Published in final edited form as:

Psychol Women Q. 2014 September 1; 38(3): 311–326. doi:10.1177/0361684314525579.

Gender Roles and Mental Health in Women With and at Risk for HIV

Leslie R. Brody¹, Lynissa R. Stokes^{1,2}, Sannisha K. Dale¹, Gwendolyn A. Kelso¹, Ruth C. Cruise¹, Kathleen M. Weber³, Jane K. Burke-Miller³, and Mardge H. Cohen⁴

¹ Department of Psychology, Boston University, Boston, MA, USA

² School of Social and Behavioral Health Sciences, College of Public Health and Human Sciences, Oregon State University, Corvallis, OR, USA

³ Cook County Health & Hospital System, Chicago, IL, USA

⁴ Departments of Medicine, Rush University and Cook County Health & Hospital System, Chicago, IL, USA

Abstract

Predominantly low-income and African American women from the same community, HIV-infected ($n = 100$; HIV+) and uninfected ($n = 42$; HIV–), were assessed on reported gender roles in sexual and other close relationships—including levels of self-silencing, unmitigated communion, and sexual relationship power—at a single recent study visit during 2008–2012. Recent gender roles were investigated in relation to depressive symptoms and health-related quality of life assessed both at a single visit during 2008–2012 and averaged over semiannual visits (for depressive symptoms) and annual visits (for quality of life) occurring between 1994 and 2012. Compared to HIV– women, HIV+ women reported significantly higher levels of several aspects of self-silencing, unmitigated communion, and multi-year averaged depressive symptoms as well as lower levels of sexual relationship power and recent and multi-year averaged quality of life. For both HIV+ and HIV– women, higher self-silencing and unmitigated communion significantly related to recent or multi-year averaged higher depressive symptoms and lower quality of life. Intervention strategies designed to increase self-care and self-advocacy in the context of relationships could potentially minimize depressive symptoms and enhance quality of life in women with and at risk for HIV.

Keywords

sex roles; HIV; depression; quality of life; silencing the self; communion; health; empowerment

© The Author(s) 2014

Corresponding Author: Leslie R. Brody, Department of Psychology, Boston University, 648 Beacon Street, Boston, MA 02215, USA. lrbrody@gmail.com.

Authors' Note

The contents of this publication are solely the responsibility of the authors and do not necessarily represent the views of the National Institutes of Health.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

A number of investigators have recommended that HIV-related research focus on the psychosocial circumstances unique to women that predict their HIV risk in national and international samples (Amaro & Raj, 2000; Dworkin & Ehrhardt, 2007; Wingood & DiClemente, 2000). However, few studies have systematically investigated how gender roles differ in women with and at risk for acquiring HIV or how gender roles relate to the high rates of depressive symptoms and low health-related quality of life often experienced by individuals living with HIV (Cook et al., 2002; McDonnell, Gielen, O'Campo, & Burke, 2005; Wisniewski et al., 2005). Gender roles in women with HIV are particularly important to understand in the context of the shift in transmission from intravenous drug use toward heterosexual contact and because of the facts that women represent more than 50% of HIV infections globally (World Health Organization, 2012) and are an increasing percentage of HIV infections in the United States (Centers for Disease Control and Prevention [CDC], 2012, 2013).

It is possible to characterize gender roles along a continuum from traditional to nontraditional (or egalitarian), with traditional role expectations for women including physical and emotional caretaking, communion or affiliation with others, emotional expressivity (with the exception of anger and competitive feelings), personality characteristics emphasizing passivity and submissiveness, an emphasis on appearance and physical attractiveness, and having relatively low decision-making power in intimate relationships as well as in the larger society (Brody, 1999). Research indicates that the degree to which women adopt or identify with traditional gender roles results in part from factors associated with early socialization—including religious, cultural, socioeconomic, and educational experiences; childhood abuse; parental occupation; and family structure (Brody, 1999; McMullin, Wirth, & White, 2007; Sen, 2003). Traditional gender roles are in turn powerful predictors of lower levels of educational attainment, and they also predict a lower likelihood of being employed (Cunningham, 2008).

The gender roles women adopt in their relationships can also be viewed as adaptations to oppressive and patriarchal systems that may punish women for self-advocacy (Jack, 1999). In particular, women's limited power and resources may lead to self-silencing in the context of relationships (Jack, 1999)—a coping strategy in which women inhibit self-expression and minimize self-needs in order to avoid conflict, preserve relationships, and/or avoid criticism. Unmitigated communion is another relational coping strategy reflecting traditional roles in which women focus on caring for and meeting the needs of others, rather than on tending to self-care needs, as well as providing support to others but not necessarily perceiving support from others to be available (Helgeson & Fritz, 1998, 1999). Numerous research studies have documented that participants who score highly on unmitigated communion are overinvolved in the problems of others such that they become distressed at the distress of others, neglect their own needs, and evaluate themselves according to others' judgments (for reviews, see Helgeson, 2003; Helgeson & Fritz, 2000).

Traditional gender roles, particularly an emphasis on self-silencing and sacrificing self-needs in order to care for others, have been found to relate significantly to depressive symptoms and poor health outcomes in women with breast cancer, diabetes, rheumatoid arthritis, and heart disease (Eaker & Kelly-Hayes, 2010; Helgeson, 2003; Helgeson & Fritz,

1998, 1999; Jack & Dill, 1992; Nagurney, 2007; Trudeau, Danoff-Burg, Revenson, & Paget, 2003). For example, women who reported high levels of unmitigated communion were found to practice inadequate health behaviors (e.g., failing to adhere to a prescribed exercise program) following a coronary event because they attended to the needs of others instead of the self (Fritz, 2000). Even more compelling, research has indicated that women who self-silenced during marital conflicts, compared with women who did not, had 4 times the risk of dying over a 10-year follow-up period (Eaker & Kelly-Hayes, 2010). The relationships between traditional gender roles and health outcomes are not unique to heterosexual women: Among women in same-sex relationships, lack of relationship power is associated with experiencing higher levels of interpersonal violence (Eaton et al., 2008), and gender role attitudes have generally been found to be independent of sexual orientation (Greenfield, 2008; Peters & Cantrell, 1993).

Gender Roles, HIV Risk, and Psychosocial Characteristics

Compared to uninfected women (HIV−), women with HIV (HIV+) may be more likely to report traditional gender roles because of their demographic and psychosocial characteristics, which typically include a relatively lower level of education, lack of employment (exacerbated by both the stigma and physical sequelae of HIV), inadequate financial resources, and a history of abuse. Each of these demographic and psychosocial circumstances has been found to relate to traditional gender roles in other populations of women (Fortin, 2005; Teitelman, Ratcliffe, Dichter, & Sullivan, 2008).

Women with HIV may also report more traditional gender roles than their uninfected peers because traditional gender roles may have played a role in placing HIV+ women at risk for contracting HIV. A longitudinal study of adolescent and young adult women in South Africa supports a causal association between higher relationship inequity (with women having low levels of power relative to their partners) and the incidence of new HIV infection (Jewkes, Dunkle, Nduna, & Shai, 2010). Women who report traditional gender roles may be less able to negotiate male condom use with their partners, increasing their HIV risk. Consistent male condom use has been found to be significantly related to higher levels of female partners' sexual relationship power, which includes the ability for women to make decisions in sexual relationships, to potentially act against male partners' wishes, or to potentially control or influence male partners' actions (Harris, Gant, Pitter, & Brodie, 2009; Knudsen et al., 2008; Pulerwitz, Amaro, DeJong, Gortmaker, & Rudd, 2002). High levels of unmitigated communion coupled with high levels of perceived stress have been found to relate to inconsistent male partner condom use in community and college samples of women (Nagurney & Bagwell, 2009). Traditional gender role personality characteristics, such as passivity, and traditional gender role attitudes that limit women's opportunities relative to men's may also contribute to women's inability to advocate for and negotiate male condom use with their partners (Curtin, Ward, Merriwether, & Caruthers, 2011; Impett, Schooler, & Tolman, 2006; Nguyen et al., 2010; Yoder, Perry, & Saal, 2007).

HIV Status, Gender Roles, and Health

The relationship of traditional gender roles with depressive symptoms and quality of life may be more significant for women with HIV compared to uninfected women. Many psychosocial and physical stressors accompany an HIV diagnosis, including social rejection and ostracism, daily medication regimens which involve negotiations with the health care system, and multiple physical symptoms and limitations (DeMarco, 2010; Gielen et al., 2000; Serovich, McDowell, & Grafsky, 2008). Traditional gender roles—in which women with HIV prioritize care for others over self-care and silence themselves in relation to family, friends, and physicians—may prevent women with HIV from adaptively coping with HIV-related stressors, may increase their depressive symptoms, and may decrease their quality of life. For example, in a qualitative study, women with HIV who prioritized their families' needs and problems rather than their own were found to put their ongoing health at risk by failing to fully engage in medical treatment and ancillary services (DeMarco, 2010). In addition, although HIV infection itself makes it less likely that women will be employed due to both physical limitations and social stigma, women who report traditional gender roles may be especially likely to be unemployed (Cunningham, 2008), and unemployment has been found to be an independent risk factor for disease progression and death for HIV-infected patients (Delpierre et al., 2008).

More traditional gender roles in women with HIV compared to uninfected women may contribute to previous findings that HIV+ women report higher levels of depressive symptoms than do uninfected women (who are demographically matched), men with HIV, and the general population (Cook et al., 2002; Ickovics et al., 2001), as well as often also report lower quality of life (Liu et al., 2006; McDonnell et al., 2005). Depressive symptoms in women with HIV are significant risk factors for treatment nonadherence, heightened risky sexual behaviors, worse self-care behaviors, greater decline in CD4+ cell counts (a measure of the absolute number of T helper cells that are essential for an effective adaptive immune response), virologic failure (inability of anti-HIV drug treatment to reduce and maintain viral load to less than 200 copies per ml.), and increased mortality (Cook et al., 2002; Kalichman, 1999; Leserman, 2008). Additionally, depressive symptoms and quality of life have been found to be inversely related (Andrinopoulos et al., 2011). Although it is not clear how depressive symptoms and quality of life shift over time in women with HIV, in community samples of women, depressive symptoms have been found to improve with age (Woods et al., 2008). Many researchers have argued that the minimization of depressive symptoms and the optimization of healthrelated quality of life are especially important now that HIV is a chronic disease and women with HIV have the potential for long-term survival (Sherbourne et al., 2000).

Ethnicity, HIV, Depression, and Quality of Life

Black and Latina women comprise the majority of women infected with HIV in the United States, with Black women being 20 times more likely and Latina women 4 times more likely to contract HIV than White women (CDC, 2012).¹ Across diverse ethnic groups of women, including Black/African American and Latina/Hispanic, traditional gender role expectations and beliefs may place women at risk for unsafe sexual practices associated with HIV and for

poor psychological health outcomes after infection (DeMarco, 2010). For example, Billy, Grady, and Sill (2009) found that, among women with traditional gender role beliefs, the probability of doing nothing to protect themselves from sexually transmitted infections did not significantly vary by race and ethnicity, which included Hispanic, non-Hispanic Black, and non-Hispanic/Other women. Further, in a recent study of an ethnically diverse community sample of women (Grant, Jack, Fitzpatrick, & Ernst, 2011), ethnic minority women (including Black, Native American, Hispanic, and Asian women) had higher levels of self-silencing than White women, but significant relationships between self-silencing and symptoms of depressive distress showed no interactions with ethnicity. Across all ethnic groups, there was a statistically significant 3% increased risk for depressive distress for each one point increase in self-silencing scores.

In the current study, we chose to include and combine multiple ethnic groups in our analyses, including African American, Hispanic, White, and women of mixed racial identities, because all participants originated from demographically similar disenfranchised communities that are at risk for poverty, limited educational opportunities, homelessness, violence, abuse, and substance abuse—factors that place women at risk for HIV across ethnic groups (CDC, 2012; Cohen et al., 2000). By investigating how gender roles relate to depressive symptoms and quality of life across ethnic groups in our sample while controlling for demographic variables, we were better able to understand the psychosocial risk factors associated with HIV for women from disenfranchised communities regardless of race and ethnicity. This strategy was recommended by Wyatt (1994) who advocated that researchers examine sociocultural factors that affect all women, not just specific racial and ethnic groups. Such an approach has been adopted by numerous researchers who have studied relationships between HIV risk and traditional gender role traits and attitudes, relationship power, and sexual decision making among ethnically diverse women (Harvey, Bird, Galavotti, Duncan, & Greenberg, 2002; Quina, Harlow, Morokoff, Burkholder, & Deiter, 2000; Shearer, Hosterman, Gillen, & Lefkowitz, 2005).

Goals of the Present Study

In the current study, we investigated gender roles in relation to depressive symptoms and health-related quality of life in women with HIV compared to those without HIV from the same community. The focus of our article is on the gender roles women adopt in sexual and other close relationships, as reflected by the degree to which they report self-silencing, unmitigated communion, and sexual relationship power. We were primarily interested in investigating whether women with HIV reported more traditional gender roles than uninfected women. We were also interested in whether HIV status moderated relationships of gender roles with depressive symptoms and quality of life. Finally, we explored changes over time in depressive symptoms and quality of life for both women with HIV and women at risk.

¹We use the terms Black, African American, Latina, and Hispanic in the present article to match how the ethnicity of samples was described in each of the original sources that we cite. To refer to these racial/ethnic groups, the National Institutes of Health (NIH) and the Centers for Disease Control (CDC) currently use these terms either interchangeably (e.g., Latina/Latino or Hispanic) or in combination (e.g., Latino/Latina/Hispanic). In the current sample, the terms used to categorize these groups were Black/ African American as well as Hispanic.

The Women's Interagency HIV study (WIHS), an ongoing, national, longitudinal cohort study of women with HIV/AIDS and a demographically matched control group of HIV seronegative women at risk for HIV infection, presents a unique opportunity to measure gender roles in relation to depressive symptoms and quality of life over time. WIHS enrollment began in 1994, with a second wave of women enrolled in 2001–2002. Study visits, entailing a detailed structured interview (including measures of depressive symptoms and quality of life) as well as physical and gynecologic examinations and specimen collections, are conducted every 6 months. Characteristics of the national WIHS cohort have been published previously (Bacon et al., 2005; Barkan et al., 1998).

We developed four specific hypotheses. (a) HIV+ women would report significantly more traditional gender roles in their relationships than HIV– women (Hypothesis 1). (b) HIV+ women would report significantly higher levels of depressive symptoms and lower levels of quality of life compared to HIV– women (Hypothesis 2). (c) Gender roles would significantly relate to depressive symptoms and quality of life in the entire sample, with more traditional gender roles relating to higher depressive symptoms and lower quality of life (Hypothesis 3). (d) Relationships of gender roles with depressive symptoms and quality of life would be moderated by HIV status, such that relationships would be more significant in HIV+ than in HIV– women (Hypothesis 4). Finally, we explored the nature of changes over time in depressive symptoms and quality of life for both HIV+ and HIV– women.

Method

Participants

The sample consisted of 142 women, 100 HIV+ and 42 HIV–, enrolled into the Chicago WIHS site in Wave 1 (1994–1995; 55 women) or in Wave 2 (2001–2002; 87 women), who were asked to participate in the current study during a routine WIHS study visit between 2008 and 2012. Women who did not speak English (and therefore could not complete standardized measures) and women who did not have in-person clinic visits (and therefore could not be assessed during face-to-face interviews) were excluded; additionally, seven women were approached for the study but declined to participate. Written informed consent was obtained and participants received a financial honorarium of US\$25 in support of their time and effort, transportation, and child care (as needed).

Table 1 displays the demographics for the participants in the sample who had an average age of 43.95 years (standard deviation [*SD*] = 9.53 years, range = 25–72 years). The majority were African American ($n = 128$, 90.14%), with another eight women (5.63%) identifying as Hispanic White or Hispanic/Other; earned less than US\$12,000 per year ($n = 89$, 62.68%); were unmarried ($n = 113$; 79.58%); reported being in current romantic or sexual relationships ($n = 97$, 68.31%); and had completed at least a high school degree ($n = 85$, 59.86%). Of the women, 10 identified as bisexual, 5 as lesbian/gay, and 127 (89.44%) as heterosexual.

As displayed in Table 1, HIV+ and HIV– participants did not differ by race; mean number of male sexual partners averaged across all study visits; current or previous use of alcohol, crack/cocaine/heroin (CCH), and marijuana; childhood sexual abuse; current or previous

physical abuse, sexual abuse, and domestic coercion; being in a current romantic or sexual relationship; and sexual orientation. However, HIV+ participants were older, had lower income, were less educated, and were more likely to have previously injected drugs than HIV- participants. These similarities and differences between HIV+ and HIV- women mirrored those found in the larger Chicago cohort (205 HIV+ women; 88 HIV- women), with two exceptions. In the larger Chicago cohort, there were no significant differences in income ($\chi^2 = 2.95, p = .23$) or education ($r_s = -.11, p = .06$) between the two groups.

Procedure and Materials

The study protocol was approved by the Cook County Health and Hospital System and Boston University Institutional Review Boards as well as by the WIHS Executive Committee. Gender role measures were collected in a single administration at a recent study visit occurring between 2008 and 2012. Recent levels of depressive symptoms and quality of life either were collected at the same visit as the gender role measures or, if unavailable concurrently, were taken from a study visit in the previous 6–12 months. The depressive symptom measure was administered every 6 months, but the quality of life measure was administered only once per year. As a result, 11 (8%) recent depressive symptom measures and 38 (27%) recent quality of life measures were from a visit occurring 6–12 months prior to the collection of gender roles data.

In order to make use of the available longitudinal data and to characterize women's mental health over time, depressive symptoms and quality of life scores were also averaged across all prior and recent study visits for each participant. This included a mean of 23.2 study visits ($SD = 7.1$, median = 20.0 visits, range = 6–34 visits) occurring over a mean of 10.7 years ($SD = 3.6$ years, median = 9.0 years, range = 6.5–17.0 years). Had the gender role measures been administered at more than one time point, a multilevel analysis incorporating time-varying repeated measures would have been the preferred analytic approach. However, because gender role measures were administered at only one time point, a multilevel analysis was not possible and instead we chose to augment the cross-sectional analysis and make use of the richness of the longitudinal observations by creating summary variables for depressive symptoms and quality of life in the form of averages over time. Thus, use of the average scores over many visits is intended to capture aspects of individual variation over time, including the stability of the construct across individuals, in a way that single time-point measures do not.

Measures were selected based both on pilot testing and on their reliability and validity with ethnically diverse and HIV+ populations. Each woman filled out gender role questionnaires independently in a clinic room in which only she and a trained WIHS research staff member were present; for those who could not understand gender role questions, as well as for all of the depression, quality of life, and demographic measures, the research staff member read the questions from each instrument aloud.

Demographic measures—Women were asked to report their income (US\$6,000, US \$6,001–US\$12,000, and >US\$12,000 per year); age; race (African American, White/non-Hispanic, White/Hispanic, Hispanic/Other, other); education (no schooling, less than sixth

grade education, Grades 6–11, completed high school, some college, completed college, some graduate school); substance abuse (categorized as ever/never for history of use and yes/no for current use, including hazardous drinking based on the National Institute on Alcohol Abuse and Alcoholism criteria of three drinks/day or seven drinks/week, or use of injecting drugs, CCH); and sexual abuse, physical abuse, or domestic coercion (categorized as ever/never for history of abuse and yes/no for current abuse). More specifically, women were asked during their baseline visit whether substance abuse, sexual abuse, physical abuse, and domestic coercion had ever occurred, and subsequently at each visit they were asked whether these experiences had occurred during the 6 months preceding each WIHS visit. For each type of abuse, a variable of history (ever/never) was generated based on whether women ever reported these experiences at baseline or at any WIHS interview and an additional variable of current abuse (yes/no) was generated based on whether women reported these experiences for the 6 months preceding the current WIHS interview.

Sexual Relationship Power Scale—The Sexual Relationship Power Scale (SRPS; Pulerwitz, Gortmaker, & DeJong, 2000) is a 23-item questionnaire with two distinct subscales. The first subscale measures respondents' perceptions of the distribution of relationship control with such items as "If I asked my partner to use a condom, he would get angry," and "My partner tells me who I can spend time." Each item is assessed on a scale from 1 (*strongly agree*) to 4 (*strongly disagree*). The second subscale measures decision-making dominance in sexual relationships, with such items as "Who usually has more to say about what you do together?" and "Who usually has more to say about whether you have sex?" assessed as 1 (*your partner*), 2 (*both of you equally*), and 3 (*you*). Higher scores on subscales indicate higher levels of relationship control and decision-making power. The measure possesses good internal reliability ($\alpha = .84$), as well as predictive and construct validity (Pulerwitz et al., 2000), and it showed an a coefficient of .89 in a sample of African American women (Harris et al., 2009). In a sample of women at a community health clinic ($N = 388$, 89% Latina, 8% African American), the SRPS significantly related to consistent male condom use and relationship satisfaction (Pulerwitz et al., 2000).

The instructions for the measure were adapted for the current study in order to make it relevant for women who were not currently in sexual relationships as well as for women who were in current or previous sexual relationships with women. Instructions were as follows: "This next set of questions will be about an ongoing relationship that you are currently having or have most recently had. Think about the person with whom you currently have or most recently have had an ongoing sexual/romantic/dating relationship. By ongoing relationship we mean someone that you have seen more than once." Women were then asked whether they were currently in a sexual or romantic relationship and whether their current or recent relationship was with a man or a woman. For participants who reported being in a current or previous relationship with a woman, the 4 items related to condom use were deleted. Total scores were based on averages for completed items. The Cronbach's α coefficient for the SRPS in the current sample was .89 for the total scale, .90 for the relationship control subscale, and .74 for the decision-making dominance subscale.

Silencing the Self Scale—The Silencing the Self Scale (STSS; Jack & Dill, 1992) is a 31-item scale that examines the extent to which an individual suppresses certain feelings, thoughts, and/or actions and prioritizes care for others over self-care in order to maintain intimate relationships and avoid conflict. Four subscales measure silencing behaviors: Silencing the Self (SS), inhibiting self-expression and behaviors in order to avoid conflict or loss of relationship (sample item: “I don’t speak my feelings in an intimate relationship when I know they will cause disagreement”); Divided Self (DS), presenting an outer compliant self to conform to gendered norms about how women should act while internally experiencing different feelings (sample item: “Often I look happy enough on the outside, but inwardly I feel angry and rebellious”); Care as Self-Sacrifice (CSS), placing the needs of others before the needs of the self (sample item: “Caring means putting the other person’s needs in front of my own”); and Externalized Self-Perception (EXP), judging the self by external standards (sample item: “I tend to judge myself by how I think other people see me”). Each question is assessed on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The STSS total scale has adequate internal consistency (with α ranging from .86 to .94) and test–retest reliability (ranging from .88 to .94; Jack & Dill, 1992) as well as content validity as assessed in a sample of seropositive women (DeMarco, Johnsen, Fukuda, & Deffenbaugh, 2001).

The STSS was validated in three groups of women (undergraduates, pregnant women, and a battered women’s shelter group), demonstrating good construct validity as indicated by higher self-silencing scores among battered women who may silence to avoid abuse; it showed correlations of approximately .50 with the Beck Depression Inventory (Jack & Dill, 1992). The STSS has been administered to diverse samples domestically and internationally (Drat-Ruszczyk, 2010; Grant et al., 2011; Hautamaäki, 2010; Sikka, Vaden-Goad, & Waldner, 2010; Zoellner & Hedlund, 2010) as well as to a small sample of 15 women with HIV (DeMarco et al., 2001). The α for the total STSS in the current sample was .89, and the four subscale α s were .76 (SS), .76 (DS), .49 (CSS), and .83 (EXP). The relatively low reliability of the CSS is consistent with lower reliabilities reported in some previous samples; for example, Jack and Dill (1992) reported α s of .60 and .65 for the CSS, in contrast to α s ranging from .74 to .89 for the other three subscales. However, because of its lower reliability, results concerning the CSS in the present study should be interpreted with caution.

Revised Unmitigated Communion Scale—The Revised Unmitigated Communion Scale (RUCS; Fritz & Helgeson, 1998) is a 9-item self-report measure that asks participants to rate their degree of agreement with items focusing on their concern for others at the expense of their own needs. Sample items include “For me to be happy, I need others to be happy” and “I worry about how other people get along without me when I am not there.” Each item is assessed on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores on the RUCS have significantly related to higher distress as measured by the Brief Symptom Inventory (Derogatis & Spencer, 1982) as well as to lower scores on a health behavior index centered on diet, stress, exercise, and relaxation (Helgeson & Fritz, 1999). The RUCS has been shown to have high internal consistency ($\alpha = .93$) in African American women (Harris et al., 2009). In samples of college students and medical patients

with unspecified or mixed ethnicities, as have ranged from .69 to .76 (Fritz & Helgeson, 1998; Helgeson & Fritz, 1998, 1999); in our sample, the α was .49. When the item “I have great difficulty getting to sleep at night when one of my family members is upset,” which assesses the specific behavior of sleep (unlike other items which are more general), was eliminated from the scale, the α increased to .68. Because our analyses testing hypotheses involving the RUCS with and without this item showed identical results, the original scale was retained for all analyses reported here.

Center for Epidemiological Studies Depression Scale—The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) is a 20-item self-report measure used to assess depressive symptoms in the general population. Sample items include “I was bothered by things that usually don’t bother me” and “I had crying spells” rated on a 4-point scale for the frequency with which participants experienced each item that week (0 = rarely or none of the time/less than one day and 3 = most or all of the time/5–7 days). Higher scores indicate more depressive symptomatology. This measure has been used extensively in studies of women with HIV (Cook et al., 2002; Gurung, Taylor, Kemeny, & Myers, 2004), and it has demonstrated excellent reliability, validity, and factor structure with seronegative women (Radloff, 1977). The α for the CES-D scale administered at the same time as the gender role measures (2008–2012) was .90. At two other randomly selected visits in 2002 and 2006, it was .90 and .92, respectively.

Health-related quality of life—The widely used Medical Outcome Study (MOS-HIV), developed by Bozzette, Hays, Berry, Kanouse, and Wu (1995), was abbreviated for use in the WIHS with 21 items and titled Health-Related Quality of Life (HRQoL; Liu et al., 2006). A summary score is generated from six domains, including physical functioning (sample item “For how long, if at all, has your health limited you in ... walking one block; eating, dressing bathing, using the toilet?” rated on 3-point scales); role functioning (sample item “Does your health keep you from working at a job, doing work around the house, or going to school?” rated on a 3-point scale); social functioning (assessed with one item “How much of the time during the past month has your health limited your social activities, like visiting with friends or close relatives?” rated on a 6-point scale); mental health (sample item “How much of the time during the past month have you been a very nervous person, a happy person?” rated on a 6-point scale); general health perceptions (sample item “I am as healthy as anybody I know” rated on a 5-point scale); and pain (assessed with one item “How much bodily pain have you experienced during the past four weeks?” rated on a 6-point scale). The total score is generated by summing item responses, and raw scale scores are then linearly transformed to a 0–100 scale, with 0 representing the lowest possible score and 100 the highest possible score. Cronbach’s α s for subscales at two points in time ranged from .76 to .89 (Smith, Feldman, Kelly, & DeHovitz, 1996).

Smith, Feldman, Kelly, and DeHovitz (1996) reported that patients with HIV who were older, unemployed, had a history of injecting drug use (IDU), or who were rated by clinicians as being lower in normal activity levels reported lower HRQoL than those who were younger, employed, had no drug use history, or were rated by clinicians as being higher in normal activity levels. Scores on the role and physical functioning scales were

sensitive to differences in clinical status over time. Further, Liu et al. (2006) found that scores on the HRQoL were significantly higher for HIV-infected women who were taking highly active antiretroviral medication (HAART) than for those who were not taking medication. The Cronbach's α s for the current sample for the 4 multi-item subscales administered at three time points (the same time as the gender role measures in 2008–2012 and for two randomly selected visits in 2002 and 2006), respectively, were .81, .82, and .83 (for physical functioning); .75, .77, and .77 (for role functioning); .71, .77, and .76 (for emotional well-being); and .60, .65, and .68 (for health perception). A Cronbach's α is not typically generated for the total scale score because some subscales contain only 1 or 2 items (i.e., pain and social functioning subscales) and some scales are rated on different metrics.

Results

All analyses were computed using SPSS Version 20.0. Income, age, enrollment wave, education, and history of IDU were included as covariates in order to control for demographic differences between HIV+ and HIV– women as well as for differences between the current sample and the larger Chicago WIHS cohort. One participant was deleted from analyses involving the SRPS because she did not complete the scale due to examiner error. All variables were standardized using z -scores before inclusion in analyses, and interaction terms in regression analyses were calculated based on mean-centered predictor variables.

Descriptive Statistics and Preliminary Analyses

Means and SD s for all measures are displayed in Table 2, with results for the HIV+ and HIV– women displayed separately. For the Sexual Relationship Power Scale, preliminary analyses were conducted to determine if scores differed for women in current sexual relationships compared to those not in current sexual relationships. Analyses of covariance (ANCOVAs) for the entire sample controlling for income, education, history of IDU, enrollment wave, age, and HIV status revealed no significant differences for women in current relationships compared to those not in current relationships for the Sexual Relationship Power total scale, $F(1, 132) = 1.75, p = .19, \eta_p^2 = .01$; the Decision-Making Power subscale, $F(1, 132) = 2.06, p = .15, \eta_p^2 = .02$; and the Relationship Control subscale, $F(1, 132) = .58, p = .45, \eta_p^2 = .04$.

Hypothesis 1: HIV status and gender roles—Table 2 also displays the results for the ANCOVAs used to test the hypothesis that women with HIV would report more traditional gender roles than HIV– women. HIV status was the independent variable and the three gender role measures (STSS, SRPS, and RUCS, including total scores and sub-scales) were outcome variables in independent analyses, with income, education, history of IDU, enrollment wave, and age as covariates. The hypothesis was partially confirmed in that HIV status significantly related to the total score on two of the three gender role measures, with HIV+ women reporting significantly lower scores on the SRPS, $F(1, 134) = 5.03, p = .03, \eta_p^2 = .04$, and higher scores on the RUCS, $F(1, 135) = 5.74, p = .02, \eta_p^2 = .04$. Although the total STSS only approached significance in relating to HIV status, $F(1, 135) = 3.78, p = .054, \eta_p^2 = .03$, HIV+ women scored significantly higher on three of the four Silencing the

Self subscales than HIV– women: Divided Self, $F(1, 135) = 4.30, p = .04, \eta_p^2 = .03$; Externalized Self Perception, $F(1, 135) = 5.48, p = .02, \eta_p^2 = .04$; and Silencing the Self, $F(1, 135) = 5.24, p = .02, \eta_p^2 = .04$. Only two gender role subscales were not significantly related to HIV status: the CSS subscale on the STSS, $F(1, 135) = .28, p = .60, \eta_p^2 = .00$, and the Relationship Control subscale on the Sexual Relationship Power Scale, $F(1, 134) = 2.28, p = .13, \eta_p^2 = .02$.

Hypothesis 2: HIV status, depression, and quality of life—The recent scores for depressive symptoms and quality of life, each measured at the single time point of the 2008-2012 data collection visit, were significantly correlated but not collinear with the mean scores for depressive symptoms and quality of life based on multi-year data: (a) recent single time-point depressive symptoms and multi-year averaged depressive symptoms score, $r = .66, p < .001$, and (b) recent single time-point quality of life score and multi-year averaged quality of life score, $r = .74, p < .001$. These correlations suggest that although related, the recent score and multi-year average scores have distinct meanings. From intraclass correlations (ICCs, representing the amount of interindividual variance divided by total variance [inter-plus intraindividual]), we also estimated that about half the variance of longitudinal depressive and quality of life scores was attributable to individual state dependency of the repeated measures (depressive symptoms: ICC = .58 and quality of life: ICC = .49). The depressive symptom and quality of life scores changed over time in a significant linear pattern: Analysis of variance tests for linear trend for depressive symptoms, $F(1, 2697) = 26.50, p < .001, \eta_p^2 = .02, r^2 = .01$, and for quality of life, $F(1, 1977) = 4.30, p = .04, \eta_p^2 = .01; r^2 = .002$. The linear changes over time in CESD and HRQoL do not differ by HIV status. The interactions between time and HIV status were not significant for depressive symptoms, $F(22, 2697) = .60, p = .92, \eta_p^2 = .05$, or for quality of life, $F(22, 1977) = .42, p = .99, \eta_p^2 = .05$. The sample average score for depressive symptoms at participants' first visit was 19 ($SD = 12$), interquartile range (IQR) = 18, and at the recent visit for which the gender role data were collected, the average score had declined to 14 ($SD = 11$), IQR = 16. The sample average quality of life score at participants' first visit was 65 ($SD = 19$), IQR = 27, and at their recent gender role data collection visit was 70 ($SD = 20$), IQR = 32. Thus, depressive symptoms and quality of life improved over time for both HIV+ and HIV– women.

Means and SD s for depressive symptoms and quality of life in HIV+ and HIV– women are displayed in Table 2. ANCOVAs controlling for education, income, enrollment wave, history of IDU, and age were used to analyze relationships of HIV status with recent and multi-year averaged depressive symptoms and health-related quality of life. The hypothesis that women with HIV would have higher depressive symptoms and lower quality of life than uninfected women was partly confirmed in that HIV+ women, compared to HIV– women, reported significantly lower quality of life both recently, $F(1, 135) = 4.83, p = .03, \eta_p^2 = .04$, and averaged over time, $F(1, 135) = 11.39, p = .001, \eta_p^2 = .08$, as well as significantly higher depressive symptoms averaged over time, $F(1, 135) = 4.96, p = .03, \eta_p^2 = .04$. Recent depressive symptoms also tended to be higher in HIV+ women, $F(1, 135) = 3.08, p = .08, \eta_p^2 = .02$.

Hypothesis 3: Gender roles, depression, and quality of life—Table 3 displays partial correlations among gender role measures and depressive symptoms and quality of life, controlling for HIV status, age, enrollment wave, history of IDU, income, and education. The partial correlations among gender role measures indicate that the STSS were significantly related to both the SRPS and the RUCS and that the association between the RUCS and SRPS was not significant. Partial correlations between depressive symptoms and quality of life revealed highly significant negative relationships both when the two were measured concurrently and when the two reflected multi-year averages.

Results displayed in Table 3 partially confirmed the hypothesis that more traditional gender roles would be significantly related to higher depressive symptoms and lower quality of life across HIV+ and HIV– women. Higher total scores on the STSS were significantly related to higher scores on recent and multi-year averaged depressive symptoms as well as to lower scores on recent and multi-year averaged quality of life. Higher total scores on the RUCS were significantly related to higher recent and multi-year averaged depressive symptoms, as well as to lower recent quality of life, but they were not significantly related to multi-year averaged quality of life. Neither the total score on the SRPS nor its subscale scores significantly related to recent or multi-year averaged depressive symptoms or quality of life. This pattern was true for the entire sample as well as when women in current relationships and those not in current relationships were analyzed independently.

Hypothesis 4: HIV status as a moderator—We ran multiple linear regressions to test the hypothesis that HIV status would moderate relationships between gender role variables and the outcomes of depressive symptoms and quality of life. In four sets of regressions, depressive symptoms and quality of life (each measured recently and averaged over time) were investigated as outcomes. Within each set, covariates of age, income, history of IDU, enrollment wave, and education were entered in Block 1; HIV status and one of the gender role measures (STSS, RUCS, and SRPS) were entered in Block 2; and the interaction between HIV status and the relevant gender role measure was entered in Block 3. The interaction term was calculated by multiplying standardized (mean centered) scores for each variable. As displayed in Table 4, results revealed that the hypothesis was not confirmed; none of the interactions between HIV status and gender role variables significantly predicted recent or multi-year averaged depressive symptoms or quality of life.

Discussion

HIV+ women reported significantly more traditional gender roles in sexual and other close relationships than demographically similar HIV– women. Specifically, after controlling for age, income, enrollment wave, history of IDU, and education, HIV+ women reported higher levels of unmitigated communion, lower levels of sexual relationship power, and higher levels of several aspects of self-silencing—including divided self, externalized self-perception, and silencing the self—when compared to their HIV– peers. Compared to HIV– women, HIV+ women also reported lower quality of life when measured both recently and averaged over a mean of 11 years as well as higher levels of depressive symptoms averaged over a mean of 11 years.

The higher levels of several aspects of self-silencing and unmitigated communion, as well as lower levels of sexual relationship power, reported by women with HIV as compared to a demographically similar sample of uninfected women make a new and significant contribution to the literature. Because the gender role study was not designed to be longitudinal, the direction of causality between HIV status and gender role characteristics cannot be determined. On one hand, women with traditional gender roles may be less able to advocate for male condom use by their partners and also may be more likely to be inducted into IDU by their partners, both of which are risk factors for HIV (Frajzyngier, Neaigus, Gyarmathy, Miller, & Friedman, 2007; Pulerwitz et al., 2002). It is also possible, however, that the direction of causality between traditional gender roles and HIV infection is reversed. Women who become infected with HIV may cope with the increased possibility of relational loss and rejection that often accompanies an HIV diagnosis (Gielen et al., 2000; Serovich et al., 2008) by becoming more submissive, passive, and less self-assertive in order to avoid and prevent additional losses.

HIV Status, Depression, and Quality of Life

Our findings that HIV+ women had higher multi-year averaged depressive symptoms and lower multi-year averaged quality of life extends the existing literature documenting high depressive symptoms and low quality of life in women with HIV (Cook et al., 2002; McDonnell et al., 2005). The multi-year averaged data for depressive symptoms and quality of life were based on semiannual visits (for depressive symptoms) and annual visits (for quality of life) occurring over an average of 11 years. The unpredicted finding that, over time, depressive symptoms and quality of life improved for both HIV+ and HIV– women is consistent with longitudinal data from a study showing that depressive symptoms in women as measured with the CES-D improved with age (Woods et al., 2008). The findings are also somewhat consistent with previous research on changes in health-related quality of life across the life span, showing that there were subgroups of women for whom quality of life improved, stayed the same, or declined as a function of physical symptoms, health behaviors, and psychosocial circumstances (Dale et al., 2013). It is probable that the improved health-related quality of life among women with HIV and uninfected women in the current sample partly reflects the impact of being enrolled in WIHS, which serves to make health care behaviors salient. In particular, health-related quality of life has been shown to improve for people with HIV receiving comprehensive therapy and support, even in the absence of receiving antiretroviral medication (Solomon et al., 2009).

Gender Roles, Depression, and Quality of Life

The current study also corroborates the existing literature showing that higher levels of self-silencing and unmitigated communion are significantly related to higher depressive symptoms (Grant et al., 2011; Helgeson, 2003; Helgeson & Fritz, 1999, 2000; Jack, 1999), and it extends those findings to lower quality of life as well as to a sample of predominantly ethnic minority women with and at risk for HIV. Contrary to hypotheses, HIV status did not moderate relationships between higher depressive symptoms, lower quality of life, and traditional gender roles in this sample of women—all of whom originated from high-risk communities characterized by low income, limited educational and work opportunities, homelessness, violence, sexual and physical abuse, and substance abuse. Women who

reported higher levels of self-silencing scored significantly higher on all measures of depressive symptoms and lower on all measures of quality of life. Higher scores on unmitigated communion were also significantly related to higher levels of depressive symptoms (both recent and averaged over time) and lower recent quality of life. Sexual relationship power did not significantly relate to any measures of depressive symptoms or quality of life. Perhaps this is because the SRPS, in contrast to the other two measures, assesses power dynamics in a specific relationship which may not generalize to women's other interpersonal relationships, past or present. Other psychosocial factors, such as social supports and adaptive coping strategies, may buffer the effects of low sexual relationship power in a relationship that might otherwise be deleterious.

A possible mediating route of the relationship between high depressive symptoms, low quality of life, and high levels of self-silencing is learned helplessness occurring subsequent to repeated traumatic and disempowering experiences (Filson, Ulloa, Runfola, & Hokoda, 2010). Women who self-silence may have an attributional style characterized by feelings and thoughts that desirable outcomes are unlikely to occur, aversive outcomes are highly likely to occur, and that there is no point in self-advocacy. In a study of women in domestic violence shelters, feelings of powerlessness predicted both concurrent depressive symptoms and depressive symptoms 6 months post-shelter visit, after controlling for previous levels of depressive symptoms (Campbell, Sullivan, & Davidson, 1995). It is also probable that being depressed renders it more difficult for women to assert power, to advocate for themselves in their relationships, and to engage in self-care behaviors, and it may also make them more vulnerable to abuse and low quality of life.

The negative consequences of unmitigated communion for depression and for recent quality of life in women with HIV may occur because overinvolvement in caring for others interferes with the time-intensive medication regimen and the self-care that an HIV diagnosis requires. Liu et al. (2006) found that for women with HIV, being on a HAART medication regimen was associated with short-term direct benefits for quality of life, and other research has indicated that care for others, including child care burden, may interfere with medication adherence (DeMarco, 2010; Merenstein, et al., 2009). It is also possible that HIV+ and HIV- women who are depressed and have poor quality of life may turn to caring for others, including children, family members, and friends, in order to attain fulfillment and sometimes at the expense of self-care. It is noteworthy that unmitigated communion related negatively only to recent quality of life, not to multi-year averaged quality of life, suggesting that the effects of unmitigated communion on quality of life may be limited to the specific time periods in which caretaking of others is a priority. In contrast to the finding that unmitigated communion did not significantly relate to multi-year averaged quality of life, unmitigated communion did significantly relate to both recent and multi-year averaged depressive symptoms, suggesting that depressive symptoms and unmitigated communion may have a bidirectional and cyclical relationship that is not limited to particular relationships or time periods. For example, women who are depressed may be more vulnerable to neglecting their own needs and becoming over-involved in the problems of others, and doing so may increase their depressive symptoms over time, which in turn continues to place them at continued risk for neglecting their own needs.

Ethnicity and Gender Roles

It is noteworthy that levels of self-silencing and unmitigated communion significantly related to depressive symptoms and quality of life in our predominantly Black sample, as similar to what Grant, Jack, Fitzpatrick, and Ernst (2011) found in their community sample of ethnically diverse women. Although Black women's gender role socialization tends to place an emphasis on financial independence and strength in the face of adversity (Kerrigan, Andrinopoulos, Chung, Glass, & Ellen, 2008), Black women are not immune to feeling powerless in sexual relationships nor to putting the needs of others ahead of their own. Studies have indicated that they may have difficulty negotiating safe sexual practices with their male sexual partners because of the relative lack of available male partners in the Black community combined with the salience of female gender ideologies which value stable heterosexual unions (Bowleg, Lucas, & Tschann, 2004; Kerrigan et al., 2007; Sobo, 1995). Future research could also investigate the impact of gender roles among Latina women who composed only a small percentage of women in our sample. Traditional gender norms such as marianismo (the belief that women should be self-sacrificing and defer to men as well as demonstrate loyalty and commitment to family needs; Denner & Dunbar, 2004; Ulibarri, Raj, & Amaro, 2012) and machismo (the expectation that men should control and dominate sexual relationships; Falicov, 2010) may potentially leave Latina women feeling powerless to negotiate safe sex practices and may increase HIV risk (Amaro & Raj, 2000; Hillman, 2008; Moreno, 2007; Tross, 2001; Ulibarri et al., 2012; Weidel, Provencio-Vasquez, Watson, & Gonzalez-Guarda, 2008).

Limitations and Contributions

Limitations of the current study include the cross-sectional design and the fact that the multi-year averaged data for depressive symptoms and quality of life were collected prior to gender role measures, both of which limit interpretations of causality among variables. Self-report measures may have resulted in loss of ecological validity and may be affected by social desirability pressures. Further, the results involving the CSS subscale and the RUCS should be interpreted cautiously because of their relatively low reliabilities in our sample.

Despite these limitations, the results of our study indicate that traditional gender roles, especially those that affect women's failure to advocate for their own needs in the context of sexual and other close relationships, may distinguish women with HIV from their demographically matched uninfected peers. Traditional gender roles may also relate to higher levels of depressive symptoms and lower levels of health-related quality of life over multiple years in both HIV+ and HIV- women.

Practice Implications

Understanding and investigating the nature of women's gender roles in their sexual and close relationships should be a priority in understanding and improving mental health functioning for women with and at risk for HIV. Interventions that seek to minimize traditional gender roles and focus on heightening self-advocacy, self-care, and assertiveness in the context of relationships may improve health outcomes for HIV+ women, especially symptoms of depression and low quality of life. Such interventions might also minimize HIV risk for both HIV- women and their sexual partners. It is also clear from previous

research that a lack of material resources and gender inequities in socioeconomic resources and educational and job opportunities all serve to maintain traditional gender roles (Banaszak & Leighley, 1991; Crompton & Lyonette, 2005; Cunningham, 2008; Thornton et al., 1983). Thus, strategies to improve women's economic independence and to provide educational and job opportunities should be major considerations in any intervention.

Several ongoing or previous HIV behavioral interventions for women infected with HIV and women at risk for infection seem particularly relevant in that they emphasize gender pride and assist women in developing skills to become empowered interpersonally and economically. For instance, Sisters Informing Sisters about Topics on AIDS (SISTA) is an evidence-based five-session intervention program that targets heterosexual African American women, with two of the sessions focused on ethnic and gender pride and self-assertiveness skills training (DiClemente & Wingood, 1995). The WILLOW Program for women living with HIV emphasizes gender pride, provides women with information on local social services and resources (e.g., shelters/housing) and encourages women to formulate personal goals (e.g., seeking employment and giving updates on their progress; Wingood et al., 2004). The Intervention with Microfinance for AIDS and Gender Equity (IMAGE) program provided South African women with small loans to conduct incomegenerating projects and included sessions on gender roles, domestic violence, and HIV infection. Women participating in IMAGE experienced greater empowerment in areas such as challenging gender norms and improving financial confidence (Kim et al., 2007).

These programs are models for what can be achieved by challenging traditional gender roles and providing women with education and skills training. The present study provides evidence that promoting self-advocacy (as opposed to self-silencing) and prioritizing self-care in the context of sexual and other close relationships should be specifically targeted. Future research should also consider the impact that gender roles might have on treatment adherence, disease progression, and mortality in women with HIV.

Conclusion

Ethnic minority women represent 26% of 50,000 new HIV infections each year in the United States (CDC, 2013), and women with HIV tend to have higher levels of depression and lower quality of life than noninfected women from the same communities (Cook et al., 2002; McDonnell et al., 2005; Wisniewski et al., 2005). In turn, higher depression and lower quality of life relate to suboptimal medication adherence and poor physical health outcomes (Cook et al., 2002; Kalichman, 1999; Leserman, 2008). To understand more about how to improve the mental health functioning of women with and at risk for HIV, the current study focused on how gender roles, including self-silencing in relationships, sexual relationship power, and caring for others at the expense of self-care, differ for HIV+ versus HIV- women. We also investigated the contribution of HIV status, gender roles, and their interaction to depressive symptoms and quality of life measured at one recent visit and also averaged over semiannual visits (for depressive symptoms) or annual visits (for quality of life) occurring over an average of 11 years. Our results indicated that compared to HIV- women, HIV+ women had higher levels of several aspects of self-silencing, unmitigated communion, and multi-year averaged depressive symptoms as well as lower levels of sexual

relationship power and recent and multi-year averaged quality of life. For both HIV+ and HIV- women, higher self-silencing and unmitigated communion significantly related to recent or multi-year averaged higher depressive symptoms and lower quality of life. We theorize that for women with and at risk for HIV, gender roles and mental health outcomes have bidirectional and cyclical relationships, that the quality of gender roles is critical to investigate in order to better understand health outcomes, and that transforming both systems-level gender inequities and traditional gender roles to enhance self-care and self-advocacy are important HIV intervention strategies that could minimize depressive symptoms and enhance quality of life.

Acknowledgments

We would like to thank the WIHS participants and WIHS staff, especially Sally Urwin, Cheryl Watson, and Karlene Schowalter, who collected and managed data.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Data were collected by the Chicago site of the Women's Interagency HIV study (WIHS), which is funded by the National Institute of Allergy and Infectious Diseases Grant U01-AI-34994 (PI, Dr. Mardge Cohen) and co-funded by the National Cancer Institute and National Institute of Drug Abuse. Kathleen Weber is also funded in part by P30-AI 082151 and Sannisha Dale is funded by F31-MH 095510.

References

- Amaro H, Raj A. On the margin: Power and women's HIV risk reduction strategies. *Sex Roles*. 2000; 42:723–749. doi:10. 1023/A:1007059708789.
- Andrinopoulos K, Clum G, Murphy DA, Harper G, Perez L, Xu J. Health related quality of life and psychosocial correlates among HIV-infected adolescent and young adult women in the US. *AIDS Education and Prevention*. 2011; 23:367–381. doi:10.1521/aeap.2011.23.4.367. [PubMed: 21966746]
- Bacon MC, von Wyl V, Alden C, Sharp G, Robison E, Hessol N, Young NA. The women's interagency HIV study: An observational cohort brings clinical sciences to the bench. *Clinical and Diagnostic Laboratory Immunology*. 2005; 12:1013–1019. doi:10.1128/CDLI.12.9.1013-1019.2005. [PubMed: 16148165]
- Banaszak LA, Leighley JE. How employment affects women's gender attitudes: The workplace as a locus of contextual effects. *Political Geography Quarterly*. 1991; 10:174–185. doi: 10.1016/0260-9827(91)90019-Q.
- Barkan SE, Melnick SL, Preston-Martin S, Weber K, Kalish LA, Miotti P, Feldman J. The women's interagency HIV study. WIHS collaborative study group. *Epidemiology*. 1998; 9:117–125.
- Billy JOG, Grady WR, Sill ME. Sexual risk-taking among adult dating couples in the United States. *Perspectives on Sexual and Reproductive Health*. 2009; 41:74–83. doi:10.1363/4107409. [PubMed: 19493216]
- Bowleg L, Lucas KJ, Tschann JM. "The ball always in his court": An exploratory analysis of relationship scripts, sexual scripts, and condom use among African American women. *Psychology of Women Quarterly*. 2004; 28:70–82. doi:10.1111/j.1471-6402.2004.00124.x.
- Bozzette SA, Hays RD, Berry SH, Kanouse DE, Wu AW. Derivation and properties of a brief health status assessment instrument for use in HIV disease. *Journal of Acquired Immune Deficiency Syndromes*. 1995; 8:253–265.
- Brody, LR. *Gender, emotion and the family*. Harvard University Press; Cambridge, MA: 1999.
- Campbell R, Sullivan CM, Davidson WS. Women who use domestic violence shelters: Changes in depression over time. *Psychology of Women Quarterly*. 1995; 19:237–255. doi:10. 1111/j. 1471-6402.1995.tb00290.x.

- Centers for Disease Control and Prevention. HIV among women. 2012 Retrieved from <http://www.cdc.gov/hiv/topics/women/index.htm>.
- Centers for Disease Control and Prevention. HIV surveillance—Epidemiology of HIV infection (through 2011). 2013 Retrieved from <http://www.cdc.gov/hiv/topics/surveillance/resources/slides/general/index.htm>.
- Cohen M, Deamant C, Barkan S, Richardson J, Young M, Holman S, Melnick S. Domestic violence and childhood sexual abuse in HIV-infected women and women at risk for HIV. *American Journal of Public Health*. 2000; 90:560–565. [PubMed: 10754970]
- Cook JA, Cohen MH, Burke J, Grey D, Anastos K, Kirstein L, Young M. Effects of depressive symptoms and mental health quality of life on use of highly active antiretroviral therapy among HIV-seropositive women. *Journal of Acquired Immune Deficiency Syndromes*. 2002; 30:401–409. doi:10.1097/01.QAI.0000018280.16783.FE. [PubMed: 12138346]
- Crompton R, Lyonette C. The new gender essentialism—Domestic and family ‘choices’ and their relation to attitudes. *The British Journal of Sociology*. 2005; 56:601–620. doi:10.1111/j.1468-4446.2005.00085.x. [PubMed: 16309438]
- Cunningham M. Influences of gender ideology and housework allocation on women’s employment over the life course. *Social Science Research*. 2008; 37:254–267. doi:10.1016/j.ssresearch.2007.01.003. [PubMed: 19255608]
- Curtin N, Ward LM, Merriwether A, Caruthers A. Femininity ideology and sexual health in young women: A focus on sexual knowledge, embodiment, and agency. *International Journal of Sexual Health*. 2011; 23:48–62. doi:10.1080/19317611.2010.524694.
- Dale CE, Bowling A, Adamson J, Kuper H, Amuzu A, Ebrahim S, Nüesch E. Predictors of patterns of change in health-related quality of life in older women over 7 years: Evidence from a prospective cohort study. *Age and Ageing*. 2013; 42:312–318. doi:10.1093/ageing/aft029. [PubMed: 23537589]
- Delpierre C, Cuzin L, Lauwers-Cances V, Datta GD, Berkman L, Lang T. Unemployment as a risk factor of AIDS and death for HIV-infected patients in the era of highly active antiretroviral therapy. *Sexually Transmitted Infections*. 2008; 84:183–186. doi:10.1136/sti.2007.027961. [PubMed: 18192292]
- DeMarco, RF.; Ali, A. Supporting voice in women living with HIV/AIDS. In: Jack, DC., editor. *Silencing the self across cultures: Depression and gender in the social world*. Oxford University Press; New York, NY: 2010. p. 343–362. doi:10.1093/acprof:oso/9780195398090.003.0017
- DeMarco R, Johnsen C, Fukuda D, Deffenbaugh O. Content validity of a scale to measure silencing and affectivity among women living with HIV/AIDS. *Journal of the Association of Nurses in AIDS Care*. 2001; 12:77–88. [PubMed: 11486723]
- Denner J, Dunbar N. Negotiating femininity: Power and strategies of Mexican American girls. *Sex Roles*. 2004; 50:301–314.
- Derogatis, LR.; Spencer, PM. *The brief symptom inventory (BSI): Administration, scoring, and procedures manual-I*. Johns Hopkins University, School of Medicine; Baltimore, MD: 1982.
- DiClemente RJ, Wingood GM. A randomized controlled trial of an HIV sexual risk-reduction intervention for young African-American women. *Journal of the American Medical Association*. 1995; 274:1271–1276. [PubMed: 7563531]
- Drat-Ruszczak, K. The meaning of self-silencing in Polish women. In: Jack, DC.; Ali, A., editors. *Silencing the self across cultures: Depression and gender in the social world*. Oxford University Press; New York, NY: 2010. p. 203–225.
- Dworkin SL, Ehrhardt AA. Going beyond “ABC” to include “GEM”: Critical reflections on progress in the HIV/AIDS epidemic. *American Journal of Public Health*. 2007; 97:13–18. doi:10.2105/AJPH.2005.074591. [PubMed: 17138923]
- Eaker, ED.; Kelly-Hayes, M. Self-silencing and the risk of heart disease and death in women: The Framingham offspring study. In: Jack, DC.; Ali, A., editors. *Silencing the self across cultures: Depression and gender in the social world*. Oxford University Press; New York, NY: 2010. p. 399–414. doi:10.1093/acprof:oso/9780195398090.003.0020

- Eaton L, Kaufman M, Fuhrel A, Cain D, Cherry C, Pope H, Kalichman SC. Examining factors co-existing with inter-personal violence in lesbian relationships. *Journal of Family Violence*. 2008; 23:697–705. doi:10.1007/s10896-008-9194-3.
- Falicov CJ. Changing constructions of machismo for Latino men in therapy: “The Devil never sleeps.”. *Family Process*. 2010; 49:309–329. doi:10.1111/j.1545-5300.2010.01325.x. [PubMed: 20831763]
- Filson J, Ulloa E, Runfola C, Hokoda A. Does powerlessness explain the relationship between intimate partner violence and depression? *Journal of Interpersonal Violence*. 2010; 25:400–415. doi:10.1177/0886260509334401. [PubMed: 19487687]
- Fortin NM. Gender role attitudes and the labour-market outcomes of women across OECD countries. *Oxford Review of Economic Policy*. 2005; 21:416–438. doi:10.1093/oxrep/gri024.
- Frajzyngier V, Neaigus A, Gyarmathy VA, Miller M, Friedman SR. Gender differences in injection risk behaviors at the first injection episode. *Drug and Alcohol Dependence*. 2007; 89:145–152. doi:10.1016/j.drugalcdep.2006.12.021. [PubMed: 17276623]
- Fritz HL. Gender-linked personality traits predict mental health and functional status following a first coronary event. *Health Psychology*. 2000; 19:420–428. doi:10.1037/0278-6133.19.5.420. [PubMed: 11007150]
- Fritz HL, Helgeson VS. Distinctions of unmitigated communion from communion: Self-neglect and overinvolvement with others. *Journal of Personality and Social Psychology*. 1998; 75:121–140. [PubMed: 9686454]
- Gielen AC, Fogarty L, O’Campo P, Anderson J, Keller J, Faden R. Women living with HIV: Disclosure, violence, and social support. *Journal of Urban Health*. 2000; 77:480–491. doi:10.1007/BF02386755. [PubMed: 10976619]
- Grant TM, Jack DC, Fitzpatrick AL, Ernst CC. Carrying the burdens of poverty, parenting, and addiction: Depression symptoms and self-silencing among ethnically diverse women. *Community Mental Health Journal*. 2011; 47:90–98. doi:10.1007/s10597-009-9255-y. [PubMed: 19842035]
- Greenfield, J. Coming out: The process of forming a positive identity. In: Makadon, H.; Mayer, K.; Potter, J.; Goldhammer, H., editors. *Fenway guide to lesbian, gay, bisexual and transgender health*. American College of Physicians; Philadelphia, PA: 2008. p. 45-74.
- Gurung RAR, Taylor SE, Kemeny M, Myers H. “HIV is not my biggest problem”: The impact of HIV and chronic burden on depression in women at risk for AIDS. *Journal of Social and Clinical Psychology*. 2004; 23:490–511. doi:10.1521/jscp.23.4.490.40305.
- Harris KA, Gant LM, Pitter R, Brodie DA. Associations between HIV risk, unmitigated communion, and relationship power among African American women. *Journal of HIV/AIDS & Social Services*. 2009; 8:331–351. doi:10.1080/15381500903396865.
- Harvey SM, Bird ST, Galavotti C, Duncan EA, Greenberg D. Relationship power, sexual decision-making, and condom use among women at risk for HIV/STDS. *Women and Health*. 2002; 36:69–84. doi:10.1300/J013v36n04_06. [PubMed: 12555803]
- Hautamäki, A. Silencing the self across generations and gender in Finland. In: Jack, DC.; Ali, A., editors. *Silencing the self across cultures: Depression and gender in the social world*. Oxford University Press; New York, NY: 2010. p. 175-201.
- Helgeson VS. Unmitigated communion and adjustment to breast cancer: Associations and explanations. *Journal of Applied Social Psychology*. 2003; 33:1643–1661. doi:10.1111/j.1559-1816.2003.tb01967.x.
- Helgeson VS, Fritz HL. A theory of unmitigated communion. *Personality and Social Psychology Review*. 1998; 2:173–183. doi:10.1207/s15327957pspr0203_2. [PubMed: 15647153]
- Helgeson VS, Fritz HL. Unmitigated agency and unmitigated communion: Distinctions from agency and communion. *Journal of Research in Personality*. 1999; 33:131–158.
- Helgeson VS, Fritz HL. The implications of unmitigated agency and unmitigated communion for domains of problem behavior. *Journal of Personality*. 2000; 68:1031–1057. [PubMed: 11130731]
- Hillman J. Knowledge, attitudes, and experience regarding HIV/AIDS among older adult inner-city Latinos. *International Journal of Aging and Human Development*. 2008; 66:243–257. [PubMed: 18459604]

- Ickovics JR, Hamburger ME, Vlahov D, Schoenbaum EE, Schuman P, Boland RJ, Moore J. Mortality, CD4 cell count decline, and depressive symptoms among HIV-seropositive women: Longitudinal analysis from the HIV Epidemiology Research Study. *The Journal of the American Medical Association*. 2001; 285:1466–1474. doi:10.1001/jama.285.11.1466.
- Impett EA, Schooler D, Tolman DL. To be seen and not be heard: Femininity ideology and adolescent girls' sexual health. *Archives of Sexual Behavior*. 2006; 35:129–142. doi:10.1007/s10508-005-9016-0.
- Jack, D. Silencing the self: Inner dialogue and outer realities. In: Joiner, T.; Coyne, J., editors. *The interactional nature of depression*. American Psychological Association Press; Washington, DC: 1999. p. 221-246.
- Jack DC, Dill D. The silencing the self scale: Schemas of intimacy associated with depression in women. *Psychology of Women Quarterly*. 1992; 16:97–106. doi:10.1111/j.1471-6402.1992.tb00242.x.
- Jewkes RK, Dunkle K, Nduna M, Shai N. Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: A cohort study. *The Lancet*. 2010; 376:41–48. doi:10.1016/S0140-6736(10)60548-X.
- Kalichman SC. Psychological and social correlates of high-risk sexual behavior among men and women living with HIV/AIDS. *AIDS Care*. 1999; 11:415–428. doi:10.1080/09540129947794. [PubMed: 10533534]
- Kerrigan D, Andrinopoulos K, Chung S, Glass B, Ellen J. Gender ideologies, socio-economic opportunities and HIV/STI-related vulnerability among female, African-American adolescents. *Journal of Urban Health*. 2008; 85:717–726. doi:10.1007/s11524-008-9292-9. [PubMed: 18553223]
- Kerrigan D, Andrinopoulos K, Johnson R, Parham P, Thomas T, Ellen JM. Staying strong: Gender ideologies among African-American adolescents and the implications for HIV/STI prevention. *Journal of Sex Research*. 2007; 44:172–180. doi:10.1080/00224490701263785. [PubMed: 17599274]
- Kim JC, Watts CH, Hargreaves JR, Ndhlovu LX, Phetla G, Morison LA, Pronyk P. Understanding the impact of a microfinance-based intervention on women's empowerment and the reduction of intimate partner violence in South Africa. *American Journal of Public Health*. 2007; 97:1794–1802. doi:10.2105/AJPH.2006.095521. [PubMed: 17761566]
- Knudsen HK, Leukefeld C, Havens JR, Duvall JL, Oser CB, Staton-Tindall M, Inciardi JA. Partner relationships and HIV risk behaviors among women offenders. *Journal of Psychoactive Drugs*. 2008; 40:471–481. [PubMed: 19283951]
- Leserman J. Role of depression, stress, and trauma in HIV disease progression. *Psychosomatic Medicine*. 2008; 70:539–545. doi: 10.1097/PSY.0b013e3181777a5f. [PubMed: 18519880]
- Liu C, Weber K, Robison E, Hu Z, Jacobson LP, Gange SJ. Assessing the effect of HAART on change in quality of life among HIV-infected women. *AIDS Research and Therapy*. Mar 20.2006 3:6. doi: 10.1186/1742-6405-3-6. [PubMed: 16549012]
- McDonnell KA, Gielen CA, O'Campo P, Burke JG. Abuse, HIV status and health-related quality of life among a sample of HIV positive and HIV negative low income women. *Quality of Life Research*. 2005; 14:945–957. doi:10.1007/s11136-004-3709-z. [PubMed: 16041892]
- McMullin D, Wirth RJ, White JW. The impact of sexual victimization on personality: A longitudinal study of gendered attributes. *Sex Roles*. 2007; 56:403–414. doi:10.1007/s11199-006-9179-8.
- Merenstein D, Schneider MF, Cox C, Schwartz R, Weber K, Robison E, Plankey MW. Association of child care burden and household composition with adherence to highly active antiretroviral therapy in the women's interagency HIV study. *AIDS Patient Care and STDs*. 2009; 23:289–296. doi:10.1089=apc.2008.0161. [PubMed: 19243274]
- Moreno C. The relationship between culture, gender, structural factors, abuse, trauma, and HIV/AIDS for Latinas. *Qualitative Health Research*. 2007; 17:340–352. doi:10.1177/1049732306297387. [PubMed: 17301342]
- Nagurney A. The effects of relationship stress and unmitigated communion on physical and mental health outcomes. *Stress and Health*. 2007; 23:267–273. doi:10.1002/smi.1146.

- Nagurney A, Bagwell B. Relations of the gender-related personality traits and stress to sexual behaviors among college students. *North American Journal of Psychology*. 2009; 11:85–95.
- Nguyen AB, Clark TT, Hood KB, Corneille MA, Fitzgerald AY, Belgrave FZ. Beyond traditional gender roles and identity: Does reconceptualisation better predict condom-related outcomes for African-American women? *Culture, Health and Sexuality*. 2010; 12:603–617. doi: 10.1080/13691051003658127.
- Peters DK, Cantrell PJ. Gender roles and role conflict in feminist lesbian and heterosexual women. *Sex Roles*. 1993; 28:379–392. doi:10.1007/BF00289603.
- Pulerwitz J, Amaro H, DeJong W, Gortmaker SL, Rudd R. Relationship power, condom use, and HIV risk among women in the USA. *AIDS Care*. 2002; 14:789–800. doi:10.1080/0954012021000031868. [PubMed: 12511212]
- Pulerwitz J, Gortmaker SL, DeJong W. Measuring sexual relationship power in HIV/STD research. *Sex Roles*. 2000; 42:637–660. doi:10.1023/A:1007051506972.
- Quina K, Harlow LL, Morokoff PJ, Burkholder G, Deiter PJ. Sexual communication in relationships: When words speak louder than actions. *Sex Roles*. 2000; 42:523–549.
- Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*. 1977; 1:385–401. doi:10.1177/014662167700100306.
- Sen B. Why do women feel the way they do about market work: The role of familial, social and economic factors. *Review of Social Economy*. 2003; 61:211–234. doi: 10.1080/0034676032000098228.
- Serovich JM, McDowell TL, Gafsky EL. Women's report of regret of HIV disclosure to family, friends and sex partners. *AIDS and Behavior*. 2008; 12:227–231. doi:10. 1007/s10461-007-9295-7. [PubMed: 17682937]
- Shearer CL, Hosterman SJ, Gillen MM, Lefkowitz ES. Are traditional gender role attitudes associated with risky sexual behavior and condom-related beliefs? *Sex Roles*. 2005; 52:311–323. doi: 10.1007/s11199-00502676-4.
- Sherbourne CD, Hays RD, Fleishman JA, Vitiello B, Magruder KM, Bing EG, Shapiro MF. Impact of psychiatric conditions on health-related quality of life in persons with HIV infection. *The American Journal of Psychiatry*. 2000; 157:248–254. doi:10.1176/appi.ajp.157.2.248. [PubMed: 10671395]
- Sikka, A.; Vaden-Goad, L.; Waldner, LK. Authentic self-expression: Gender, ethnicity, and culture. In: Jack, DC.; Ali, A., editors. *Silencing the self across cultures: Depression and gender in the social world*. Oxford University Press; New York, NY: 2010. p. 261-284.
- Smith MY, Feldman JJ, Kelly PP, DeHovitz JA. Health-related quality of life of HIV-infected women: Evidence for the reliability, validity and responsiveness of the Medical Outcomes Study Short-Form 20. *Quality Of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation*. 1996; 5:47–55. doi:10.1007/BF00435968.
- Sobo EJ. Finance, romance, social support, and condom use among impoverished inner-city women. *Human Organization*. 1995; 54:115–128.
- Solomon S, Batavia A, Venkatesh KK, Brown L, Verma P, Cecelia AJ, Mayer KH. A longitudinal quality-of-life study of HIV-infected persons in South India: The case for comprehensive clinical care and support services. *AIDS Education and Prevention*. 2009; 21:104–112. doi:10.1521/aeap.2009.21.2.104. [PubMed: 19397433]
- Teitelman AM, Ratcliffe SJ, Dichter ME, Sullivan CM. Recent and past intimate partner abuse and HIV risk among young women. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*. 2008; 37:219–227. doi:10.1111/j.1552-6909.2008.00231.x.
- Thornton A, Alwin DF, Camburn D. Causes and consequences of sex-role attitudes and attitude change. *American Sociological Review*. 1983; 48:211–227. doi:10.2307/2095106. [PubMed: 6859679]
- Tross S. Women at heterosexual risk for HIV in inner-city New York: Reaching the hard to reach. *AIDS and Behavior*. 2001; 5:131–139.
- Trudeau KJ, Danoff-Burg S, Revenson TA, Paget SA. Agency and communion in people with rheumatoid arthritis. *Sex Roles*. 2003; 49:303–311. doi:10.1023/A:1025192818638.

- Ulibarri, MD.; Raj, A.; Amaro, H. Love, sex, and power revisited: The integration of gendered context in HIV prevention among Latinas. In: Organista, KC., editor. *HIV prevention with Latinos: Theory, research, and practice*. Oxford University Press; New York, NY: 2012. p. 63-81.
- Weidel JJ, Provencio-Vasquez E, Watson SD, Gonzalez-Guarda R. Cultural considerations for intimate partner violence and HIV risk in Hispanics. *The Journal of the Association of Nurses in AIDS Care*. 2008; 19:247–251. [PubMed: 18598900]
- Wingood GM, DiClemente RJ. Application of the theory of gender and power to examine HIV-related exposures, risk factors, and effective interventions for women. *Health Education & Behavior*. 2000; 27:539–565. doi:10.1177/109019810002700502. [PubMed: 11009126]
- Wingood GM, DiClemente RJ, Mikhail I, Lang DL, McCree DH, Davies SL, Saag M. A randomized controlled trial to reduce HIV transmission risk behaviors and sexually transmitted diseases among women living with HIV: The WiLLOW Program. *Journal of Acquired Immune Deficiency Syndromes*. 2004; 37:S58–S67. [PubMed: 15385901]
- Wisniewski AB, Apel S, Selnes OA, Nath A, McArthur JC, Dobs AS. Depressive symptoms, quality of life, and neuropsychological performance in HIV/AIDS: The impact of gender and injection drug use. *Journal of Neurovirology*. 2005; 11:138–143. doi:10.1080/13550280590922748. [PubMed: 16036792]
- Woods NF, Smith-DiJulio K, Percival DB, Tao EY, Mariella A, Mitchell S. Depressed mood during the menopausal transition and early postmenopause: Observations from the Seattle Midlife Women's Health Study. *Menopause*. 2008; 15:223–232. doi:10.1097/gme.0b013e3181450fc2. [PubMed: 18176355]
- World Health Organization. Gender inequalities and HIV. 2012. Retrieved from http://www.who.int/gender/hiv_aids/en/index.html
- Wyatt GE. The sociocultural relevance of sex research: Challenges for the 1990s and beyond. *American Psychologist*. 1994; 49:748–754. [PubMed: 8092615]
- Yoder J, Perry R, Saal E. What good is a feminist identity? Women's feminist identification and role expectations for intimate and sexual relationships. *Sex Roles*. 2007; 57:365–372. doi: 10.1007/s11199-007-9269-2.
- Zoellner, T.; Hedlund, S. Women's self-silencing and depression in the socio-cultural context of Germany. In: Jack, DC.; Ali, A., editors. *Silencing the self across cultures: Depression and gender in the social world*. New York, NY: 2010. p. 107-127.p. Oxford University Press

Table 1

Sample Demographic Characteristics.

	Entire Sample (N = 142)	HIV Positive (n = 100)	HIV Negative (n = 42)	HIV Status Differences
Age	<i>M</i> = <i>SD</i> = 43.95 9.53	45.24 8.83	40.90 10.52	$t(140) = 2.52, p = .01$
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	
Race				$\chi^2(1) = .28, p = .60^a$
African American/non-Hispanic	128 (90.1)	91 (91.0)	37 (88.1)	
White/non-Hispanic	5 (3.5)	4 (4.0)	1 (2.4)	
White/Hispanic	6 (4.2)	3 (3.0)	3 (7.1)	
Other/Hispanic	2 (1.4)	1 (1.0)	1 (2.4)	
Other	1 (0.7)	1 (1.0)	0 (0.0)	
Bisexual/lesbian	15 (10.6)	11 (11.0)	4 (9.5)	$\chi^2(1) = .07, p = .79$
Education				$r_s = .18, p = .03$
Grades 1–6	1 (0.7)	1 (1.0)	0 (0.0)	
Grades 7–11	56 (39.4)	45 (45.0)	11 (26.2)	
Completed high school	45 (31.7)	31 (31.0)	14 (33.3)	
Some college	33 (23.2)	18 (18.0)	15 (35.7)	
Completed 4-year college	6 (4.2)	4 (4.0)	2 (4.8)	
Graduate school	1 (0.7)	1 (1.0)	0 (0.0)	
Income				$\chi^2(2) = 12.48, p = .002$
US\$6,000 or less	42 (29.6)	27 (27.0)	15 (35.7)	
US\$6,001–US\$12,000	47 (33.1)	42 (42.0)	5 (11.9)	
US\$12,001 or more	53 (37.3)	31 (31.0)	22 (52.4)	
Marital status				$\chi^2(6) = 5.21, p = .52$
Married	29 (20.4)	20 (20.0)	9 (21.4)	
Unmarried, living with partner	9 (6.3)	4 (4.0)	5 (11.9)	
Widowed	11 (7.7)	9 (9.0)	2 (4.8)	
Divorced/annulled	23 (16.2)	18 (18.0)	5 (11.9)	
Separated	13 (9.2)	9 (9.0)	4 (9.5)	
Never married	54 (38.7)	38 (38.0)	17 (40.5)	
Other	2 (1.4)	2 (2.0)	0 (0.0)	
In recent relationship ^b	97 (68.3)	68 (68.0)	29 (69.0)	$\chi^2(1) = .03, p = .87$
Injecting drug use ^c	40 (28.2)	34 (34.0)	6 (14.3)	$\chi^2(1) = 5.68, p = .02$
Crack, cocaine, heroin ^c	97 (68.3)	71 (71.0)	26 (61.9)	$\chi^2(1) = 1.13, p = .29$
Heavy drinking ^c	40 (28.2)	31 (31.0)	9 (21.4)	$\chi^2(1) = 1.42, p = .23$
Any abuse ^c	120 (84.5)	86 (86.0)	34 (81.0)	$\chi^2(1) = .58, p = .45$

Note.

^aThis analysis is based on African American versus other.

^bBased on self-reports of yes/no.

^cBased on ever versus never experienced.

Table 2

Means and Standard Deviations for Gender Role Measures by HIV Serostatus.

Measures	HIV Seronegative (<i>n</i> = 42)		HIV Seropositive (<i>n</i> = 100)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
STSS Total	71.25	16.79	80.26	21.39
STSS Divide	14.83	4.73	17.60	6.41
STSS Exp	12.81	5.77	15.85	6.08
STSS Silence	18.98	6.50	22.64	7.08
STSS Care	24.55	4.84	24.20	5.91
SRPS Total ^a	3.11	.45	2.91	.45
SRPS Decision ^a	2.24	.37	2.10	.33
SRPS Relationship ^a	3.37	.54	3.16	.57
RUCS	26.60	4.60	28.85	5.53
CESD recent	12.31	11.09	15.73	10.79
CESD average	12.66	7.18	16.59	8.22
HRQoL recent	75.54	15.55	66.25	20.95
HRQoL average	75.49	12.20	65.88	14.51

Note. STSS = Silencing the Self Total Scale; STSS Divide = Divided Self subscale; STSS Exp = Externalized Self Perception subscale; STSS Silence = Silencing the Self subscale; STSS Care = Care as Self Sacrifice subscale; SRPS = Sexual Relationship Power Scale; SRPS Decision = SRPS Decision-Making subscale; SRPS Relation = SRPS Relationship Control subscale; RUCS = Revised Unmitigated Communion Scale; CESD recent = Center for Epidemiological Studies Depression Scale at recent visit; CESD average = mean of all CESD visits; HRQoL recent = Health-Related Quality of Life at recent visit; HRQoL average = mean of all HRQoL visits.

^a Analyses for the SRPS were based on 100 HIV-seropositive and 41 HIV-seronegative women because of error in administering the scale to one participant.

Table 3

Partial Correlations^a Among Gender Role and Outcome Variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. STSS Total	—	.84*	.85*	.85*	.70*	-.43*	-.28*	-.43*	.33*	.30*	.33*	-.33*	-.22*
2. STSS Divide		—	.66*	.68*	.37*	-.39*	-.23*	-.41*	.18*	.23*	.29*	-.24*	-.17
3. STSS Exp			—	.59*	.52*	-.35*	-.22*	-.35*	.42*	.39*	.36*	-.35*	-.21*
4. STSS Silence				—	.44*	-.41*	-.28*	-.39*	.21*	.20*	.22*	-.26*	-.15
5. STSS Care					—	-.24*	-.15	-.24*	.27*	.17*	.20*	-.24*	-.18*
6. SRPS Total						—	.82*	.84*	-.14	.00	.09	.07	.10
7. SRPS Decision							—	.38*	-.05	.08	-.01	.07	.13
8. SRPS Relation								—	-.17*	-.08	-.13	.05	.04
9. RUCS									—	.23*	.20*	-.25*	.08
10. CESD recent										—	.62*	-.55*	.47*
11. CESD average											—	-.45*	.68*
12. HRQoL recent												—	.71*
13. HRQoL average													—

Note. STSS Total = Silencing the Self Total Scale; STSS Divide = Divided Self subscale; STSS Exp = Externalized Self Perception subscale; STSS Silence = Silencing the Self subscale; STSS Care = Care as Self Sacrifice subscale; SRPS Total = Sexual Relationship Power Total Scale; SRPS Decision = SRPS Decision-Making Subscale; SRPS Relation = SRPS Relationship Control subscale; RUCS = Revised Unmitigated Communion Scale; CESD recent = Center for Epidemiological Studies Depression Scale at recent visit; CESD average = mean of all CESD visits; HRQoL recent = Health Related Quality of Life at recent visit; HRQoL average = mean of all HRQoL visits.

^a All partial correlations control for HIV status, income, education, history of injecting drug use, enrollment wave, and age.

* $p < .05$.

Table 4
HIV Status and Gender Role Variables as Predictors of Depressive Symptoms and Quality of Life.

Outcomes																	
Predictors	CESD Recent				CESD Average				HRQoL Recent				HRQoL Average				
	B	t	p	r ²	B	t	p	r ²	B	t	p	r ²	B	t	p	r ²	
STSS	HIV status	.08	.95	.34	.07 ^a	.14	1.72	.09	.15 ^a	-.12	-1.41	.16	.05 ^a	-.24	-2.79	.01	.09 ^a
	STSS	.33	3.65	.00	.18 ^b	.31	3.79	.00	.27 ^b	-.37	-4.12	.00	.19 ^b	-.24	2.76	.01	.20 ^b
	STSS × HIV	-.05	-.52	.61	.18 ^c	.04	.55	.58	.27 ^c	.05	.55	.58	.19 ^c	.05	.54	.59	.20 ^c
SRPS	HIV status	.15	1.68	.10	.07 ^a	.15	1.74	.08	.15 ^a	-.16	-1.78	.08	.05 ^a	-.24	-2.74	.01	.08 ^a
	SRPS	-.02	-.17	.86	.09 ^b	-.10	-1.17	.25	.19 ^b	.10	1.12	.27	.09 ^b	.13	1.59	.11	.17 ^b
	SRPS × HIV	-.01	-.16	.88	.09 ^c	.05	.62	.54	.19 ^c	-.06	-.74	.46	.10 ^c	-.07	-.81	.42	.17 ^c
RUCS	HIV status	.10	1.14	.26	.07 ^a	.13	1.61	.11	.15 ^a	-.14	-1.60	.11	.05 ^a	-.25	-2.91	.00	.09 ^a
	RUCS	.23	2.62	.01	.14 ^b	.20	2.43	.02	.21 ^b	-.24	-2.79	.01	.14 ^b	-.09	-1.06	.29	.16 ^b
	RUCS × HIV	.00	.01	.99	.14 ^c	-.05	.66	.51	.22 ^c	-.02	-.28	.78	.14 ^c	.09	1.05	.29	.17 ^c

Note. STSS Total = Silencing the Self Total Scale; SRPS = Sexual Relationship Power Total Scale; RUCS = Revised Unmitigated Communion Scale; CESD recent = Center for Epidemiological Studies Depression Scale at recent visit; CESD average = mean of all CESD visits; HRQoL recent = Health Related Quality of Life at recent visit and HRQoL average = mean of all HRQoL visits. All statistics, with the exception of r^2 values, are reported from Block 3 of the regression model which includes as predictors: covariates (age, injecting drug use, enrollment wave, education, and income), HIV status, one gender role variable, and the interaction term between HIV status and the gender role variable.

^a r^2 Block 1 includes covariates.

^b r^2 Block 2 includes covariates and HIV status and relevant gender role variable.

^c r^2 Block 3 includes covariates, HIV status, relevant gender role variable, and HIV Status × Gender Role variable.