Self-Compassion and Risk Behavior Among People Living With HIV/AIDS


Abstract: Sexual risk behavior and illicit drug use among people living with HIV/AIDS (PLWHA) contribute to poor health and onward transmission of HIV. The aim of this collaborative multi-site nursing research study was to explore the association between self-compassion and risk behaviors in PLWHA. As part of a larger project, nurse researchers in Canada, China, Namibia, Puerto Rico, Thailand and the US enrolled 1211 sexually active PLWHA using convenience sampling. The majority of the sample was male, middle-aged, and from the US. Illicit drug use was strongly associated with sexual risk behavior, but participants with higher self-compassion were less likely to report sexual risk behavior, even in the presence of illicit drug use. Self-compassion may be a novel area for behavioral intervention development for PLWHA.

Keywords: HIV/AIDS; International Nursing Network for HIV/AIDS Research; nursing; self-compassion; sexual risk behavior; illicit drug use

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Multi-site, collaborative research is a promising model for nursing science, and technological advances have helped these models expand over the past 5 years (Schluter, Turner, Huntington, Bain, & McClure, 2011). Collaborative models can be efficient, productive, and can lead to more generalizable findings (Beaver, 2004). The utility of such nursing research is particularly relevant for illnesses such as HIV/AIDS, which affects populations around the world and is demanding the attention of nurses globally. The International Nursing Network for HIV/AIDS Research (Holzemer, 2007) recently completed its fifth collaborative study, and this paper presents a sub-analysis of the relationship of self-compassion to unhealthy drug and sexual behaviors among people living with HIV/AIDS (PLWHA).

Preventing HIV transmission and maintaining adherence to prescribed HIV treatments are of great concern for PLWHA, and are significant global public health priorities (Crepaz et al., 2006; McCoy, Kangwende, & Padian, 2010). Recently, much attention has been paid to preventing HIV transmission through antiretroviral (ARV) use, which lowers HIV viral load and reduces the risk of onward transmission of HIV (Donnell et al., 2010; Kalichman et al., 2011). The efficacy of ARV use for prevention, however, is dependent on adherence to the medications. In order for HIV treatment and prevention efforts to reduce transmission, the factors that support and inhibit adherence to treatment for individual PLWHA must be studied (Okonsky, 2011). Self-management of health behavior can include both positive and negative ways of managing health and symptoms (Eller et al., 2010; Nicholas et al., 2007).
Illicit drug use is one unhealthy behavior that may complicate HIV self-management. Illicit drug use interferes with medication access and adherence and may increase HIV pathogenesis, transmission risk, and instability of social and financial support (Mellins et al., 2009). In PLWHA, researchers have found an association between illicit drug use, particularly of stimulants such as methamphetamine and crack cocaine, and behaviors that transmit HIV (Colfax et al., 2004; Hedden et al., 2011). Illicit drug use is a risk factor for poor adherence to HIV medications and is associated with lower CD4 counts and higher viral load (Samet, Walley, & Bridden, 2007). Crack cocaine use is associated with lower CD4 counts and higher viral load (Samet, et al., 2004; Hedden et al., 2011). Illicit drug use is a risk for progression of HIV to AIDS (Baum et al., 2009). In a prospective study of illicit drug users, active stimulant users demonstrated smaller reductions in HIV viral load and smaller increases in CD4 cell count from baseline, even when ARV adherence was taken into account (Baum et al., 2009).

Both ARV medication non-adherence and behavioral risks, such as illicit drug use, occur in individuals who have problems coping with their HIV diagnosis or face specific psychosocial barriers (Moskowitz, Hult, Bussolari, & Acree, 2009; Sikkema et al., 2010). Problems coping with HIV can lead not only to illicit drug use, but also to fatalistic thoughts about the future, suicidal tendencies, and selective disclosure or non-disclosure of HIV status to offset discrimination and stigma in personal relationships and social contexts (Crepaz & Marks, 2001; Moskowitz et al., 2009). Psychological and social issues may affect the PLWHA’s ability to manage a complex illness (Carrico, Neilands, & Johnson, 2010), and the positive influence of self-efficacy on HIV medication adherence has been well documented (Johnson, Neilands, et al., 2007), but further study is needed of interventions to influence psychosocial factors as a way to reduce unhealthy behaviors and improve self-management among PLWHA.

Self-regulation and self-management behaviors in PLWHA, including adherence to HIV medication, are an important area of focus for interventions to improve the health of PLWHA (Wilkinson & Whitehead, 2009). There is little consensus on the components of self-management or how best to incorporate them in interventions to improve health. Self-management is learned through experience, education, culture, and scientific knowledge, and includes behaviors that are amenable to change.

Self-compassion may play a role in HIV self-management (Moskowitz & Seal, 2011). Self-compassion refers to treating oneself with the same concern and care as one would provide to a loved one who is experiencing difficulties such as illness (Brion, Leary, & Drabkin, 2014; Neff, 2003). Little is known about self-compassion in individuals who are engaging in unhealthy behaviors (such as sexual risk behavior and substance use) while managing a chronic illness, but levels of self-compassion potentially could be altered or improved (Neff, 2003). Brion et al. (2014) found that chronically ill individuals with higher levels of self-compassion exhibited more resilience in responding to their illness, including adherence to ARVs and ongoing medical treatments, but little more is known about the relationship between self-compassion and self-management in HIV. The purpose of this analysis, then, was to explore the relationship between unhealthy behaviors (sexual risk behavior and illicit drug use) and self-compassion among people living with HIV/AIDS who participated in a multi-site nurse-led research collaboration.

Methods

This cross-sectional study was conducted under the auspices of the International Nursing Network for HIV/AIDS Research (Holzemer, 2007; Kemppainen et al., 2013; Nokes et al., 2012; Weibel et al., 2012). Data were collected from sites in Vancouver, Canada; Shanghai, China; Windhoek, Namibia; and Bangkok, Thailand, and from 11 sites in the United States (Boston, MA, Chicago, IL, Cleveland, OH, Corpus Christi, TX, Durham, NC, Harlingen, TX, Honolulu, HI, Newark, NJ, New York, NY, San Francisco, CA, San Juan, PR, Seattle, WA, and Wilmington, NC). Each site director agreed to adhere to the common protocol and to take responsibility for financial, ethical and legal aspects of the study at her/his own site. The common protocol was designed with input from site directors over the course of two in-person meetings of the nurse-researcher collaboration.

Participants

Each site sought to recruit a convenience sample of a minimum of 100 adults living with HIV infection. Given the large number of sites and the lack of evidence on differences in self-compassion that might be clinically significant, we did not conduct a power analysis to determine the sample size. Inclusion criteria were: (1) 18 years or older; (2) self-reported HIV-positive serostatus; and (3) ability to provide informed consent in the local language (e.g., English, Thai, Chinese, local Namibian dialect, or Spanish). Our analysis focused on participants who reported being sexually active in the past 3 months (Koblin et al., 2003). Participants were recruited from HIV community-based organizations and HIV care clinics, using two methods. First, flyers were posted in participating sites indicating how people who were interested in the study could call to make an appointment with an investigator or meet the research team at the site. In the second method, members of the research team visited waiting rooms where only PLWHA were present and announced the study to all present; people who were interested then approached the researchers. At each site, data were collected until a minimum of 100 PLWHA had completed the study.

After recruitment and screening, all participants gave written informed consent and completed a self-administered
survey. Participants who were unable to read the survey were given the opportunity to complete the survey via interview with a research assistant. Upon completing the survey, participants were given financial acknowledgements to compensate them for their time. These ranged from US $5–6 in Thailand and China to US $15–$30 in the US and Namibia. The amounts were determined based upon site investigators’ prior experience with PLWHA research participants and were approved by each site’s institutional review board (IRB).

Measurement

The study questionnaire included 16 instruments, and those used in this analysis are described below. On average, participants took 30–60 minutes to complete the entire study booklet. All variables in this analysis were chosen a priori, consistent with our prior work and our hypothesis that self-compassion is related to self-care for PLWHA.

Demographics. This instrument used in prior Network studies consists of 20 items on age, gender, race, ethnicity, education, adequacy of income, health insurance, date of HIV diagnosis, self-reported current CD4 count (Cunningham, Rana, Shapiro, & Hays, 1997; Kalichman, Rompa, & Cage, 2000), HIV viral load, co-occurring health conditions, HIV transmission route, and general health. Along with gender and HIV medications, self-esteem was included as a control variable in multivariate analyses. Self-esteem was measured with the Rosenberg Self-Esteem Scale (1989).

Illicit drug use. This 10-item survey, modified from an existing assessment of drug use (Lightfoot et al., 2005), measured self-reported recent use of licit and illicit drugs, including tobacco, alcohol, cocaine, crack, heroin, inhalants, marijuana, opiates, and methamphetamine or speed. Participants are asked how many days per week they used each drug on average, over the past 3 months, an approach found reliable and valid in community studies (Denis et al., 2012). For this analysis, the responses were combined into one dichotomous variable that indicated any illicit drug use (yes/no) in the past 3 months, including stimulants, crack, heroine, inhalants, opiates, or speed (Dowling-Guyer et al., 1994). We did not include marijuana or alcohol.

Self-compassion. Neff (2003) developed and validated a 26-item self-report inventory to measure individual differences in the tendency to be self-compassionate. A shorter 12-item Brief Version Self-Compassion Inventory, was subsequently developed (Raes, Pommier, Neff, & Van Gucht, 2011) and showed internal reliability (Cronbach α ≥ .86) as well as construct validity. We used the shorter version to decrease participant burden and found the reliability to be acceptable (Cronbach α = .71; Kemppainen et al., 2013). Participants were asked to rate how they dealt with difficult situations on a 5-point scale, (where 1 = almost never, 2 = rarely, 3 = sometimes, 4 = frequently, and 5 = almost always). Sample items included, “When I’m feeling down I tend to obsess and fixate on everything that’s wrong,” and “When I see aspects of myself that I don’t like, I get down on myself.” After reverse-scoring several items, responses are summed to calculate a total score. Lower scores represent lower self-compassion.

Sexual risk behavior. Sexual risk behavior was measured using a set of questions (Koblin et al., 2003) on the number of times and number of partners with whom the respondent reported engaging in sexual behaviors known to transmit HIV, including unprotected insertive and receptive anal intercourse or vaginal intercourse (Catania, Kegeles, & Coates, 1990). We did not measure oral sex because the data on HIV transmission via oral sex is inconclusive, and oral sex does not usually occur in isolation of vaginal or anal intercourse (Parsons et al., 2005; Vittinghoff et al., 1999). We cued participants as engaging in sexual risk behavior if they reported any anal or vaginal intercourse without a condom in the previous 3 months. This measure has been used in many studies of self-reported sexual behavior in HIV (Catania, Gibson, Chitwood, & Coates, 1990).

Translation

At four of the sites, the instruments were translated from English to the local language(s). These sites were Shang-hai, China (Chinese), Bangkok, Thailand (Thai), San Juan, Puerto Rico (Spanish), and Windhoek, Namibia (Afrikaans and Oshiwambo). Each site followed established translation procedures (Beaton, Bombardier, Guillemin, & Ferraz, 2000) in order to ensure reliability of translated instruments. This process included initial translation (forward) by an expert whose primary language was Thai, Spanish, Afrikaans, Oshiwambo, or Chinese; back translation; review and adjudication; pilot testing; and finally a consensus meeting to approve the translated version of the measure. Psychometric evaluation of each of these instruments was beyond the scope of this analysis, but a more in-depth discussion of cross-cultural translation of the brief version of the self-compassion instrument can be found in Kemppainen (2013).

Ethical Review

The University of California San Francisco (UCSF) Committee on Human Research conducted the primary ethical review for this study. Once approval was received, each of the sites submitted the proposal to its local IRB for independent ethical review and received approval prior to implementing study procedures.

Data Analysis

Each site was responsible for collecting data, ensuring completeness of the survey, entering and cleaning their data in an SPSS template, and securing the data. After
these tasks were complete at each site, the data were de-
identified and sent to the coordinating center at UCSF,
where the data were cleaned and aggregated in SPSS, and
instrument sub-factor and total scores were calculated.

Analyses for this report were conducted in Stata 11
(StataCorp, 2010) and Mplus 7 (Muthén & Muthén, 1998–
2012). We first conducted bivariate logistic regression to
examine associations between the variables of interest
(illicit drug use and self-compassion) and sexual risk be-
havior. These variables were then entered into a multivariable
regression model to examine whether illicit drug use and
self-compassion were significantly associated with sexual
risk behavior when adjusting for potential confounders (gen-
der, self-esteem, HIV medication use). We then developed
a path mediation model with Mplus to investigate whether
illicit drug use mediated the relationship between self-com-
passion and sexual risk behavior. Path models are superior
to a series of regression equations for estimating mediated
effects (Iacobucci, Saldanha, & Deng, 2007). Robust stan-
dard errors were employed to account for the possible non-
independence of the participants clustered by site (Fig. 1).
Because mediation effects are known to be non-normally
distributed (Shrout & Bolger, 2002), we employed an esti-
mator that is robust to non-normality as well as non-inde-

Results

Of the 2,182 PLWHA who participated in the larger study,
1,211 (55.4%) reported being sexually active in the prior
3 months and were included in this sub-analysis. All coun-
tries were represented, but over two-thirds (80.4%) were
from the US, including Puerto Rico. Sexually active partici-
pants had a mean age of 43 years, and the majority were
male (Table 1). Most were unemployed, and more than
one-third perceived their income to be inadequate or barely
adequate to meet their needs. Eighty percent of the female
participants and 40% of the males reported having children.
Most had known their HIV status for over 10 years, over
two-thirds reported taking antiretroviral medication for their
HIV, and 44% had received an AIDS diagnosis.

The mean self-compassion score (range 10–50) was
38.7 (±7.5). The majority (53.5%) reported tobacco use,
25.8% reported alcohol use, and 29.7% reported using mar-
jjuana in the past 3 months. Over one-quarter reported illicit
drug use in the prior 3 months, with crack cocaine (15.4%)
and cocaine (13.3%) most commonly reported. Approxi-
mately 40% reported one or more instances of sex without
a condom, defined as sexual risk behavior.

People who reported illicit drug use in the prior
3 months were nearly twice as likely to report engaging in
sexual risk behavior (Table 2). Those with higher self-com-
passion scores were less likely to report sexual risk behav-
ior in the last 3 months, both in unadjusted analysis and
when gender, HIV medication use, and self-esteem were
taken into account (Bing et al., 2001; Johnson, Charlebois,
Morin, Remien, & Chesney, 2007; Markowitz et al., 2011;
Venkatesh et al., 2012).

In path analysis, the direct association between self-
compassion and unprotected sex was significant (p = .046),
as was the indirect association of self-compassion and
unprotected sex, mediated by illicit drug use (p = .014).
When mediated by drug use, a 10-point increase in self-
compassion was associated with 22.9% lower odds of
unprotected sex. The total effect (combined direct and indi-
rect effect) of a 10-point increase in self-compassion was
36.9% lower odds of having unprotected sex (p < .001).

Discussion

In this multi-site collaborative nursing study, we examined
self-compassion, illicit drug use, and sexual risk behavior in
an international sample of 1,211 sexually active PLWHA,
who were, on average, middle-aged men. While only half of
the larger study sample reported being sexually active in
the last 3 months, more than half of the 1,211 who were
having sex engaged in sexual risk behavior (anal or vaginal
intercourse without use of a condom). Illicit drug use in the
past 3 months was common in this sample and included
use of stimulants (cocaine, crack cocaine, and speed) and
opiates (heroin and other non-prescribed opiates). While we
do not have a biological test confirming substance use,
self-report of illicit substance use is thought to be accurate
and, if anything, underreported when self-report is utilized
(Denis et al., 2012; Dowling-Guyer et al., 1994). Higher lev-
els of illicit drug use were associated with greater sexual
risk behavior. The level of self-compassion in this sample
was moderate, and PLWHA who had higher levels of self-
compassion had lower odds of engaging in sexual risk
behavior.
While similar results linking illicit drug use to sexual risk behavior among PLWHA have been reported (Colfax et al., 2004; Purcell et al., 2007), this is the first study of self-compassion and sexual risk behavior in PLWHA. Magnus, Kowalski, and McHugh (2010) found that self-compassion was related to well-being in 252 women who exercised. Our examination of unhealthy behaviors in sexually active PLWHA extends our understanding of this

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### Table 1. Demographic and HIV Health Indicators

<table>
<thead>
<tr>
<th>Race</th>
<th>Male (n = 830)</th>
<th>Female (n = 337)</th>
<th>Transgender/Other (n = 34)</th>
<th>Total (n = 1,211)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian/Pacific Islander</td>
<td>21 (2.6)</td>
<td>11 (3.3)</td>
<td>2 (5.9)</td>
<td>34 (2.8)</td>
</tr>
<tr>
<td>African American/Black</td>
<td>298 (36.2)</td>
<td>120 (35.7)</td>
<td>14 (41.2)</td>
<td>433 (36.1)</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>166 (20.2)</td>
<td>66 (19.6)</td>
<td>10 (29.4)</td>
<td>243 (20.3)</td>
</tr>
<tr>
<td>Native American/Indian</td>
<td>17 (2.1)</td>
<td>6 (1.8)</td>
<td>2 (5.9)</td>
<td>25 (2.1)</td>
</tr>
<tr>
<td>White/Anglo</td>
<td>175 (21.2)</td>
<td>47 (14.0)</td>
<td>2 (5.9)</td>
<td>226 (18.9)</td>
</tr>
<tr>
<td>Other</td>
<td>18 (2.1)</td>
<td>7 (2.1)</td>
<td>2 (5.9)</td>
<td>27 (2.3)</td>
</tr>
<tr>
<td>African—Namibia</td>
<td>35 (4.3)</td>
<td>32 (9.5)</td>
<td>2 (5.9)</td>
<td>69 (5.8)</td>
</tr>
<tr>
<td>Asian—China and Thailand</td>
<td>94 (11.4)</td>
<td>47 (14.0)</td>
<td>0 (0.0)</td>
<td>141 (11.8)</td>
</tr>
<tr>
<td>Completed education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11th grade or less</td>
<td>178 (21.5)</td>
<td>129 (38.3)</td>
<td>10 (29.4)</td>
<td>320 (26.6)</td>
</tr>
<tr>
<td>High school or GED</td>
<td>323 (39.1)</td>
<td>104 (30.9)</td>
<td>13 (38.2)</td>
<td>441 (36.7)</td>
</tr>
<tr>
<td>2 year or technical degree</td>
<td>189 (22.9)</td>
<td>70 (20.8)</td>
<td>9 (26.5)</td>
<td>268 (22.3)</td>
</tr>
<tr>
<td>B.S. or B.A. degree</td>
<td>96 (11.6)</td>
<td>23 (6.8)</td>
<td>1 (2.9)</td>
<td>120 (10.0)</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>35 (4.2)</td>
<td>10 (3.0)</td>
<td>0 (0.0)</td>
<td>45 (3.7)</td>
</tr>
<tr>
<td>Doctorate</td>
<td>6 (0.7)</td>
<td>1 (0.3)</td>
<td>1 (2.9)</td>
<td>8 (0.7)</td>
</tr>
<tr>
<td>Perceived income adequacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totally inadequate</td>
<td>120 (17.5)</td>
<td>69 (23.3)</td>
<td>3 (10.0)</td>
<td>194 (19.0)</td>
</tr>
<tr>
<td>Barely adequate</td>
<td>185 (27.0)</td>
<td>69 (23.3)</td>
<td>13 (43.3)</td>
<td>269 (26.3)</td>
</tr>
<tr>
<td>Enough</td>
<td>381 (55.5)</td>
<td>158 (53.4)</td>
<td>14 (46.7)</td>
<td>559 (54.7)</td>
</tr>
<tr>
<td>Currently work for pay</td>
<td>262 (39.8)</td>
<td>88 (26.4)</td>
<td>6 (17.7)</td>
<td>359 (30.0)</td>
</tr>
<tr>
<td>Have health insurance</td>
<td>589 (71.2)</td>
<td>251 (75.2)</td>
<td>25 (75.3)</td>
<td>873 (72.5)</td>
</tr>
<tr>
<td>Have children</td>
<td>324 (40.0)</td>
<td>269 (80.3)</td>
<td>6 (17.7)</td>
<td>602 (50.7)</td>
</tr>
<tr>
<td>Live with one or more children</td>
<td>95 (11.9)</td>
<td>126 (52.7)</td>
<td>1 (16.7)</td>
<td>222 (40.1)</td>
</tr>
<tr>
<td>Have AIDS diagnosis</td>
<td>354 (43.7)</td>
<td>146 (44.4)</td>
<td>12 (36.4)</td>
<td>512 (43.7)</td>
</tr>
<tr>
<td>Currently taking HIV meds</td>
<td>679 (83.5)</td>
<td>266 (81.9)</td>
<td>25 (75.8)</td>
<td>970 (82.8)</td>
</tr>
<tr>
<td>Detectable HIV viral load (if known)</td>
<td>154 (27.3)</td>
<td>77 (39.1)</td>
<td>4 (30.8)</td>
<td>365 (30.4)</td>
</tr>
<tr>
<td>Any illicit drug use</td>
<td>241 (29.5)</td>
<td>73 (21.7)</td>
<td>18 (56.3)</td>
<td>332 (28.0)</td>
</tr>
<tr>
<td>Had unprotected sex in the last 3 months</td>
<td>354 (42.7)</td>
<td>127 (37.7)</td>
<td>15 (44.1)</td>
<td>496 (41.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M (SD)</th>
<th>Male (n = 830)</th>
<th>Female (n = 337)</th>
<th>Transgender/Other (n = 34)</th>
<th>Total (n = 1,211)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>43.8 (9.6)</td>
<td>41.8 (8.8)</td>
<td>40.8 (9.1)</td>
<td>43.1 (9.4)</td>
</tr>
<tr>
<td>Year diagnosed with HIV</td>
<td>1998 (8.0)</td>
<td>1999 (7.1)</td>
<td>1999 (7.2)</td>
<td>1999 (7.8)</td>
</tr>
<tr>
<td>CD4+T cell count</td>
<td>485 (367)</td>
<td>528 (392)</td>
<td>282 (260)</td>
<td>491 (372)</td>
</tr>
<tr>
<td>Self-compassion Score</td>
<td>38.5 (7.3)</td>
<td>38.5 (7.5)</td>
<td>36.4 (4.6)</td>
<td>38.4 (7.3)</td>
</tr>
</tbody>
</table>

*Ten people did not report gender. Of these, seven did not report sex, two were born male, and one was born female.

While similar results linking illicit drug use to sexual risk behavior among PLWHA have been reported (Colfax et al., 2004; Purcell et al., 2007), this is the first study of self-compassion and sexual risk behavior in PLWHA.

### Table 2. Predictors of PLWHA Sexual Risk Behavior in Unadjusted and Adjusted Logistic Regression

<table>
<thead>
<tr>
<th>Predictor</th>
<th>OR (95% CI)</th>
<th>p-Value</th>
<th>Adjusted OR* (95% CI)</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illicit drug use</td>
<td>1.75 (1.18, 2.60)</td>
<td>&lt;.01</td>
<td>1.67 (1.10, 2.54)</td>
<td>.02</td>
</tr>
<tr>
<td>Self-compassion</td>
<td>.98 (.96, 1.00)</td>
<td>.01</td>
<td>.96 (.93, .99)</td>
<td>.02</td>
</tr>
<tr>
<td>Gender</td>
<td>.88 (.71, 1.09)</td>
<td>.24</td>
<td>.85 (.66, 1.10)</td>
<td>.19</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>.99 (1.00, 1.04)</td>
<td>.80</td>
<td>.97 (.93, 1.00)</td>
<td>.12</td>
</tr>
<tr>
<td>HIV medication use</td>
<td>.99 (.84, 1.17)</td>
<td>.90</td>
<td>1.02 (.86, 1.22)</td>
<td>.81</td>
</tr>
</tbody>
</table>

Note. PLWHA, persons living with HIV/AIDS; OR, odds ratio; CI, confidence interval.

*Controlling for gender, HIV/AIDS; OR, odds ratio; CI, confidence interval.

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phenomenon. In this cross-sectional study, we could not determine whether more self-compassion caused lower use of illicit drugs, nor do we know the clinical significance of different scores on the self-compassion scale. If self-compassion is found to predict drug use, interventions to increase self-compassion may decrease drug use. For example, counseling or interventions to improve self-compassion among PLWHA may help to reduce unhealthy behaviors (e.g., illicit drug use, sexual risk behavior) as a component of self-management.

Addressing the risk behaviors that lead to increased morbidity and mortality in PLWHA has been a challenge in behavioral research and patient care. Behavioral interventions beyond those for adherence to ARV medication have had little attention from nurse researchers. Given the evidence that ARV medications can be a means to HIV prevention (Cohen, McCauley, & Sugarman, 2012), addressing self-compassion to promote ARV adherence as well as reduce risk behaviors may reduce transmission of HIV. Self-compassion may be a novel avenue for the development of nursing interventions to promote health in PLWHA and active illicit drug users.

Stigma affects HIV morbidity and is a particularly important target of HIV nursing research (Holzemer & Uys, 2004; Nyblade, 2006). One explanation for our findings could be that those who experience less stigma do not blame themselves for their HIV status, have higher levels of self-compassion, and thus are more likely to do what they can to take care of themselves. This self-care includes decreasing sexual risk behavior and illicit drug use. While self-compassion operates at the level of the individual, eliminating structural and societal barriers that add to stigma and discrimination could enhance self-compassion.

Limitations of this study include that a majority of our sites and site directors are from the US, and other countries were not evenly represented in the present sample. In the US, the majority of PLWHA are men (often men who have sex with men) and people of color. This may explain why 70% of our sample was male, whereas worldwide, it is estimated that 52% of all PLWHA are women, limiting the generalizability of these findings. In recent years, HIV has expanded greatly into the female population in the US, although women are still fewer than half of those living with HIV. The US sample also reflected substantial regional differences, as sites included Puerto Rico (largely Hispanic and of mixed ethnicity) and Hawaii. In contrast, in Canada, China, Namibia, and Thailand, recruitment took place in a single region. A further limitation was the variation in the types of settings from which participants were recruited, which included clinic sites and community-based HIV/AIDS organizations. The preponderance of US-based investigators may have led us to lean toward assessing concepts that, while well-established in the West, may be less applicable outside the US. However, the International Nursing Network for HIV/AIDS Research has experience working in international settings.

The study’s cross-sectional design prevented inferences about causality or changes over time. This design, along with the convenience sampling methodology, limited our ability to make statistical comparisons across sites and countries. In addition, the self-compassion instrument does not have established cut-offs or guidelines for clinical or research use. However, the study was intended to be exploratory, and the results point to a novel area of research that may have important policy and clinical implications. One of our strengths as a Network is also one of our limitations. We did not enter into this research with a funded research protocol but instead aimed to collaborate with nurse researchers in countries with large HIV epidemics to answer questions central to nursing science and self-care.

Conclusion and Implications

The growing prevalence of HIV/AIDS makes it imperative to develop new strategies to help PLWHA better manage their own health, which can in turn prevent onward transmission of HIV. This exploratory analysis can guide further in-depth examination of self-management and its association with risk behaviors that affect HIV morbidity and mortality. Self-compassion may be a key to reduce unhealthy behaviors such as illicit drug use that are associated with sexual risk behavior that can transmit HIV. These data provide a foundation to understanding these concepts as potential components of nurse-initiated self-management interventions for the more than 30 million PLWHA worldwide.

As the global burden of HIV continues to grow, responsibility for clinical management is being shifted to the profession of nursing (Callaghan, Ford, & Schneider, 2010). By working with nurse investigators around the globe, the Network is helping to elucidate the complex factors that affect an HIV-infected person’s ability to manage his or her HIV disease. The results of collaborative nursing research can add to clinical and policy knowledge to inform interventions to improve the health of PLWHA and reduce onward transmission world-wide.

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