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The implications of intimate partner violence on health-related quality of life among adults living with HIV who experienced childhood sexual abuse

Tiara C. Willie, MA,

PhD Candidate, Chronic Disease Epidemiology, Yale School of Public Health, and a Fellow, Center for Interdisciplinary Research on AIDS, New Haven, Connecticut, USA

Trace Kershaw, PhD,

Full Professor, Social and Behavioral Sciences, Yale School of Public Health, and Director of T32 Training, Center for Interdisciplinary Research on AIDS, New Haven, Connecticut, USA

Jhumka Gupta, ScD, and

Assistant Professor, Global and Community Health, George Mason University, Fairfax, Virginia, USA

Nathan Hansen, PhD*

Professor and Department Head, Health Promotion and Behavior, University of Georgia College of Public Health, Athens, Georgia, USA

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Health-related quality of life (HRQoL) refers to the perception of personal health across multiple domains (e.g., physical, emotional, social wellbeing), and is an important indicator of disease progression for people living with HIV (PLWH; Persons, Kershaw, Sikkema, & Hansen, 2010). HRQoL is influenced by sociodemographic factors such as race and sexual identity as well as clinical factors such as physical symptoms (Vyavaharkar, Moneyham, Murdaugh, & Tavakoli, 2012). For example, among PLWH, those with more HIV-related symptoms and co-morbid health problems experienced poorer HRQoL (Persons et al., 2010).

While existing research has underscored the impact of sociodemographic and clinical factors on HRQoL among PLWH, experiences of interpersonal violence such as intimate partner violence (IPV) and childhood sexual abuse (CSA) may also play an important role. In the

*Corresponding Author: Nathan Hansen: nhansen@uga.edu.

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United States, IPV is defined as the physical, sexual, and psychological harm inflicted by an intimate partner (Black et al., 2011). The prevalence of IPV in the general U.S. population is 28.5% and 35.6% for men and women respectively (Black et al., 2011), but the IPV prevalence for PLWH has been estimated as almost double general population estimates (Pantalone, Hessler, & Simoni, 2010). To date, the few studies that have examined the impact of IPV on PLWH show that IPV experiences are associated with reduced HRQoL (Pantalone et al., 2010).

One critically important subpopulation, adult PLWH who experienced CSA, has been particularly overlooked in quality of life research. Adults who experienced CSA have often reported poorer HRQoL compared to those without such experiences (Chartier, Walker, & Naimark, 2007). Yet, we are aware of only one study that has examined risk factors of reduced HRQoL among adult PLWH who experienced CSA (Persons et al., 2010), and IPV was not included as a predictor. This dearth of studies is concerning as the prevalence of CSA in adult PLWH has been shown to range between 30% and 53% (Markowitz et al., 2011), and CSA is strongly associated with an increased risk of IPV in adulthood (Classen, Palesh, & Aggarwal, 2005; Daigneault, Hébert, & McDuff, 2009). Given this increased vulnerability, studies examining IPV as a risk factor for reduced HRQoL among adult PLWH who experienced CSA are needed for the development of IPV-informed HIV care and retention programs.

We aimed to describe the prevalence of IPV among adult PLWH who experienced CSA and examine the unique contributions of IPV on overall HRQoL and each dimension of HRQoL (i.e., physical wellbeing, emotional wellbeing, social wellbeing, function and global wellbeing, and cognitive functioning) above and beyond the effects of known correlates.

Methods

Our study is a secondary data analysis of data collected from a pilot trial of an individual psychotherapy intervention for adult PLWH who experienced CSA (Hansen, Brown, Tsatkin, Zeligowski, & Nightingale, 2012). Participants were recruited from HIV specialty clinics in an urban area in the northeast region of the United States. Flyers were posted in order to recruit participants for the study in addition to provider referrals. Potential participants were screened for eligibility via phone. The eligibility criteria were: (a) at least 18 years of age, (b) English-speaking, (c) living with HIV infection, and (d) reported childhood sexual abuse (i.e., sexual exposure, sexual touch, or anal, oral, or vaginal sex). CSA was operationalized as nonconsensual sex or consensual sex by someone at least 5 years older than the participant if the participant was age 12 or less, or 10 years or older if the participant was between ages 13 and 17 (Hansen et al., 2012).

Eligible participants were invited to participate in a formal screening assessment at a local community organization and were asked to sign an informed consent form to participate in a two-part screening interview consisting of questions on trauma history, sociodemographics, and the Structured Clinical Interview for DSM-IV (SCID; First, Spitzer, Gibbon, & Williams, 2002). The interviews were administered in English by doctoral-level psychologists or fourth-year clinical psychology practicum students using a computer-

assisted personal interview (CAPI) in a private space. Participants were screened between March 2009 and November 2010. Eligible participants completed a second consent form to participate in the intervention study and the baseline interview. Participants were remunerated \$40 for each screening interview and \$50 for the baseline interview. Our study used complete data from screening and baseline interviews, resulting in a final sample of 78 participants. Study procedures were approved by the Yale University's institutional review board.

IPV was assessed using 20 questions administered as a structured interview on physical (e.g., slap, hit, punch, shove, or used other physical force against you) and sexual (e.g., used threats or force to make you have sex) violence experienced with past and current partners. A dichotomous summary variable was created: physical or sexual IPV (yes to any physical or sexual IPV acts in a past or current relationship). HIV symptom severity was assessed using a 20-item HIV Symptom Checklist (Folkman, Chesney, Collette, Boccellari, & Cooke, 1996). Participants rated each symptom as either *Present* (1) or *Not present* (0). Symptoms were summed to create a total score, with higher scores indicating more symptoms (Cronbach's alpha of 0.84). Co-morbidities were assessed using a 25-item Co-morbidity Index (Selim et al., 2004). Participants stated whether each condition was *Present* (1) or *Not present* (0). Examples of conditions were depression and cancer. Conditions were summed to create a total score, with higher scores indicating more conditions (Cronbach's alpha of 0.70). HRQoL was assessed using the revised 44-item Functional Assessment of Human Immunodeficiency Virus Infection (FAHI; Peterman, Cella, Mo, & McCain, 1997). The FAHI assessed overall quality of life and five subscales: emotional wellbeing, social wellbeing, cognitive functioning, physical wellbeing, and function and global wellbeing. Participants rated their wellbeing on a 4-point scale from *Not at all* (0) to *Very much* (4). Responses were summed to obtain a total score for overall quality of life and each subscale, with higher scores indicating higher wellbeing (Cronbach's alphas were: 0.93 [overall], 0.89 [physical wellbeing], 0.85 [emotional wellbeing], 0.65 [cognitive functioning], 0.86 [function and global wellbeing], and 0.86 [social wellbeing]). Participants reported age (in years), gender (i.e., women and men), race and ethnicity (i.e., African American, White, Hispanic, and Other), income (\$0–\$9,999; \$10,000+), sexual identity (i.e., heterosexual and gay/bisexual).

Data Analysis

Descriptive statistics were computed and correlations were conducted to examine the relationships between all study variables. The primary hierarchical linear regression examined the influence of IPV on overall HRQoL. Age, sexual identity, gender, and race and ethnicity were entered simultaneously as co-variables in the first step. HIV symptom severity and co-morbidities were entered simultaneously as known correlates of HRQoL in the second step. IPV was entered as a predictor of HRQoL in the last step. Secondary regression analyses were also conducted to examine the influence of IPV on each HRQoL subscale (i.e., emotional wellbeing, social wellbeing, physical wellbeing, function and global wellbeing, and cognitive functioning). The regression steps noted above were repeated for each HRQoL subscale. All analyses were performed using SPSS 21.

Results

The sample comprised 78 PLWH who experienced CSA (39 women and 39 men), with an average age of 47 years ($SD = 7$). The racial and ethnic makeup was 67% Black, 12% White, 17% Hispanic, and 5% another race. Two in three adults (69%) reported their household income between \$0 and \$9,999, and 65% identified as heterosexual.

Overall, three in four adults (77%) experienced physical and/or sexual IPV (Table 1). Table 1 also displays the correlations between predictors and HRQoL. Age was significantly and positively correlated with HRQoL. Gender, sexual identity, race, and income range were not significantly correlated with HRQoL. HIV symptom severity was significantly and negatively correlated with HRQoL. Total co-morbidities were not related to HRQoL. Lifetime physical or sexual IPV was negatively correlated with HRQoL.

The primary hierarchical regression revealed that older age ($B = 0.23, p = 0.05$), identifying as heterosexual ($B = 0.24, p = 0.05$), and identifying as a man ($B = -0.24, p = 0.05$) significantly predicted higher HRQoL, explaining 12% of the variance (Table 2). Some predictors in Steps 2 and 3 significantly contributed to the overall model beyond the factors from Step 1. Step 2 explained an additional 24% of the variance, including HIV symptom severity ($B = -0.54, p = 0.001$), which significantly predicted lower overall HRQoL. Step 3 explained an additional 8% of the variance, including physical or sexual IPV, which significantly predicted lower HRQoL ($B = -0.32, p = 0.001$).

Secondary hierarchical regressions examined associations between IPV and each HRQoL subscale (Table 2). Physical or sexual IPV significantly predicted lower emotional wellbeing ($B = -0.25, p = 0.01$), function and global wellbeing ($B = -0.24, p = 0.05$), social wellbeing ($B = -0.34, p = 0.01$), and cognitive functioning ($B = -0.33, p = 0.01$), but not physical wellbeing ($B = -0.12, p > 0.05$).

Discussion

IPV is a common lived experience for adult PLWH who experienced CSA. In our sample, 7 of 10 adults experienced physical and/or sexual IPV, which included 84.6% of women and 69.2% of men. Our sample reported a prevalence of IPV that far exceeded the estimated national lifetime prevalence of IPV for women (35.6%) and men (28.5%; Black et al., 2011). Few studies have described the IPV prevalence in this population, but this finding supports research indicating high rates of violent traumas among PLWH (Brezing, Ferrara, & Freudenreich, 2015). IPV needs to be recognized as another important violent experience for this population. One potential explanation for the high prevalence of IPV may be related to CSA experiences. Social, emotional, and mental health problems associated with CSA can increase vulnerability and risk of revictimization (Classen et al., 2005). Moreover, our findings suggest that IPV was related to poorer overall HRQoL, and more specifically, reduced emotional, social, function and global wellbeing, and cognitive functioning. There is a clear need to implement IPV screening protocols and provide services for IPV-exposed, adult PLWH who experienced CSA in HIV care and retention programs (Prust, Mellor-Crummey, Sullivan, Lang, & Hansen, 2017).

The HRQoL of adult PLWH who experienced CSA is likely directly impacted by the experience of physical and sexual violence in intimate relationships, and indirectly related to mental health problems. These pathways are consistent with work showing poor mental health as a mediator between IPV and HRQoL among sexual minority men living with HIV (Pantalone et al., 2010). In addition, our findings may be indicative of the HIV-trauma syndemic. This syndemic suggests that an interaction between HIV and trauma can synergistically lead to further compromised health for PLWH (Brezing et al., 2015). Interventions and programs targeting PLWH who experienced CSA need to be aware of and sensitive to the impact of IPV.

These findings should be interpreted in light of study limitations. First, participants for our study were recruited from 2009 to 2010 in the northeast region of the United States, thus the findings may have limited generalizability. Second, the cross-sectional nature of the data limit any causality inferences. Third, self-report measures were used to determine IPV experiences, as a result, there is a potential for underreporting due to social desirability bias. Future research should use longitudinal data with larger samples to examine temporal relationships and potential mediating and moderating effects.

Conclusions

IPV experiences are important factors that impact the wellbeing for adult PLWH who experienced CSA. Our findings highlight unique contributions of IPV on HRQoL that can inform interventions and programs to improve the health of adult PLWH who experienced CSA. Because adult PLWH who experienced CSA endorse a high prevalence of IPV, this population may benefit from IPV risk reduction programs. Linkage to IPV service providers is needed (Prust et al., 2017) and IPV screening protocols could enhance HIV care and retention programs (Prust et al., 2017). Also, adult PLWH who experienced CSA may benefit from IPV-focused health promotion interventions. There are a limited number of mental health interventions for adult PLWH who experienced CSA (Hansen et al., 2012), and future programs could build upon existing frameworks to help this population manage stress associated with IPV. Modifying existing mental health interventions for adult PLWH who experienced CSA may help with IPV-related stress management to improve HRQoL.

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Table 1

Means, Standard Deviations, and Correlations with Study Variables

	1	2	3	4	5	6	7	8	9
1. Age	-								
2. Woman ^a	.05	-							
3. Heterosexual ^a	.22 [*]	.40 ^{**}	-						
4. Income Range ^a	.13	-.17	.27 [*]	-					
5. African American ^a	.01	.11	-.06	-.09	-				
6. Total Co-morbidities	.17	.33 ^{**}	.29 [*]	-.16	-.08	-			
7. HIV Symptom Severity	-.02	.29 [*]	.13	-.07	-.18	.52 ^{**}	-		
8. Physical or Sexual IPV ^a	-.05	.18	.11	-.07	.32 ^{**}	.16	.06	-	
9. Health-Related Quality of Life	.27 ^{**}	-.11	.18 [*]	-.10	.17	-.17	-.53 ^{**}	-.26 [*]	-
Mean	47.8	50%	65%	69%	67	5.1	10.1	77%	126.0
Standard Deviation	6.8	39	51	64	52	3.2	9.2	60	30.9

Note. IPV = Intimate Partner Violence.^{*} $p < .05$,^{**} $p < .01$.^aData are % (N).

Table 2

Hierarchical Linear Regression Examining the Unique Contribution of IPV on Health-Related Quality of Life

	B	Adjusted R²	F
Overall HRQoL			
<i>Step 1</i>		0.12	3.59**
Age	0.23	2.08*	
Heterosexual	0.24	1.97*	
African American	0.20	1.86	
Woman	−0.24	−1.99*	
<i>Step 2</i>		0.35	7.98***
Age	0.21*		
Heterosexual	0.23**		
African American	0.09		
Woman	−0.08		
HIV Symptom Severity	−0.54***		
Total Comorbidities	0.05		
<i>Step 3</i>		0.44	9.62***
Age	0.17*		
Heterosexual	0.26**		
African American	0.20*		
Woman	−0.06		
HIV Symptom Severity	−0.54***		
Total Co-morbidities	0.10		
Physical or Sexual IPV	−0.32***		
Physical Wellbeing, <i>M</i> (<i>SD</i>)			
<i>Step 3</i>		0.56	14.74***
Age	0.07		
Heterosexual	0.10		
African American	0.04		
Woman	−0.22**		
HIV Symptom Severity	−0.71***		
Total Comorbidities	0.08		
Physical or Sexual IPV	−0.12		
Emotional Wellbeing, <i>M</i> (<i>SD</i>)			
<i>Step 3</i>		0.34	6.72***
Age	0.15		

	B	Adjusted R²	F
Heterosexual	0.27 ^{**}		
African American	0.25 ^{**}		
Woman	0.02		
HIV Symptom Severity	−0.48 ^{**}		
Total Comorbidities	0.14		
Physical or Sexual IPV	−0.25 ^{**}		
Function/Global Wellbeing, <i>M (SD)</i>	28.2 (11.3)		
Step 3		0.18	3.35 ^{**}
Age	0.18		
Heterosexual	0.19		
African American	0.11		
Woman	−0.03		
HIV Symptom Severity	−0.35 ^{**}		
Total Comorbidities	0.05		
Physical or Sexual IPV	−0.24 [*]		
Social Wellbeing, <i>M (SD)</i>	20.4 (8.7)		
Step 3		0.10	2.21 [*]
Age	0.12		
Heterosexual	0.22+		
African American	0.17		
Woman	0.08		
HIV Symptom Severity	−0.04		
Total Comorbidities	0.01		
Physical or Sexual IPV	−0.34 ^{**}		
Cognitive Functioning, <i>M (SD)</i>	8.5 (2.4)		
Step 3		0.32	4.61 ^{***}
Age	0.05		
Heterosexual	0.16		
African American	0.30 ^{**}		
Woman	−0.02		
HIV Symptom Severity	−0.38 ^{**}		
Total Comorbidities	0.05		
Physical or Sexual IPV	−0.33 ^{**}		

Note. To conserve space, only the final (third) step is shown for the five subscales. Standardized regression coefficients are shown.

* p = 0.05,

** p = 0.01,

p = 0.001.

IPV = intimate partner violence; HRQoL = health-related quality of life.

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