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## Details for Manuscript Number SSM-D-06-00290R2 “Internalized Stigma, Discrimination, and Depression among Men and Women Living with HIV/AIDS in Cape Town, South Africa”

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### Abstract

AIDS stigmas interfere with HIV prevention, diagnosis and treatment and can become internalized by people living with HIV/AIDS. However, the effects of internalized AIDS stigmas have not been investigated in Africa, home to two-thirds of the more than 40 million people living with AIDS in the world. The current study examined the prevalence of discrimination experiences and internalized stigmas among 420 HIV positive men and 643 HIV positive women recruited from AIDS services in Cape Town, South Africa. The anonymous surveys found that 40% of persons with HIV/AIDS had experienced discrimination resulting from having HIV infection and one in five had lost a place to stay or a job because of their HIV status. More than one in three participants indicated feeling dirty, ashamed, or guilty because of their HIV status. A hierarchical regression model that included demographic characteristics, health and treatment status, social support, substance use, and internalized stigma significantly predicted cognitive-affective depression. Internalized stigma accounted for 4.8% of the variance in cognitive-affective depression scores over and above the other variables. These results indicate an urgent need for social reform to reduce AIDS stigmas and the design of interventions to assist people living with HIV/AIDS to adjust and adapt to the social conditions of AIDS in South Africa.

### Keywords

Internalized stigma; AIDS; coping; South Africa; Discrimination; Depression

### Introduction

HIV/AIDS is perhaps the most stigmatized medical condition in the world. Research conducted across continents has consistently demonstrated that adversarial views of people living with HIV/AIDS are common. AIDS stigmatizing beliefs are the product of multiple social influences including attributions of responsibility for HIV infection and beliefs that individuals with HIV/AIDS are contaminated and tainted. In his classic theory of social

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stigma, Goffman (1963) identified three aspects of stigma that are characteristic of HIV/AIDS: blemishes of personal character, stained social identity, and physical deformity or defects. AIDS stigmas also reproduce inequalities of class, race, and gender (Parker & Aggleton, 2003). People with HIV infection are often ascribed responsibility for their condition because HIV is contracted from behaviors that are considered avoidable, namely unsafe sex and drug use practices (Herek, 1999). AIDS stigmas are also inextricably enmeshed with other stigmas associated with risk behaviors, such as sexual promiscuity, homosexuality, sexual exchange, and drug use (Novick, 1997). Adverse reactions are greatest toward people with AIDS who contracted HIV through sexual and drug use behaviors relative to those who contracted HIV via blood transfusion (Crawford, 1996). Similarly, individuals who contract HIV via injection drug practices or multiple sex partners are blamed more for their HIV infection than people described as contracting HIV by having sex with only one partner (Herek, Capitanio & Widaman, 2003).

AIDS-related stigmas also interfere with HIV prevention efforts. For example, in a study conducted in the US, Stall and colleagues (Stall, Hoff, Coates, Paul, Phillips, Ekstrand et al., 1996) reported that two out of three men who have sex with men who were unaware of their HIV status indicated that AIDS-related stigmas influenced their decisions not to get tested. Among HIV positive women in Sub-Saharan Africa, a primary reason for not disclosing HIV/AIDS and failure to seek assistance are fears of AIDS stigma (Kilewo, Massawe, Lyamuya, Semali, Kalokola, Urassa et al., 2001). Like elsewhere in the world, AIDS stigmas also create a barrier to HIV prevention including HIV testing and counseling in South Africa (Kalichman & Simbayi, 2003; Petros, Airhihenbuwa, Simbayi, Ramlagan & Brown, in press).

There have been relatively few studies of AIDS stigmas experienced by people living with HIV/AIDS. Socially constructed views of AIDS can be assimilated and internalized by infected persons. Internalized AIDS stigmas have the potential for adverse behavioral and emotional ramifications including not seeking treatment and care services (Chesney & Smith, 1999), engaging in unsafe sex practices (Wenger, Kusseling, Beck & Shapiro, 1994), fostering a sense of isolation and emotional distress (Crandall & Coleman, 1992), and self-hatred (Lewis, 1998). Internalized stigma has also been related to the development of depressive symptoms (Wight, 2000). In a study designed to assess the impact of internalized AIDS stigmas in the US, Lee, Kochman, and Sikkema (2002) found that 63% of HIV positive persons sampled in two US cities indicated that they were embarrassed by their HIV infection and 74% stated that it is difficult for them to tell others that they are HIV positive. Lee and colleagues further showed that internalized AIDS stigmas accounted for a significant and unique proportion of the variance in depression symptoms among people living with HIV/AIDS; internalized stigma was related to depression over and above demographic characteristics, health status, symptoms of grief, and coping responses. These findings suggest that internalized AIDS stigmas may play a crucial role in the emotional reactions and distress experienced by many people living with HIV/AIDS.

Although still prevalent, AIDS stigmas appear to be declining somewhat in the Republic of South Africa. The national HIV/AIDS household survey in South Africa in 2005 showed that endorsements of AIDS stigmatizing beliefs had declined from the previous household

survey reported in 2003 (Shisana, Rehle, Simbayi, Parker, Bhana & Zuma, 2005). Nevertheless, 29% of South Africans stated that they would not buy food from a vendor who has HIV and 20% stated that HIV positive children should be kept separate from other children to prevent infection (Shisana et al., 2005). Studies have shown that people living in Cape Town South Africa frequently endorse AIDS stigmatizing beliefs (Deacon, Stephney, & Prosalendis, 2004; Kalichman, Simbayi, Jooste, Toefy, Cain, Cherry et al., 2005). For example, 43% of people surveyed in local townships and neighborhoods stated that people living with HIV/AIDS should not be allowed to work with children and 41% felt that people with HIV/AIDS should expect to have restrictions placed on their freedom (Kalichman et al., 2005).

The current study was conducted to examine internalized AIDS stigmas among people living with HIV/AIDS in Cape Town South Africa. To our knowledge, no previous studies have investigated internalized AIDS stigma in Africa, the region of the world that is home to more than 60% of people living with HIV/AIDS (UNAIDS / WHO, 2005). Because AIDS stigmas are prevalent in the general population of South Africa, we hypothesized that internalized AIDS stigmas and AIDS-related discrimination experiences would also be prevalent in people living with HIV/AIDS. Following from the results of Lee et al. (2002) discussed above, we predicted that internalized AIDS stigmas would be associated with symptoms of depression over and above other common correlates of depression including health status, social support, and substance use.

## Method

### Participants and setting

Surveys were completed by 420 HIV positive men and 643 HIV positive women in Cape Town, South Africa. Southern Africa is home to two-thirds of the more than 40 million people living with HIV/AIDS in the world. Although only 10% of the world's population lives in Sub-Saharan Africa, more than 85% of the world's AIDS-related deaths have occurred in this region. The Republic of South Africa has one of the world's worst HIV/AIDS epidemics, with an estimated 5.5 million people living with HIV/AIDS; 18.8% of adults are living with the virus (UNAIDS, 2006). The study was conducted in Cape Town, a city with over 3 million people and estimated HIV prevalence of 9%.

Participants were sampled from local social service and health care providers offering services to people living with HIV/AIDS in Cape Town. The sample was racially diverse, with 68% (n = 714) African, 15% (n = 156) mixed race or Coloured, 12% (n = 127) Indian, and 5% (n = 47) white. The sample also represented a broad spectrum of ages, with 28% (n = 305) under age 25 and 28% (n = 293) 36 and older.

### Measures

Measures were administered in a seven-page survey that was completed in approximately 30 minutes. The surveys were available in three languages spoken by the vast majority of people living in Cape Town: Xhosa, English, and Afrikaans.

**Demographic and health characteristics**—Participants reported demographic characteristics including their age, race, employment status, and marital status. For health status, we asked participants whether they were currently taking antiretroviral (ARV) medications, how many times they had been hospitalized for HIV-related conditions, and whether they had experienced 12 symptoms of advancing HIV infection including persistent shortness of breath, persistent cough, oral lesions, persistent diarrhea, recurring fever, or excessive and sudden loss of weight. Participants also reported the month and year that they had tested HIV positive.

**Internalized AIDS Stigma**—Items were adapted to assess internalized AIDS stigmas from a scale developed to measure AIDS-related stigma beliefs in general South African populations. We selected seven items from the AIDS-Related Stigma Scale (Kalichman et al., 2005) and reframed the wording to represent negative self-perceptions and self-abasement in relation to being a person living with HIV/AIDS. The items focused on self-blame and concealment of HIV status from others (exact items used are shown in Table 1). In this study, we examined responses to each of the seven Internalized stigma items as individual indicators of internalized AIDS stigma and we computed a scale by summing all items endorsed in the direction of greater internalized stigma. Items were responded to dichotomously, 1 = Agree, 0 = Disagree; scale scores represent the sum total of endorsed items, range 0 to 7. The internalized AIDS stigma scale score was internally consistent,  $\alpha = .70$ .

**HIV/AIDS Discrimination Experiences**—To assess AIDS-related discrimination, we asked participants if they had experienced three discrimination-related events: whether they had been treated differently since they had disclosed their HIV status to friends and family; whether being HIV positive had caused them to lose a job or a place to stay; and whether they had experienced discrimination because they are HIV positive. Exact items are shown in Table 1 and each was responded to dichotomously, Yes or No.

**Cognitive and Affective Depression**—The Centers for Epidemiological Studies Depression Scale (CESD) is a 20-item scale that assesses symptoms of depression over the previous 7 days, 0 = No days, 3 = 5-7 days (Radloff & Locke, 1986). Because the somatic depression items on the CESD overlap with HIV-related symptoms (Kalichman, Rompa, & Cage, 2000), we administered 11 cognitive and affective symptoms of depression items to limit confounding of depression with HIV disease-related symptoms (CESD items included: I was bothered by things that usually don't bother me, I felt I was just as good as other people (reversed), I felt depressed, I thought my life had been a failure, I felt fearful, I was happy (reversed), I talked less than usual, I felt sad, I felt lonely, I had crying spells, and I felt that people disliked me). Scores on the Cognitive and Affective Depression scale ranged from 0 to 33 and the scale was internally consistent,  $\alpha = .79$ .

**Social Support**—Three items were drawn from the Social Support Questionnaire to assess perceived social support (Brock, Sarason, Sarason, & Pierce, 1996). The items were selected to reflect perceived tangible and emotional support: If I were sick and needed someone to take me to a doctor I would have trouble finding someone (reversed); I feel that there is no

one I can share my most private concerns and fears (reversed); and I feel a strong emotional bond with at least one other person. These items were responded to on 4-point scales, 1 = Completely true, to 4 = Completely false, and summed to a score with a range of 3 to 12,  $\alpha = .68$ .

**Substance Use**—Participants were asked whether they had used alcohol, cannabis (dagga), methamphetamine (Tik), cocaine, Mandrax (methaqualone), or any injection drug over the past 3-months. For alcohol, responses were collected as 0 = no use, 1 = only once, and 2 = more than once. For other drugs, each substance was dichotomously scored for having used or not used each drug and the number of drugs used was summed with totals ranging from 0 representing no drugs used to 5 representing use of all five drugs.

## Procedures

The survey was developed from measures used in previous research conducted in South Africa (Kalichman & Simbayi, 2003; Kalichman et al., 2005). Initial drafts of the survey were pilot tested with HIV positive volunteers in Cape Town. Survey venues were selected based on known supportive services (e.g., support groups, 38%), treatment services (e.g., clinics, 39%), and by word of mouth (chain) recruitment (23%). Surveys were administered by 11 trained, racially and ethnically diverse field workers. The measures were self-administered with less than 5% of participants requiring assistance reading the survey items. Participants were offered R20 South African Rand (US\$3) after they completed the survey. Participants were not told about the cash reimbursement until after returning the survey to avoid participation coercion and response bias. Ninety-five percent of persons recruited agreed to complete the survey.

## Data Analyses

For descriptive purposes, we first examined the frequencies of responses to the internalized stigma items and AIDS discrimination experiences. Men and women who endorsed each item were compared using contingency table chi-square ( $X^2$ ) tests. The main study hypothesis concerning the association of internalized stigma in relation to cognitive-affective depression was tested in a hierarchical linear regression where cognitive-affective depression scores were entered as the dependant variable and predictor variables were sequentially entered in four hierarchically ordered blocks. AIDS discrimination experiences were correlated with internalized stigma scores,  $r(1067) = .31, p < .001$  and was not included in the regression model to avoid conceptual and statistical redundancy. The first block of variables entered into the regression consisted of three demographic characteristics: participant gender (0 = male, 1 = female), age, and race (0 = African, 1 = White, Coloured, or Indian). Block 2 consisted of three health characteristics: the number of years since participants had tested HIV positive, the number of HIV-related symptoms they endorsed, and whether they were taking ARVs (1 = Yes, 0 = No). The third block included social support scores, alcohol use, and drug use. Finally, Block 4 included Internalized AIDS stigma scale scores. The order of variables entered into the model was conceptually grounded, starting with fixed participant characteristics, then entering health status variables which can vary, followed by coping and adjustment variables and finally internalized stigma. Each variable was tested for significance using unstandardized (B) and standardized

( $\beta$ ) coefficients and each block was tested for significance by examining the amount of variance accounted for ( $R^2$ ) and change in variance accounted for ( $\Delta R^2$ ). Statistical significance was defined as  $p < .05$ . Cell sizes vary as participants were included for all analyses in which they had non-missing values.

## Results

The mean number of years since participants had been tested HIV positive was 2.7 (SD = 2.4). More than 50% of participants indicated that they had experienced at least seven different symptoms of advancing HIV disease and 50% of the sample was currently taking ARVs. In addition, more than 30% of the sample reported over the mid-point of cognitive-affective depression scale scores of 16, suggesting considerable prevalence of depression symptoms. In terms of recent substance use, 22% reported drinking once in the past 3-months and 29% drank more than once. For drug use, 22% reported using at least one drug in the past 3-months, the most common of which was Dagga (17%).

### Prevalence of AIDS Discrimination and Internalized Stigma

Table 1 presents the prevalence of discrimination experiences and internalized stigma indicators for men and women. A substantial number of both men and women reported AIDS related discrimination; one in three persons with HIV/AIDS had been treated differently by friends and family and over 40% had experienced discrimination since testing HIV positive. A greater proportion of men reported adverse social reactions to their HIV infection including losing a job or place to stay. In addition, internalized AIDS stigma was common in the sample. Both men and women endorsed self-abasing beliefs related to living with HIV/AIDS. Like discrimination experiences, men endorsed four of the seven beliefs more frequently than did women; feeling dirty, guilty, and ashamed, and that it was their own fault that they were HIV positive. Overall internalized AIDS stigma scores were higher for men than women, but women reported higher depression scores and greater social support scores than men (see Table 1).

### Correlations among Depression, Internalized Stigma, Substance Use, and Participant Characteristics

Pearson correlations among depression, internalized stigma, social support, substance use, health, and demographic characteristics are shown in Table 2. Cognitive-affective depression scores were significantly positively correlated with internalized AIDS stigma, substance use, HIV symptoms, gender (higher scores for women), and race (higher scores for non-Africans), and inversely associated with social support scores. Internalized stigma scores were also correlated with substance use and were inversely correlated with social support, years since testing HIV positive, and gender. These patterns of correlations supported moving forward with the regression analyses.

### Internalized AIDS Stigmas in Relation to Depression

The first block of predictors entered in the hierarchical regression consisted of demographic characteristics (gender, age, and race) and was statistically significantly associated with depression,  $F(3, 1070) = 11.6, p < .01$ , accounting for 4.6% of the variance in depression

scores. In this block, gender and race were significantly related to depression (see Table 3). Health characteristics were entered in the second block (years since testing HIV positive, HIV symptoms, and taking ARVs) and the equation remained statistically significant,  $F(6, 1067) = 35.8, p < .01$ , contributing an additional 8.7% of the variance in depression scores, a statistically significant change; HIV symptoms were significantly related to depression scores. Adding the third block (social support, alcohol and drug use), the equation remained significant,  $F(9, 1064) = 8.3, p < .01$ , contributing an additional 1.9% to the explained variance in depression. Finally, internalized stigma was entered into the fourth and final block, with the final equation remaining significant,  $F(10, 1069) = 64.1, p < .01$ , contributing an additional 4.8% to the explained variance in depression scores, with the overall final model accounting for 20% of the variance in depression.

## Discussion

Discrimination experiences were common and internalized AIDS stigmas were prevalent among people living with HIV/AIDS in Cape Town. Nearly one in four participants in this study had never talked with a friend about their HIV status and one in three said that they were treated differently by friends and family since they had tested HIV positive. More than 40% had experienced discrimination resulting from having HIV infection and one in five persons with HIV/AIDS had lost a place to stay or a job because of their HIV status. Given that most persons in this study had only been diagnosed with HIV infection for less than 3 years, discrimination practices therefore persist in South Africa. These adverse experiences likely account for why 60% of the sample said that they had not told people about their HIV infection because of fear of their reactions.

The small but consistent pattern of gender differences in AIDS discrimination experiences and internalized stigma should be noted. Men were more likely to have never discussed AIDS with friends, were more likely to have been treated differently since testing HIV positive, and were more likely to have suffered loss of a place to stay or job due to AIDS. In addition, men were more likely to report experiencing internalized AIDS stigma than women. Consistent with the literature on gender differences in depression, we found that men reported less social support and less depression than women. Men therefore did not follow the pattern suggested by the correlation between internalized stigma and depression which suggests that individuals with greater internalized stigma would report more depression. These findings do correspond with research showing men are more inclined to use alcohol and other drugs to cope with depression whereas women are more likely to seek support.

Internalized stigmas were prevalent in our sample of people living with HIV/AIDS. More than one in three men and women endorsed AIDS-related self-abasing views. In fact, people living with HIV infection have internalized AIDS stigmas to a far greater extent than these beliefs are held in the broader community. For example, in a study of 2306 adults throughout Cape Town (Kalichman et al., 2005), 10% believed that people with AIDS are dirty compared to 27% of people living with HIV/AIDS, 16% believed that people with AIDS should be ashamed of their condition whereas 38% of people with HIV said they were ashamed, and 13% felt that people with HIV/AIDS must have done something to deserve

their condition whereas 41% of people with HIV/AIDS felt guilty about having been infected with HIV. The considerable amount of psychological distress reported among people living with HIV/AIDS in other studies in South Africa may be at least somewhat accounted for by internalized AIDS stigmas (Olley, Seedat, & Stein, 2004; Olley, Zeier, Seeda & Stein, 2005).

Symptoms of depression were substantial in this sample and greater than in the general population of South Africa. Shisana et al. (2005) found that 29% of the general South African population reported feeling depressed in the past year compared to 42% of people living with HIV/AIDS. Our finding that 30% of people with HIV/AIDS indicated depression in the past week is consistent with these results. We also found that internalized stigmas were closely associated with signs of cognitive-affective depression. Internalized stigma was associated with not being Black African in terms of race, lower social support and greater substance use, a pattern of results that mirrored those for cognitive-affective depression scores. When examined in a hierarchical regression, internalized stigma contributed to the explained variance in cognitive-affective depression over and above other common correlates of depression including health status, social support, and substance use. These findings are very similar to those reported in a study of HIV positive persons in two US cities (Lee et al., 2002). Although we must be cautious when comparing results across different studies, the parallels between Lee and colleagues' results and the current study findings are striking. Because there has been far more research conducted in countries that have been far less affected by HIV/AIDS, research is needed to determine the extent to which findings such as these are generalizable across cultures.

The current findings should, however, be interpreted in light of the study methodological limitations. The research was conducted in Cape Town South Africa, a city with greater racial diversity and more economic resources than other cities and regions in South Africa. The health and emotional well-being of people living with HIV/AIDS in this study may therefore represent a more optimistic view than in other areas of southern Africa. The study is also limited by our use of targeted convenience sampling. We did not have an HIV negative comparison group to directly examine differences in depression. We also relied entirely on self-reported data within the constraints of a brief and anonymous survey. Our measure of depression was not a diagnostic instrument and can only be interpreted as signs of negative affect or emotional distress not as depression per se. Finally, the sampling strategy relied on self-reported HIV status among persons attending the targeted service and community venues.

We believe that the current findings have important implications for services and interventions for people living with HIV/AIDS in South Africa. Interventions are needed that can assist people living with HIV/AIDS to better adapt and adjust to their conditions and the social environment. Coping efficacy training targeted to address managing social stigmas and reducing internalized stigmas such as those that have been tested in the US (Chesney, Folkman, & Chambers, 1996; Heckman & Carlson, in press) should be developed and tested in the African context. Men may present particular challenges to engage in supportive services. People living with HIV/AIDS may also benefit from interventions designed to broaden and strengthen their social support networks. Support groups are



common in southern Africa and may be used as a starting place for the development of social support interventions. However, the ultimate solution to AIDS stigmas does not lie in the hands of people living with HIV/AIDS. Structural interventions are needed to change the social climate of AIDS. Anti-discrimination laws need strengthening and serious enforcement. Treating HIV/AIDS as a medical condition, including greater availability of ARVs, may reduce the stigmas ascribed to people with HIV/AIDS. Reducing AIDS stigmas at the societal level will likely impact the internalized stigmas which are clearly magnified in people living with HIV/AIDS.

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**Table 1**

Discrimination Experiences, Internalized AIDS Stigma, Cognitive-Affective Depression, and Social Support Scores among Men and Women Living with HIV/AIDS.

	Men (N =420)		Women (N = 643)		$\chi^2$
	N	%	N	%	
<u>Discrimination Experiences</u>					
Has talked with a friend about AIDS.	296	70	494	77	5.3*
Has been treated differently by friends and family since they found out you were HIV positive.	167	40	199	31	8.5**
Friends or family stopped visiting after learning you are HIV positive.	145	34	167	26	8.5**
HIV caused you to lose a job or housing.	115	27	114	18	14.0**
Have experienced discrimination because of HIV.	191	45	254	40	5.5*
There are people you have not told you are HIV positive because you fear their reaction.	251	60	391	61	0.1
<u>Internalized Stigma</u>					
It is difficult to tell other people about my HIV infection.	275	66	392	61	2.3
Being HIV positive makes me feel dirty.	138	33	144	23	14.1**
I feel guilty that I am HIV positive.	197	47	233	37	10.7**
I am ashamed that I am HIV positive.	181	43	224	37	6.5**
I sometimes feel worthless because I am HIV positive.	157	38	219	34	1.2
It is my own fault that I am HIV positive.	215	51	240	38	18.8**
I hide my HIV status from others.	241	57	335	53	1.9
	<u>Mean SD</u>		<u>Mean SD</u>		<u>t</u>
Internalized AIDS Stigma	3.3	2.0	2.8	2.1	4.2**
Cognitive-Affective Depression	11.5	6.1	12.8	6.7	3.1**
Social Support	7.3	2.6	7.9	2.7	3.4**

\* p < .05

\*\* p < .01

**Table 2**

Correlations among Depression, Internalized Stigma, Social Support, Substance Use, and Health and Demographic Characteristics for HIV Positive Men and Women, Cape Town, South Africa.

	Depression	Internalized Stigma	Social Support	Alcohol Use	Drug Use	Years HIV+	HIV Symptoms	Taking ARVs	Age	Race
Internalized Stigma	.27**									
Social Support	-.11**	-.29**								
Alcohol Use	.11**	.10**	-.03							
Drug Use	.12**	.16**	-.06	.29**						
Years HIV+	-.07	-.09*	-.01	-.05	-.10**					
HIV Symptoms	.32**	.05	.03	.13**	.06	.02				
Taking ARVs	-.07	-.05	-.06	-.15**	-.22**	.18**	.11**			
Age	-.02	-.07	.03	-.13**	-.20**	.12**	.10**	.19**		
Race	.20**	.09	-.07	.33**	.32**	-.11**	.16**	-.16**	-.11**	
Gender	.10**	-.13**	.11**	-.24**	-.22**	-.02	.07*	.02	.05	-.04
Mean (%)	12.3	3.0	7.6	52%	22%	2.7	6.5	51%	72% <sup>a</sup>	68% <sup>b</sup>
SD	6.5	2.1	2.7			2.4	3.7			

Note Means and standard deviations provided for interval measures

<sup>a</sup> under age 35

<sup>b</sup> Black

\* p < .05

\*\* p < .01

**Table 3**

Unstandardized (B) and Standardized Regression Coefficients ( $\beta$ ) and  $R^2$  Statistics for Variables Entered into the Hierarchical Regression Predicting Cognitive-Affective Depression Scores.

Variable	B	se	$\beta$	t	$R^2$	$R^2$	F
<u>Block 1</u>					.046	.046	18.3**
Gender	1.79	0.38	.13	4.6**			
Age	-.11	.18	-.01	0.3			
Race	.63	.17	.11	3.5**			
<u>Block 2</u>					.133	.087	35.9**
Years HIV+	-.11	.08	-.03	1.3			
HIV symptoms	.48	.05	.28	9.9**			
Taking ARVs	-.07	.15	-.01	0.5			
<u>Block 3</u>					.152	.019	8.1**
Social Support	-.13	.07	-.06	1.9			
Alcohol	.21	.23	.03	0.9			
Drugs	.32	.19	.05	1.6			
<u>Block 4</u>					.200	.048	64.7**
Internalized Stigma	.74	.09	.23	8.0**			

Note

\* $p < .05$

\*\*  
 $p < .01$