. [I: *Did it help?*] Umm, yeah, my head didn't hurt no more! [laughs] I don't remember it hurting and I stayed awake *and* had great sex. (pt 07)

Coping with mental health issues, especially mood disorders, was another catalyst for substance use mentioned by several men.

But, um, a lot of us who are bipolar, and have issues, we use. And I'm not saying this is an excuse to use drugs but, um, a lot of us do. So, like, you'll use it to medicate, just to get us on a base level – of feeling semi-decent. Granted, the aftereffects and the drama that goes with that are not fun, though. (pt 04)

I keep a lot, I have drugs at my house. It keeps me nice and... stupefied, if I get those days. 'Cause there are days that I just want, it gets really bad, when I just want to walk out in front of that bus. (pt 16)

One respondent highlighted the consequences of excessive substance use. While drug use (finding drugs, using drugs) can involve other people and be seen as a social activity (at least superficially), he identified the idea that deep, meaningful connections are unlikely to result from a life of substance abuse.

Oh just, it makes you numb-er, it makes you more numb. [laughs] "Numb-er." I don't know if that's even a word. It makes you more numb and it's, it just is impossible to really connect on any level of authenticity, if you're numb or you're in, you know, an altered state. (pt 04)

4. Sexual minority identity. In reviewing the men's stories, another prominent theme that emerged was the impact of having and disclosing a sexual minority or transgender identity. For some, this additional vulnerability led to rejection by family and friends.

Um, I told my family, my mother... she was cool with it. And my father, before he was passed, he was not. He was *not* down with it! He didn't, he didn't have no – he "didn't raise no gays," you know? (pt 02)

Some of the rejection the men faced was based on misconceptions about non-heterosexual people held by family members or significant friends.

Another time was when my family told me that I was going to molest children if I was gay, that gay people molested children. They had me convinced that I could not, I couldn't prevent it – that I couldn't *not* do it. That it was like, just, something every gay person did. (pt 12)

It is clear that, with strongly held stereotypes such as these, the men did not receive support from their families. Rather, interactions with family or other non-affirming individuals likely served as an additional burden on the men. This more limited emotional closeness and supportive contact with families of origin is likely to be related to the men's later feelings of social isolation. As a result of these strained family interactions, some men reported distancing themselves from relatives. Others were rejected outright and given a clear message of invalidation and ostracism.

No, I mean, I was the, when I left, I don't know how my brothers and sisters fared. Because I was thrown out, you know? I saw them once in a while. I guess life got better for them, I don't know. I was dis-communicated from the family. You know, they told me – they told me I should have been dead. (pt 16)

5. Mental health problems in respondent and family members. Many men referenced their own mental disorders or those of relatives or other adult caretakers. Considering the life circumstances the men reported, especially the early abuse experiences, it is unsurprising that the men faced significant psychological problems. It is impossible to identify the direction of the relations, however. For example, it is possible that mental health problems – or early sexuality or atypical gender presentation behaviors – may result in the young men being targeted for abuse or dismissed with neglect by adult caretakers (Burke & Follingstad, 1999). Alternatively, there are significant data to suggest that mental health problems, poverty, and stigma are related to abuse and the concomitant negative physical and mental health sequelae (Campbell, 2002).

“Um, I was, I went through major, you know, again I've suffered from bipolar since I was a kid, and I had a very abusive childhood growing up. Um, so to me, I, I was sort of like, “Fuck it anyways,” you know? Like, “who cares?” (pt 04)

As exemplified by this participant's comment, apathy – and eventually social isolation – can result from mental health problems that affect interpersonal relationships. A range of mental health diagnoses were mentioned by the men but mood disorders and posttraumatic stress disorder were most common.

It's hard to remember. I don't remember everything. There's like splotches that are missing. But, I just remember waking up at the residential center. I was handcuffed to the – I mean, with those leather straps – I was strapped to the bed. And they wouldn't tell me what I did, so I just went into a panic, and I busted my wrist. I ripped the pole out! And then they told me I had contracted PTSD from what I saw. The bipolar, I guess I already had, I was born with it. My mom and then her mom and then her mom, you know, going down the line. I guess I got the "mom genes." (pt 20)

Some of the men's comments indicate severe mental health problems with significant consequences, although this was not the modal presentation. Depression, hopelessness, and suicidal thoughts or behaviors were mentioned frequently, however. One of the men – who reported considerably more abuse than most other men – pointed out an unfortunate and unexpected link between the distress he had experienced and his HIV-positive diagnosis.

You know, you, when, before you have anything like this, you feel... I don't know, I was pretty invincible... Actually, I hate to say it, but getting HIV probably improved my life somewhat. I had spent so much of my time trying to commit suicide throughout my life that, um, I just didn't have to anymore [laughs] because it was, you know, something that's inevitable now. (pt 12)

D. Findings – Proximal Factors

The distal factors presented above – some long ago in the men's childhoods and others (like poverty or lack of education) constantly operating in the background – set the stage for the social isolation, normalization of violence, and acquisition of HIV that were such robust themes across the interviews. In this section, we will introduce the ideas that the

men discussed that led us to these three themes. While the data analysis used a bottom-up approach (i.e., all analyses began with the men's words), the content that the men put forward corresponds well to consistent findings in the PV literature more generally. A recent meta analysis aimed at identifying effect sizes for a variety of risk factors for partner victimization (Stitha et al., 2004), pooling data from 85 published reports, implicates many of the same constructs that came up in our interviews. Overlapping indicators include witnessing family of origin violence, previous experience with violence, alcohol and drug abuse, mental health problems (especially depression) and relationship conflict.

1. Fear of being alone. One of the most prominent and clearly articulated themes to come from the interviews was the profound sense of social isolation that the men felt. The idea of feeling separate – disconnected from other people or society as a whole – came up many times in the interviews, related to a variety of discussion topics. The fear of being alone was not a topic that required deeply interpretive data analysis; the men had considerable insight in this area, including the prominence of the notion in their minds and its consequences in their lives and, especially, in interpersonal relationships. Some of the loneliness that the men expressed, and the fear of further loneliness or abandonment, seemed to be related to their HIV-positive status. Others expressed the fear more generally, likely the result of negative childhood experiences and lack of secure attachments.

I have to have somebody to talk to, 'cause if I didn't, I would have killed myself. I would have just killed myself. 'Cause I have nobody, I, no – I have one friend – I feel so alone, alone. One more step why you'd want to kill yourself [cries]. There it goes. That's the reason, you know. (pt 16)

2. Optimism about making the relationship work. Most of the men's comments on this topic arose during the discussion of violent relationships with romantic partners. The notion that they were afraid of "being alone" seemed to mean, in a concrete sense, they feared being single or, more probably, feared being single against their will (i.e., being broken up with or abandoned). Often thoughts of leaving the relationship came up only after the violence had begun. Some men dismissed such thoughts readily; they would not concede that ending the relationship was even a possibility.

I said, "You know, I'm not going to leave you and you're not going to leave me, we're going to work this out. I know you love me, and I love you and we're going to work this out, we will." And you know... I tried everything. (pt 06)

3. Negotiation strategies to maintain the relationship. The common idea in the men's comments were their efforts – typically, their efforts alone – to keep the relationship going. One strategy the men reported using to defuse some of the tension and anger was to make concessions. The men could identify areas of their relationships, usually of their partners' behavior specifically, that they wished were different. Another strategy mentioned by the men included attempts to radically accept the partner's behavior in that area (e.g., substance abuse). At times, the men would negotiate these concessions directly with partners and at other times these decisions were not communicated. Typically, the desired effect – mitigating their frustration and distress – was not achieved.

I know it was wrong, you know, but, um... being hit and staying in a relationship like that, but you know... I loved him. And I, you know... [softly] I was afraid of being alone. (pt 06)

And I told him he could [continue using coke and meth]. And I even let him – I know I shouldn't have. I should have put an end to it. Said, "It's either me or them," but, you know... (I: *Why didn't you*

do that?) Because I was afraid of being alone. [pause] That was it, I was afraid to be alone. I wanted that relationship. (pt 04)

I said to him, "I'm going to try my best to fix this, make this relationship work." No matter what it takes, I was gonna. No matter what it takes, I was gonna deal with it. [I: *How come?*] Because, um, I was committed to it. I was committed to the relationship and I loved him. (pt 24)

4. Role of HIV in relationships. One major aim of the study was to investigate the role that HIV played in the men's relationships. In response to questions about the extent to which having HIV affected the men's willingness to stay in a relationship even after the initiation of violence, the comments were mixed. For some men, they identified the general fear of being alone (unrelated to their HIV-positive status) as the most important motivator.

No, I stayed with him because I loved him. 'Cause I thought – yeah, I did love him, you know. I don't think that, HIV didn't come up a lot unless we really got into it, you know, as far as arguing. But no, I never, I never thought HIV had anything to do with me staying with him. It was more other things than that. Like, for one thing, I didn't like being alone [laughs]! It's always, all my life it's always been somebody around. And so, to live alone, it's like, it's nice be able to live alone – you can do what you want without, you know – I just always had somebody there. There's always been somebody there. (pt 10)

For other men, they discussed the impact of living with HIV as a significant stressor. One participant reflected on the role of HIV in his life:

It's a big deal. Being HIV is a big deal. Knowing that you have an illness that's gonna kill you. And it's just hard. (pt 06)

This man went on to discuss how the emotional weight of having HIV was difficult for him to manage alone and, thus, finding and keeping a romantic partner became even more important. Another participant eloquently voiced similar sentiments, about the extent to which he fears being both alone (i.e., single) and HIV-positive.

Basically because of wanting to be needed, and wanting to be wanted, and not wanting to be alone [sighs]. Not, you know, being HIV can be very lonely. And I think that's a lot of the reason why I stayed, you know... and tried to work it out, is because I didn't wanna have to be go through being HIV and being alone like, which, well, I am now, which I hate. (pt 22)

Some men discussed the stigma of having HIV within the context of their romantic relationships. This topic will be addressed more below, however, it seems important to give voice to the men's comments in this vein as they relate to a fear of being alone because of their HIV-status.

I wouldn't have come back [after breaking up the first time]. I wouldn't have had him come back. Definitely not. I was too afraid of the two situations. One, I was gonna die by myself. And two, um, I, I was damaged goods. I, just to be by yourself and to, I, it seems like a very lonely place. You know, back then it did. (pt 03)

Living alone was presented as undesirable by the men. However, dying alone was also a concern. This idea seems related to the existential impact of having a disease such as HIV that, while possible to manage with medications, hastens death nonetheless. Also, many of these men acquired the virus before the era of combination therapy (1996) and potentially expected that they would not have lived even this long. Respondents wanted to know that someone would be there to take care of them if they were to become acutely ill or to make their funeral arrangements. In these areas, especially, the men's social isolation was highlighted.

But I think back then, too, you know, I wanted someone to be there in case I passed away. (pt 03)

'Cause I know I'll die alone. And if that's the case, why not let me die the way I want to die. I mean, who's going to bury me? I have no friends, I have no loved ones. Who's going to bury me, the state? No one will know when I go. (pt 16)

5. Inadequate screening of potential romantic partners. Although they reported considerable social isolation, still the men strongly desired human connections. One way that this manifested during the interviews was the discussion of a fear of being alone, mentioned above, about which they displayed considerable insight. However, one way that the men displayed their desire for social and romantic ties – about which they did not report much insight – is in the way in which the men met and screened potential dating partners.

The men were asked, in talking about one specific violent partnership, to relate the story of how the partners met and what things were like at the beginning of the relationship. Several patterns of responses were noted during the coding, present in this section of the interview, surely, but peppered throughout as well. These cognitive and behavioral patterns included selective attention towards certain partner qualities (having fun together, being HIV-positive) and away from others (early warning signs about the partner's controlling nature, substance abuse problem). Respondents endorsed a strong desire for their relationship to follow a “storybook romance” type of narrative. Additionally, a surprisingly consistent pattern for the participants was to meet their potential partner, begin a romantic or sexual relationship, and then to live together within a few weeks or months.

Having fun with partners. Many of the men, when asked what partner characteristics were most attractive to them at the beginning of their relationship, responded by indicating that the partner was “fun” or “exciting.” Many of the men reported meeting their partners in a bar or club setting and, thus, many of the men's comments reflect that fact. The men's descriptions of their relationships are more short-term and pleasure

oriented; they typically did not talk about the importance of forging deep, meaningful connections with a partner.

I met him when I was 18 and it was his first relationship. And we met, I seen him at a bar, and we kept staring at each other. And, you know, he was cute and I went up to him and I said, "Hey, you're cute!" And he said, "Hey, so are you!" And he says, "You wanna dance?" And I said, "Yeah!" So, we danced. And he says, "Well..." – and it was the end of the night and the bar was closing – so he asked if I wanted to go home with him, and I said, "Yeah." And I went home with him – it wasn't for sex – and, um, stayed there for the whole twelve years. (pt 06)

It was fun, I mean 'cause we went out all the time and just had a good time. We were young and just had fun. Just went out all the time, we loved to dance. And just, you know, went out to the bars and just had fun. (pt 03)

Belief in 'love at first sight.' Many of the men became enchanted with a partner during the initial phase of the relationship, the infatuation or "honeymoon" period. During this time, partners appear to be a perfect match for each other, and respondents focus on the seemingly deep connections that they experience after knowing each other for a very short time.

Well, when I moved into his place, it was really kind of bizarre, because – I mean, we have a lot of things in common. He likes dancing, I like dancing. He likes, we both like the same kind of music, we both like to read. Um, we both like mov-, we like a lot of the same similar things. But, when I moved into his place – well, actually, when I first went to go visit him – he had a stereo system, the exact same stereo system my friend in Portland had! Exact same stereo system! And I thought, "Okay, something's going on here," because there's too much stuff that was just syncing up (pt 13)

And I went down to the bank to meet my brother and he saw me... he ran down to the lobby and introduced his self. Asked me could he take me out to lunch, gave us a ride home that evening. He came to my job the next day, took me out to lunch. While we was out to lunch, we walked past the jewelry store, and there was a two carat solitary diamond ring sitting in the window. I said, "Ohhh, ain't that pretty!" Later on, he went in there, filled out a credit application, and by 3:00 that afternoon he was at my job and put that two carat diamond ring on my finger. In one day! You know, so, naturally that just blew me away. Next thing I know, we moved in together... (pt 27)

The comments of a few participants underscores their insight into the notion that a strong initial connection, however powerful it feels emotionally, cannot substitute for the deeper and more complete knowledge about a person that develops over time.

I mean, we'd go to a restaurant, you know, and, you know, before the waiter comes, and I'd go use the bathroom, I wouldn't have to communicate what I wanted. He knew exactly. I mean, it was like he'd look through the menu, okay, duh-duh, duh-duh, okay fine. And it could be a restaurant we'd never even been to! I mean, we did really have a lot of insight on each other that I don't know how. I mean it was like we just, "Yeah, he'd like that," or "Yeah, he wants that," you know? We just knew, and it was just one of those things that, you know, it comes with getting to know a person, really knowing a person. And, I just didn't know key things about him. (pt 19)

Dismissal of early warning signs. At times, respondents noted specific concerns they had early in the relationship that were dismissed through optimism or a desire to see the best qualities in a partner.

Uh, I was giving him all the benefit of the doubt, and we were real social out in the bar scene, um, and he ended up - you know love is blind, he was a real heavy duty alcoholic and I didn't realize that when he wanted to go the bar it was to drink, when I wanted to go to the bar it was to socialize, and so... (pt 03)

I mean, we had a great time together. We traveled all over the place and usually ended up having a good time. I think there was one time where we had issues before we moved to California together, but that was about it. And it was a situation where I thought I saw him playing with somebody at a urinal. And, you know, I still think I did. And he says I didn't, but... [laughs]. (pt 19)

Some early relationship experiences were more dramatic and included the onset of more significant violent acts, verbal or physical. Even after the violence escalated to a serious level, some participants still remained hopeful for improvements in the partner's behavior.

So we kind of dated. We dated from like a, almost about four or five months. Well, I decided I might as well move in with him, and I did. And moved in with him and... he'd call me a "nigger black whore bitch" and stuff stupid like that, because I was mixed. He was a white boy, so I called him a "peckerwood." And the next thing you know, he slapped me upside my head and I was going off of that and I would - slapping and grabbing the lamps - and I would be threatening to hit him with it! (pt 26)

Rapidly deciding to move in together. Living together was an important relationship milestone noted by many participants. Men reported relatively short durations of time from meeting or beginning a relationship to moving in together. Beginning to live together anytime from the first meeting to 3-4 months into the relationship was common. This was one of the most reliable and unexpected findings, especially since no interview questions focused specifically on housing issues. This phenomenon appears to be driven by the interaction of infatuation and economic necessity (e.g., see discussion of *poverty* under Societal Marginalization above). The reasons the respondents proffered reflect many of the underlying issues present in the men's lives (i.e., vulnerability factors mentioned above) and was likely another barrier to leaving the relationship. Sometimes the reasons given were practical.

So I just figured, you know, he's spending every night in town at my place anyway but he's paying rent for a place for his clothes to be... He doesn't even own furniture – he's got, again, a bed that was there, you know, it was a furnished room that he just rented. So, I said, "Move in with me! This is silly. Don't pay rent there. You can go out to dinner on that money." (pt 17)

A common reason for moving in together that was offered by the men was because one or both partners were, at that time, living in marginal or unstable housing situations. Men were eager to move in together in order to share expenses or, literally, because one or both had no other place to sleep at night.

I said, I asked him, "I'm wondering if I could possibly move into your place and stay with you for two weeks 'til I could figure something out, because there's a sheriff's note on the door here, says they're looking for somebody. It's not me, but I don't need to go through this shit – I don't want to." So, he said okay, and two weeks turned into seven years. (pt 13)

We met though, uh, a mutual friend. And I, you know, met him one time when he came over to my house and another time looking for a friend we knew together, and I seen him. And, the next day or two later, they came over to my house again and, you know, we was talking. We was just, you know, being friends and stuff and they, we, they moved in because they had nowhere to stay, so I let them stay with me. And we just became friends and then that's how it started that way, you know? (pt 10)

Serosorting. Another robust theme that arose from the data was the participants' strong desire to date other men who were also HIV-positive. For some, serosorting was even presented as an unbreakable rule. The men presented compelling reasons to explain this practice, one result of which may be a selective focus on the HIV status of potential partners rather than other criteria that might be important.

I think HIV had a lot to do with it, you know. I think that if he were not positive, I wouldn't have stayed. Oh, I don't think I would've gotten involved with him in the beginning, anyway. (pt 22)

It keeps us stable. It keeps us, uh, grounded, because we each have to take care of our disease, as opposed to anything else. And so, I mean, it's, it's not an on and off thing that you do when you've got HIV. It's 100% or you might as well not even do it! And uh, you know, we became more compatible now that I was openly HIV positive. (pt 08)

Some men's concerns were based upon their own reactions to the idea of a serodiscordant relationship. These men feared they would not be able to relax fully with an HIV-negative partner. The participants reported concern that they would be preoccupied with worry about potentially infecting an HIV-negative partner.

Every single person – especially as far as if I'm ever gonna be intimate with someone, I'm usually with HIV positive, it's 99.9% – I'm always with HIV-positive guys. I would never want to have that on my conscience, that I made someone seroconvert. (pt 04)

Other men's reluctance to engage in serodiscordant relationships was based upon their perceptions of HIV-negative men's capabilities. The respondents reported believing that an

HIV-negative partner would not understand their experience of the world, as people living with HIV.

I think, you know, it would be really hard to find an HIV negative person who would be totally, honestly at ease, you know, with my status or just a medical condition even. I mean, who wants to get into a relationship with a person who's going to die of cancer? Any potential life partner, do you wanna explain that you may not, you know, be around that long? (pt 17)

With us both being positive, it freed up a lot of stuff that we could, uh, really explore each other – both physically and emotionally – further than, you know, just, with somebody who is not positive. (pt 19)

Some participants espoused the belief – at times corroborated by anecdotes that provide real-life evidence – that HIV-negative men would not wish to partner with HIV-positive men.

Horrifying. I had been in a relationship with a guy that I was, you know, faithful to, and I very much loved him. And at the point he realized I was positive, he left me. (pt 12)

A few of the men's comments explicitly provided a link between the participants' focus on the HIV status of potential partners and their lack of focus on the men's other attributes, such as substance use, for example.

He was tall and blond. I've got this thing for tall blondes, you know? And he, he fit the description just perfectly. And I told him I was HIV positive – “Me too,” he said, you know. We talked. Even had a tattoo of a ribbon. The HIV ribbon, you know. And, uh, I thought he was just the cutest guy, but he started drinking really bad, and... (pt 21)

5. Stigma of being HIV-positive. The respondents explained clearly the multitude of ways in which they feel rejected by society more generally. They recounted anecdotes related to disclosure of their HIV status – of parents who would subsequently not share drinking glasses with them, of being fired from jobs, and of being told by friends that HIV is a

punishment from God onto gay men. Many vignettes detail situations in which the men were the victims of discriminatory acts. Throughout the interviews, the main themes into which the men's stories fell include: the beliefs that HIV-positive people are flawed, that having HIV means that you are unlovable (interestingly, both of the maladaptive core beliefs from Beck's cognitive theory) and that HIV-negative people cannot understand, thus reifying the notion that the men are separate and alone in the world.

Belief that they are flawed or are being punished. Questions posed to the participants early in the interview address the timing and context of receiving their HIV-positive diagnosis. Men reported reactions that varied from numbness to denial and from deep sadness and shame to lengthy drug and alcohol binges.

I felt very, in fact, when I first found out I remember just feeling like I was, um, venomous... who would want you, you know? And probably I stayed in it 'cause I didn't even want *myself* at that point. I did look back on things as, I was being punished. It was just, just madness. (pt 03)

Respondents related stories of people in their lives – partners, certainly, but more often friends or family members – who believed stereotypes and misinformation about HIV and made hurtful statements. The emotional damage that resulted from the discrimination aimed at the men from other people was compounded by the men's own internalized disgust and shame for having acquired the virus.

Well, I think, you know, I had that in my head anyway, I still do pretty much. I always, I felt that way even before he was in the picture... that no one would ever love me because I'm HIV positive. (pt 22)

Right, damaged goods. Yeah. It was damaged goods, you know... Usually he wouldn't come out and say, "You're not deserving," but that's just, like, the subtext to it all. Like, "You ought to be

grateful... for having been with me.” He such a, he’s... I’m trying to be healthier now. I still want to fucking throttle him sometimes. [That’s] stuff that I still wrestle with, you know. (pt 15)

Sense of isolation and separateness. Many of the men’s comments about their backgrounds, as discussed previously, highlight a sense of isolation and loneliness they have experienced, irrespective of their HIV-status. Living with HIV seems to compound those feelings.

I mean, it’s like, until you’re on that side of the curtain, you have no idea what that stigma that’s attached to being HIV positive, how it affects you, until you had it inflicted on you four or five times. I mean, it’s extreme! (pt 19)

Well, I didn’t feel it was going to do any good [to tell people about becoming positive]. You can tell your friends but, if they don’t have HIV too, they don’t have a point of reference so... It’s not like they can tell you it’s going to be any better. I feel, if you’re not taking 40 pills a day, and if you’re not going through this crap, you don’t – not to be nasty – but there’s not a whole lot somebody’s gonna tell me. That it’s going to be better... No, it’s not! [laughs] It’s going to get worse. Everything gets worse. (pt 20)

As evidenced by the last participant’s comment, many men expressed hopelessness about ever being treated more positively with respect to their HIV diagnosis, or ever having things go better in their lives more generally.

6. Perceived absence of alternatives. A sense of gratitude for being in *any* romantic relationship was mentioned by many of the men. Like many of the discriminatory comments detailed above, some of the men were told that they should feel lucky to have a partner while, for others, the message had been internalized. Some men reported staying in relationships that were unhappy or even abusive because they did not feel confident that they could find another partner, flawed as they felt because of their HIV-positive status and emotionally exhausted from the violence they had experienced.

I was just kinda like, I was lucky to have him there. [sighs] And I just, you know, just being HIV from the beginning it's just it's been a, it's been an evolving situation. You know, and back then I, inside of me, I was thinking, "God, maybe it's true." And I did, I felt like damaged goods. And so I stayed in the relationship, even as it was. (pt 03)

Um, I, I'd lost, uh, three really good friends within a year and a half and, after they were gone, it was like I felt in my world [my partner] was all that was left. You know, and I didn't have, he had depleted me so much of my self that I didn't, I couldn't even stand up for myself or be there for myself. And I relied on his abusiveness and alcoholic asinine shit, that that was all I deserved, that was all there was... This is, yeah, "This is all I'll ever be able to get anyway." (pt 03)

Other participants spoke of a clear link in their minds between the difficulty of finding a romantic partner and tolerance of violence in a relationship. As mentioned by participants in previous sections, the men employed strategies such as acceptance and negotiation in order to mitigate the psychological impact of the violence while remaining in the relationship.

I think that being HIV is a driving force to stay together. You know, because we know that finding someone else is, is very, very, very – or wanting to find someone else – is extremely difficult, so you try to make the best of what, if you have something you try to make the best of it. You know, I know a lot of other people that I've talked to that have been through, through things, through violence, you know. I have another friend that went through even worse violence than I did. Because, you try to make it work, you try to stay with that person. You're scared to leave, to get out of it, so you know when you try to make it work you stay and you just try to do whatever you can to not leave this person... just bite the bullet on the bad days and try to make it through. (pt 22)

For other men, the focus of their comments was on describing the ways in which they had been treated by potential dating partners who learned of their HIV-positive status.

And I came across the first case of like, someone saying, "Don't date him, he's HIV." Luckily, I didn't find out until after the fact. (pt 04)

It's like, drop dead gorgeous guys are all over you until you disclose your HIV status, and then he's almost disgusted with you at that point, and walks away. And you're like, it's like that stigmatal (sic) (pt 19)

You know, and it's not that I got a, a large pool to pick from, you know what I mean? You could go to a bar or a, wherever you go, to a movie, and meet somebody. And you talk to 'em. What you gonna say? "I'm positive," and they'll say, "OK, see you later." You know what I mean? (pt 23)

The isolative habits of many people living with HIV – likely a result of the discrimination and stigmatizing comments that have been made to them previously – may contribute to the difficulty in finding suitable dating partners. If one is less active and less visible publicly, it holds that they would be less likely to come into contact with potential dating partners.

But because it's really – when you're HIV – it's difficult to find someone to be in a relationship with. 'Cause usually people that are HIV isolate, they stay out of relationships, period. (pt 22)

Finally, some men expressed extreme pessimism and hopelessness about ever finding another partner, given their HIV-status.

I know I'm going to be alone for the rest of my life, because, you know, people say you find one or two boyfriends here and there, you know. Yeah but, you know, when they find out you have HIV and you have Hepatitis, you have other diseases, people change. It's going to be impossible. Now that I've, now that I know, I gotta live with it, so, it's... I know I'm going to be alone. (pt 16)

7. Benign or positive interpretation of aggressive behavior. Based on the way in which the men talked about the considerable exposure to violence they faced in their lives, it seems they have habituated to hardship, struggle, and adversity. After a point, the men's most common reaction to additional violence experiences was a profound lack of surprise. This was true for adult abuse experiences as well as violence perpetrated by romantic partners.

The core of the comments grouped into this theme is the men's almost universally neutral or positive interpretation of jealous (seen as loving or caring) and aggressive (stalking, physical assault) behavior.

The neighbors had smelled me baking the cake and I said, "Oh, I'll cut you slice." Just because I cut them a slice of cake, he assumed that I was having an affair with the woman's husband [laughs]. And

just because I used to, like, across the street from our house, there was this little bodega, a little store, a little Spanish store. And if we were short on cash between pay periods, you know, they'd let us get things on credit and stuff. He used that as, "They're letting you do that because you're having sex with one of the guys over there or the owner over there!" I mean, he would say this with such a conviction that it almost made me feel that I was doing that [laughs]! And I'm like, "Oh my God..." [rolls his eyes] (pt 24)

The flippant tone in which the men spoke when recounting these controlling behaviors was striking. Aggressive behavior of partners, especially, was not interpreted as worrisome when it was directed towards other people. Often, the incident recounted by a participant involved his partner's jealousy and fear suspected infidelity. Stalking was described by some men.

And uh, then he would always accuse me of cheating and he was always, he was, didn't want me to talk to the brother. He didn't want nobody at the house when he was gone... He would think I was fooling around and he would, you know, like stalk you, like peep in people's windows. (pt 14)

I remember I used to ask him when we first got together – I used love going walking at night in spring and summer time – I used to ask him go walking with me, and he always said no. And I figured, he figured, I would just stay, you know, and not go. But I would go ahead and go walking. One night, as I'm walking – I guess it's in autumn 'cause the leaves is falling off the trees – as I'm walking down the street, I hear people walking through leaves. I turned around, I didn't see nobody. I walked some more. I hear the leaves, "Ssh, ssh" – someone walking through them again. I turn around and look again, and I still didn't see nobody. I keep on walking. All of a sudden I turn around real quick and caught him ducking between the houses! I stopped and said, "I asked you to come walking with me! It's very untrusting!" And so, what he would do, he would follow me. Instead of walking with me, he'd follow me to see if I was going to meet somebody else. That's the jealous side of him, you know. (pt 27)

Others described physical violence, even, as the men's partners attempted to assert their dominance and claim possession of the men.

Yeah, all my partners have been possessive. This one don't want anybody touching me... He will jump on men! Oh yeah, he's very protective of me! He'll say, in a minute, "Don't mess with my girl," and he will fight about it! I know he broke one jaw, and I don't know about this other guy he hit... (pt 14)

It was like, if somebody walked down the street or especially, you know, we used to go to a lot of gay bars. If somebody looks at me or you looked at me, he'd go off on that person, you know? All this stuff. Just little small things, but it was nothing major. Like, it wasn't nothing physical or nothing that we brought home to argue about. And after we'd go out and if I, it's four or five people dancing or something like that – even him included – we're dancing or something and then everybody be

bumping and touching. And, you know, he would start fights with them and we would get kicked out the club! And not even with me – he would start fights with somebody else, about me, and he'd get us kicked out the club! (pt 23)

The lighthearted way in which the participants relayed these vignettes underscores their tacit approval of fighting on their behalf and their minimizing the significance of the fisticuffs that would ensue, e.g., this participant's analysis of the situation was that "it was nothing major." Some men talked about being attracted to the aggressive behaviors their partners displayed, especially aggressive sexual behaviors.

By him being aggressive, and wanting to do this and that sexually, it kind of, I don't know, it put some kind of – how do you say it? – spontaneous type of fun into the relationship, you know what I'm saying! (pt 11)

Other men describe negative consequences that resulted from their partners' violence outbursts but rationalize the partners' behavior based on some external factor, such as substance use or work stress.

And I think what really brought us together is we used to, before all this came out, I told him straight up what I was. I go, "I have two jobs. I'm a certified nursing assistant and a hustler." At that time, he used to go with me downtown, and wait for me to go get my money from my johns on the corner. But then he started getting jealous, because I'd be gone *too long* with the guys. He'd be running up to the cars – start throwing rocks at the cars! The johns wouldn't come and see me no more 'cause of him... People would say, "Why are you with him?" I'd go, "Because I love him and the *only* reason he acts like that is because he's drunk. When he's sober, he doesn't act like that." He never has. (pt 09)

Overall, the men minimized the impact of violence in their lives, often laughing or making jokes about violence perpetrated by a partner. It seems as if violence is such a part of the men's lives that it barely registers at all for them, and clearly does not cross the threshold of a worrisome behavior. It may be that this latency in detecting danger – and inability to judge

safety – is a key psychological factor contributing to the initiation and maintenance of violent partnerships.

8. Longing for a protector. In discussing the traits of a potential partner that were attractive, in addition to desiring another HIV-positive man, the respondents also expressed other preferences about an ideal partner's physical appearance and demeanor. Taken together, these preferences exemplify a man who is strong, masculine, smart, and generous: in sum, a 'protector' figure, one who can help and shield them from the turmoil of their lives. Of all the traits, masculinity was the most universally valued.

Benefits afforded by a partner's masculinity were both internal and external. Respondents liked the feeling of safety and security that resulted from having a partner with an especially masculine gender presentation. In some relationships, the partner's masculinity and greater social status (i.e., ability to 'pass' for white) provided other, external benefits to our interviewees, such as a higher social standing (by association) and increased access to venues where they might otherwise face discrimination and dismissal.

He was masculine, carried himself well. Um, we just had eye contact, when we first locked eyes it was just like, "Okay, it's gonna happen." It was the energy there. I guess in a sense when we were together, it was like real possessive, like he was mine, I was his. It was really – I liked it. Oh yeah, that was like from the beginning. If we had to go out, it was like, he had his arm around my shoulder, you know? It was interesting. It was just secure. It was security. (pt 19)

Outward appearing, he's masculine, you know. But he wasn't ashamed to be seen, you know, with a [more feminine appearing] gay man. Plus, you know, he's Mexican – but he's a Mexican that looks white. And that's another reason I was attracted to him, because – I don't know if you know about Missouri, but Missouri is still a borderline slave state. [laughs] And, being on his arm, I can get in places, you know, without having to go through the stigma of the black boy – "the nigger," as they would call it, you know. Stuff like that. (pt 27)

Other traits seen as attractive by participants included maturity, courage, and physical stature. Being associated with a strong, mature man resulted in the men feeling safer navigating their otherwise intimidating environments.

I don't know, I guess his smile and his eyes. In the way he carried his self. Yeah. And he's a lot more mature than his age... he carries himself like someone who's older. I mean, he makes me feel safe and comfortable... by taking me places and being with me. (pt 11)

He was a little of, where I was weak at, he was my strength in those spots, you know? We'd go different places and I would probably react a different way to different situations, which he's – like I said, more rugged – the 'thug' type. You know, he'd be out there, he would know how to handle that situation. (pt 10)

Respondents also mentioned evaluating potential partners based on the attention and romantic-themed gifts they were given.

To me, it was like, "Well, he must be a good provider since he bought me those expensive gifts," somebody that can support me, you know? Maybe we can, you know, do things together. And, uh, throwing gifts, and flowers, and all! Take me out to lunch and dinner everyday, and all that type of stuff. (pt 27)

CONCLUSIONS

This study presents data from 28 one-on-one interviews with HIV-positive MSM. The men all have experienced partner violence in at least one relationship in the past. The sample has a mean age of 44 years old, is racially diverse, includes a significant minority of male-to-female transgender individuals, and reports a predominantly gay sexual orientation. Overall, the men report low educational attainment and low income. As discussed at length in the previous section, these demographic factors feature prominently in the men's narratives of lifetime abuse which, sadly, culminated frequently in the violent partnerships they discussed in the interviews.

For these HIV-positive MSM, there are innumerable potential pathways leading from a disadvantaged background to becoming – and remaining – involved in an abusive partnership. However, in this cohort, the intervening factors suggested by the men seem

surprisingly consistent and, conceptually, hang together well. Many of the men evidence little insight into the ways in which contextual and situational factors have operated in their lives. While this complicated the researchers' task of characterizing the important influences in the men's lives, the team – thorough review of the transcripts and an iterative data coding process – has attempted to characterize the implicit organizing principles operating on the data. At the broadest level, the data analysts identified the themes of social isolation, the normalization of violence, and the experience of acquiring and living with HIV.

What do the data tell us? As presented in Part I of the results section, the amalgamation of poverty, childhood exposure to violence, mental health problems, substance use, and the stress caused by negotiating a same sex sexual orientation (and for some, additionally, an opposite-gender gender identity) comes together to create a context of deprivation, in which the men long for connection, love, and material comforts. As a result of these experiences, the men lack the skills and the opportunities to translate their desires into attainable goals. Several of these factors are well-supported as risk factors for the initiation of PV, especially poverty (Jewkes, 2002).

In Part 2 above, the intervening constructs are presented and supported by numerous quotes from the participants. To most efficiently present a rich understanding of the men's lives, we include a figure detailing the relations between key ideas discovered in the men's stories (Figure 1). This method, of visually structuring the observed associations between ideas, aims to help reduce the data to a more manageable quantity. In investigating potential patterns in the data from our 28 men, we identified four 'trajectories' that lead from societal marginalization and negative life experiences to the initiation and maintenance

of PV. As mentioned previously, there are no absolutes in qualitative research and, certainly, it is possible that a different data analytic team or a different sample may have resulted in the identification of different pathways among the variables of interest. However, for our team and our participants, these are the constructs that were most prominent – and we have attempted to depict in a meaningful way the pattern of associations of the constructs in the men’s lives.

One pathway, leading from social isolation to an intense fear of being alone, may result in the men becoming involved with abusive partners through inadequate screening of potential partners. The men may selectively attend to the potential partner’s HIV-positive status, become focused on ephemeral (i.e., having fun, wanting a fairy tale romance) rather than long-lasting aspects of a partner/relationship, or move in together after dating just for a short time. These latter activities may perpetuate a relationship with a partner who, potentially, our participant does not know well and who may turn out to be violent.

Other pathways seem to emanate more directly from a man’s HIV-positive status. One pathway – not discussed in the results section of this paper but worthy of mention nonetheless – leads to a man feeling the stigma of his HIV-infection and focusing on coupling only with other HIV-positive men. This process, called serosorting in the literature, is likely to decrease the man’s chances of having a violent relationship partner use the man’s HIV-positive status as a weapon of power and control. One finding from the literature on specific tactics of abusers is that they are thought frequently to tailor aggressive or controlling behaviors to the specific vulnerabilities of their partner (e.g., Relf, 2001). To the

extent that this is true, have a seroconcordant pair would neutralize one potential vulnerability (i.e., it would be a shared stigmatized identity rather than a unique one).

Another pathway mentioned frequently by the men highlighted the relation between awareness of the stigma they face due to having HIV and a strong perception that there are few other men with whom they could potentially partner. In a manner that harkens to classic social exchange theory (e.g., Murstein et al., 1977), the absence of alternative partners – coupled with the added burden of multiple stigmatized identities – seems to exert a strong influence on the man to remain in violent relationships longer than they might otherwise.

Finally, the final identified pathway in the data operates through the third major theme, normalization of violence. Given the incredibly broad range of exposure (breadth, frequency, severity) to potentially traumatic events throughout the men's lifespan – abuse during childhood, living on the street, commercial sex work, it is unsurprising that the men may have habituated to the uncertainty and fear that result from experiencing violence. Having a higher threshold (may be analogous to the impaired risk recognition introduced in the sexual revictimization literature) about when a situation is unsafe, or when a relationship is not merely annoying but is actually abusive, may work against the men if they partner with more violent or aggressive men. A penchant for interpreting controlling behavior as benign or jealous/aggressive behavior as caring (and, thus, feeling flattered) could result in a man's ending up with a violent partner or could contribute to a man staying longer in a violent relationship.

There are several limitations to this study, some of which are inherent in all qualitative work. The goal of qualitative work is never to generalize to the population but,

rather, to generalize to theory – we will not try to say that the experiences discussed previously represent the modal experience (i.e., by using qualitative methods and non-probability sampling, we could not provide adequate data on that point). Our data analysis aims to chronicle the range of possible experiences in a reasonable amount of depth, towards the end of stimulating future research. Still, it may be that these results lead us astray, conceptually. Identification of how far afield we researchers may have gone can only be accomplished by replication of this study or by extension to a quantitative study that aims to test empirically some of the hypothesized relations raised by the respondents (or the investigators, in response to the participants' comments). The chief limitation of all qualitative work is the potential for our biases, as researchers, to lead us to a dramatic misunderstanding (at best, or a willful misrepresentation, at worst) of the meaning conveyed by the respondents. In the more benevolent interpretation, there may exist a discrepancy between what was said (meant) by the patients and what was heard (interpreted) by the data analysts. To address these potential threats to validity, the design included recruiting a reasonably sized sample (i.e., to triangulate among multiple sources of data) and employed multiple coders and a consensual data analytic process (i.e., to triangulate among multiple interpretations of the data). These measures were intended to decrease the likelihood that bias introduced by any one individual could influence too strongly the results overall. In some studies, the authors build in a final phase of the data analysis – after the data collection is complete – in which they meet (individually or as a group) with previously enrolled participants and present their interpretation of the findings – asking the participants directly which aspects do and do not seem accurate, based on their experience. Given time

constraints and human subjects concerns about retaining confidential contact information of patients with multiple stigmatized identities, this procedure was not conducted in this study.

In summary, using one-on-one interviews of HIV-positive MSM, we have identified a multitude of factors that impact, and are impacted by, the longstanding vulnerability factors, social isolation, HIV, and normalization of violence reported by the men in the study. Almost any of the constructs identified in this research (or the ideas contained within them) is worthy of additional study, using qualitative or quantitative methods, depending on the research question. Specifically, the beliefs and behavioral tendencies reported by the participants – attentional bias in partner screening, perceived absence of alternative partners based on stigmatized condition, desire for a “protector,” etc. – appear less well described in the literature. In general, the PV research to date is concerned with predictors of onset or recurrence of violence in an existing relationship (e.g., Dutton et al., 2004) rather than looking at the specific beliefs or event-level behaviors related to (a) partner selection or (b) the onset of violence in a previously violence-free partnership. If, indeed, individuals who become involved in one violent relationship have a higher likelihood of becoming involved in additional violent partnerships, then the field ought to consider more fully the factors (specific, such as attitudes related to violence tolerance or violence risk recognition, as well as global, such as PTSD or depression symptom severity).

The men we interviewed showed themselves to be resilient individuals seeking a human connection while simultaneously burdened with long histories of abuse, neglect, and rejection. These men desire physical and psychological safety and security – for some, the romanticized ideal of true love, as well – while navigating in a world that reminds them

about the ways in which they are 'less than.' Simply surviving is a challenge when an individual is encumbered with the combination of a stigmatized medical condition and the concomitant illness, physical deterioration, and psychological distress. Clinicians working with HIV-positive MSM or with known victims of PV may find it beneficial to assess for – and target, when necessary – some of the beliefs and behavior patterns presented here (i.e., some of the potential pathways described above and depicted in Figure 1). Since many of the men interviewed for this study demonstrated little insight into the relations among these constructs in their lives, it would be particularly important to approach these issues sensitively, displaying respect for the multiple hardships the clients have faced and, in some ways, the inevitable (or at least unsurprising) nature of some of these patterns, given their complex and multifaceted life histories.

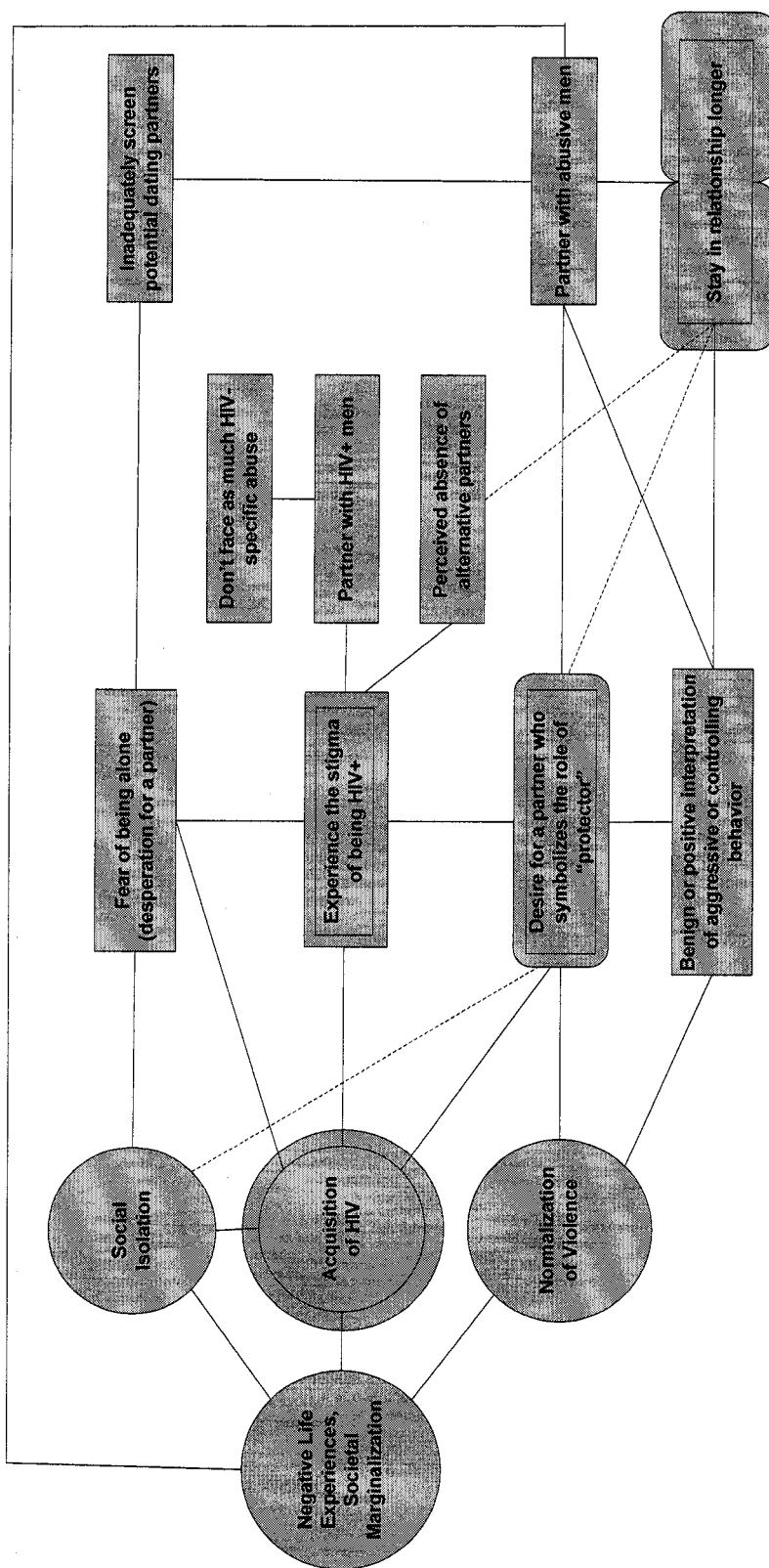


Figure 1. Qualitative Results Schema.

Table 3. *Qualitative Demographics.*

	<i>n</i>	<i>% of sample</i>
<i>Age</i>	$M = 43.6, SD = 6.2$	
<i>Gender</i>		
Male	24	86%
Transgender M to F	4	14%
<i>Sexual Orientation</i>		
Gay	23	82%
Bisexual	3	11%
Two Spirit	1	4%
Other	1	4%
<i>Sexual Attractions</i>		
Only to men	22	79%
Much more to men than women	3	11%
Slightly more to men than women	2	7%
Much more to women than men	1	4%
<i>Race and Ethnicity</i>		
White/Euro-American	13	46%
Black/African American	8	29%
Latino/Hispanic	2	7%
Biracial/Multiracial	3	11%
American Indian / Alaskan Native	3	11%
<i>Income</i>		
Less than \$10,000/year	17	61%
More than \$10,000/year	11	39%
<i>Employment</i>		
Disabled	20	71%
Employed Part-time	4	14%
Other (retired, student, unemployed)	8	28%
<i>Education Attained</i>		
Less than 12 years	4	14%
High school graduate	9	32%
More education or technical school training	15	54%
<i>Relationship Status</i>		
Currently in romantic relationship	12	43%
Living with current partner	6	21%

CHAPTER 3 – SURVEY STUDY

INTRODUCTION AND STUDY AIMS

The purpose of this study was to investigate the relative frequency of PV, and notable physical and mental health correlates, in the intimate relationships of HIV-positive MSM engaged with medical care at an urban outpatient HIV clinic, and to test a theoretical model examining the effects of violence on physical health, mediated by mental health. A comprehensive literature review (Chapter 1) identified multiple targets for future research, including exploratory, applied, and theoretical directions. Some novel hypotheses were tested in a qualitative study (Chapter 2), and data from that study were used to refine the content and methods of the current study. Data collected as part of the present survey study were used to address several limitations in the literature. Primary aims of the study are as follows:

Aim 1: High rates of PV among HIV-positive MSM have been identified in multiple studies (e.g., Greenwood et al., 2002; Shelton et al., 2005). In some reports, these rates are comparable to those reported by heterosexual women, the group universally thought to experience the most abuse in intimate relationships, irrespective of HIV-status (Bogart et al., 2005). The survey study investigated the rates of multiple domains of PV (physical, sexual, psychological) simultaneously in a sample of HIV-positive MSM. *Hypothesis:* Rates of PV in this sample will be comparable to those found in analogous studies using the same timeframe.

Aim 2: In addition to the domains of abuse (physical, sexual, psychological) commonly discussed in the PV literature, there has been concern that one partner might capitalize on the additional vulnerability that having HIV adds to an individual's life (Relf, 2001). The act of one partner using another partner's HIV-positive status as a means of exerting power and control has been reported anecdotally (e.g., Cooke, 2006) but no published empirical work has investigated its prevalence or impact. The survey study piloted questions about emotionally abusive acts related to one's HIV-positive status derived from qualitative interviews with HIV-positive MSM who had experienced PV (see Chapter 2).

Hypotheses: (a) Respondents will report HIV-specific abuse perpetrated by romantic partners, family and friends. (b) The HIV-specific abuse reported will be more likely to be perpetrated by non-partners (based on the results of the qualitative study, Chapter 2). (c) Because HIV-specific abuse is most closely related conceptually to psychological abuse, HIV-specific abuse will be correlated with adult psychological abuse and psychological PV.

Aim 3: Until recently, no reports of physical or mental health correlates of abuse in HIV-positive MSM had been published. The sole manuscript in this area reported on mental health problems in HIV-positive women (Axelrod et al., 1999). In the past two years, a few reports of such correlates of abuse have surfaced in the literature on HIV-positive MSM. Topics addressed by published analyses include the relations between partner violence and risky sexual behaviors (Bogart et al., 2005) alcohol or drug abuse (Bogart et al., 2005; Galvan et al., 2004), and a recent mood or anxiety disorder diagnosis (Galvan et al., 2004). These data come from separate reports of the same sample (the HCSUS study) and the authors assessed only the combination of physical and sexual (i.e., contact) PV as the predictor

variable. The survey study presented here will report on associations between each type of PV experienced and a variety of physical and mental health correlates, including psychological symptoms, substance use, coping, social support, functional status, HIV related virologic/immunologic indicators. *Hypotheses:* (a) Based on the findings of studies investigating the physical and mental health sequelae of PV experienced, we believe that higher frequency of PV will be related to more severe depression, anxiety, PTSD symptoms; greater use of substances and maladaptive coping strategies; lower social support, medication adherence, quality of life; poorer health status as measured by HIV biomarkers; and greater utilization of health care resources. (b) The domains of PV (physical, sexual, psychological) will be significantly related to each other. (c) The domains of PV will be significantly related to childhood and other adult abuse experiences.

Aim 4: The literature on theories attempting to explain the effects of violence on health, or even to identify mediating factors, is limited. Several promising models have been theorized but few have been tested empirically. In general, there are published data on the physical and mental health correlates of stress experiences generally (e.g., Cohen & Williamson, 1991; Kiecolt-Glaser & Glaser, 1995; Sapolsky, 2000), however, most do not investigate abuse experiences at all or PV specifically. Some posited mechanisms involve direct effects and others suggest indirect effects. In addition to identifying the rates and correlates of PV, a more basic scientific objective of this study was to use latent structural equation modeling techniques to test a mediational model, based on theory and relevant data, exploring the role of mental health in the association between partner violence and physical health (e.g., Resnick et al., 1997). As part of the survey study, questionnaires

inquiring about multiple aspects of each construct (PV, mental health) were given and physical health status was assessed via extracted medical data from participants' electronic medical records. *Hypotheses:* The final model will demonstrate (a) indirect effects, significant associations between the predictors (PV & adult abuse, with child abuse functioning as a covariate) and the mediators (mental health symptoms [depression, anxiety, PTSD, coping], substance use, social support, medication adherence), and between the mediators and the outcomes (HIV biomarkers, self-report quality of life, health care utilization). The model will support (b) direct effects, that is, the predictors will be significantly related to the outcomes.

METHODS

A. Procedures

1. Human subjects protection. This study received continuous approval from the University of Washington's Institutional Review Board for the entirety of data collection, analysis, and publication (06-1806-G). To further protect the privacy and confidentiality of the data provided by the participants, researchers applied for and received a Certificate of Confidentiality issued by the National Institute of Mental Health.

2. Recruitment sites. The Madison HIV/AIDS Clinic at Harborview Medical Center (Madison) serves an urban, medically underserved population of over 1,900 patients including ethnic minorities (44%), women (18%), intravenous drug users (25%), and homeless individuals (9%). Approximately 77% of the clinic population is fully or partly funded by public sources and 46% report an income below the federal poverty level.

Another HIV/AIDS clinic within the university's health system is the Virology Clinic at UWMC—Roosevelt Division (Virology), which serves 180 patients, including women (16%), ethnic minorities (33%), intravenous drug users (5%), and homeless individuals (2%). At Virology; 50% of the patients receive some form of public assistance.

3. Recruitment methods and eligibility. A purposive (i.e., targeted) sampling strategy (Watters & Biernacki, 1989) was used to recruit HIV-positive MSM study participants from two outpatient HIV clinics. At both clinics, interdisciplinary treatment teams comprising medical and mental health providers treat all patients. At the Virology site, referrals were made from the social work team who routinely meet with each patient at every visit. At the Madison site, referrals were made by a research nurse recruiter whose job involves initial screening of all clinic patients for any of the ongoing research trials for which the patient may qualify.

Potential participants at both sites were asked about their willingness to participate in a one-time, computer-based interview study investigating “certain life experiences you may have had and how they have affected your health and the way you feel about yourself.” At no time were patients told about the study's focus on interpersonal violence. The study was advertised to patients as Project LEAP (Life Experiences Affecting Prognosis). Interested patients either (a) were given a business card with the study's contact information or (b) added their name and contact information to a list of interested patients kept by study staff. Any patient who was reached over the phone or via email was scheduled for an appointment. For clinic patients who initially expressed interest but did not follow up – as well as those who denied interest when approached – no systematically collected data on

rates or reasons for refusal are available because of the format of the recruitment efforts.

Anecdotally, however, the recruiting nurse reported that the most common reason given was lack of time or being unavailable during available appointment times.

4. Procedures. Study visits were conducted either at the patient's usual clinic site or at the research offices of the investigators on the University of Washington (UW) campus, whichever was more convenient for them. Patients were formally screened for eligibility. Eligible patients were active patients at one of the UW-affiliated HIV clinics, over 18 years old, biologically male at birth, English-speaking, identified as an MSM, and agreed to all study procedures including participation in the computerized interview as well as the provision of consent for medical data to be extracted from the patient's electronic medical record. All patients who were referred and passed the initial screening were deemed eligible and enrolled.

Eligible patients were consented and instructed on how to fill out the computerized survey, delivered via laptop computer using ci3 software (Sawtooth Technologies, Skokie, IL). The use of a computer-assisted self-interview (CASI) aims to maximize time efficiency, increase confidentiality, decrease socially desirable responding, and aids in subsequent data management and analysis (e.g., Metzger et al., 2000; Turner et al., 1998). Participants filled out the survey in a private room or cubicle with a research assistant nearby to clarify questions or assist with technical problems. At the close of each interview, participants were paid \$20 in cash for their time and given a list of free or low-cost community resources related to domestic violence, housing, employment, and those focused on the medical and mental health needs of people living with HIV. After each interview, research staff collected

data directly from the patient's electronic medical record, to save time and increase accurate reporting of each participant's medical history. A total of 167 participants enrolled in the study.

5. Measures. Well-validated measures with established psychometric properties were administered whenever possible and feasible. The administration of the survey instruments using CASI technology permitted the use of skip patterns embedded within the questionnaires to eliminate redundant or irrelevant questions based on each participant's previous responses. Questions included in this study concerning abuse experiences were based on behavioral definitions of abuse, rather than subjective victimization, as these tend to be more valid and, thus, yield higher rates than subjective measures (Silvern et al., 2000). For some measures, especially those concerning relationship experiences, terminology was modified to replace the standard "husband" and "wife" with more inclusive terms such as "romantic partner" or "dating partner" in order to make them applicable to individuals in same-sex relationships.

B. Measures

1. Demographics. Basic demographic information about the sample was collected through a series of questions about age, race, income, level of education, employment and disability status, and living situation. Other questions asked about the respondents' gender identity and sexual orientation. The measure also inquired about whether or not the participant was currently involved in a romantic relationship. In the analyses, single items from this measure corresponding to the demographic of interest were used.

2. Social desirability. To place the data from each participant into a context that allows us to estimate biased responding, the short-form (10 items, true or false) of the Marlowe-Crown Social Desirability scale was administered (Crowne & Marlowe, 1960). In the analyses, this measure was operationalized as the mean of all items, after reverse coding the appropriate items. Chronbach's alpha for the measure in this sample is .74.

3. Childhood abuse experiences. Measures of childhood experiences measured occurrence, timing, and frequency of physical, sexual, and psychological abuse. The measures were based on commonly accepted definitions of child abuse constructs; to reduce participant burden, abbreviated versions of commonly used measures were employed. The measures used were based on the Childhood Maltreatment Interview Schedule – Short Form (CMIS-SF; Briere, 1992). Questions from CMIS-SF subscales used were those concerning physical abuse (physical injury by a parent or adult caretaker before age 18; 5 items), sexual abuse (sexual abuse by someone who was 5+ years older than the respondent and/or by someone of any age who used force or coercion; 2 items), and psychological abuse (emotionally abusive actions by a parent or adult caretaker before age 18; 7 items). Questions assessed whether such experiences occurred and, if so, age at first abuse experience, frequency, and characteristics of the perpetrator. Chronbach's alphas for the subscales in this sample are .82, .63 (correlation because there are only 2 items), and .97, respectively. In the analyses, the responses for these measures (estimation of frequency for various behaviorally defined acts) was operationalized as the sum of items endorsed across questions.

4. Adult abuse experiences. Measures of adult abuse experiences consisted of behaviorally-anchored questions about physical, sexual, and psychologically abusive acts

perpetrated on the respondent. The questions were based upon those from established measures but were truncated to decrease participant burden. Participants were asked about their experiences with crime victimization (verbally attacked, physically injured) adapted from Herek, Gillis, and Cogan (1999). Participants were asked whether they have been threatened with physical violence, harassed, stalked or followed, had property vandalized or stolen, were mugged, beaten up, or assaulted with a weapon. Frequency of acts was assessed as well as characteristics of the perpetrator. Three items about serious physical abuse ($\alpha = .76$) and one item about serious psychological abuse were used. Respondents were also questioned about sexual abuse experiences, using an abbreviated version of the Sexual Experiences Survey (SES; Koss, Gidycz, & Wisniewski, 1987), with questions designed to gather information about progressively more severe degrees of sexual victimization (9 items; $\alpha = .93$).

5. Partner violence. Physical, sexual, and psychological abuse in current and all prior relationships was assessed with the complete Revised Conflict Tactics Scale (CTS2; Strauss et al., 1996), a previously validated 78-item measure with established psychometric properties. Questions on the CTS2 use non-gendered terminology to inquire about abusive acts that occurred in a relationship. Parallel questions are presented, i.e., the measure asks about whether a respondent was the victim or the perpetrator of a given behaviorally defined act. For victimization, the five subscales include Physical Assault (12 items), Sexual Coercion (7 items), Psychological Aggression (8 items), Injury (6 items), and Negotiation (6 items). The timeframes investigated include the past year (standard CTS2), past 5 years (to match up with Greenwood et al., 2002), or ever in one's life. Response choices yield ordinal frequency

data for the past year only and dichotomous data for the longer timeframes. In the analyses, this measure was operationalized as the sum of ordinal responses to questions in the subscales about physical abuse ($\alpha=.89$), sexual coercion ($\alpha=.70$), and psychological abuse ($\alpha=.83$).

6. HIV-specific abuse. Nine questions about abusive experiences perpetrated by a friend, relative, or relationship partner focused on ways in which a respondent's HIV-positive status may have been used as a means of exerting control. These questions, created by the investigator based on theory (Relf, 2001) and recent qualitative work (Pantalone, unpublished manuscript), consisted of items such as, "Has anyone ever threatened to tell your employer about your HIV-status?" Ordinal response options ranged from 0 (this has never happened) to 6 (more than 20 times in the past year). Participants could also indicate that a given event had not occurred in the past year but had occurred later in the past (past 5 years, ever). For each base item endorsed as positive, a series of follow-up questions asked about the frequency and characteristics of the perpetrator. In the analyses, this measure was operationalized as the sum of ordinal categories endorsed. Chronbach's alpha for the measure in this sample is .84.

7. Anxiety. Participants filled out the state anxiety (10 items) and trait anxiety (10 items) subscales of the State-Trait Personality Inventory (STPI; Spielberger et al., 1979). The items included on this scale are those that performed best from the State Trait Anxiety Inventory, another commonly used (but proprietary) measure of state and trait anxiety. Respondents are asked to report to what extent they feel calm, for example, at the moment of the interview (state anxiety) and, in general, how often they feel like a failure (trait

anxiety). Response choices range from 1 (not at all) to 4 (very much so) for the state subscale and 1 (almost never) to 4 (almost always). In the analyses, this measure was operationalized as the sum of the 10 items for each subscale (total subscale score). Psychometric properties for the STPI state and trait anxiety subscales are similar to those of the STAI; in this sample, alphas are .91 for the state subscale, .81 for the trait subscale, and .91 for the overall measure.

8. Depression. Depressive symptoms were measured with the Center for Epidemiological Study–Depression Scale (CES-D; Radloff, 1977). This commonly used instrument asks respondents to rate the frequency with which they experience any of 20 depressive symptoms during the past week. Sample items include, “I thought my life had been a failure” and “I had crying spells.” Response choices range from 1 (rarely or none of the time; less than 1 day/week) to 4 (most or all of the time; 5-7 days/week). In the present analyses, this measure was operationalized as the sum of the items endorsed, the scoring method recommended by the authors of the measure. Chronbach’s alpha in this sample is .92.

9. Social support. The 19-item Medical Outcomes Study - Social Support (MOS-SS) survey was used to assess how often respondents have available various types of support, including companionship or assistance, when needed (Sherbourne & Stewart, 1991). In measuring social support, it is especially important to measure the social support that is available; other social support constructs, such as social support needed, are more variable depending on the respondent’s current circumstances. Items include, “someone to confide in or talk to about yourself or your problems” and “someone to do something enjoyable

with” and are scored from 0 (none of the time) to 4 (all of the time). A final item was added asking the number of close friends or relatives with whom participants feel comfortable talking about their HIV-positive diagnosis. Final scores were derived by taking the sum of the items endorsed ($\alpha = .97$).

10. PTSD. Posttraumatic stress symptoms were measured by the self-report version of the PTSD Symptom Scale (PSS-SR; Foa et al., 1993). Respondents were first asked if they have experienced a Criterion A event and, for those who endorse a specific event, a series of 17 questions about current PTSD symptoms follows. Questions inquire about the frequency of symptoms within the past week; items include, “Trying not to think about, talk about, or have feelings about the trauma” and “Feeling distant or cut off from people around me.” Response choices range from 0 (not at all/only once) to 3 (almost always/5 or more times per week). In the present study, the PSS was operationalized as the total score (sum of ordinal frequency ratings for all symptoms) for the 84 participants endorsing a Criterion A event. Chronbach’s alpha in the current sample is .95.

11. Substance use. Frequency of alcohol and drug use during the past year was measured with the Daily Drug Taking Questionnaire (DDTQ; Collins et al., 1985). For each of 17 substances presented, respondents were asked to indicate their level of use during the past year. Response options ranged from 0 (never) to 7 (7 days a week). Additionally, because of the well-documented, high rates of crystal methamphetamine use among MSM (Buchacz et al., 2005), a series of in depth follow-up questions specific to crystal methamphetamine use (Menza, personal communication) were asked for respondents who indicated any use during the past year. In the present study, several substance use questions

were combined into a composite variable comprised of club drugs – that is, drugs that are common in the rave and circuit party scenes (Mansergh et al., 2001). The measure consisted of the mean use in the past year of (1) powder cocaine, (2) amphetamines in general and specifically (3) crystal methamphetamine, (4) ecstasy, (5) barbiturates (especially GHB), and (6) hallucinogens like acid or LSD.

12. HIV medication adherence. Adherence to HIV medications was measured by a series of investigator-created questions based on the recommendations set forth by Simoni and colleagues (2006) in their systematic review of self-report adherence measures. There are no uniformly accepted HIV medication adherence measures in the field. Recent evidence indicates that questions inquiring about missed doses using a “past 30 days” timeframe may more accurately reflect true adherence (Lu et al., 2007). Respondents were asked in multiple ways to indicate their level of adherence, e.g., “How many doses of your HIV medications did you miss in the last 7 days?” and “Sometimes, if you feel worse, do you stop taking your HIV medicines?” Some items required the participant to type in the number of missed doses and some had ordinal response options. In this study, the question about missed doses in the past 30 days was used, yielding a continuous measure of adherence/nonadherence.

13. Coping. The 28-item Brief COPE (Carver, 1997), a well-validated abbreviated version of the full COPE Inventory (Carver et al., 1989), was used to assess the frequency with which respondents used a variety of coping methods to cope with a specific stressor. In this study, we chose “living with HIV.” Items on the shorter version were chosen because of their strong factor loadings from previous factor analyses of the longer instrument which was originally designed to measure coping with a medical condition. The Brief COPE asks

about the frequency of behaviors (thoughts and overt actions) an individual has employed in response to a stressor. Participants choose the frequency with which they have used each strategy, from 0 (I have not done this at all) to 4 (I have done this a lot), since their HIV-positive diagnosis. Sample items include, "I've been using alcohol or drugs to make myself feel better" and "I've been getting help and advice from other people." The full scale can be divided into 14 two-item subscales such as denial, self-blame, humor, acceptance, and so on. However, the authors of the measure give no guidance about how to score the measure but, rather, encourage each investigator to determine which method best fits their research question. In the present study, we were especially interested in the maladaptive coping strategies and, thus, a composite measure was created with the sum of item scores from the Self-distraction, Denial, Substance use, Behavioral disengagement, and Self-blame subscales. This 10 item measure yielded an alpha of .80.

14. Quality of life: Health-related quality of life (HR-QOL) and perceptions of health status were measured by the Medical Outcomes Study HIV Health Survey (MOS-HIV; Wu et al., 1997). This widely used, well-validated 35-item instrument covers 10 dimensions including general health perceptions, physical functioning, role functioning, pain, social functioning, mental health, energy, health distress, cognitive functioning, and quality of life. Many of the questions are taken from similar QOL measures, including the SF-36 (Ware & Sherbourne, 1992). Timeframes included today, a typical day, and within the past 4 weeks. Sample items include, "Were you discouraged by your health problems?" and "How much did pain interfere with your normal work?" Specific response choices varied based on question type but most were Likert-scale ratings about frequency of problems or degree of

impairment. In total, 19 items were used in the present analysis; this included items from all physical health focused subscales and excluded all items from the mental health and cognitive functioning subscales, because of potential redundancy with the mental health variables used as mediators. Chronbach's alpha in the current sample is .78.

15. Health Status. Electronic medical record data were collected using a standardized form (Appendix B) by one of two research assistants. Each research assistant collected data for approximately one half of the sample. As a reliability check, 10% of each research assistant's work was also completed by the other research assistant. Comparing exact matches across the 80 variables of interest for each record there was 93% agreement, which we judged to be acceptable. The data collected, from the year preceding the data when the participant filled out the CASI questionnaire, were in the areas of (a) HIV health, (b) health care utilization, and (c) physical health problems for which the patient received treatment. The physical health problems included in the medical record review include those commonly found in HIV-positive individuals as well as acute physical injuries and those chronic, non-specific health concerns typically reported by victims of PV. In this study, we operationalized the categories of medical data as most recent viral load and CD4 count (HIV health); number of inpatient, outpatient, and ER visits (health care utilization); and the presence or absence of treatment for a variety of medical problems (chronic fatigue syndrome, broken bones, chronic pain).

C. Analysis Plan

Initial descriptives including frequency distributions, measures of central tendency, and variation, were run on all scales and key individual variables included in the analyses. Scatter plots were examined to detect outliers or other distributional abnormalities. Bivariate analyses examined the relation between demographic covariates and the main predictors, mediators, and outcomes. Factors included in the initial analyses were age, education, income, race, work status, and living situation. Also, correlations between social desirability and the main outcomes were investigated, as well as the effects of enrollment site. Frequency and correlates of each type of PV were investigated.

Structural equation modeling (SEM) procedures using Amos 5.0 (SPSS Inc., Chicago, IL) were used to test the conformity of this sample to the causal model hypothesized a priori in Figure 2. SEM, basically path analysis with latent factors, is a measurement procedure that allows evaluation of both the latent factors in a model as well as the measurement of the model fit as a whole (McDonald & Ho, 2002). Using SEM allows us to test the relations of all variables and underlying constructs simultaneously. The major advantage of employing this approach is its ability to identify direct and indirect effects (and the corresponding standard errors) as well as measures of overall model fit. Moreover, complications associated with measurement error, correlated measurement error, and feedback can be taken into account in the model (e.g., Kline, 1998).

The sample size in this study ($N = 160$) is considered small for SEM. However, our analyses used maximum likelihood estimation (MLE) which corrects for moderate skewness found in some measured variables and has been shown to perform reasonably well in SEM even for small samples (e.g., Hoyle & Panter, 1995). Model fit to the sample data was

assessed through the two-step testing procedure commonly used for this purpose (Anderson & Gerbing, 1988). That is, the hypothetical model (also called the full model or the saturated model) was tested with all relevant paths free to vary and the fit measured. Then the trimming process began, in which the standardized regression weights for each path were examined and non-significant paths were set to zero. Trimming is an essential part of the SEM process as model builders attempt to build a theoretically sensible and parsimonious model.

Although the paths that were set to zero were not statistically significant on their own, many of them – especially the marginally significant trends – were helping the model fit by contributing to the overall variance explained. Once the trimmed model was finalized (Figure 3), fit statistics were computed again and the chi-square statistics of the two models were compared.

Multiple goodness-of-fit indices were considered in evaluating model fit. The chi-square statistic, sensitive to the assumption of normality, is a commonly reported indicator of fit. However, chi-square is also quite sensitive to sample size, which is small in this study. Therefore, other fit indices were considered as well. The Comparative Fit Index (CFI; Bentler & Bonett, 1980) provides a fit index that measures the reduction in lack of fit of the model compared to a baseline model. CFI is less sensitive to sample size and indicates an adequate fit for values equal to or above .90 (Klein, 1998). Additionally, the Root Mean Square Error of Approximation (RMSEA) index, which tests the error per degree of freedom, was examined. For RMSEA, values under .08 and the lower bound of the confidence interval under .05 indicating an adequate fit (McDonald & Ho, 2002).

RESULTS

A. Preliminary Data Analyses

Data from 167 participants were screened for outliers, skewness, kurtosis, and missing data using SPSS 14.0 (SPSS, Inc., Chicago, IL). Demographic data on the sample and descriptive statistics on key variables are presented in Tables 1 and 2, respectively. When necessary, variables were transformed to meet the assumption of normality (Kline, 1998). For all factors and indicator variables in this study, the transformed response ranges were normal with the skew and kurtosis within the acceptable ranges. Missing data from items in scaled scores were replaced with the mean of the answered items in the scale or subscale, provided more than 50% of the questions were answered. In total, seven participants were excluded (listwise deletion) from the analyses. Reasons for exclusion included technical difficulties (1 pt), unfinished CASI interviews resulting in excessive missing data (2 pts), duplicate enrollment (2 pts), and an improbable pattern of responding (2 pts). The latter category included two respondents who chose the answer choice “1” for the final 300 questions of the survey. In the case of duplicate enrollments, the data from the first enrollment were kept and data from the second enrollment were excluded.

B. Relative Frequency of Partner Violence (Aim 1).

Data on the relative frequency of various domains of PV is printed in Table 6. Across categories, the men reported experiencing significant rates of PV in the past year, including 20% for both physical and sexual abuse and more than 50% for psychological

abuse. For physical, sexual, and psychological PV, five year rates were approximately 30%, 25%, and 60% (respectively) and lifetime rates were 40%, 33%, and 75%, respectively. In the fourth column, we report, for comparison, the results of our measure of HIV-specific abuse perpetrated by a relationship partner. These rates are lower than those reported for the other categories of PV.

C. Relative Frequency of HIV-Specific Abuse (Aim 2).

Participants answered a series of questions about abusive experiences where the respondent was a victim of psychological abuse based specifically on being HIV-positive. The nine questions presented are listed in Table 7, along with information about the perpetrator's relationship with the participant. The columns in the table correspond to the question, the proportion of the sample who endorsed that someone committed one of the acts listed towards the respondent, and then the number of participants who indicated that the abuse was perpetrated either by a relationship partner (casual or exclusive) or a family member (parent, sibling, cousin). Note that multiple perpetrators could be identified for each item, i.e., the relationship to perpetrator category is not mutually exclusive. Overall, the most common experiences endorsed by participants were having been told (a) that no one else will want to have sex with them because of their HIV-positive status, (b) that HIV makes them bad or is a punishment, or (c) having experienced an unwanted disclosure of their HIV-positive status to friends, family, or neighbors. The measure of HIV-specific abuse was not correlated with adult psychological abuse ($r = .22, ns$) or psychological PV ($r = .04, ns$). The

HIV-specific abuse measure was not related to any of the PV measures but was related to adult physical ($r = .35^{**}$) and sexual ($r = .27^{**}$) abuse.

D. Physical and Mental Health Correlates of Various Domains of Abuse (Aim 3)

Correlations of all variables included in the analyses are presented in Table 8.

Physical, sexual, and psychological partner violence are presented in columns and rows 11, 12, and 13, respectively. The measures of these domains of violence are moderately to highly correlated with each other and with several other measures. Respondents who reported more frequent physical PV in the past year were older, reported lower income, and reported greater frequency of both childhood and adult physical abuse. The physical PV victims also reported lower quality of life overall as well as more symptoms of depression, anxiety, and PTSD, and more frequent use of illegal drugs and maladaptive coping strategies. Participants who reported sexual PV in the past year also reported more frequent substance use, adult sexual abuse, and physical and psychological PV. Respondents endorsing more frequent psychological PV were younger, on average, and reported more frequent childhood physical and psychological abuse, adult physical abuse, and physical and sexual PV. These participants also scored higher on the measures of depression, anxiety, and PTSD symptoms as well as lower on the measure of quality of life.

E. Model Testing (Aim 4).

1. Descriptives. Descriptive statistics for all of the variables used in the SEM model are displayed in Table 5.

2. Correlations. Bivariate correlations among all measured variables in the theoretical model appear in Table 8 and a summary of those relations for physical, sexual, and psychological PV appears in the text above. As mentioned previously, the three types of partner violence hung together well and formed a latent factor. In terms of other potential latent constructs, the child abuse variables (physical, sexual, & psychological abuse) were also significantly related; the three variables were significantly interrelated except childhood physical and sexual abuse, although both of those measures showed strong to medium strength correlations with child psychological abuse. The adult abuse variables (physical, sexual, psychological, & HIV-specific abuse) variables were significantly correlated with each other except, unexpectedly, adult psychological abuse and HIV-specific abuse. For the mental health cluster, the measures were all highly intercorrelated in the expected direction, especially depression and anxiety symptoms. Social support correlated with income, adult physical abuse, and symptoms of depression, anxiety, and PTSD. Illicit substance use was significantly associated with higher frequency of physical and sexual PV and maladaptive coping. It was also associated in the expected direction with viral load, quality of life, and ER visits. Unexpectedly, more frequent substance use was correlated with being older and having a higher income. HIV medication adherence was associated with surprisingly few variables, including depression, anxiety, and a history of childhood psychological abuse. Few of the physical health outcomes were related. Viral load was significantly correlated with the other three health outcome measures. The only other significant association was between CD4 count and quality of life, and this relation is weak. Surprisingly, the composite measure

of major medical problems treated in the past year was not correlated with any other study variable and was dropped from further analyses.

3. Covariates. Potential covariates shown in the literature to relate to PV, mental health, and the health outcomes were examined. Covariate analyses indicated no site differences and few associations with race. A notable exception was that blacks had a lower viral load compared to other races. Age, income, and education were related to measures of abuse, mental health, drug use, and health outcomes in the expected directions. Social desirability was related to almost all of the abuse and mental health variables. Income and education were correlated ($r = .22, p < .01$) and performed similarly with key variables. Thus, in subsequent analyses, we included only income as a covariate. Age and social desirability were also retained as covariates because of their strong correlations with the mediators and outcomes.

4. Structural equation modeling. The hypothesized theoretical model tests the indirect effects of partner violence on physical health and functioning through the mediators of mental health, substance use, social support, and medication adherence. The model, displayed in Figure 2, posits that childhood abuse experiences would predict both higher levels of adult abuse and PV, which we would expect given the substantial literature on revictimization. Adult abuse and PV would be positively associated. Both PV and adult abuse would, in turn, predict poorer mental health, lower medication adherence, less social support, and greater substance use. Finally, the four mediators would be related to the physical health outcomes chosen for this analysis; we would expect a higher viral load and number of ER visits in the year preceding the interview, and lower CD4 cell count and self-

reported quality of life. The covariances between variables at each level (i.e., covariates, predictors, mediators, health outcomes) were also estimated. Based on preliminary analyses, some variables that did not perform well at the bivariate level were excluded from further analyses (e.g., major medical problems).

Forming latent variables. Based on the low base rates of each type of abuse and the typically high correlations among the components (e.g., physical, sexual, and psychological PV), latent factors were created to combine the multiple manifest measures. Thus, latent factors were created for child abuse, adult abuse, and partner violence. The latent factor for child abuse was formed using three indicators, child physical abuse, child sexual abuse, and child psychological abuse; adult abuse comprises four indicators (physical, sexual, psychological, HIV-specific abuse); and partner violence comprises three indicators (physical, sexual, psychological PV). Overlap between adult abuse and partner violence, for example, was investigated in preliminary analyses which showed that these were separate but related constructs. Similar analyses were conducted with all latent factors (see correlation matrix, Table 8 for more detail about the interrelations of the variables). The latent factor created for mental health consists of four indicators (anxiety, depression, PTSD, coping). In constructing this factor, based on the high correlations among the variables and because of the considerable construct overlap between depression, anxiety, and PTSD (all psychiatric disorders, conceptually different from the measure of coping), we allowed the error terms of these three indicators to be correlated. In the final model, loadings for each of the measured variables included in the latent factors were significant contributors to the factor.

Factor loadings for the indicators of the latent variables are shown in Figure 3. The latent variable child abuse accounted for 31% of the variance in child physical abuse, 11% of the variance in child sexual abuse, and 60% of the variance in child psychological abuse. The latent variable adult abuse accounted for 63% of the variance in adult physical abuse, 24% of the variance in adult sexual abuse, 45% of the variance in adult psychological abuse, and 17% of the variance in HIV-specific abuse. The latent variable partner violence accounted for 62% of the variance in physical PV, 25% of the variance in sexual PV, and 73% of the variance in psychological PV. The latent variable mental health accounted for 54% of the variance in depression, 41% of the variance in state anxiety, 62% of the variance in PTSD, and 36% of the variance in maladaptive coping.

Two-step model testing. The hypothesized structural path model in Figure 2 displayed adequate fit ($\chi^2 [192] = 256.455, p = .001, CFI = .916, RMSEA = .046$). While the chi-square statistic was significant, we report it here mostly to conform to SEM convention. Since the chi-square result is so easily affected by sample size, there is a growing movement to eschew this test in favor of other significance tests (McDonald & Ho, 2002). Inspection of the path coefficients revealed that several paths did not differ significantly from zero, including the paths predicting adherence and social support, and most of the covariances among mediating variables and among outcomes. In the final model (Figure 3), non-significant paths were fixed to zero with the exception of the paths from substance use to viral load ($\beta = .134, p = .073$) and from adult abuse to partner violence ($\beta = .280, p = .062$), both of which approached significance. All other paths left free to vary in the final model remained significant.

The final, trimmed model (Figure 3) continued to fit the data reasonably well (χ^2 [242] = 310.456, $p = .002$, CFI = .910, RMSEA = .042), with the same two fit indices (CFI, RMSEA) showing a good fit of the data to the model. Chi-square difference testing (e.g., Anderson & Gerbing, 1988) was used to compare the hypothesized model to the final model. Results indicated that the final model did not differ significantly from the hypothesized model (χ^2_{diff} [52] = 54.001, χ^2_{crit} [52] = 69.83, $p > .05$, *ns*), even with the paths leading to and from several mediators set to zero. Examination of the squared multiple correlations among the variables indicates that the final model accounted for statistically significant portions of the variance in the outcomes, including 4% of the variance in ER visits, 4% of the variance in CD4 count, 10% of the variance in viral load, and 57% of the variance in self-reported quality of life.

As expected, child abuse predicted both higher levels of adult abuse and partner violence. Adult abuse was not significantly related to any of the mediators. However, there was a marginally significant positive covariance between adult abuse and partner violence, suggesting that adult abuse has some indirect effect on the mediating mechanisms and outcomes through partner violence. Partner violence was significantly associated with both mental health and substance use. Together, mental health and substance use were related to all four outcomes. Higher viral load, lower CD4 count, and lower QOL were predicted by mental health, and lower QOL and more ER visits were predicted by substance use. The data also revealed a trend between substance use and higher viral load. Covariances within each level were, for the most part, non-significant in the final model. However, there was a significant correlation between the covariates social desirability and age; between adult abuse

and partner violence; between depression and anxiety within the mental health factor; and between viral load and CD4 count among the outcomes.

DISCUSSION

A. Relative Frequency of Partner Violence (Aim 1).

We measured PV using the CTS2, the instrument considered the gold standard in PV research. Using the physical, sexual, and psychological PV subscales, we assessed for the relative frequency of violence in multiple timeframes, including past year (or last relationship, if the participant had not had a romantic relationship in the past year), past five years, and ever. A non-zero score on a given subscale was considered a positive screen for that type of PV. The goal was to compare our estimates with those published previously (e.g., 5 years was used in Greenwood et al., 2002) and, as well, to stay true to the measure (i.e., its psychometric properties were established using a past relationship or past year timeframe). For the past year, 21% of participants endorsed physical PV (compared to 31% for 5 years, 41% lifetime), 20% of participants endorsed sexual PV (compared to 23% for 5 years, 33% lifetime), and 51% of participants endorsed psychological PV (compared to 62% for 5 years, 74% lifetime). Interestingly, the biggest proportion of PV occurred in the respondents' current, recent, or last relationship. Moving back in time, twice as many participants report at least one instance of physical PV ever but the change is much smaller for sexual and psychological PV. Lifetime rates are only 1.5 times as many.

Results indicate that, of the nine violence type \times timeframe estimates in our data that match with those in previously published work, our estimates appear similar to three (past 5 years physical, lifetime physical, lifetime sexual), appear higher than three (past 5 years sexual & psychological, lifetime psychological), and appear lower than three (past year physical, sexual, & psychological). Variations in sampling and recruitment techniques, sample size, and measures likely play a role in the observed differences across studies. Four studies contribute those nine frequency rates. Both the past year (Craft & Serovich, 2005) and lifetime (Nieves-Rosa et al., 2000; Shelton et al., 2005) figures come from studies with small sample sizes, i.e., 51, 84, and 54, respectively. The study using the past five years timeframe, conducted by Greenwood and colleagues (2002), used a random digit dialing and recruited a sizable sample ($n = 442$) of HIV+ MSM; thus, those results are likely more accurate for the population of HIV+ MSM as a whole (since the other studies mostly sampled men engaged in health care). However, the rates in the Greenwood study may be artificially low due to the fact that the questionnaires were administered by an interviewer, increasing the probability of socially desirable responses. Only one of the four studies used a CASI for the survey battery. The rates we report may be more accurate, as far as social desirability is concerned, and utilize established measures in the field rather than investigator created measures or single item responses. Future research in this area would benefit from more strict use of established PV measures delivered via CASI to participants sampled probabilistically (as much as is possible, given the hidden nature of this population).

B. Relative Frequency of HIV-Specific Abuse (Aim 2).

Participants endorsed relatively low levels of HIV-specific abuse, based on the nine questions that we created and piloted in the qualitative study (Table 6). The rates (counting any participant with a non-zero score) were much lower than those found for the other abuse measures. In this sample, 9% of the men reported some HIV-specific abuse perpetrated by a romantic or dating partner in the past year, 11% in the past five years, and 14% sometime in the man's life. The HIV-specific abuse questions were intended to capture abuse (psychological, control/intimidation) as perpetrated by romantic partners. However, the participants in the qualitative interviews were consistent in their response to the piloted questions: while the men did face the kind of HIV-related discrimination tapped by these questions, the perpetrator was rarely a romantic partner and was more frequently a family member or friend.

Examining the proportion of perpetrators of abuse who were partners versus non-partners (Table 7), this hypothesis was supported. For none of the nine questions did more than half of the respondents indicate that a partner perpetrated the act. The most commonly endorsed question about HIV-specific abuse was that which asked the participants if they had ever been told that no one would ever want to have sex with them again; just over half of the respondents endorsing that item reported that one of the people who did this to them was a romantic or dating partner. The other two most frequently endorsed items, having their HIV-positive status disclosed without their consent and being told that having HIV is a punishment, were more often perpetrated by other people in a participant's life, other than a romantic or dating partner. Further, contrary to the hypothesis, HIV-specific abuse was not

significantly associated with any of the psychological abuse variables. In fact, this measure was unrelated to any of the PV measures, although it was significantly moderately correlated with both adult physical and sexual abuse. Given the low proportion of HIV-specific abuse events perpetrated by a partner, it is unsurprising that the measure is more closely related to violent acts perpetrated by non-partners. Future research should continue to examine the potentially harmful ways that an individual's HIV status may be used as a tool of subjugation. Identifying additional HIV-specific abuse behaviors may be useful, to the extent that the construct is not truly tapped by the items we have created. Eventually, it may be useful to examine the contexts in which these behaviors do show up, rare as they might be. Investigators may also look at the differential effects on mental and physical health of HIV-specific abuse by different perpetrators.

C. Physical and Mental Health Correlates of Various Domains of Abuse (Aim 3)

At the bivariate level, experiencing more frequent physical, sexual, and psychological PV (as measured by the appropriate CTS2 subscale) was related to a variety of physical and mental health indicators, as expected. Also, the three domains of PV were all significantly related to each other and to many of the other abuse measures. In terms of associations among the abuse variables, physical PV was related to both childhood and adult physical abuse. Sexual PV was related to adult sexual abuse. Psychological PV was related to psychological abuse as a child and to physical abuse as a child and as an adult. Results indicate that, for men who experience PV, they are likely to be subjected to a broad range of PV behaviors, not just limited to physical, sexual, or psychological PV alone. Men who

experience PV, as expected, typically also have been the victim of abuse during childhood or during adulthood perpetrated by non-partners. These results are consistent with the violence victimization literature and the focus more recently on previous abuse experiences increasing the likelihood of being abused again (i.e., revictimization).

Regarding associations with mediators, physical and psychological PV had the clearest association with the mental health variables (depression, anxiety, PTSD symptoms). In terms of mediators, sexual PV was only related to substance use, as was physical PV. Interestingly, HIV medication adherence and social support were not related to any of the PV variables. In terms of outcomes, all three types of PV were significantly related to self-reported quality of life, which is focused on concerns about physical health problems. None of the PV variables were associated with any of the medical-record extracted outcome measures (VL, CD4, ER visits, major medical problems). Most surprising about these results is the lack of a correlation between PV and medication adherence or social support. Evidence in the literature has not suggested a strong relationship between abuse experiences and adherence per se (and this was true for the results of the qualitative study [Chapter 2] as well). However, as we have seen, the various PV variables are strongly related to many of the known correlates of adherence (age and mental health, for example). This may indicate that, if a significant relation were to exist between PV (or any of the abuse variables, actually) and adherence, it may be an indirect one, operating through the constructs with which both of these variables are correlated, such as mental health. Additionally, social support – a frequent correlate of adherence (e.g., Simoni, Frick, & Huang, 2006) – was not related to the PV measures, either. Typically, victims of PV report lower social support, which makes sense

given the physical and psychological isolation they often experience. One explanation might be a measurement problem, although social support and PV were measured using standard measures with established psychometric properties. Further investigation of the relations between these variables is warranted, given the potential for psychosocial intervention to address some or all of them.

D. Model Testing (Aim 4).

Our efforts at model building were reasonably successful and, overall, we found support for our mediational hypothesis: violence had a significant indirect effect on physical health through mental health. However, no direct effects of violence on physical health were observed in either the full or trimmed models.

As a test of our hypothesis, using the correlations described in Aim 3, we assembled latent factors (child abuse, adult abuse, partner violence, mental health) using multiple correlated measures of each construct as indicators. We placed these latent factors in a model alongside measured variables (a “mixed model”) and investigated the model fit. All of the latent factors hung together well and functioned adequately in the model as a whole. After obtaining fit statistics for the full model (two of three indicated very strong model fit), we trimmed the non-significant paths until only significant (and trend) paths remained. We would expect the fuller model to fit the data better; simply by virtue of having more variables in the model, more of the variance would be explained. Re-examination of the model fit post-trimming showed a non-significant χ^2 change statistic (Table 9), meaning that the more

parsimonious model – with fewer paths among variables – fits the data equally as well as the fuller model.

Contrary to our expectation, the final model (Figure 3) did not demonstrate direct effects of the predictors on the outcomes. These relations were significant at the bivariate level but did not hold up once they were operating in the context of all the other variables. However, as we predicted, there were significant indirect effects of violence on physical health through mental health. Given the poor performance of the adherence and social support variables at the bivariate level, it is unsurprising that the links to and from those variables in the model were non-significant and were constrained to zero during the trimming process. The effects of PV on the health outcomes were mediated by mental health and substance use alone.

Notably, in the theoretical model where all paths between variables were allowed to vary freely, it was PV and not adult abuse that remained significantly associated with the mediators. The relation between the latent factors PV and adult abuse remained a trend, indicating that these underlying constructs are different in some significant ways. One way in which the measured variables of the latent factors are different is the timeframe in which any violence occurred. For the adult abuse questions, the timeframe to which the questions are geared is anytime since their 18th birthday. Thus, with a sample comprised of individuals whose mean age is 44 years old, the time period for which the average respondent is answering is very large and, thus, it may make sense that violent experiences far in the past have less bearing than ones that have occurred more recently. For the PV measure, participants were instructed to apply the 78 questions to one specific relationship that has

occurred in the past year (could be current or not). In order to maximize the proportion of the sample responding to the PV questions, if a participant has not been in a relationship in the past year, they were asked to answer the questions while thinking of the last relationship they were in, whenever it was. Slightly more than half of the sample had been in a relationship during the past year (see Table 4); 30% more of the sample reports a relationship in the past 5 years, indicating that approximately one-fifth of the participants had *not* been in a relationship even in the past 5 years. So here, too, just less than half of the participants may have been reporting PV that occurred in the more distant past. We would potentially expect stronger direct relations with health outcomes for a sample whose violence exposure was more recent.

It is clear that experiences with violence and mental health problems influence an individual's perceptions of their physical health. The self-report quality of life measure – the MOS-HIV, a standard in HIV studies for 10 years – was highly correlated with virtually all of the predictors and mediators at the bivariate level and these relations did not diminish when all of the variables were put in the model simultaneously. The model was able to explain a whopping 57% of the variance in QOL, giving us a clear message about the potential benefits to physical health of treating mental health problems as well. Another measure of health, the utilization of costly ER visits in the year preceding interview, is a proxy for what the health services field calls inappropriate utilization of health care services. Ten percent of the variance in past year ER visits was accounted for by the model. The point, it seems, is that patients actively involved in outpatient medical care (ostensible 'appropriate' utilization of health care services) use those services and, also, are healthier because of preventive

medical care. As the recruitment universe was HIV+ MSM engaged with medical care, this sample was already attending a high number of outpatient appointments – the modal participant attended at least one outpatient visit per quarter, the CDC’s recommendation for HIV patients – and those who required extra, emergent care were also those who reported experiencing more frequent PV. ER personnel should routinely screen for PV in walk-in patients, irrespective of the patient’s presenting problem. We might expect this to happen when the patient’s reason for the visit is an acute physical injury. No data was systematically collected on the presenting problem in ER visits; however, there were data (not shown) on physical injuries in the past year noted in the participants’ medical records and we saw no correlation between physical injuries reported and any of the violence measures.

Given the innumerable biological and psychological influences on biomarkers of HIV infection, it is notable that our model is able to explain a small but significant amount of the variance in both viral load and CD4 count. Since viral load is much less stable, with fluctuations that could be adequately measured on a scale of days, its direct relations with predictor and mediator variables are likely to be based on events that occur relatively close in time to the interview. CD4 count, however, is much more stable and changes would be better measured on a scale of weeks or months. The relationship between the biomarkers is such that, once viral load is sufficiently suppressed (by antiretroviral medications or by a natural immune process), only then will CD4 count begin to rise. Finding a significant relation of mental health on both of these variables implies both short- and longer-term effects, i.e., a patient’s level of immune system health may be influenced proximally by

depression and more distally by PV experienced several months ago. Only longitudinal studies would be able to address questions of sequencing and causality.

In sum, the present study provides further empirical support for the relation between mental health and physical health and immune functioning (e.g., Kiecolt-Glaser & Glaser, 1995). In this analysis, however, variations in the physical health outcomes are driven more distally by exposure to violent, potentially traumatic events. Theoretical models of the relations between these key variables have been proposed by several researchers (e.g., Dutton et al., 2006; Plichta, 2004; Resnick et al., 1997) but few have been tested empirically. One model investigating the effects of PV on health through social support also used SEM techniques to examine all relevant links simultaneously. The Coker analysis, however, was conducted on the sub-sample of women currently in relationships where they were experiencing PV. Our study investigates a potentially broader range of experiences, with men who report very low levels of violence to those reporting significant amounts. Further, our study looks at how a variety of violence experiences affect the mediators and outcomes, not PV alone.

E. Limitations

The present study adds significantly to the practical knowledge base in the fields of HIV and PV, and to the theoretical knowledge in the stress/health area. Like any individual study, it has significant limitations which restrict generalizability.

Most importantly, the project is cross-sectional in nature and, thus, no causality can be inferred from the results (despite the terminology of 'causal models' from SEM). It is

possible that, if the constructs in the model were rearranged or if different constructs were substituted, the model would fit as well or better, thus providing an alternative account of the relations between the variables. Future analyses will test model fit of alternative models.

The project has a relatively small sample size for structural equation modeling. Often, the rule of thumb is a ratio of 10 cases to each parameter to be estimated. With only 160 participants, the model may be too complex for the power available and, thus, the findings may be unreliable. Replication of these findings in another potentially larger sample would provide greater assurance of the stability of the relations depicted in the model. Also, the sample consists of HIV-positive MSM who are engaged with medical care; recent research (Cunningham et al., 2006) adds to the body of literature suggesting that patients involved in care are qualitative and quantitatively different than those not in care, further limiting generalizability.

In terms of measures, some critics have argued that the CTS2 is unsuitable because it measures simple frequency of behaviors devoid of context. Function of a given behavior – initial aggression, self-protective reaction, etc. – remains unknown. Most of the measures, including all of the measures of covariates, predictors, and mediators, were self-report and, thus, are subject to potential misunderstanding on the part of the participant or biased responding, although social desirability was measured and left in the model as a covariate. Some important questions were not asked to participants, including the relationship of the perpetrator in the adult abuse questions; this is a potential confound between adult abuse and PV. HIV serostatus of present and past partners was not assessed and, thus, no analyses

can be completed which take into account this important variable. Also, the extent to which any PV experienced was related to HIV status was not assessed.

F. Implications

This study could serve as a jumping-off point for future research. The search for unique risk and resilience factors related to the health of a stigmatized population, such as MSM or people living with HIV, remains an important question. It is important to employ a variety of different measures or to include multiple measures of the same construct in a study – to triangulate the data and minimize measurement error. In this way, investigators can more thoroughly assess the true contribution of a given construct to the model. Further research that continues to fill in the links between violence, mental health, and physical health – especially to the extent that it provides evidence of mechanisms of effect, is warranted.

Rates of PV are considerable and are comparable to some estimates of the rates for heterosexual women. Future research may want to compare HIV-positive and HIV-negative individuals using established measures and potentially using a longitudinal design. Future studies could recruit HIV-positive women to see how well the model fits that sample, potentially giving us some ideas of gender differences. With greater access to resources, a single sufficiently large sample of both HIV-positive women and MSM would be another route to investigate such differences.

Exposure to potentially traumatic events seems to cluster in this population, e.g., the high correlations between child abuse, adult abuse, and PV indicate some potential shared

vulnerability. To the extent that the common factor(s) can be reliably identified, we could develop individual, dyadic, group, or community-level interventions. For example, it may be true that poverty is the strongest and most reliable predictor of abuse. If so, instrumental interventions might be most useful, such as increasing the availability of low-cost housing options and job training or vocational rehabilitation programs.

The results of this study provide strong support for the contribution of violence exposure, mental health factors, and substance use to differences in physical health. Clinical practice implications include stressing the importance of assessing for HIV and HIV risk behaviors in PV or primary care settings, as well as assessing for PV in HIV clinics. Further, it follows that medical settings may wish to provide more intensive mental health services in order to keep down costs associated with physical health problems that are potentially exacerbated by psychological distress. Rather than providing supportive counseling or case management alone (although this population clearly has the need for social services), as social support dropped from the model, clinics may instead wish to offer evidence-based mental health treatments that target specific disorders or symptom clusters. Providing evidence-based substance use treatment, especially for younger patients involved in the club drug scene, may also increase health more generally and decrease health service utilization.

Table 4. *Survey Demographics.*

	<i>n</i>	<i>% of sample</i>
<i>Gender</i>		
Male	157	98%
Transgender M to F	3	2%
<i>Race and Ethnicity</i>		
White/Euro-American	100	63%
Black/African American	28	18%
Latino/Hispanic	20	13%
Biracial/Multiracial	13	8%
American Indian / Alaskan Native	10	6%
Unknown/Missing	9	6%
<i>Income</i>		
Less than \$738 per month	73	46%
\$739-\$1,477 per month	55	34%
\$1,478+ per month	32	20%
<i>Employment</i>		
Disabled	89	56%
Employed FT or PT	24	15%
Other (retired, student, unemployed)	45	28%
<i>Education Attained</i>		
Less than 12 years	18	11%
High school diploma	49	31%
Any post high school education/training	92	58%
<i>Living Situation</i>		
His own home or apartment	117	73%
Someone else's home or apartment	24	15%
Marginal housing	19	12%
<i>Relationship Status</i>		
Presently partnered	60	38%
In the past one year	87	54%
In the past five years	132	83%

Note: Sample size differs for each variable due to missing data. Percentages may not equal 100 due to rounding.

Table 5. *Survey Descriptives.*

	<i>M</i>	<i>SD</i>	Range
Age	44.4	8.3	25-66
Social Desirability	5.67	2.5	0-10
Child Physical Abuse	5.7	7.7	0-36
Child Sexual Abuse	8.8	14.3	0-62
Child Psych Abuse	23.9	15.3	0-42
Adult Physical Abuse	14.3	14.9	1-60
Adult Sexual Abuse	1.3	1.5	0-4
Adult Psych Abuse	1.0	0.7	0-2
HIV-Specific Abuse	1.7	1.0	0-9
Partner Physical Abuse	1.8	4.8	0-27
Partner Sexual Abuse	1.1	3.1	0-20
Partner Psych Abuse	4.7	7.1	0-34
Depression	40.2	12.8	20-77
State Anxiety	19.1	7.1	10-38
PTSD Symptoms	14.1	12.3	0-51
Maladaptive Coping	9.4	5.9	0-28
Social Support	45.7	20.9	0-76
Substance Use	2.0	2.7	1-21.24
Adherence	2.0	4.1	0-30
Viral Load	2.3	1.3	1.5-6.0
CD4 Count	404	221	8-1329
Quality of Life	3.2	0.5	1.24-4.38
Major Medical Problems	2.4	1.4	0-7

Note. Because of the skewness typical of abuse variables in community samples (i.e., relatively low base rate so many zeros), many of the variables were transformed to improve their normality. In this table, the untransformed versions are presented to improve interpretability.

Table 7. *Rates of Partner Violence By Timeframe.*

	<i>Physical</i>	<i>Sexual</i>	<i>Psychological</i>	<i>HIV-Specific</i>
Past year	20.6%	19.4%	51.3%	8.8%
Past 5 years	31.2%	23.4%	61.9%	11.3%
Ever	40.6%	33.1%	74.4%	14.4%

Table 8. *Response Rate for HIV-Specific Abuse by Item by Perpetrator in the Past Year.*

<i>Stem: Has anyone ever...</i>	<i>Total % of sample (n)</i>	<i>Dating / Romantic Partner (n)</i>	<i>Family Member (n)</i>
Kept you from taking your HIV medications by hiding or stealing them	7.5% (12)	4	2
Kept you from attending a medical appointment when you really wanted to go	10.6% (17)	6	4
Told your friends, family, or neighbors about your HIV status when you didn't want them to know	14.4% (23)	7	9
Told your co-workers or classmates about your HIV status when you didn't want them to know	11.3% (18)	4	1
Told you that no one else will love you because you have HIV	10.6% (17)	7	4
Told you that no one else will want to have sex with you because you have HIV	16.9% (27)	14	2
Told you that having HIV makes you bad or that it is a punishment	15.0% (24)	3	6
Told you that having HIV makes you a burden to care for	11.3% (18)	4	7
Told you that you infected them and so you have to do what they say	3.8% (6)	3	1

Table 9. *Fit Indices for the Model Comparison.*

Model	X^2	df	p	X^2 / df	CFI	RMSEA
Theoretical	256.455	192	.001	1.34	.916	.046
Trimmed	310.456	242	.002	1.28	.910	.042
Model Comparison	X^2 diff	df	p			
Theoretical vs. Trimmed	54.001	52	ns			

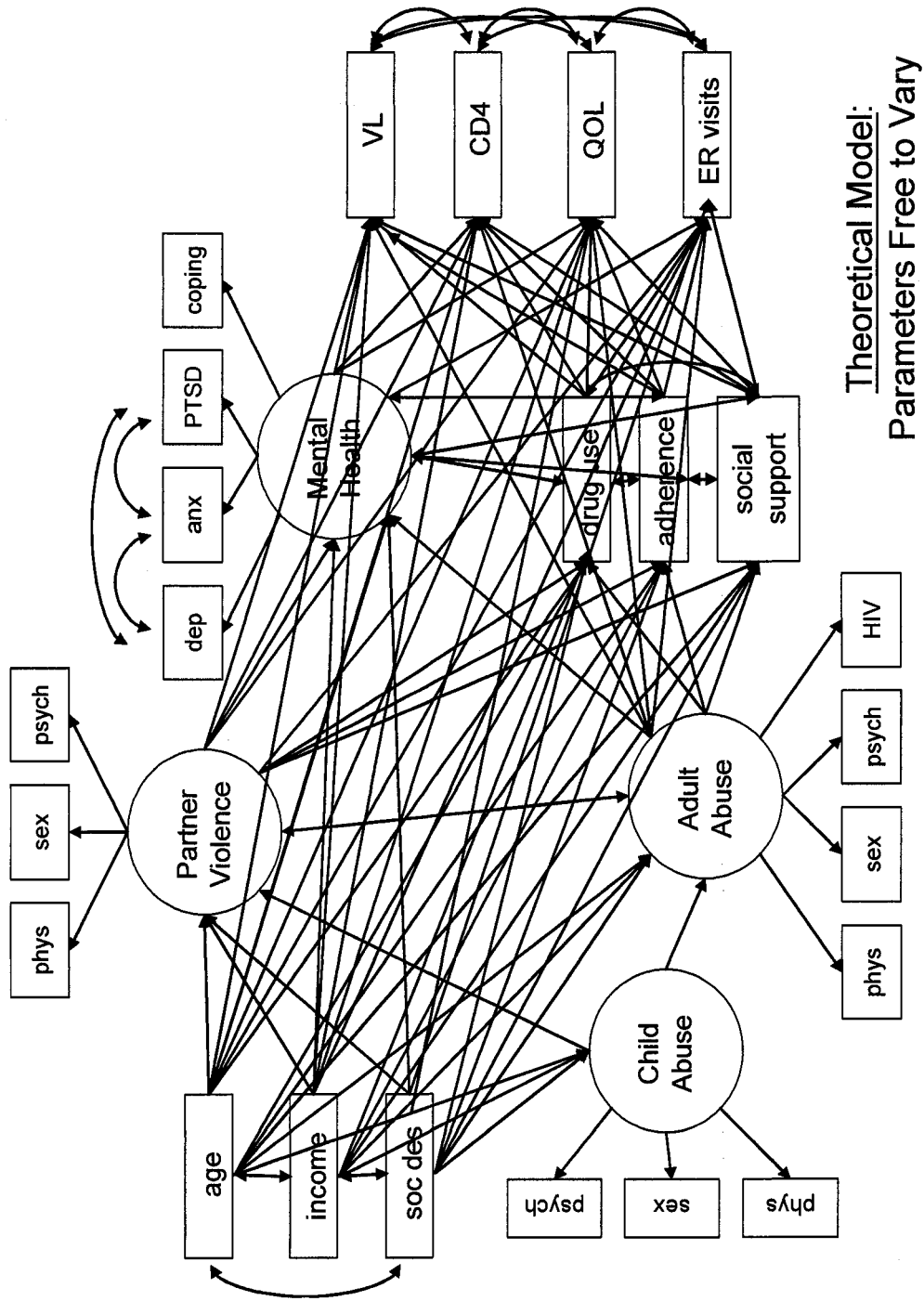


Figure 2. Theoretical Model.

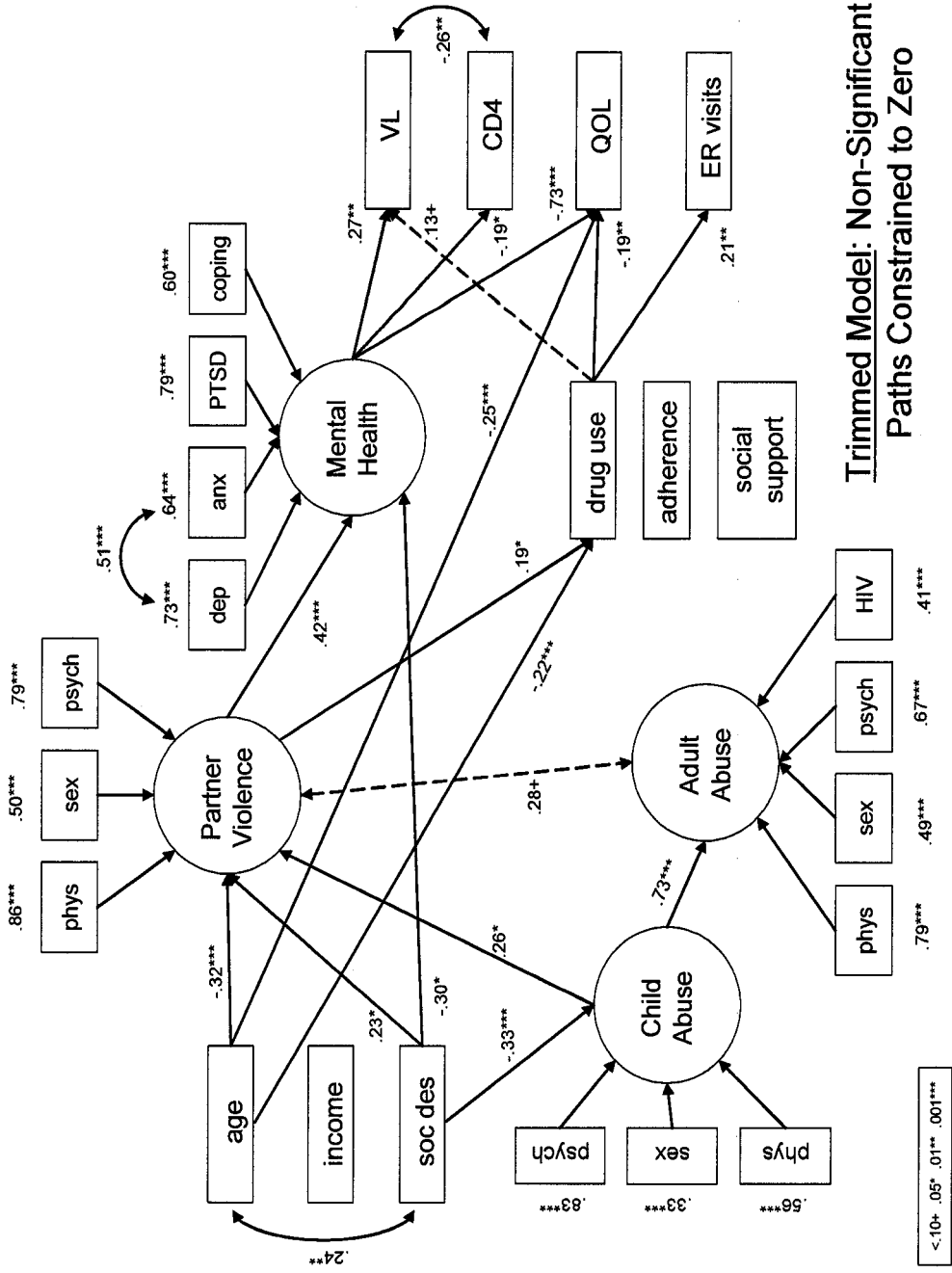


Figure 3. Trimmed Model.

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APPENDIX A – QUALITATIVE INTERVIEW GUIDE

MADISON CLINIC RELATIONSHIP STUDY

PATIENT ONE ON ONE INTERVIEW GUIDE

Warm-up

Thanks again for agreeing to participate in the interview. I'm going to turn the tape recorder on now. <turn on audio recorder> I'd like to start off by asking you to tell me a little bit about what attracted you to the study and why you're willing to share your story with me?

Main questions and probes

I. Background (~10 minutes)

Disease history

Okay, lets get started. First, I want to just ask you about what was happening in your life when you first learned that you were HIV positive?

- How did you react when you got the news?
- Were you surprised?

Disclosure and General Social Support

How many people have you told that you have HIV?

- Please describe who these people are to you. We're not asking for names, just your relationship to them, for example, whether they are friends, family, co-workers, etc?
- Do most of your friends know? Your family?
- Why did you choose to tell them?
- Are there people you would like to tell but have not? Why have you decided to not tell them?

Romantic Relationships since HIV+ Diagnosis

Next I'd like to ask about your last few romantic relationships. By romantic relationships, I mean a boyfriend or someone you are dating, where the basis of your relationship was emotional in addition to physical.

How many romantic relationships have you been in since you found out that you were HIV-positive?

- How long did each one last?
- Were they casual or exclusive?
- Are you in one right now? If not, when did the last one end?

Great, thanks. It's helpful for me to know some of your history as background for the next set of questions.

II. Conflict, Stressful Experiences and Abuse (~30 minutes)

Next, we're moving into the section where I'm going to ask you about some of the conflicts and fights that you and your current or previous partner(s) have had. Before we start, I'd like to encourage you to be as honest as you feel comfortable being. I can't stress enough that I'm not here to judge you or your relationship(s) or to lay blame anywhere for the way things happened. My goal here is only to learn about the variety of stressful experiences that you've had in your romantic relationships since your HIV diagnosis. Overall, we are interested in studying conflict in relationships.

A. Open-Ended Segment (approx. 10 minutes)

In this section, I'm going to ask you questions about very specific, stressful or traumatic experiences that you've had in your romantic relationships. Since your HIV diagnosis, would you say that you've had experiences like that in one relationship, more than one, or all of them? Because of the level of detail that I'm going to ask about, if it's more than one, then I'd like you to choose only one to talk about. It could be whichever one you want: the most recent, the most scary, the one you feel most comfortable talking about. It's up to you.

Do you have one in mind? <once pt answers yes> OK. Did that partner have HIV? Now, can we give that partner a fake name to use, so that I can call him by name, and so that I can remind you to talk about only him. What name would you like to use? <pt generates name> Great. We'll call him <name> for the rest of this interview.

Should specifically ask about physical abuse – both receiving and giving it to others

When fights became upsetting or get out of hand with <name>, what usually happened? What was a typical fight like for you and your partner? Was there a usual pattern or trigger? What was it about the fight that made it particularly stressful? <start by asking what happened physically or sexually> How often did these events happen? What was it like for you, psychologically, to have this going on? Did you ever tell anyone? If so, what did they say or do?

What happened the time you got hurt the most, physically or psychologically? Why do you think it was different that time? How serious were your injuries?

What about the first time and/or the time you were the most scared? What happened then? Why was that time different than any others?

Overall, what role do you think your HIV+ status played in the dynamics of your relationship? What about your race or ethnicity? How have those or other cultural factors played a role in the dynamics of your relationship?

B. Systematic Review of Multiple Domains (approx. 10 minutes)

Thank you so much for sharing that information about your relationship with <name>. It sounds like it was really challenging for you to negotiate staying safe in that relationship. Is it alright if I ask some more questions?

<If yes, then:> Next, I'd like to ask you not about any one specific relationship that you've been in, but about all of the romantic relationships that you've been in since you found out that you have HIV. So, I'm not just asking about <name> anymore.

Sometimes it's hard for people being interviewed to know all of the kinds of experiences that we as researchers would like to know about. Next I'll ask about some other kinds of stressful ways that people sometimes deal with conflict in relationships.

Psychological: Were there other times that you didn't mention before where your partner put you down... or made you do something humiliating or degrading or against your will... or when your partner intimidated you... or made you scared for your safety or your life? What happened then? What was it like?

Physical: Were there other times that you didn't mention before where your partner pushed you, kicked you, hit or slapped you, grabbed you hard, or shoved you? Had your partner ever thrown something at you? Did he intend to hit you? What happened then? What was it like?

Sexual: Were there other times that you didn't mention before where your partner forced you to have sex with him when you didn't want to or in ways that you didn't want? When he wouldn't let you use a condom or otherwise wouldn't follow your requests about sexual safety? What happened then? What was it like?

Disclosure: Who did you tell about the abuse that occurred? How did they react?

C. Review of Potential Survey Items (approx. 10 minutes)

One of the goals of this research is to develop a survey questionnaire that asks about all of the different ways one partner can use the other partner's HIV-positive status against them. I'd like to review with you a list of some experiences that other patients in the clinic have had. You don't need to tell me whether or not they happened to you. The purpose of this part of the interview is to make sure that these questions are clear and to understand how you interpret them so we can line up our intention for the question with your understanding of it. [Start open-ended first]

For each item I'm going to ask you what the phrase means to you, what you think about it, and whether you would add anything. I'll also ask if there are any important items missing that we should add to the list. Let's go through them one at a time.

Has your partner ever done or threatened to do any of the following:

Kept you from taking your HIV medications

Kept you from attending a medical appointment

Told your friends, family, co-workers about your HIV status when you didn't want them to know

Told you that no one else will love you because of your HIV (... have sex with you ...)

Told you that having HIV makes you bad or is a punishment

Told you that having HIV makes you a burden to care for

Told you that you infected them and so you cannot leave

III. Consequences: Adherence, Physical and Mental Health, Access to Care (~15 minutes)

Next, I'd like to ask you some questions about how these abusive experiences affected your health and in what ways you have promoted your own health and wellness in spite of the stress and trauma.

In what ways do you think the conflicts we've been talking about, that you have faced in your relationships since your HIV+ diagnosis, have affected your health? <probe for short-term and long-term effects> How has it affected your health-behaviors -- both helpful and hindering -- like diet, exercise, HIV medication adherence, or coming to the clinic for appointments?

How have the stressful experiences that you have had in your relationships affected your use of substances, both alcohol and drugs?

How have these challenges strengthened you? How did these experiences affect how you feel about yourself over time? Affect your mental or physical health? Who has tried to help you to deal with any problems that you've had related to your relationship troubles? How has it been helpful? Not helpful?

IV. Intervention suggestions

Next, I'd just like to ask -- when you were experiencing the violence, what was the most helpful thing that your friends did to help you? Your family? Your medical providers or case manager? In general, when people are in abusive relationships, what kind of help do you think they need the most, from friends? What kind of services do they need the most, e.g., info on how to leave the relationship, protection from the police, etc.?

Closing

OK, those are all of my questions for you. Is there anything else that you'd like to add? Was there anything else that I should have asked? Do you have any questions for me? **<turn off audio recorder>**

I'd like to thank you for talking with me today, and I want to tell you again how much I appreciate your willingness to participate in this research. Thank you for sharing so much personal information with me. Your contributions will really help the project. I would also like to check in with you to see how you're doing. We talked about a lot of different topics. How are you feeling? <Discuss briefly and refer to MD or MSW, if appropriate>

We have included a resource list for you to take with you, and a handout. <give resource list and debriefing handout> If, once you leave today, you continue to experience any distress related to this study, I encourage you to talk to your Madison Clinic case manager or to your medical provider. They are knowledgeable about many of the agencies listed here as well as other resources available in the hospital to clinic patients. If you'd feel more comfortable using resources on your own outside of the clinic, I encourage you to contact one of the organizations listed on this sheet.

Because we want to thank you for your time, we have a small reimbursement for you <give \$25>. Thanks again and have a good day.

APPENDIX B – MEDICAL RECORD EXTRACTION FORM

Information about the review:

- (1) Participant ID Number: _____ (2) Medical Record Number: _____
 (3) Initials of Reviewer: _____ (4) Date MR Review Conducted: ___/___/2007
 (5) Date Interview Conducted: ___/___/200__

From the LAB tab:

- Lab results: (6) # CD4 cells (x1000) ____ (7) % CD4 cells ____ (8) Viral load ____ copies/mL
 (9) Number of days away from interview when labs were collected: _____

From the PROCEDURES and PATHOLOGY tabs:

- (10) Total number of surgeries/significant procedures in the year preceding interview: _____

From the VISITS tab → IP VISITS tab:

- (11) # inpatient medical admissions in YEAR 1: _____
 (11a) # of medical inpatient days: _____
 (11b) # of those medical admissions where primary diagnosis was HIV: _____
 (12) # inpatient psychiatry admissions in YEAR 1: _____
 (12a) # of psychiatric inpatient days: _____
 (13) # inpatient medical admissions in YEAR 2: _____
 (13a) # of medical inpatient days: _____
 (13b) # of those medical admissions where primary diagnosis was HIV: _____
 (14) # inpatient psychiatry admissions in YEAR 2: _____
 (14a) # of psychiatric inpatient days: _____

From the VISITS tab → OP VISITS tab:

- (15) Consultations by other specialties in the past year: NO YES
 (15a) Cardiology NO YES
 (15b) Surgery or Anesthesiology NO YES
 (15c) Rehabilitation Medicine or Physical Therapy NO YES
 (15d) Gastroenterology or GI Clinic NO YES
 (15e) Neurology or Neurological Surgery NO YES
 (16) Total number of outpatient clinical care encounters in the year preceding interview: _____
 (16a) Medical visits (Madison Clinic or Virology Clinic): _____
 (16b) Period of 4 consecutive months with no primary HIV visit? NO YES
 (16c) Other medical visits: _____ [code ER visits in #17]
 (16d) Psychiatric visits: _____
 [psychiatry, psychology, social work for therapy but not case mgmt]
 (17) Total number of emergency room encounters in the year preceding interview: _____

From the PROBLEMS tab:

(18) Diabetes / DM II / Diabetes Type 2?	NO	YES		
(19) Hypertension?	NO	YES	[any kind but the “benign” form]	
(20) Heart attack/myocardial infarction?	NO	YES		
Year of each event: _____, _____, _____, _____				
(21) Stroke/cerebrovascular accident?	NO	YES		
Year of each event: _____, _____, _____, _____				
(22) HPV / human papillomavirus / anal or genital warts / viral warts	NO	YES		
(23) Herpes / Herpes simplex virus / HSV 2	NO	YES	[not Herpes zoster]	
(24) Syphilis / Neurosyphilis	NO	YES		
(25) Hepatitis C	NO	YES		
(26) Borderline personality disorder	NO	YES		
(27) Antisocial personality disorder	NO	YES		
(28) Any other personality disorder (i.e., schizotypal PD, histrionic PD, narcissistic PD)	NO	YES		
			<u>Past Year</u>	<u>Ever</u>
(29a,b) Irritable Bowel Syndrome?	NO	YES	NO	YES
(30a,b) Chronic Fatigue Syndrome?	NO	YES	NO	YES
(31a,b) Fibromyalgia?	NO	YES	NO	YES
(32a,b) Mood disorder (depression, bipolar, dysthymia, mood disorder NOS, depression with psychosis)	NO	YES	NO	YES
(33a,b) Anxiety disorder (panic disorder, any phobia, GAD, PTSD, OCD, anxiety disorder NOS, neurosis)	NO	YES	NO	YES
(34a,b) Thought disorder (schizophrenia, schizoaffective disorder, schizotypal PD, psychotic disorder NOS)	NO	YES	NO	YES
(35a,b) Tobacco abuse / dependence	NO	YES	NO	YES
(36a,b) Alcohol abuse / dependence	NO	YES	NO	YES
(37a,b) Cannabis abuse / dependence	NO	YES	NO	YES
(38a,b) Cocaine abuse / dependence	NO	YES	NO	YES
(39a,b) Amphetamine abuse / dependence	NO	YES	NO	YES
(40a,b) Heroin abuse / dependence	NO	YES	NO	YES

(41a,b) GI problems? (rectal bleeding, GI bleeding, proctitis)	NO	YES	NO	YES
(42a,b) Chronic pain? (i.e., LBP, back pain, peripheral neuropathy)	NO	YES	NO	YES
(43a,b) Headaches/migraines?	NO	YES	NO	YES
(44a,b) Sexual functioning problem / Erectile dysfunction	NO	YES	NO	YES
(45a,b) Gonorrhoea / Neisseria gonorrhoeae / GC (oral, rectal, pharyngeal)	NO	YES	NO	YES
(46a,b) Chlamydia	NO	YES	NO	YES
(47a,b) Acute physical injuries? (broken bones, bruises, contusions, fractures, dislocated joints, torn muscle tissue)	NO	YES	NO	YES
(48a,b) Cancer (any kind)	NO	YES	NO	YES

From the TRANSCRIPTS tab:

(49) Most recent CDC disease staging: A B C / 1 2 3

CURRICULUM VITAE

David W. Pantalone was born and raised in Philadelphia, Pennsylvania. He attended the George Washington High School before moving to Providence, Rhode Island, to complete his bachelor's degree (A.B.) in public policy from Brown University. After working as a research coordinator at Fenway Community Health in Boston, Massachusetts, he came to the University of Washington to study clinical psychology. He received his M.S. and Ph.D. in 2004 and 2007, respectively.