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Utility of a Partner Communication Scale and a Personal Meaning Scale in Newly Diagnosed HIV-Infected Persons

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Abstract

No studies to our knowledge have examined the Lepore Social Constraint Scale or Fife Constructed Meaning Scale in recently diagnosed HIV-infected persons. Twenty-four participants in a prospective observational cohort completed the social constraint measure, and 47 completed the constructed meaning scale at either 3 or 9 months after diagnosis. Participants completed a 4-week visual analogue scale (VAS) to assess adherence to antiretroviral therapy (ART) and validated depression and self-efficacy scales. Spearman correlation coefficients compared measures. In cross-sectional analyses, participants with higher social constraint scores had lower constructed meaning and adherence. Higher social constraint correlated negatively with self-efficacy and positively with depression. Higher constructed meaning scores did not correlate with adherence, but correlated positively with self-efficacy and negatively with depression. The quality of HIV-infected individuals' discussions of HIV with their partners and positive constructed meaning were associated with better mental health and could be targets for improving medication adherence.

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Keywords

AIDS; adherence; antiretroviral therapy; clinical trial; HIV; social support

HIV is a life-threatening and unpredictable disease that requires individuals to make psychological adjustments (Farber, Mirsalimi, Williams, & McDaniel, 2003). Traumatic events, such as receiving a diagnosis of a life-threatening or chronic medical condition, can take a mental toll (Brown, Levy, Rosberger, & Edgar, 2003; van der Veek, Kraaij, Van, Garnefski, & Joeke, 2007).

Several scholars have examined the process of coping with trauma. Using a theoretical model of stress and coping, Lazarus (2006) described appraisal as a process whereby one evaluates the personal significance of an event and the options for coping. Emotional-focused coping is one method of coping (Folkman & Greer, 2000), and communicating concerns about an illness to a spouse or partner can be a form of emotional-focused coping. The success of emotional-focused coping can be affected by how that spouse or partner reacts to such communication. For example, if a partner is supportive and compassionate, this can validate a person's feelings about his or her illness and help the person effectively cope with his or her disease. On the other hand, if the partner is not receptive to communication about the person's illness, the person experiences what is called social constraint (Lepore & Helgeson, 1998).

Lepore and Helgeson (1998) developed a Social Constraint Scale to measure the quality of communication that a person has with his or her spouse or partner about an illness. The scale was derived from items in the Cancer Rehabilitation Evaluation System (CARES) instrument (Schag, Ganz, & Heinrich, 1991). The reliability of the Lepore scale in 178 persons with prostate cancer was high (Cronbach's $\alpha = .79$; Lepore & Helgeson, 1998). Eight items of the Lepore scale were also assessed in 339 females with rheumatoid arthritis (Cronbach's $\alpha = .69$), and social constraint was associated with psychological distress (Danoff-Burg, Revenson, & Trudeau, 2004).

Constructed meaning is another factor that can affect coping behavior and may occur as people try to determine the impact of major events on their lives (Fife, 2005). Constructed meaning is a component of personal identity and a primary factor in a person's response to a life-threatening illness. The meaning that a person gives to a major event can in turn influence behavior and, hence, the ability to cope with the illness (Fife, 2005). Fife, Scott, Fineberg, and Zwickl (2008) designed the constructed meaning scale to assess the impact an illness has on a person's identity, on interpersonal relationships, and on his or her sense of what the future holds. This instrument was developed from interviews with persons undergoing cancer treatment. The scale was found to be internally consistent with a Cronbach's α of .81 (Fife, 1995). Scale scores were significantly associated with positive emotional responses ($p < .01$; Fife, 1995). The constructed meaning scale has also been found to be internally reliable in persons with heart failure (Cronbach's $\alpha = .72$) and was positively associated with mental health (Evangelista, Kagawa-Singer, & Dracup, 2001). Fife and colleagues (2008) found the constructed meaning scale to be internally reliable in 130 persons with HIV at various stages of the disease process (Cronbach's $\alpha = .89$).

The diagnosis of HIV, similar to a diagnosis of other serious chronic diseases or cancer, can be a traumatic event in a person's life. Many studies have examined coping strategies used by HIV-infected persons to manage their disease. A study of 92 minority HIV-infected women found that positive coping was associated with lower levels of perceived stress

(Lopez, Antoni, Fekete, & Penedo, 2012). In rural women with HIV, problem-focused coping as opposed to emotional-focused coping was associated with higher quality of life (Vyavaharkar, Moneyham, Murdaugh, & Tavakoli, 2012). Maladaptive coping in 758 HIV-infected persons in Canada was associated with lower mental health-related quality of life (Gibson et al., 2011). Successful coping with HIV infection, therefore, appears to be related to quality of life, and interventions focused on helping HIV-infected persons use adaptive coping could enhance the quality of their lives.

Low social constraint (i.e., the ability to communicate with a significant other and derive emotional support) and/or high constructed meaning (i.e., the ability to see a positive meaning for an illness) may enhance HIV-infected persons' abilities to cope with their disease. That ability to cope with illness may, in turn, impact medication adherence (Finocchiaro-Kessler et al., 2011; Lopez, Jones, Villar-Loubet, Arheart, & Weiss, 2010). To our knowledge, the Lepore Social Constraint Measure and the Fife Constructed Meaning Scale have not been assessed in recently diagnosed, antiretroviral therapy (ART)-naïve HIV-infected persons. Neither measure has been assessed in relation to individuals' reports of adherence to ART. We felt the Lepore Social Constraint Measure and the Fife Constructed Meaning Scale might provide a fuller understanding of psychosocial factors affecting adherence. Therefore, we conducted a pilot study of the Lepore and Fife measures in the context of a larger prospective cohort study of persons newly diagnosed with HIV infection. The primary aim of the study reported here was to assess the reliability of the measures; secondary aims were to assess the measures' construct validity by assessing their relationships with depression, general self-efficacy, and ART adherence. We expected that higher social constraint and lower constructed meaning scores would be associated with more depressive symptoms, lower self-efficacy, and lower adherence to ART.

Methods

Study Design, Participants, and Setting

We conducted a prospective observational cohort study in Houston, Texas, of persons newly diagnosed with HIV infection. Enrollment into the Attitudes and Beliefs and the Steps of HIV Care study (the Steps Study) began January 2006, and the last patient follow-up was in March 2009. Those ages 18 and older were eligible for the study if they had been diagnosed with HIV within the previous 3 months and had not yet completed an outpatient visit with an HIV primary care clinician. Recruitment took place at the Ben Taub and Lyndon Baines Johnson General Hospitals, the Michael E. DeBakey Veterans Administration Hospital, and the outpatient clinics of the Harris County Hospital District, including the Thomas Street Health Center, an HIV clinic. Individuals from City of Houston clinics for sexually transmitted infections were referred by City Disease Intervention Specialists. Individuals were excluded from the study if they were unable to complete the interviewer-administered surveys in English or Spanish. All study procedures for the Steps Study were approved by the Institutional Review Board of Baylor College of Medicine and Affiliated Institutions. All participants provided written informed consent.

Surveys

Participants completed an interviewer-administered survey at baseline and every 3 months for up to 18 months. The survey was generally completed outside of the clinical setting. The 3-month and 9-month surveys included the Center for Epidemiologic Studies Depression (CES-D) scale to measure depression, and the baseline survey included a validated five-item general self-efficacy scale (Huba et al., 2000; Weissman, Sholomskas, Pottenger, Prusoff, & Locke, 1977). Every 3 months for up to 18 months, participants in the observational study who started ART were asked to list their medications and complete a 4-week visual

analogue scale (VAS) to assess their adherence to antiretroviral medications (Giordano, Guzman, Clark, Charlebois, & Bangsberg, 2004). After May 11, 2007 (about halfway through the Steps enrollment period), participants completing the 3-month and 9-month surveys were administered the Lepore Social Constraint Measure and the Fife Constructed Meaning Scale.

The Lepore Social Constraint Measure is a 15-item measure that assesses a spouse/partner's response to the participant over the previous month. This scale was completed only by participants who reported being married or in a marriage-like relationship. Items were rated on a 4-point Likert scale from 1 (*never*) to 4 (*often*). High scores (up to 60) indicated high social constraint whereas low scores (down to 15) indicated low social constraint (Lepore & Helgeson, 1998).

The Fife Constructed Meaning Scale is a self-report measure that includes statements about the meaning of HIV for participants, the illness's impact on interpersonal relationships, and what the participant thinks the future holds. The scale includes eight statements with the responses on a 4-point Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*). High scores (up to 32) indicated positive meaning whereas low scores (down to 8) indicated a negative sense of the meaning of illness (Fife, 1995).

Data Analysis

We assessed the reliability of the Lepore and Fife measures by calculating Cronbach's alpha. We then compared participants' scores on the Lepore Social Constraint Measure and Fife Constructed Meaning Scale with depression scores using Spearman correlation coefficients (r_s) and using the depression score from the same time point as the Lepore and Fife scores. Spearman correlation coefficients were also calculated to compare the Lepore and Fife scores with baseline self-efficacy scores. We then calculated the Spearman correlation coefficients between Lepore and Fife scores and VAS adherence scores, using the VAS score from the same time point as the Lepore and Fife scores. We used the 9-month social constraint and constructed meaning scores unless a participant only completed the measures at 3 months.

Results

Participant Characteristics

One-hundred eighty-four participants were included in the final Steps cohort (Bhatia, Hartman, Kallen, Graham, & Giordano, 2011). A total of 90 people had either a 3-month or a 9-month Steps survey after May 11, 2007, the date when the Lepore and Fife instruments were added to the protocol. Twenty-six of the 90 participants said they were married or living with someone, and 24 of these participants completed the Lepore Social Constraint Measure. The remaining two participants were inadvertently not given the Lepore measure.

Forty-seven participants completed the Fife Constructed Meaning Scale at either 3 months or 9 months. Early in survey implementation, and inadvertently, only participants who confirmed that they had a spouse/partner were given the Fife measure to complete. The 43 participants who did not complete the Fife measure were more likely to be male (56% vs. 44%, $p = .04$), Hispanic (71% vs. 29%, $p < .01$), and Spanish-speaking (76% vs. 24%, $p < .01$) compared to those participants who completed the measure, but no differences were found in age, education level, insurance level, HIV risk factor, baseline CD4+ T-cell count, or baseline log₁₀ HIV viral load.

The majority of the participants who completed either the Lepore or Fife measure were male, between ages 30 and 50 years, Black, had no high school diploma, and had low

incomes (Table 1). Twelve participants (25%) had a baseline CD4+ T-cell count of < 200 cells/mm³, and the median baseline HIV log₁₀ viral load (25th, 75th percentile) was 5.2 log₁₀ copies/mL (4.7, 5.7). Detailed characteristics of the participants in the present analyses are shown in Table 1.

Psychometric Analysis

Participants had a mean social constraint scale score of 27.2 (SD = 10.2) and a median (25th, 75th percentile) score of 23.0 (21.5, 32.5). The mean and median scores for each item in the scale are shown in Table 2. Cronbach's alpha for the complete Lepore Social Constraint Measure was 0.88.

Participants had a mean Fife Constructed Meaning Scale score of 21.6 (SD = 3.4) and a median (25th, 75th percentile) score of 22.0 (19.0, 23.0). The mean and median scores for each item in the scale are shown in Table 3. The Cronbach's alpha for the complete Fife Constructed Meaning Scale was 0.72.

Participants had a mean depression score of 15.8 (SD = 15.1) and a median (25th, 75th percentile) score of 21.0 (11.5, 34.0). The mean self-efficacy score was 24.2 (SD = 6.0) and the median (25th, 75th percentile) score was 25.0 (20.5, 29.0). The Cronbach's alpha for the CES-D was .93 and for the self-efficacy measure was .70. The mean self-reported adherence to ART was 93.5% (SD = 10.5) and the median (25th, 75th percentile) was 100.0 (90.0, 100.0).

Association of Social Constraint and Constructed Meaning with Other Variables

As shown in Table 4, participants who scored higher on the Lepore Social Constraint Measure scored lower on the Fife Constructed Meaning Scale ($r_s = -.42$, $p < 0.05$), higher on the depression scale ($r_s = .62$, $p < .01$), and lower on the self-efficacy scale ($r_s = -.63$, $p < .01$). Participants who endorsed higher social constraint had lower self-reported adherence to ART ($r_s = -.64$, $p < .01$). Participants who scored lower on the Fife Constructed Meaning Scale had higher depression scores ($r_s = -.42$, $p < .01$) and lower self-efficacy scores ($r_s = -.38$, $p < .01$). These participants did not have lower adherence ($r_s = .12$, $p = .57$). There were no significant relationships between depression and adherence ($r_s = -.22$, $p = .26$) and self-efficacy and adherence ($r_s = .13$, $p = .50$).

Discussion

In this pilot study of persons recently diagnosed with HIV infection, the Lepore Social Constraint Measure and the Fife Constructed Meaning Scale had good internal reliability. Cronbach's alpha for the complete Lepore Social Constraint measure was .88 and for the complete Fife Constructed Meaning Scale was .72. These results were comparable to the Cronbach's alphas found in the first populations in which these measures were used: .79 for the Lepore measure and .81 for the Fife scale (Fife, 1995; Lepore & Helgeson, 1998). Further, we found evidence of construct validity for the scales, since they generally correlated as expected with other measured traits. For example, the social constraint felt by an individual in discussing an illness with his or her spouse/partner was associated with lower constructed meaning. Participants who had higher social constraint scale scores and lower constructed meaning scale scores also had higher depression scores. In addition, higher social constraint scale scores and lower constructed meaning scale scores were associated with lower self-efficacy. Finally, participants who had higher social constraint scale scores had lower self-reported adherence to ART, although constructed meaning scale scores were not associated with adherence. These results provided evidence that the social

constraint and constructed meaning constructs and scales may be useful in persons recently diagnosed with HIV infection.

Depression can be high in persons newly diagnosed with HIV infection (Bhatia et al., 2011) and has been associated with lower adherence to ART in other studies (Diiorio et al., 2009; Hartzell, Janke, & Weintrob, 2008; Kacanek et al., 2010). We found that both social constraint and constructed meaning were associated with depression. Braitman and colleagues (2008) found that higher social constraint in persons with diabetes was associated with negative mood states and lower adherence to diet and exercise recommendations. A study of 100 women with breast cancer found that social constraint was associated with a negative affect and less frequent breast self-examinations, a form of avoidant coping (Lepore, 2001). Lepore and Helgeson (1998) found in their study of bereaved mothers that social constraint in talking about the death of a child led to more depressive symptoms. These findings suggest that constraint in talking to a spouse or partner may hinder one's ability to cognitively process illness and cope, resulting in depressive symptoms.

Fife and colleagues (2008) postulated that a patient's meaning of illness might be a clinical marker for his or her psychosocial vulnerability. Consistent with that hypothesis, we found that lower constructed meaning was associated with higher depression scores. Farber and colleagues (2003) discovered that positive meaning in persons with symptomatic HIV was associated with a lower level of depressed mood. Therefore, maximizing the positive meaning of living with HIV may improve an individual's psychological health.

In our study population, social constraint and lower constructed meaning scale scores were associated with lower self-efficacy. Low self-efficacy has been shown to correlate with low adherence to ART in other studies (Ammassari et al., 2002). Increasing coping self-efficacy with coping effectiveness training led to decreases in psychological distress among a group of homosexual HIV-infected men in the era preceding highly effective ART (Chesney, Chambers, Taylor, Johnson, & Folkman, 2003).

As in our study, Power and colleagues (2003) found a positive relationship between support from the partner of an HIV-infected person and adherence to ART. Remien and colleagues (2005) demonstrated that a couple-focused adherence intervention resulted in higher patient adherence in the short term, but the effect was attenuated over time. Fife and colleagues (2008) demonstrated that an intervention that encouraged positive communication between an HIV-infected patient and his or her partner resulted in better patient adaptive coping, although they did not assess medication adherence. Our results and those of other studies suggest that adherence interventions that facilitate couple communication and encourage greater empathy and caregiving behavior by an HIV-infected patient's partner may reduce social constraint and result in improved clinical outcomes.

Our findings on the associations of social constraint and constructed meaning with depression, self-efficacy, and adherence, in the context of what is known about the influence of those factors on adherence, lead to the hypothesis that intervening to decrease social constraint and increase constructed meaning might increase adherence to ART. Future studies could test this hypothesis.

This pilot study had several limitations. The sample size was small, which may explain why we did not find correlations between the constructed meaning scale, depression, and self-efficacy with self-reported adherence to ART. The sample size precluded us from being able to perform multivariate regression analysis to further investigate the potential interplay between social constraint, constructed meaning, depression, self-efficacy, and adherence. We were not able to assess inter-rater reliability. The small sample size also did not allow us to study the scales' performance in sub-populations. Our study did not assess potential

changes in social constraint scores and constructed meaning scores over time. As a predominately cross-sectional analysis, causality cannot be inferred. Future work with larger sample sizes and ethnically diverse participants could explore relationships between changes in these measures over time and changes in health status indicators and other psychosocial factors.

To our knowledge, this is the first study to use the Lepore Social Constraint Measure and Fife Constructed Meaning Scales in HIV-infected persons who had been recently diagnosed and were ART naïve. Our results suggest that these measures may be useful in this population. Interventions to maximize spousal or partner support and encourage positive communication in couples may result in better mental health and adherence to ART. Enabling individuals to develop a positive meaning for their disease may also improve mental health and aid in coping with the disease. Our findings, if confirmed in subsequent studies, could inform interventions to improve adherence to ART, self-efficacy, and, ultimately, clinical outcomes.

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References

- Ammassari A, Trotta MP, Murri R, Castelli F, Narciso P, Noto P, Antinori A. Correlates and predictors of adherence to highly active antiretroviral therapy: Overview of published literature. *Journal of Acquired Immune Deficiency Syndromes*. 2002; 31(Suppl 3):S123–S127.10.1097/00126334-200212153-00007 [PubMed: 12562034]
- Bhatia R, Hartman C, Kallen MA, Graham J, Giordano TP. Persons newly diagnosed with HIV infection are at high risk for depression and poor linkage to care: Results from the Steps Study. *AIDS Behavior*. 2011; 15(6):1161–1170.10.1007/s10461-010-9778-9
- Braitman AL, Derlega VJ, Henson JM, Robinett I, Saadeh GM, Janda LJ, Miranda J. Social constraints in talking about diabetes to significant others and diabetes self-care: A social cognitive processing perspective. *Journal of Social and Clinical Psychology*. 2008; 27:949–969.10.1521/jscp.2008.27.9.949
- Brown KW, Levy AR, Rosberger Z, Edgar L. Psychological distress and cancer survival: A follow-up 10 years after diagnosis. *Psychosomatic Medicine*. 2003; 65:636–643.10.1097/01.PSY.0000077503.96903.A6 [PubMed: 12883115]
- Chesney MA, Chambers DB, Taylor JM, Johnson LM, Folkman S. Coping effectiveness training for men living with HIV: Results from a randomized clinical trial testing a group-based intervention. *Psychosomatic Medicine*. 2003; 65:1038–1046.10.1097/01.PSY.0000097344.78697.ED [PubMed: 14645783]
- Danoff-Burg S, Revenson T, Trudeau KPS. Unmitigated communion, social constraints, and psychological distress among women with rheumatoid arthritis. *Journal of Personality*. 2004; 72(1): 29–46.10.1111/j.00223506.2004.00255.x [PubMed: 14686883]
- Diiorio C, McCarty F, Depadilla L, Resnicow K, Holstad MM, Yeager K, Lundberg B. Adherence to antiretroviral medication regimens: A test of a psychosocial model. *AIDS Behavior*. 2009; 13:10–22.10.1111/j.14422018.2010.00521.x
- Evangelista LS, Kagawa-Singer M, Dracup K. Gender differences in health perceptions and meaning in persons living with heart failure. *Heart Lung*. 2001; 30:167–176.10.1067/mhl.2001.114893 [PubMed: 11343002]

- Farber EW, Mirsalimi H, Williams KA, McDaniel JS. Meaning of illness and psychological adjustment to HIV/AIDS. *Psychosomatics*. 2003; 44:485–491.10.1176/appi.psy.44.6.485 [PubMed: 14597683]
- Fife BL. The measurement of meaning in illness. *Social Science and Medicine*. 1995; 40:1021–1028.10.1016/0277-9536(94)00174-R [PubMed: 7597456]
- Fife BL. The role of constructed meaning in adaptation to the onset of life-threatening illness. *Social Science and Medicine*. 2005; 61:2132–2143.10.1016/j.socscimed.2005.04.026 [PubMed: 16026913]
- Fife BL, Scott LL, Fineberg NS, Zwickl BE. Promoting adaptive coping by persons with HIV disease: Evaluation of a patient/partner intervention model. *Journal of the Association of Nurses in AIDS Care*. 2008; 19:75–84.10.1016/j.jana.2007.11.002 [PubMed: 18191771]
- Finocchiaro-Kessler S, Catley D, Berkley-Patton J, Gerkovich M, Williams K, Banderas J, Goggin K. Baseline predictors of ninety percent or higher antiretroviral therapy adherence in a diverse urban sample: The role of patient autonomy and fatalistic religious beliefs. *AIDS Patient Care and STDs*. 2011; 25:103–111.10.1089/apc.2010.0319 [PubMed: 21235403]
- Folkman S, Greer S. Promoting psychological well-being in the face of serious illness: When theory, research and practice inform each other. *Psychooncology*. 2000; 9:11–19.10.1002/(SICI)10991611(200001/02)9:1<11::AID-PON424>3.0.CO;2-Z [PubMed: 10668055]
- Gibson K, Rueda S, Rourke SB, Bekele T, Gardner S, Fenta H, Hart TA. Mastery and coping moderate the negative effect of acute and chronic stressors on mental health-related quality of life in HIV. *AIDS Patient Care and STDs*. 2011; 25:371–381.10.1089/apc.2010.0165 [PubMed: 21492004]
- Giordano TP, Guzman D, Clark R, Charlebois ED, Bangsberg DR. Measuring adherence to antiretroviral therapy in a diverse population using a visual analogue scale. *HIV Clinical Trials*. 2004; 5:74–79.10.1310/JFXH-G3X2-EYM6-D6UG [PubMed: 15116282]
- Hartzell JD, Janke IE, Weintrob AC. Impact of depression on HIV outcomes in the HAART era. *Journal of Antimicrobial Chemotherapy*. 2008; 62:246–255.10.1093/jac/dkn193 [PubMed: 18456650]
- Huba GJ, Melchior LA, Panter AT, Brown VB, Cherin DA, Gallagher T, Steinberg J. Typology of quality of life experiences among persons living with HIV. *Home Health Care Services Quarterly*. 2000; 18:23–41.10.1300/J027v18n03_02 [PubMed: 11211319]
- Kacanek D, Jacobson DL, Spiegelman D, Wanke C, Isaac R, Wilson IB. Incident depression symptoms are associated with poorer HAART adherence: A longitudinal analysis from the Nutrition for Healthy Living Study. *Journal of Acquired Immune Deficiency Syndromes*. 2010; 53:266–272.10.1097/QAI.0b013e3181b720e7 [PubMed: 20104122]
- Lazarus RS. Emotions and interpersonal relationships: Toward a person-centered conceptualization of emotions and coping. *Journal of Personality*. 2006; 74:9–46. [PubMed: 16451225]
- Lepore SJ. A social-cognitive processing model of emotional adjustment to cancer. In: Baum, A.; Andersen, BL., editors. *Psychosocial interventions for cancer*. Washington, D.C: American Psychological Association; 2001. p. 99–116.
- Lepore SJ, Helgeson VS. Social constraints, intrusive thoughts, and mental health after prostate cancer. *Journal of Social and Clinical Psychology*. 1998; 17(1):89–106.10.1521/jscp.1998.17.1.89
- Lopez CR, Antoni MH, Fekete EM, Penedo FJ. Ethnic identity and perceived stress in HIV+ minority women: The role of coping self-efficacy and social support. *International Journal of Behavioral Medicine*. 2012; 19:23–28.10.1007/s12529-010-9121-x [PubMed: 20890774]
- Lopez EJ, Jones DL, Villar-Loubet OM, Arheart KL, Weiss SM. Violence, coping, and consistent medication adherence in HIV-positive couples. *AIDS Education and Prevention*. 2010; 22:61–68.10.1521/aeap.2010.22.1.61 [PubMed: 20166788]
- Power R, Koopman C, Volk J, Israelski DM, Stone L, Chesney MA, Spiegel D. Social support, substance use, and denial in relationship to antiretroviral treatment adherence among HIV-infected persons. *AIDS Patient Care and STDs*. 2003; 17:245–252.10.1089/108729103321655890 [PubMed: 12816618]
- Remien RH, Stirratt MJ, Dolezal C, Dognin JS, Wagner GJ, Carballo-Dieguez A, Jung TM. Couple-focused support to improve HIV medication adherence: A randomized controlled trial. *AIDS*. 2005; 19:807–814.10.1097/01.aids.0000168975.44219.45 [PubMed: 15867495]

- Schag CA, Ganz PA, Heinrich RL. Cancer rehabilitation evaluation system--short form (CARES-SF). A cancer specific rehabilitation and quality of life instrument. *Cancer*. 1991; 68:1406–1413.10.1002/1097-0142(19910915)68:6<1406::AID-CNCR2820680638>3.0.CO;2-2 [PubMed: 1873793]
- van der Veek S, Kraaij V, Van KW, Garnefski N, Joeke K. Goal disturbance, cognitive coping and psychological distress in HIV-infected persons. *Journal of Health Psychology*. 2007; 12:225–230.10.1177/1359105307074249 [PubMed: 17284487]
- Vyavaharkar M, Moneyham L, Murdaugh C, Tavakoli A. Factors associated with quality of life among rural women with HIV disease. *AIDS Behavior*. 2012; 16:295–303.10.1007/s10461-011-9917-y
- Weissman MM, Sholomskas D, Pottenger M, Prusoff BA, Locke BZ. Assessing depressive symptoms in five psychiatric populations: A validation study. *American Journal of Epidemiology*. 1977; 106:203–214. [PubMed: 900119]

Clinical Considerations

- Maximizing the support HIV-infected persons receive from a spouse or partner and encouraging positive communication in couples may result in better mental health and adherence to ART.
- Enabling patients to develop a positive meaning for their disease may also improve mental health and aid in coping with the disease.
- Our findings could inform interventions to improve adherence to ART, self-efficacy, and, ultimately, clinical outcomes.

Table 1

Characteristics of 48 Participants Enrolled in the Steps Study in Houston, TX, who Completed Either the Lepore Social Constraint Measure or Fife Constructed Meaning Scale

Characteristic	N (%)
Gender	
Male	28 (58%)
Female	20 (42%)
Age	
30 years of age	15 (31%)
31–50 years of age	24 (50%)
> 50 years of age	9 (19%)
Race/Ethnicity	
Black, non-Hispanic	28 (58%)
White, non-Hispanic	8 (17%)
Hispanic	12 (25%)
Degree Attained	
No degree-never finished high school	20 (42%)
High school diploma or GED	14 (29%)
Some college	14 (29%)
Yearly Income	
< \$25,000	40 (83%)
≥ \$25,000	8 (17%)
Insurance	
Private, Medicare, and/or Medicaid	5 (10%)
Uninsured	43 (90%)
HIV Risk Factors	
Any IDU	6 (13%)
MSM	15 (31%)
Heterosexual or other	27 (56%)
Marital Status	
Married or in a marriage-like relationship	26 (54%)
Living alone	30 (63%)
Median HIV Viral Load before ART log ₁₀ copies/mL (25 th , 75 th percentile)	5.2 (4.7–5.7)
CD4+ T-Cell Count	
< 200 cells/mm ³	20 (43%)
≥ 200 cells/mm ³	27 (57%)

Note. GED = general equivalency diploma; IDU = intravenous drug use; MSM = men who have sex with men.

Table 2

Mean and Median Responses for Each Item of the Lepore Social Constraint Measure in 24 Participants in the Steps Study

Items	Mean (SD) ^a	Median (25 th , 75 th percentile) ^a
(1) How often in the past month has your spouse/partner changed the subject when you tried to discuss your HIV?	1.6 (1.0)	1.0 (1.0, 2.5)
(2) How often did it seem that your spouse did not understand your situation?	1.8 (.98)	1.0 (1.0, 3.0)
(3) How often did your spouse/partner avoid you?	1.7 (1.1)	1.0 (1.0, 2.5)
(4) How often did your spouse/partner minimize your problems?	1.7 (1.1)	1.0 (1.0, 2.5)
(5) How often did your spouse/partner seem to be hiding his feelings?	2.2 (1.3)	1.5 (1.0, 3.5)
(6) How often did your spouse/partner act uncomfortable when you talked about your illness?	1.5 (0.9)	1.0 (1.0, 1.0)
(7) How often in the past month has your spouse/partner trivialized your problems?	1.8 (1.2)	1.0 (1.0, 3.0)
(8) How often did your spouse/partner complain about his/her own problems when you wanted to share yours?	1.8 (1.2)	1.0 (1.0, 2.5)
(9) How often did your spouse/partner act cheerful around you to hide his/her true feelings and concerns?	2.0 (1.1)	1.5 (1.0, 3.0)
(10) How often did your spouse/partner tell you not to worry so much about your health?	2.6 (1.3)	3.0 (1.0, 4.0)
(11) How often did your spouse/partner tell you to try not to think about the HIV?	2.3 (1.3)	2.0 (1.0, 3.5)
(12) How often did you get the idea that your spouse/partner did not want to hear about your HIV?	1.4 (.9)	1.0 (1.0, 1.0)
(13) How often did your spouse/partner make you feel you had to keep your feelings to yourself, because they made him feel uncomfortable?	1.5 (0.9)	1.0 (1.0, 1.50)
(14) How often did your spouse/partner make you feel you had to keep your feelings to yourself, because they made him feel upset?	1.6 (1.0)	1.0 (1.0, 2.0)
(15) How often did your spouse/partner let you down by not showing you as much love and concern as you would have liked?	1.8 (1.0)	1.0 (1.0, 3.0)
Total	27.2 (10.2)	23.0 (21.5, 32.5)

^aThe higher the score, the higher the social constraint; possible scores range from 1 to 4

Table 3

Mean and Median Responses for Each Item of the Fife Constructed Meaning Scale in 47 Participants in the Steps Study

Items	Mean (SD) ^a	Median (25 th , 75 th percentile) ^a
(1) I feel HIV is something I will never recover from.	2.7 (.8)	3.0 (2.0, 3.0)
(2) I feel HIV is serious, but I will be able to return to life as it was before my illness.	3.0 (.7)	3.0 (3.0, 3.0)
(3) I feel HIV has changed my life permanently so it will never be as good again.	2.6 (.8)	3.0 (2.0, 3.0)
(4) I feel I have made a complete recovery from my illness.	2.3 (.5)	2.0 (2.0, 3.0)
(5) I feel that I am the same person as I was before my illness.	2.9 (.7)	3.0 (2.0, 3.0)
(6) I feel that my relationships with others have not been negatively affected by my illness.	2.6 (.7)	3.0 (2.0, 3.0)
(7) I feel that my experiences with HIV have made me a better person.	2.9 (.7)	3.0 (3.0, 3.0)
(8) I feel that having HIV has interfered with my achievement of the most important goals I have set for myself.	2.7 (.8)	3.0 (2.0, 3.0)
Total	21.6 (3.4)	22.0 (19.0, 23.0)

^aThe higher the score, the higher the constructed meaning; possible scores range from 1 to 4

Spearman Correlations (r_s) of Lepore Social Constraint Measure, Fife Constructed Meaning Scale, Depression, Self-Efficacy, and Adherence

Table 4

	Social Constraint	Constructed Meaning	Depression	Self-Efficacy	Adherence
Social Constraint	1.00				
Constructed Meaning	−0.42 $p < .05$ $N = 23$	1.00			
Depression	0.62 $p < .01$ $N = 24$	−0.42 $p < .01$ $N = 47$	1.00		
Self-Efficacy	−0.63 $p < .01$ $N = 24$	0.38 $p < .01$ $N = 47$	−0.53 $p < .01$ $N = 48$	1.00	
Adherence	−0.64 $p = .01$ $N = 14$	0.12 $p = .57$ $N = 26$	−0.22 $p = .26$ $N = 27$	0.13 $p = .50$ $N = 27$	1.00