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Factors Influencing Engagement into Interventions for Adaptation to HIV in African American Women

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Abstract

Factors that may influence engagement into a family—ecological psychosocial intervention and a nondirective psychosocial intervention designed for HIV+ asymptomatic women were examined. Participants were 136 HIV+ African American women. Participant characteristics and therapeutic alliance were examined as possible predictors of engagement. Both participant characteristics and therapeutic alliance had some power in predicting engagement. However, fewer participant characteristics than expected were statistically significant. Statistically significant results indicate that women who had more daily hassles, more distress, more social support, and more disagreements with their spouse were more likely to engage in the intervention. The strongest predictor of engagement was therapeutic alliance, indicating the importance of the alliance between the HIV+ participant and the interventionist. The importance of these findings is discussed.

Keywords

Engagement; therapeutic alliance; psychosocial interventions; HIV/AIDS; African Americans

INTRODUCTION

Psychosocial interventions have been shown to be efficacious in reducing HIV risk behaviors in HIV- individuals (National Institute of Mental Health Multisite HIV Prevention Trial Group, 1998) as well as improving the quality of life for HIV+ individuals (Antoni, 1997; Antoni *et al.*, 1994). In HIV+ populations, these interventions have increased social support and the use of active coping strategies, while decreasing distress levels and the use of avoidant and denial coping strategies (Antoni *et al.*, 1994; Kelly *et al.*, 1993). In addition, some of these psychosocial interventions have been shown to be efficacious in slowing down the progression of HIV disease (Antoni, 1997).

Despite the positive impact of psychosocial interventions, participation and attendance in these interventions are low. Studies have shown that participation and attendance rates in HIV psychosocial interventions, in particular, remain very low. For example, in a small group intervention to reduce HIV infection and risky sexual behavior, average participation at unpaid group sessions was less than 10% (Greenberg *et al.*, 1998). In another study designed to reduce risk-taking behavior among HIV+ African American women, less than two-thirds of those assigned to the treatment condition participated in group sessions (Carmona and Chin, 2001). Other programs measuring drug taking and HIV risk-taking behaviors have suggested that low attendance rates have been a problem in the successful implementation of the study (Teesson and Gallagher, 1999). Research in psychosocial interventions has documented the importance

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of client engagement in obtaining positive treatment outcomes (Ball and Ross, 1991; Simpson *et al.*, 1995).

Though some research exists on engagement in prevention and adaptation studies, and with families of troubled youth, there is a dearth of research on engagement into interventions designed for HIV+ individuals. A search of Medline and PsychLit from 1980 to the present yielded only two clinical articles dealing with engagement of HIV+ individuals into group therapy (Viney *et al.*, 1991) and case management services (Lopez and Getzel, 1984). Because there is a lack of literature examining the characteristics that influence engagement into HIV interventions, the literature review in this paper will examine factors that have predicted engagement into drug prevention and treatment interventions. Factors that have influenced engagement into substance abuse prevention and treatment interventions include client characteristics (Fiorentine *et al.*, 1998; Perrino *et al.*, 2001; Spoth *et al.*, 1999), therapeutic alliance, or the relationship between the client and interventionist (DeLeon, 1995; Fiorentine *et al.*, 1998; Simpson and Joe, 1993), and clinician behavior (Santisteban and Szapocznik, 1994; Santisteban *et al.*, 1996; Szapocznik *et al.*, 1988, 1989). This study employs a sample of HIV+ African American women to examine participant engagement, defined as having attended at least two sessions, into a family—ecological intervention and a nondirective intervention that controls for the common factors in psychotherapy. The extent to which participant characteristics and therapeutic alliance predict engagement into these interventions is examined.

Predictors of Engagement

Characteristics of the Woman—The perceived need for the intervention and the participant's barriers to participation have been found to be important predictors of engagement into prevention interventions, substance abuse interventions, and outpatient drug treatment programs (Perrino *et al.*, 2001; Fiorentine *et al.*, 1998; Spoth *et al.*, 1999). Participants who perceive greater need for the intervention and who have fewer barriers to contend with are often more likely to engage in these types of interventions (Fontana *et al.*, 1988; Hahn, 1995; Sutton and Dixon, 1986).

Factors that may be related to the participant's perceived need for the intervention appear to be important predictors of engagement (Perrino *et al.*, 2001; Spoth *et al.*, 1999). Perceived stress, amount of social support, family functioning, perceived control, and psychological distress are participant characteristics that are associated with the client's perceived need of the intervention. Participants who experience higher levels of perceived stress and distress, poorer family functioning, less perceived control, and less social support may perceive a greater need for an intervention and thus be more likely to seek and participate in psychotherapy, substance abuse, or prevention interventions (Moos *et al.*, 1990; Perrino *et al.*, 2001).

Research suggests that the perceived need for the intervention alone may not be sufficient to predict engagement (Spoth *et al.*, 1999). One factor that inhibits the client's participation is the amount of barriers they have to overcome. Low income, poor educational attainment, time constraints, and caregiver responsibilities are all factors that have been found to restrict engagement into different treatment modalities (Fontana *et al.*, 1988). Income and educational attainment have been particularly important to engagement (McKay *et al.*, 1996; Spoth *et al.*, 1997), because those with low income and low educational attainment have limited resources available to them.

Therapeutic Alliance—Therapeutic alliance has been found to be a significant predictor of engagement (Joe *et al.*, 1998; Fiorentine *et al.*, 1998; Yalom, 1985). Therapeutic alliance is usually conceptualized as a multifaceted construct consisting of goals, tasks, and clinician bond (Bordin, 1979). In this study, clinician bond, or the quality of the clinician—client relationship

(Budman *et al.*, 1989), will be used to represent the alliance between the interventionist and the client. Fiorentine *et al.* (1998) found that client satisfaction with the counselor/therapist and the ability of the counselor/therapist to understand the client significantly increased the rate of engagement into drug treatment. These researchers concluded that therapeutic alliance was a stronger predictor of engagement than the participant characteristics (Fiorentine *et al.*, 1998).

Building a therapeutic alliance with the client is of critical importance in the engagement process (Flaskas, 1997). Alliance building begins with the initial phone contact (Szapocznik *et al.*, 1988, 1989) and has been found to be stable after the third therapeutic contact (Barrett-Lennard, 1962). In our previous studies, we achieved very successful engagement rates (Santisteban *et al.*, 1996; Szapocznik *et al.*, 1988) by focusing on building a working relationship with the client from the first contact. These family-based intervention studies extended Brief Strategic Family Therapy (Szapocznik and Williams, 2000) to begin at the time of the first contact (Santisteban *et al.*, 1996; Szapocznik *et al.*, 1988) to bring at-risk or drug-abusing youth into treatment. In both of these studies, Brief Strategic Family Therapy applied to initial contacts resulted in improved engagement rates over the control conditions (Santisteban *et al.*, 1996; Szapocznik *et al.*, 1988). These initial contacts helped the therapist develop alliances with the family by facilitating the therapist's understanding of family patterns and helping to overcome barriers to engagement.

The importance of therapeutic alliance extends to treatment outcome. The results of meta-analyses and individual studies provide strong support for the role of the therapeutic alliance in psychotherapy outcome (Bordin, 1979; Dierick and Lietaer, 1990; Gaston, 1990; Hatcher *et al.*, 1995; Horvath and Luborsky, 1993; Lambert *et al.*, 1986; Luborsky *et al.*, 1990; Waterhouse and Strupp, 1984; Weinberger, 1995). The psychotherapy research literature indicates that therapeutic alliance appears to be an important predictor of outcome in individual psychotherapy, including long- and short-term therapies and treatments for many therapeutic orientations (Eaton *et al.*, 1988; Gaston *et al.*, 1991; Henry *et al.*, 1994; Horvath and Symonds, 1991). Although the most recent conceptualizations of common factors in psychotherapy suggest that the therapeutic bond is present and important in all psychotherapies (Orlinsky *et al.*, 1994), most of the research on alliance has focused on individual therapy.

Therapeutic alliance also appears to be an important predictor of outcome in non-individual treatment modalities (Gaston and Schneider, 1992; Henry *et al.*, 1994; Pinsof and Catherall, 1986). For example, a review of 132 studies concluded that therapeutic alliance is positively related to outcome, and is a central factor in individual and group psychotherapies (Orlinsky *et al.*, 1994). In reference to family therapy, Gurman and Kniskern (1978) concluded "the ability of the therapist to establish a positive relationship ... receives the most consistent support as an important outcome-related therapist factor in marital and family therapy" (p. 575). In their review of family therapy research, Friedlander *et al.* (1994) assert that components of alliance in family therapy have been predictive of session effectiveness, treatment outcome, and engagement.

Hypotheses

This paper examines some of the variables that may influence HIV+ African American women to engage into a family—ecological intervention or a nondirective, individual, person-centered intervention. Even though there is scant literature on engaging HIV+ populations into any psychosocial intervention, previous studies with seronegative (or unknown HIV status) populations have shown that both client characteristics and therapeutic alliance are important in predicting engagement into various treatment modalities, including family therapy, individual psychotherapy, prevention interventions, and drug treatment interventions. Based on findings from prevention interventions and our prior work with family therapy interventions

involving problem youth, we hypothesize that participants with higher income, higher levels of education, more stress, more perceived stress, more distress, poorer family functioning, and less social support will be more likely to engage, defined as attending at least two sessions of the intervention. We also hypothesize that therapeutic alliance will be an important predictor of engagement, independent of the other predictors. More specifically, the better the relationship shared by the participant and the therapist, the more likely is the participant to engage in therapy, holding constant other significant predictors of engagement.

METHODS

Participants

Participants in the current study are 136 urban, low-income (median income = \$6900) HIV+ African American mothers enrolled in a longitudinal study of family therapy. The modal level of education was less than a high school degree, with only 16% of the sample having completed high school and less than 2% having completed a college education. More than two-thirds of the participants reported having a significant other, but only 20% of them reported being married and living with their spouse. All women in the study had at least one child, with 71% having two or more children and 40% having three or more children. Eight percent of the women had one child who was HIV+ and another 4% of the sample had two or three HIV+ children. Over half of the women (51%) had been living with HIV disease for at least 5 years and 72% had been living with the disease for more than 3 years (mean = 5.5 years, $SD = 3.6$ years). The participants were selected from 209 enrolled in the larger study. Only those participants ($n = 136$) who were randomly assigned to an active treatment (see intervention conditions below) were included in the analyses. Of these 136 participants, 67 were randomized in the family therapy condition and 69 were randomized into the nondirective, individual, person-centered therapy. The remaining participants were randomly assigned to a control condition that had no active therapist. Hence, defining engagement for those in this condition was not meaningful.

To be included in the larger study, the women had to be HIV+, at least 18 years old, and second-generation African American, have reported some family problem, and have a family member willing to participate. These criteria were necessary to facilitate family therapy and assessment. Women who were homeless or in a phase of institutionalization in which outside contact was prohibited were excluded from the study. In addition, at the beginning of the study, women had to have a minimum of 200 CD4 cells at admission. However, as the efficacy of protease inhibitors became known, this was revised such that participants had to have 50 CD4 cells (and be on protease inhibitors) at admission. The exclusion criteria were selected to maximize the likelihood of retaining the participants in the study (e.g., able to complete the study assessment interview sessions as well as therapy sessions).

Recruitment

Participants in the study were recruited from fall 1996 to spring 1999. The women were recruited from community-based agencies that provide health and/or social services in South Florida to HIV+ individuals. After recruitment and after determining study eligibility, the women and the recruiter arranged for the first interview session. After explaining the study, the interviewer read and obtained informed consent. Measurement of the independent variables occurred at the first interview.

Intervention Conditions

The interventions in this study were aimed at helping African American women adapt to their HIV-seropositive status. The study used two types of interventions, Structural Ecosystems Therapy (Mitrani *et al.*, 2000), a family therapy, and the Person-Centered Approach (Rogers,

1959), a nondirective individual therapy, to accomplish this goal. The minimum dosage required by the intervention was eight sessions. On average, participants who engaged in the intervention attended 8.9 sessions. Therapy sessions for each of the two conditions took place at the woman's home. Each treatment team consisted of three master's-level African American female therapists trained in the respective condition.

Structural Ecosystems Therapy—Structural Ecosystems Therapy (SET) is a family—ecological intervention aimed at helping HIV+ African American women improve their psychosocial functioning (Mitrani *et al.*, 2000). The focus of SET is on assessing and improving the woman's relationships within her entire social ecosystem, that is, with family, extended family, friends, social service providers, health care workers, and other relevant persons in her life. Therapy sessions can include the woman alone or the woman plus relevant members of her ecosystem, or can be conducted with ecosystem members without the woman's presence (but always with her consent).

SET is derived from a combination of two theoretical approaches: (1) systemic family therapy approaches as developed by Minuchin (Minuchin, 1974; Minuchin and Montalvo, 1967) and adapted by Szapocznik and colleagues into Brief Strategic Family Therapy (Kurtines and Szapocznik, 1996; Szapocznik and COSSMHO, 1994; Szapocznik and Kurtines, 1989) and (2) social ecological theory (Bronfenbrenner, 1979). Techniques include joining (building therapeutic alliances), pattern diagnosis (assessing the woman's ecosystem), and restructuring (transforming problematic interactions). Utilizing the therapeutic alliance, the therapist orchestrates opportunities for system members to build more adaptive interactions by facilitating and coaching direct contact between participants in the session.

Person-Centered Approach—The Person-Centered Approach (Rogers, 1959) is a nondirective approach selected to control for the common factors in psychotherapy. According to Rogers, empathy, unconditional positive regard, and congruence are three of six "necessary and sufficient" conditions for therapeutic change to occur, regardless of the type of treatment used (Rogers, 1959). The client must experience a relationship with the therapist where these conditions are present on the part of the therapist.

Empathy refers to the ability of the therapist to accurately recognize and reflect to the client his or her thoughts, feelings, and meanings. Unconditional positive regard has to do with the therapist's acceptance of the client as he or she is in the moment and to convey that acceptance not by direct statements of positive regard, but rather by an attitude of prizing the client and by an absence of evaluative (negative or positive) feedback to the client. Congruence or genuineness is the matching of the therapist's internal experience and overt behavior in such a way that the client perceives the therapist as genuine and sincere.

Measures

An interviewer blinded to condition assignment obtained all instruments that measured participant characteristics. These interviews were done face to face, a few days after recruitment and prior to randomization. To keep the interviewer blinded to condition assignment, the instrument that measured therapeutic alliance was obtained by a second person a few months (generally 4 months) after condition assignment. This measure was obtained via a telephone call to the participant.

Engagement—Engagement, our outcome measure, was used as a binary variable (i.e., engaged vs. not engaged). Engagement was defined in this study as attending two sessions modeled after the work of Santisteban *et al.* (1996) and Coatsworth *et al.* (2001). Retention in some of these types of psychosocial interventions is usually defined as having attended eight

sessions (Alexander *et al.*, 1976; Santisteban *et al.*, 1996) and in some cases it is also defined as having completed the course of treatment advised by the clinician or therapist (Coatsworth *et al.*, 2001).

Demographics—Demographic information was obtained using a 22-item questionnaire. The items used in this study are income and education level.

Stress—Stress was measured using a shortened version of the Life Events Scale (LES; Sarason *et al.*, 1978). To reduce subject burden, 12 items from the original LES were used in this study (Smith *et al.*, 2001). Findings from a pilot study showed that the 12 items used in the current study were the most endorsed in a sample of 108 (47 HIV+ and 61 HIV-) African American women (Hinkle, 1991). Stress was measured by the number of negative life events endorsed by the participant.

Family Functioning—Family functioning was measured using the 36-item Feetham Family Functioning Survey (Roberts and Feetham, 1982). This measure asks the participant to rate the relationships they have with their family, spouse or significant other, children, friends, and neighbors. The participants rate each item on three dimensions. A sample item used for this study is: "The amount of help from relatives with family tasks such as care of children, house repairs, household chores.—(a) how much is there now, (b) how much would you like there to be, and (c) how important is this to you." Three scales from the Feetham Family Functioning Survey were created. They are (1) a total relatives scale, which rates the amount of help, the number of discussions, the quantity of emotional support, and the satisfaction with amount of time spent with relatives; (2) the number of disagreements with the spouse or significant other; and 3) the amount of help the participant is receiving from her child or children. These three scales were used because these are family areas that our intervention targets. Cronbach's α for this sample was .92, .63, and .61 for the relatives, spouse or significant other, and children scales, respectively.

Social Support—Social support was measured using the Social Support Questionnaire—Short Form (SSQ6; Sarason *et al.*, 1987). The SSQ6 asks the respondents to list the number of people they can count on for six different aspects of support. A sample item from the SSQ6 is: "Whom can you really count on to be dependable when you need help?" For each of the six questions, the participant can list up to nine individuals that are in her social support network. The sum of the number of individuals in all six items was used. Cronbach's α for this sample was .87.

Perceived Stress—Perceived stress was measured using the Perceived Stress Scale (Cohen *et al.*, 1983). Participants rate 14 items on a 5-point Likert scale ranging from "never" to "often." The items measure how effectively the participants are coping with stressors in their lives. A sample item is: "In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?" The sum of the 14 items was used. Cronbach's α for this sample was .65.

Perceived Control Over Health—Perceived control over health was measured using the Perceived Control Questionnaire (Hinkle and Antoni, 1991). The respondents answer four questions about the control they feel they have over their health. Participants rate on a 5-point Likert scale the control they feel they have over their "present health," "future health," "threat of AIDS," and "life in general." Cronbach's α for this sample was .76.

Distress—Distress was measured using the 53-item Brief Symptom Inventory (Derogatis, 1993). This instrument assesses the respondent's psychological symptoms during the past

week. The Positive Symptom Total (Derogatis, 1993), which is total number of items endorsed, was used to measure distress.

Therapeutic Alliance—The relationship between the participant and the therapist was measured using the Barrett-Lennard Relationship Inventory: Form OS-40 (Barrett-Lennard, 1962). This measure is a 40-item instrument that asks the participants to rate the relationship they feel they have with their therapist. Sample items include: "My therapist respects me," "My therapist reacts to my words but does not see the way I feel," and "I believe that my therapist has feelings she does not tell me about that affect our relationship." Because this measure asks participants to rate how they feel about their therapist, only those participants who had completed at least one therapy session were administered the inventory. Barrett-Lennard (1962) suggested that these 40 items can be summarized using four factors. However, in our study these four factors were highly correlated and thus were aggregated to create the alliance measure. Cronbach's α for this sample was .87.

Analytic Plan

There were three steps in the analytic plan. First, we investigated whether Structural Ecosystem Therapy and the Person-Centered Approach treatment conditions were significantly different on the hypothesized variable. This test ensures that the data can be pooled across the two treatment conditions. Second, we investigated whether the predictor variables predicted engagement in the interventions by entering each into univariate logistic regression models. All available observations were used in these models, resulting in slightly different sample sizes, due to missing data. This approach uses all available information (Little and Rubin, 1987). Finally, those variables that were significant were entered into a hierarchical logistic regression model. Variables were entered as blocks. In Block 1 we entered variables related to the woman's characteristics and in Block 2 we entered therapeutic alliance. Checks for multicollinearity among predictors indicated that this would not be a concern (Menard, 1995).

RESULTS

Findings

The results show that the Structural Ecosystem Therapy and the Person-Centered Approach treatment conditions were not significantly different on any of the hypothesized variables at baseline, indicating that the data could be pooled across the two treatment conditions. The engagement rates for the two intervention conditions were 75% and 61% for SET and PCA, respectively. This was not a significant difference.

Single Predictor Logistic Regression Models—The single logistic regression analyses revealed that several of the woman's characteristics predicted engagement (Table I). Daily hassles ($p < .024$), social support ($p < .009$), disagreements with spouse ($p < .039$), distress ($p < .05$), and therapeutic alliance ($p < .0001$) significantly predicted engagement. The number of negative life events, the other family functioning variables (e.g., help from kids and total relatives scale), perceived stress, perceived control over health, income, and education failed to predict engagement at the univariate level.

The odds ratio was calculated for each of these effects to illustrate their relative magnitude. Odds ratios were calculated by comparing .5 standard deviations above to .5 standard deviations below the mean. For illustrative purposes, women who reported more hassles and a larger social support network were 1.5 times and 1.91 times (respectively) more likely to engage. Similarly, women who had more spousal disagreements were more likely to engage. Finally, women who were more distressed and who had a greater alliance with their therapist were 2.2 times and over 4 times more likely to engage, respectively.

Hierarchical Logistic Regression Analyses—In the hierarchical logistic regression analysis (Table II), characteristics of the woman, including daily hassles, available social support, disagreements with significant other, and distress, were entered as one block. The measure of therapeutic alliance was entered in a second block. The significance of the coefficients presented lies in the context of the full-hypothesized hierarchical model. The first block, characteristics of the woman, significantly predicted engagement ($p < .005$). However, only available social support ($p < .006$) was a significant predictor of engagement. Specifically, participants who reported a larger social support network were more likely to engage. Although daily hassles, disagreements with significant other, and distress were significant in the univariate analyses, they failed to predict engagement when controlling for the other participant characteristics.

The second block, therapeutic alliance, significantly predicted engagement ($p < .0001$) even after the variance due to the variables in Block 1 was removed. As in the univariate analysis, women who perceived they had a better relationship with their therapist were likely to engage in the intervention. Hence, the variance due to participant characteristics did not affect the importance of therapeutic alliance to predict engagement. It is also important to note (see Table II) that the significance of the estimated coefficients in Block 1, participant characteristics, did not change (significantly) after adding therapeutic alliance, Block 2. That is, the therapeutic alliance score does not mediate the effects of the participant characteristics. Finally, the results indicate that the full-hypothesized model (Block 1 and Block 2) is highly significant ($p < .0001$). In fact, the full model correctly predicts over 86% of the cases.

Because the above multivariate model excluded participants who were missing the alliance measure, a post hoc model including all 136 participants was estimated. Similar findings resulted from this analysis. That is, including participants who had not had any therapy contact did not change the effects of the participant characteristics measures. In addition, because the alliance measure was not administered at exactly 4 months for all participants, another post hoc analysis was performed using the date between randomization and date that the alliance measure was administered as a predictor variable. Results showed that this was not a significant effect.

DISCUSSION

The goal of this study was to determine what factors contribute to engagement into a family-ecological intervention and a nondirective intervention in a sample of HIV+ African-American women. Findings presented here indicate that both participant characteristics and therapeutic alliance had some importance in predicting engagement.

In this study, 14 participant characteristics were hypothesized to be important in predicting engagement into the intervention. Surprisingly, however, only 4 of those characteristics were significant in predicting engagement at the univariate level: Daily hassles, available social support, disagreements with significant other, and psychological distress were significant predictors of engagement. As expected, the women who had more daily hassles, more distress, and more disagreements with their significant other were more likely to engage in the intervention. Our findings are consistent with others in prevention interventions for adolescents (Perrino *et al.*, 2001; Spoth *et al.*, 1996). Income and education level did not predict engagement. However, this may be explained by the fact that our sample was not very diverse with respect to income and education; all of the women in the sample are urban, low-income African-American women. Hence, this might have been an unfair test of their importance. Finally, available social support was a predictor of engagement into the intervention. This could speak to the women's ability to establish and maintain relationships, including the therapeutic relationship.

For African Americans in general, social support is an important coping resource that is associated with lower distress levels (Moneyham *et al.*, 1998). Thus, we hypothesized that women who reported less social support would be more likely to engage. However, our results indicated exactly the opposite: Women with more available social support were more likely to participate in the therapy. There may be several interpretations for these results. One interpretation would be that more social support is not always good. More social relationships imply more relationships to which the individual must attend and this may involve a need for therapy to resolve differences and conflicts. Another possible explanation might be that the women's family and friends may serve as the voice that reinforces the importance and the possible benefits of the intervention. Additional research is warranted in this regard.

Above all, this paper highlights the importance of the alliance needed between the participant and the interventionist to successfully engage the participant into interventions that promote adaptation to HIV infection. Though very few of the participant characteristics were important in predicting engagement at the univariate level and even fewer at the multivariate level, the therapeutic alliance was the strongest predictor (largest odds ratio) in both analyses. Thus, the importance of therapeutic alliance is independent of participant characteristics. In a study of client engagement into drug treatment, Fiorentine and colleagues (1998) found that the client—counselor relationship was more important in predicting client engagement than other variables examined, including client characteristics.

There is an important clinical implication in demonstrating that therapeutic alliance may be a more important contributor to participant engagement than participant characteristics. If participant characteristics prior to treatment were the sole predictor of engagement into an intervention, there would be little that the interventionist could do. However, because therapeutic alliance is an important predictor of engagement, the interventionist can do a lot more to provide the conditions that are perceived by participants as positive for the therapeutic relationship and thus increase the probability of engagement. That is, the interventionist has more control over his or her ability and willingness to be genuine and to provide noncontingent positive regard to the HIV+ women in her relationship with the participant than over the characteristics of the participant before entering treatment.

Improved therapeutic alliance may have benefits beyond engagement. Therapeutic alliance has been associated with positive treatment outcomes (Bordin, 1979; Dierick and Lietaer, 1990; Gaston, 1990; Hatcher *et al.*, 1995; Horvath and Luborsky, 1993; Gaston and Schneider, 1992; Henry *et al.*, 1994; Lambert *et al.*, 1986; Luborsky *et al.*, 1990; Pinsof and Catherall, 1986; Waterhouse and Strupp, 1984; Weinberger, 1995). It was beyond the scope of this study to link engagement to outcomes.

LIMITATIONS

One potential limitation of this study relates to the missing data on the alliance measure. The alliance measure was not administered to 34 of the 136 participants. The missing data are a result of late implementation of the instrument, tracking problems in hard-to-reach participants, or participants who failed to engage and thus could not have established any type of a relationship with the interventionist. Among the 34 participants who had a missing alliance measure, 19 participants had no contact with the interventionist. Thus, an alliance measure was not obtained because the participant could not have established a relationship with the interventionist. The remaining 15 participants had at least one therapy contact. These participants had a missing alliance measure due to the late implementation of the instrument in the study or because the person obtaining the measure via telephone was not successful in reaching the participant. Of these 15, 10 engaged in the intervention (i.e., had two or more therapy sessions) and 5 failed to engage in the intervention. Thus, we do not suspect that the

results were biased due to these missing data. In addition, as previously reported, the analysis with all 136 participants yielded similar results with regard to the significance of the participant characteristics. An additional limitation, sample size, limited the statistical power to uncover the effects. Despite this potential limitation, several of the variables were found to be significant. Additional studies with larger sample sizes are warranted.

CONCLUSIONS

This study makes a valuable contribution to the HIV literature by extending the engagement literature to this population. As with other populations, our findings demonstrated that participant characteristics and therapeutic alliance are important factors in predicting engagement. We have also shown that therapeutic alliance is important independent of the participant characteristics. Our findings do demonstrate that daily hassles, available social support, spousal disagreements, and distress are participant characteristics that are related to engagement of HIV+ African American women into an intervention that promotes adaptation to HIV infection. These findings suggest that interventionists should target these areas at the early stages of the intervention to maximize the probability of engagement. Our findings also indicate that therapeutic alliance has a larger effect than individual participant characteristics in engaging HIV+ African American women into these types of psychosocial interventions. Thus, to increase the likelihood of engagement, interventionists working with this population should give special attention to establishing a positive relationship with the participant from the initial therapy contact.

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Table I.
Predictors of Engagement: Results of the Univariate Logistic Regression Models

Variable name	β	SE	Odds ratio	χ^2 (LRT) ^a	p value
<i>Participant characteristics</i>					
Demographics					
Personal income	.000072	.000027	1.00	0.52	.520
Education	.080	.149	1.11	0.29	.590
External					
Stress					
Negative life events	.094	.127	1.15	0.563	.456
Daily hassles	.039	.017	1.55	5.36	.024
Social support					
Available social support	.079	.030	1.91	8.44	.009
Family functioning					
Disagreements with spouse	.091	.044	1.48	4.27	.039
Help from kids	-.003	.022	0.97	0.022	.882
Total relatives scale	.005	.007	1.14	0.53	.467
Internal					
Perceived stress					
Perceived stress scale total	.029	.021	1.30	2.03	.154
Control					
Perceived control over health	-.055	.034	0.73	2.63	.105
Distress					
Distress total	.028	.014	1.45	3.93	.048
<i>Therapeutic alliance</i>	.059	.015	4.24	26.09	.0001

^aThe Likelihood Ratio Test (LRT) was used as opposed to the Wald statistic, because the LRT is a more powerful test (Hauck and Donner, 1977; Jennings, 1986).

Predictors of Engagement: Results of Hierarchical Logistic Regression Model^a

^bThe Likelihood Ratio Test (LRT) was used as opposed to the Wald statistic, because the LRT is a more powerful test (Hauck and Donner, 1977; Jennings, 1986).