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Initial Outcomes of a Culturally Adapted Behavioral Activation for Latinas Diagnosed With Depression at a Community Clinic

Jonathan W. Kanter,[1]
Azara L. Santiago-Rivera,[1]
Laura C. Rusch,[1]
Andrew M. Busch,[1] and Paul West[2]

Abstract

Latinos demonstrate high rates of depression, often do not seek treatment, and terminate prematurely for a variety of reasons, including lack of sensitivity to contextual and cultural factors in treatment approaches. For decades researchers have suggested a behavioral approach to Latinos diagnosed with depression because such an approach targets the complex environmental stressors experienced by these populations with a simple, pragmatic approach. Recently, behavioral activation has been culturally and linguistically adapted for Latinos/Latinas diagnosed with depression (BA-Latino or BAL). The current study consists of a pilot evaluation of BAL at a bilingual (Spanish–English) community mental health clinic (N = 10 Latinas). Results provide preliminary support for the feasibility and effectiveness of BAL for Latinas in a community setting in terms of treatment adherence, retention, and outcomes. Implications and future directions are discussed.

[1]University of Wisconsin—Milwaukee
[2]Sixteenth Street Community Health Center, Milwaukee, Wisconsin

Corresponding Author:
Jonathan W. Kanter, PhD, University of Wisconsin–Milwaukee, Department of Psychology, P. O. Box 413, Milwaukee, WI 53201
E-mail: jkanter@uwm.edu

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There are an estimated 40 million Latinos in the United States, and it is now the largest ethnic minority group (U.S. Bureau of the Census, 2007). They face many challenges such as unemployment, underemployment, poverty, and other financial burdens; inadequate housing; the language barrier; stressful interactions with agencies; and racism and discrimination (e.g., Hiott, Grzywacz, Arcury, & Quandt, 2006; Santiago-Rivera, Arredondo, & Gallardo-Cooper, 2002; Vega et al., 1998). These circumstances can lead to high rates of depression (Munet-Vilaro, Folkman, & Gregorich, 1999), with rates of depressive disorders at least equivalent to those of non-Latino Whites and rates of depressive symptoms slightly higher than non-Latino Whites (Mendelson, Rehkopf, & Kubzansky, 2008). Although depression rates are higher for adult women than adult men in general, depression rates are higher specifically for Latinas compared to African American and White women, after controlling for differences in education, employment, and marital status (Meyers et al., 2002). A variety of factors have been associated with depression in Latinas once they migrate to the United States, such as separation from children who were left in the home country (Miranda, Siddique, Der-Martirosian, & Belin, 2005), separation from family (Hiott et al., 2006), and recent immigrant status (Black, Markides, & Miller, 1998). In addition to separation from family, Shattell, Smith, Quinlan-Colwell, and Villalba (2008) found that isolation, harmful interpersonal relationships, and unmet economic needs were linked to depression. Equally important, the acculturation process is often stressful and has been identified as a major source of psychological distress that can lead to depression (Cortés, 2003; Cuéllar, 2000; Cuéllar, Bastida, & Braccio, 2004).

High rates of depression among Latinos are complicated further by low rates of treatment engagement and retention (Acosta, 1979; Barrera, 1978; Sue, Fujino, Hu, Takeuchi, & Zane, 1991). A number of studies note that Latinos, as well as other ethnic minorities, tend to underutilize mental health services and terminate prematurely (e.g., Cheung & Snowden, 1990; Scheffler & Miller, 1991) because traditional forms of treatment have failed to consider cultural differences and contextual factors unique to these ethnic groups. In fact, one of the driving forces for developing culturally appropriate treatment approaches is the issue of utilization, including length of time in treatment (i.e., patient retention; Sue & Sue, 2003).

Variants of cognitive-behavior therapy (CBT) have been developed to address these issues (Muñoz & Miranda, 1996; Muñoz & Mendelson, 2005)

and evaluated in several trials (reviewed in Voss Horrell, 2008). In these trials, which mostly have enrolled only Latina women, CBT has included behavior change techniques such as activity monitoring and scheduling, cognitive change techniques, and additional general techniques (e.g., relaxation, interpersonal focus, or physical health focus) and techniques to target specific problems and address cultural issues, such as supplemental case management, psychoeducation for those unfamiliar with the diagnosis, provision of child care services and transportation, or training about specific cultural values and beliefs (Miranda, Azocar, Organista, Dwyer, & Areane, 2003; Miranda, Cheng, et al., 2003; Miranda, Duan, et al., 2003). Response and retention rates in these studies are good but need further improvement. For example, in the Partners in Care study (Wells et al., 2004), which included a CBT component as part of a larger collaborative primary care intervention, CBT demonstrated a 47% "probable depression" rate for Latina patients at 6 months (Miranda et al., 2003, Miranda, Schoenbaum, Sherbourne, Duan, & Wells, 2004) and 5-year outcomes suggested that more Latinas treated with CBT remained depressed (43%) than Whites treated with usual care (36%; Wells et al., 2004). These results speak to the need for continued treatment development and refinement.

The current study sought to develop and pilot test a cultural adaptation of behavioral activation (BA) for Latinos diagnosed with depression. BA (Kanter, Busch, & Rusch, 2009; Lejuez, Hopko, & Hopko, 2001; Martell, Addis, & Jacobson, 2001) evolved out of Lewinsohn's (1974) original behavioral theory that conceptualized depression as due to losses of, reductions in, or chronically low levels of positive reinforcement. Early BA treatment techniques, including activity scheduling and skills training, focused on activating clients to obtain and maintain stable sources of positive reinforcement. In the late 1970s, these treatment techniques largely were subsumed into larger CBT approaches (e.g., Beck, Rush, Shaw, & Emery, 1979). However, recent meta-analyses (Cuijpers, van Straten, & Warmerdam, 2007; Ekers, Richards, & Gilbody, 2008) of trials with largely White samples suggest that they are effective by themselves. Cuijpers et al. found that BA interventions performed better than waitlist and no-treatment controls and equivalent to CBT across acute treatment and follow-up periods in randomized trials.

Current BA (Hopko & Lejuez, 2007; Martell et al., 2001) provides some departures from Lewinsohn's (1974) original theory and the behavioral components of CBT. Current BA suggests that depressed individuals have not only lost important sources of positive reinforcement but are also reacting to potential opportunities for positive reinforcement with avoidance rather than activation, thereby limiting opportunities to regain positive reinforcement. Thus, current BA includes an emphasis on identifying, blocking, and activating

alternatives to avoidance behaviors in addition to simple activity scheduling. These alternatives to avoidance include direct attempts at problem solving, identifying specific values, and activating behaviors in support of those values.

Current versions of BA have received empirical support. Several trials of the version by Hopko and Lejuez (2007) have been supportive, including a randomized trial on an inpatient unit (Hopko, Lejuez, LePage, Hopko, & McNeil, 2003), a trial of BATD with inner-city illicit drug users with elevated depressive symptoms (Daughters et al., 2008), and an evaluation of a single-session BATD intervention for depressed college students (Gawrysiak, Nicholas, & Hopko, 2009). The version of BA by Martell and colleagues (2001) has been evaluated favorably in an uncontrolled trial of BA for post-traumatic stress disorder symptoms in a veteran sample (Jakupcak et al., 2006); an uncontrolled trial of BA for obese, depressed patients (Pagoto, Bodenlos, Schneider, & Spates, 2008); and a comparison of group BA to a wait-list control in a public mental health setting (Porter et al., 2004). In a large randomized trial for adult depression, BA performed well, outperforming CBT and performing equivalently to paroxetine for individuals with moderate-to-severe depression levels (Dimidjian et al., 2006). Equally important, BA demonstrated a lower drop-out rate compared to Paroxetine; it was as robust as continued medication across a 1-year follow-up and was better than discontinued medication across a second year of follow-up (Dobson et al., 2008). These trials have not included sufficient numbers of Latino participants to draw conclusions about BA's effectiveness with Latinos.

A culturally sensitive version of BA may improve upon depression treatment outcomes among Latinos for two primary reasons. First, researchers have long advocated for a behavioral approach to depression among Latinos (e.g., Acosta, 1982; Herrera & Sanchez, 1976). For example, Miranda (1976) emphasized that Latino clients expect a concrete problem-focused approach with immediate symptom relief. Likewise, Organista and Muñoz (1996) advocated for treatments that are short-term, direct, and problem-solving-focused for Latinos because such approaches are more congruent with their life circumstances that require immediate attention. Whereas CBT itself may be seen as possessing these qualities, the behavioral components of CBT and current versions of BA are most directly emblematic of them.

Second, BA may be a particularly good fit for Latinos with depression because its contextual focus and direct emphasis on changing environmental variables are consistent with the clear environmental risk factors for Latino depression. BA first identifies client goals and the contextual factors responsible for low levels of positive reinforcement. Using activity charts, the therapist then schedules activation assignments to target inertia (e.g., passivity) and avoidance, address contextual factors that caused depression,

and increase potentially rewarding events and thereby improving quality of life. BA therapists assist clients in breaking down activities into small, achievable tasks so the client is able to feel a sense of accomplishment and more immediate success. Clients are encouraged to activate regardless of the aversive thoughts and mood states that they may experience before or during activation. These BA techniques, emphasizing perseverance, action, and empowerment in the face of seemingly overwhelming environmental hardships, may be more acceptable to Latinos, less stigmatizing because they locate the problem of depression outside rather than inside the individual (e.g., cognitive or biological factors), and ultimately more efficacious and robust to the extent that environmental risk factors are truly addressed as a result of treatment.

Existing BA materials, however, were not sensitive to Latino values or experiences and needed refinement and adaptation. Santiago-Rivera et al. (2008) addressed this with a specific set of modifications to BA for depressed Latinos, including specification of culturally sensitive activation targets, incorporation of Latino-specific cultural values and beliefs, addition of specific strategies to address treatment engagement and retention in the first session, and inclusion of tips for incorporating family, social, and community resources into treatment. Kanter et al. (2008) then presented a successful case study of this adaptation of BA, which we refer to as BA-Latino/a or BAL.

The present study represents an open trial of BAL with 10 Latina clients (both men and women were recruited but only women were successfully enrolled) at a bilingual (Spanish–English) community mental health clinic. The purpose of the study was to explore the feasibility and initial effectiveness of BAL in a community mental health setting. Analyses focused on treatment adherence to explore whether BAL could be implemented in this setting, treatment drop-out and completion to explore BAL's ability to retain clients in treatment, and outcomes at the end of treatment. For outcomes, we present initial estimates of effect sizes and clinical significance for the Beck Depression Inventory-II (BDI-II; for self-reported depressive symptoms) and the Hamilton Rating Scale for Depression (HRSD; for interviewer-rated depressive symptoms). Hypotheses were that BAL would demonstrate low drop-out and high completion rates with large clinically significant effect sizes for primary outcomes from pre- to post-treatment.

Method

Setting and Participants

Therapy was conducted at the mental health clinic of a large community health center that provides comprehensive medical, dental, and mental health

care and is the only community-based agency in the area with a full-service bilingual (English-Spanish) mental health clinic. The center serves a client population that is 80% Latino, the majority monolingual Spanish speakers. The mental health clinic was staffed by 5 psychiatrists, 4 licensed psychologists, 6 master-level clinicians, a psychiatric nurse, and a graduate intern, for a total of 17 providers, of which 11 were fully bilingual. Treatment as usual at the mental health clinic consists of a variety of treatment techniques depending on the clinician's training and theoretical orientation. The majority of the mental health clients are direct referrals from internal medical providers at the center.

Study participants were Latino clients who presented with depressive symptoms to the center's primary care clinic or mental health clinic. Participants were informed about the study by either their primary provider who identified depression during the clinical examination or the reception staff who noted a referral concern of depression. No additional recruitment strategies were employed. If interested, participants were referred to a trained evaluator who met with the participant, explained the study in detail, obtained informed consent and demographic information, and conducted a screening interview to determine eligibility. The interview consisted of a Spanish version of the 17-item HRSD, a Spanish version of the BDI-II, a Spanish version of the primary care evaluation for mental disorders (PRIME-MD), and several self-report measures of functioning and cultural variables. Inclusion criteria consisted of being an adult (18 years of age or older), obtaining a score of 16 or higher on the HRSD, a score of 20 or greater on the BDI-II, and a diagnosis of major depressive disorder according to the PRIME-MD. Exclusion criteria consisted of being too suicidal to be treated as an outpatient, psychotic symptoms, primary drug or alcohol use, panic attacks, and bipolar disorder.

A total of 42 participants were referred to the study, 34 completed the initial screen (8 were unable to be contacted), 30 were scheduled for a full screening assessment (2 were excluded due to alcohol or drug problems, 2 were excluded due to minimal depressive symptoms), 24 were eligible after the full screen and chose to participate (2 did not show for the assessment, 2 had below-threshold depression, and 2 chose not to participate after the study was fully explained), and 12 were randomly assigned to BAL (12 were assigned to a control condition not reported on herein). Two BAL clients did not show for their first sessions resulting in 10 clients who started treatment.

Therapists and Treatment

One BAL therapist was a bilingual Latina M.S.W. with 2 years experience, and the other was a monolingual, English-speaking, White, male, doctoral

student in clinical psychology (a replacement for a bilingual Latino therapist who unexpectedly had to leave the project after training but before recruitment). Training of the BAL therapists consisted of a 2-day workshop in BA by a national expert, several training cases, and weekly supervision by the first author. A total 8 clients chose to conduct therapy in Spanish and were seen by the Spanish-speaking therapist; 2 preferred to conduct therapy in English and were seen by the monolingual therapist.

BAL was based on Martell et al. (2001) with modifications described in Santiago-Rivera et al. (2008) and Kanter et al. (2008) and codified in a treatment manual that supplemented the original BA text (Kanter & Santiago-Rivera, 2009). In developing the BAL manual, a variety of recommendations for cultural treatment adaptations, summarized by Griner and Smith (2006), were heeded, including consistency with the cultural values and beliefs of the population, consideration of ethnic client-therapist match, development of easily accessible interventions targeted to the client's circumstances, and sensitivity to the support resources available, including the local community, spiritual traditions, and the extended family. Additional modifications to the original text included simplification of the treatment rationale and case conceptualization, additions to and structuring of Session 1, inclusion of strategies to use the family and community, and additions to and structuring of the final session (Session 12). Although previous studies of BA (Dimidjian et al., 2006) involved a treatment length of up to 24 sessions over 16 weeks, the current study shortened the number of sessions to 12, because a larger number was felt to be not feasible by the clinic's director and therapists, but lengthened the time allowed to complete 12 sessions up to 20 weeks to accommodate difficulties with scheduling and chaotic client lives that were felt to be common in the clinic. This treatment length is consistent with the typical length of BATD (Lejuez et al., 2001) and with the primary CBT treatment manual for Latinos (Muñoz et al., 1986).

Throughout treatment, cultural values and beliefs were incorporated. First, the BAL manual listed free, low-cost, and culturally sensitive activation homework assignments (e.g., walking, attending community activities such as local festivals and recreational groups, going to church, borrowing fitness DVDs from the library, going to the park), and therapists were encouraged to also identify ideographic activation homework assignments. Second, special attention was paid to cultural values such as *familísmo, personalismo*, *marianismo*, and *machísmo* and how they influence activation. For example, the manual included examples of activating a client who did not wish to confront her husband about his aggressive behavior, thereby respecting *marianismo* and *machismo,* and activating a client to go to church who felt she was being followed by a *presencia negative* (negative presence). Third, key BAL terms

and therapy materials such as activity monitoring forms were translated into Spanish, discussed and refined throughout the treatment development period. When direct translations were not available, similar terms were used (e.g., the term *activation* translated better as *pasos de acción* or *action steps*).

BAL presents depression to clients as an understandable response to life's difficulties, when one becomes passive and avoidant rather than active. Thus, the key in treating depression is to overcome avoidance and passivity, take action to solve problems, and schedule activities that bring pleasure and create meaning in life. Family members are invited to participate in and facilitate the activation process. Activation assignments are tailored to the unique needs of each client. Outcomes of previous activation assignments and obstacles to completion of new assignments are discussed each week to maximize the success of activation.

Session 1 of BAL consists of a culturally sensitive overview of depression, education about psychotherapy, and presentation of the BAL rationale. Development of the case conceptualization also begins in this session and informs the first activation homework assignment, which typically consists of completing an activity chart and tracking problem behaviors such as sleep problems or too much time watching television. In this session the therapist also discusses potential benefits of including family members in treatment. If a client is interested in bringing a family member into treatment, the family member is invited to attend Session 2.

Session 2 consists of further explanation of the rationale, review of the first activation homework assignment, and continued development of the case conceptualization. If a family member is present, an additional goal is to assess how the client and family member interact to determine how the family can assist with treatment and support nondepressed behavior of the client.

Sessions 3 to 11 follow the basic structure of BAL, making sure to review homework and assign new homework based on the client's goals each week. Therapists work collaboratively with clients to discern avoidance patterns and schedule activities to block avoidance and solve problems such as health problems and conflicts with family members as well as to simply produce more pleasure and fun in the client's life based on the client's values and goals, such as spending time with family, taking walks, and window shopping. Activity charts or calendars may be used to track and schedule activities. Therapists pay attention to the level of difficulty of the tasks to be assigned and how avoidant/scared of the task the client is and collaboratively work with the client to schedule tasks that are graded in terms of difficulty and fear level. It is important in earlier sessions for the client to experience mastery and success with the tasks.

Session 12 consists of reviewing the client's progress and completing the "Staying Active Guide" (available from the first author). This guide consists of the therapist and client collaboratively creating lists of (a) ways the client can identify whether he or she is becoming depressed or inactive, (b) nondepressed activities that the client enjoys to function as reminders of activation targets, (c) activities that are in line with the client's values, (d) obstacles to engaging in these activities and ways to overcome these obstacles, and (e) potential future events that may be difficult for the client and plans for responding to these specific events.

Measures

Primary care evaluation of mental disorders (PRIME-MD). The PRIME-MD (Spitzer, Williams, Kroenke, & Linzer, 1994) is a well-validated, paraprofessional-administered diagnostic tool for primary care settings that provides diagnoses for mood, anxiety, alcohol, somatoform, and eating disorders (for the current study, only mood, panic, generalized anxiety, and alcohol disorders were assessed). It is shorter than other research diagnostic instruments and thus ideal for research in community settings to minimize the research burden on participants. The PRIME-MD has been used in many research studies to indicate diagnostic status and has been translated and validated in Spanish (Baca et al., 1999). The Spanish-language PRIME-MD demonstrated adequate validity with the Schedules for Clinical Assessment in Neuropsychiatry's mood disorder section (coefficient of agreement = .50) and anxiety disorder section (coefficient of agreement = .35; Baca et al., 1999).

Beck Depression Inventory-II (BDI-II). The BDI-II is a widely used, 21-item, self-report depression severity measure. Previous studies have examined the psychometric properties of the Spanish version of the BDI-II among a bilingual clinical sample with significant symptoms of depression (Novy, Stanley, Averill, & Daza, 2001) and a large sample of bilingual college students (Wiebe & Penley, 2005). In various subsamples in these studies the Spanish BDI-II demonstrated good internal consistency (.91-.95). Among participants who completed both English and Spanish versions, Wiebe and Penley (2005) reported no significant language effect and Novy and colleagues (2001) reported a high correlation (r = .94) between English and Spanish versions, suggesting that the two versions are directly comparable. Wiebe and Penley (2005) reported high test–retest reliability at Week 1 (ICC = .86).

Hamilton Rating Scale for Depression (HRSD). The 17-item HRSD (Hamilton, 1967) is a semistructured interview measure of depression severity. The psychometric properties of the Spanish version of the HRSD have been investigated

in two studies (Ramos-Brieva, & Cordero-Villafáfila, 1988; Ramos-Brieva, Cordero Villafáfila, & Yañez Sáez, 1994) in which it demonstrated acceptable internal consistency (.72), good interrater reliability (.99), and good split-half reliability (.89). Construct validity was established with significant correlations with other measures of distress.

Pan Hispanic Familism Scale (PHF). The PHF (Villarreal, Blozis, & Widaman, 2005) is a 5-item self-report questionnaire that assesses the importance of immediate and extended family (*familismo*). Participants rate each item on a 5-point Likert-type scale with higher scores indicating greater commitment to one's family (1 = *strongly disagree* to 5 = *strongly agree*) with possible scores ranging from 5 to 25. Sample items include the following: "My family is always there for me in times of need," and "My family members and I share similar values and beliefs." The PHF has good internal consistency ($\alpha = .82$; Villarreal et al., 2005). The factor structure of the PHF is consistent regardless of the sample's country of origin (i.e., United States, Mexico, or Latin America) and language preference (i.e., English or Spanish; Villarreal et al., 2005).

Short Acculturation Scale for Hispanics (SASH). The SASH (Marín, Sabogal, Marín, & Otero-Sabogal, 1987) is a 12-item self-report questionnaire that assesses degree of acculturation. Participants rate each item on a 5-point Likert-type scale (1 = *only Spanish/all Latinos/Hispanic* to 5 = *only English/all Americans*) with higher scores indicating greater acculturation. The SASH produces a total score ranging from 12 to 60 and three subscales (language preference, media preference, and ethnic social relations, and the scores ranged from 5 to 25, 3 to 15, and 4 to 20, respectively). Sample items include "What language(s) do you usually speak with your friends?" and "In what language(s) are the TV programs you usually watch?" The English and Spanish versions of the SASH's full scale and subscales have good reliability (α ranging from .78 to .92; Marín et al., 1987). The SASH's full scale and subscales have demonstrated adequate validity with a sample that included Spanish-speaking and non-Spanish-speaking Hispanics and non-Hispanic Whites, with the full scale correlating highly with generation ($r = .65$), length of residence in the United States ($r = .70$), age of arrival in the United States ($r = -.69$), and ethnic self-identification ($r = .76$; Marín et al., 1987).

Multidimensional Acculturative Stress Inventory (MASI). The MASI (Rodriguez, Myers, Mira, Flores, & Garcia-Hermandez, 2002) is a 25-item self-report questionnaire that assesses acculturative stress of individuals of Mexican origin currently in the United States. Participants rate each item on a 6-point Likert-type scale (0 = *no*, meaning not applicable) to 5 = *extremely stressful*). The MASI contains 4 scales (Spanish-competency pressures, English-competency pressures, pressure to acculturate, and pressure against

acculturation), with all scores ranging from 0 to 35, except for pressure against acculturation, which ranges from 0 to 20. Higher scores indicate greater pressure on all scales. Sample items include the following: "I feel pressure to learn English," and "I have been discriminated against because I have difficulty speaking English." The MASI's full scale and subscales have good reliability among adults of Mexican origin (α ranging from .77 to .94). The MASI has been shown to have good test criterion–related validity among adults of Mexican origin, with predicted significant correlations between subscale scores and a variety of criteria, including generation, proportional length of residence in United States, Spanish proficiency, English proficiency, activities in English, Latino cultural identity, activities in Spanish, and Anglo cultural identity (Rodriguez et al., 2002). A limitation of this measure is that it has only been validated with a sample of Mexican origin.

Treatment adherence checklist. Treatment adherence was measured with a treatment adherence checklist developed for this study. To generate the checklist items all study therapists were interviewed about therapeutic techniques they typically use with depressed clients. These techniques were incorporated into the checklist and included the following: encouraged emotional experiencing and expression, discussed transference issues, explored importance of childhood events, hypnosis, cognitive restructuring, guided imagery, relaxation, and eye movement desensitization and reprocessing therapy. In addition, four specific BA techniques were included: discussed the function of the client's behavior, scheduled new activities, discussed activity/homework obstacles, and focused on avoidance. These items were randomly interspersed with the other items. In addition, 2 items asked about general therapist behaviors: provided empathy and validation, and focused on the family. After each session, therapists were asked to check yes/no indicating if they engaged in the therapist behavior indicated by the item. In the Results section, checklist responses are reported as mean scores averaged across all sessions for all therapists with yes responses coded as 1 and no responses coded as 0. Possible scores for BA items ranged from 0 (*no BA techniques conducted on average*) to 4 (*all BA techniques conducted on average*); possible scores for general therapist behavior items ranged from 0 (*did not provide empathy or validation, did not focus on the family*) to 1 (*provided empathy or validation, focused on the family*).

The checklist also asked therapists to report the frequency and nature of homework assignments given and the degree to which previously assigned homework was completed (none, partially, or fully). At the end of the study, all homework assignments were compiled and rated by a blind rater, familiar with BAL, on whether or not the assignment was consistent with the BAL manual using a single item (consistent or not consistent with BAL).

Procedures

The original intention behind this study was to conduct a comparison between BAL and treatment as usual (TAU) at the clinic. The screening and pretreatment assessment procedure (described previously) and posttreatment assessments were conducted by an advanced graduate student, blind to condition, trained in the PRIME-MD and HRSD by the first author. The assessor and first author achieved 100% agreement on the PRIME-MD and greater than 70% agreement on the HRSD (item by item) with a practice client before starting the study. After completing the screening procedure, 24 clients were randomly assigned to TAU and BAL, and 20 clients started treatment (10 in each condition). Participants received up to 12 sessions over and up to 20 weeks. Participants completed the BDI-II weekly over the course of treatment. Following the 12th session or Week 20, whichever came first, the posttreatment assessment was completed, consisting of the HRSD and BDI-II. However, there were significant problems with TAU retention: Only one TAU client completed treatment, and 50% of the clients dropped out of treatment before Session 4. Furthermore, there were significant problems with TAU therapist adherence to study procedures resulting in more than 50% of TAU sessions without session data. Combined with the high drop-out rates, sufficient data did not exist for the group comparison.

Results

Participant Characteristics

Although both men and women were recruited, the sample consisted of all Latinas. See Table 1 for participant characteristics. In general, the sample was aged 40 years on average and mostly from Mexico (60%) or Puerto Rico (30%). Clients on average had 3 children, were diverse with respect to marital status, were mostly unemployed or partially employed, and had very low incomes. In terms of cultural variables, PHF scores indicated that both immediate and extended family played an important role in clients' lives. SASH total and subscale scores suggested that participants preferred to speak Spanish, view Spanish media, and socialize with Spanish-speaking individuals. MASI subscale scores suggested that clients did not experience Spanish-competency pressure or pressure against acculturation; however, the sample reported moderate pressure to acculturate and moderate English-competency pressure. At pretreatment, the sample demonstrated a mean BDI-II score of 35.60 ($SD = 12.26$) and HRSD score of 28.90 ($SD = 6.19$), indicating

Table 1. Demographic Characteristics of Sample

		BAL (n = 10)
Age	*M* (*SD*)	39.10 (13.14)
Country of origin	%	60% Mexico 30% Puerto Rico 10% United States
Time in United States	*M* (*SD*)	13.33 (11.86)
Employed	%	30% Employed
Income	*M* (*SD*)	$5,275 (6,187)
Marital status	%	40% Married 30% Common Law 10% Separated 10% Divorced 10% Never Married
Number of children	*M* (*SD*)	3.10 (2.69)
PHF	*M* (*SD*)	17.70 (3.80)
SASH	*M* (*SD*)	23.80 (10.37)
Language	*M* (*SD*)	8.90 (5.28)
Media	*M* (*SD*)	6.20 (3.12)
Ethnic social relations	*M* (*SD*)	8.70 (3.06)
MASI		
Spanish competency pressure	*M* (*SD*)	0.20 (.63)
English competency pressure	*M* (*SD*)	8.90 (9.04)
Pressure to acculturate	*M* (*SD*)	5.20 (5.22)
Pressure against acculturation	*M* (*SD*)	0.20 (.63)

Note: PHF = Pan Hispanic Familism Scale; SASH = Short Acculturation Scale for Hispanics; MASI = Multidimensional Acculturative Stress Inventory.

a moderate-to-severe and clinically significant level of depressive symptoms. See Table 2 for pretreatment means and standard deviations for the completer and intent-to-treat samples. According to the PRIME-MD, in addition to diagnoses of depression, one client met criteria for panic disorder, one client met criteria for generalized anxiety disorder (GAD), one client met criteria for alcohol abuse, and one client met criteria for GAD and alcohol abuse.

Treatment Adherence

Over the course of therapy, therapists reported engaging in a mean of 3.24 (*SD* = 0.43) BA techniques per session (of 4 possible techniques). Specific activation assignments were reported being scheduled in 93% of sessions

Table 2. BDI-II and HRSD at Pretreatment and Post-Treatment by Intent-To-Treat and Completers

	PreTreatment		Post-Treatment	
	M	*SD*	*M*	*SD*
BDI-II				
Intent-to-treat ($N = 10$)	35.60	12.26	17.60	16.47
Completers ($n = 6$)	34.00	13.62	12.33	11.86
HRSD				
Intent-to-treat ($N = 9$[a])	28.90	6.19	11.33	10.78
Completers ($n = 6$)	28.83	7.19	8.67	8.36

Note: BDI-II = Beck Depression Inventory-II; HRSD = Hamilton Rating Scale for Depression.
a. One client's post-treatment HRSD was not collected.

(excluding Session 12), with a mean of 2.6 specific activities assigned per session (median = 3, range = 1 to 6). Therapists reported reviewing assigned activities in 100% of sessions in which they were assigned. Therapists reported that most homework was partially completed (84% of sessions) and rarely fully completed (12%) or not completed at all (4%).

Of the homework assigned, all of the assignments were rated as BA consistent by the rater. Assigned homework that was recorded by therapists included activity monitoring, calling family, going to church, exercising and walking, listening to music, going to a diabetes management group, attending social events, going to the library, spending time with children and grandchildren, getting to work on time, cooking, visiting neighbors, employment seeking, calling social service agencies and working on related problems (e.g., immigration status), going to medical appointments, attending festivals, planning for a trip, talking with husband about parenting issues, asking others for help, saying no to requests, maintaining personal hygiene, going to the museum on free days, making a budget, looking for a used car, and taking English-language and computer classes.

Therapists reported engaging in very few non-BA techniques per session ($M = 0.02$, $SD = 0.06$). Therapists reported providing empathy and validation almost every session ($M = 0.87$, $SD = 0.19$) and focusing on the family once every 2 to 3 sessions ($M = 0.29$, $SD = 0.16$).

Treatment Progress and Retention

Three clients completed all 12 sessions (one in 13 weeks, one in 16 weeks, and one in 18 weeks), one completed 11 sessions in 16 weeks, two completed

10 sessions in 20 weeks (both would have continued if the study protocol allowed), one completed 5 sessions in 16 weeks (this client left the country for 2 months during treatment), two completed 2 sessions in 2 weeks, and one completed 1 session in 1 week. Averaging across clients, a mean of 7.7 (median 10) sessions were completed over a mean of 12.4 (median 16) weeks. Of the 4 clients who completed 5 or fewer sessions, 3 of them terminated without giving reasons for termination and 1 client terminated after 2 sessions because she became employed and reported being unable to attend therapy sessions (her BDI-II dropped from a 31 to a 10 during treatment).

Treatment Outcomes

Table 2 presents pretreatment and posttreatment BDI-II and HRSD scores for the completer and intent-to-treat samples. There was a significant decrease in depression severity on the BDI-II from pre- to post-treatment for completers, $t(5) = 5.69$, $p = .002$, representing a large effect size ($d = 1.67$). Similar results were found with the HRSD from pre- to post-treatment, $t(5) = 12.77$, $p < .001$, representing a large effect size ($d = 1.57$). Using the intent-to-treat sample, the decrease in depression severity also was significant for the BDI-II, $t(9) = 5.62$, $p < .001$ (the final session was used for clients who did not complete treatment), and HRSD, $t(8) = 8.31$, $p < .001$, representing large effect sizes (BDI-II, $d = 1.07$; HRSD, $d = 1.43$).

Figure 1 presents weekly BDI-II data for all clients, showing that for clients who completed treatment, all but one demonstrated a BDI-II of 10 or below at their final session. As per Dimidjian et al. (2006), we defined response as a 50% reduction in symptoms and remission as a BDI-II < 10 or a HRSD < 7. Using these criteria, 60% of participants (6 of 10) achieved response according to the BDI-II and 78% (7 of 9) achieved response according to the HRSD. Regarding remission, 60% of participants (6 of 10) achieved remission according to the BDI-II and 44% (4 of 9) achieved remission according to the HRSD.

The reliable change index (RCI; Jacobson & Truax, 1991) was calculated for BDI-II and HRSD scores using the formula of 1.96 times the standard error of change (formula is a transformation of the one presented by Jacobson and Truax, p. 14). Given that the sample was small, the required estimates of standard deviation and internal consistency for this formula were drawn from the two previous validation studies of the Spanish BDI-II (Novy et al., 2001; Wiebe & Penley, 2005). To be most conservative the lowest reported reliability (.91) and highest reported standard deviation (13.62) were used, resulting in a RCI threshold of 11.33 BDI-II points. Only 1 participant failed to meet this criterion; thus, 9 of 10 participants experienced a reliable change in depression according to the BDI-II.

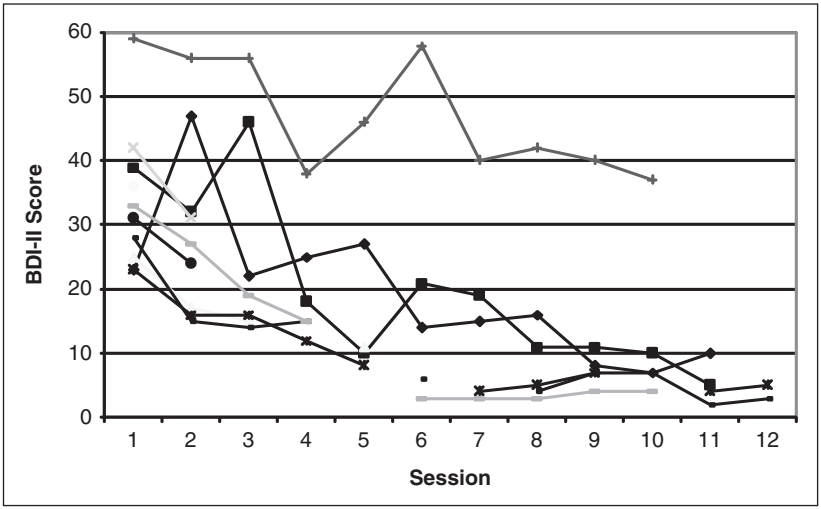

Figure 1. Beck Depression Inventory-II scores by session

Regarding reliable change on the HRSD, a reliability estimate of .72 and standard deviation estimate of 6.13 from Ramos-Brieva and Cordero-Villafáfila (1988) were used to estimate standard error of change scores. This resulted in an RCI threshold of 8.99 points. Eight of the 9 participants with valid follow-up HRSD scores experienced a reliable change in depression according to this threshold.

Discussion

The current study provides preliminary support for the feasibility of an adaptation of BA for depressed Latinos. Consistent with the deployment focused model of treatment development (Weisz, 2004), our treatment approach was developed in a community setting, using the therapists and clients for whom the treatment is intended. Specifically, the study took place at an urban, bilingual (Spanish–English) community clinic, and therapists received training at levels consistent with what is possible at such a clinic. Clients were typical of those who present with depression at this clinic: Spanish-speaking, Latina, unemployed or underemployed, low income, with several children, and diverse with respect to marital status. They preferred Spanish language, media, and socializing and felt moderate pressure to acculturate, although on average they had been living in the United States for over a decade.

First, it is important to note that BAL appears to have been implemented successfully in this setting with these clients. On average, three of the possible four BA techniques on the adherence checklist were reported as implemented by BAL therapists during each session. Furthermore, multiple BA-consistent homework assignments were assigned and reviewed in almost every BAL session. On average, assignments were partially but not fully completed by clients. Assignment content was wide ranging and appeared to be consistent with Latino cultural variables and the context of economic distress that characterizes this sample.

An encouraging finding of this pilot study is that BAL did well with respect to treatment engagement and retention. Although comparisons to TAU cannot formally be made in this study, a major reason for our inability to compare to TAU is that these clients did quite poorly in this regard. We note that the treatment engagement and retention rates for BAL were quite surprising to the clinic administrators and therapists who report that the modal number of sessions attended at the clinic is one. The majority of the BAL clients (70%) received "guideline-consistent care" of at least 4 sessions (Miranda, Chung et al., 2003; Miranda, Duan et al., 2003) and all but one of those completed 10, 11, or 12 sessions of treatment in 13 to 20 weeks. Miranda and colleagues reported guideline-consistent care rates of 53% for minority women receiving CBT and 30% for Latinos receiving CBT.

It may be the case that BA's simple, straightforward rationale, that is, emphasizing empowerment and problem solving, is a compelling fit for Latino clients and fosters treatment engagement. It also may be the case that specific modifications made to BA in the current study were useful. For example, the first session of BAL was designed specifically to immediately address basic knowledge about depression and potentially stigmatizing attitudes to minimize the potential for premature dropout (Alegria et al., 2004; Bein, Torres, & Kurilla, 2000). In addition, therapists were instructed in the first session to specifically discuss concerns about treatment dropout with their clients. The therapist emphasized coming to treatment as one of the activation targets and discussed obstacles that might get in the way of coming to the second session. The current findings are, of course, based on a small sample and call for larger comparison studies. Improving retention is a genuine need in Latino community clinics (Vega et al., 2007), and future research on BAL should address this issue as a priority.

Outcome analyses further underscore that BAL did quite well in this preliminary investigation. The majority of clients responded to BAL and approximately half achieved remission. These results are consistent with those found in larger trials that typically involve expert therapists, more intensive training

and supervision, and larger doses of treatment (i.e., BAL involved up to 12 sessions, whereas larger trials involve 16-20 sessions; Westen & Morrison, 2001). Outcomes are also equivalent to or superior than those reported in the literature on CBT for Latinos (Voss Horrell, 2008). The success of BAL speaks to the potential of BA as a potentially easy to train and disseminate empirically supported psychotherapy.

Very little is known about treating depression in Latino men, as most previous treatment studies with Latinos either only recruited Latinas, enrolled few Latino men, or did not report results by gender (Voss Horrell, 2008). It is clear that Latino men suffer significant rates of depression, although with less frequency than women, and most studies of depression among Latinos involve only female samples (Mendelson et al., 2008). Although the current study was not Latina specific, no men were successfully enrolled; thus, the study cannot comment on the effectiveness of BAL for men, and it raises concerns that must be addressed in future research about the feasibility of similar research with Latino men without explicit strategies in place to recruit them. It has been suggested that *machismo*, the Latino value of the father as the patriarchal decision maker who provides financial and emotional stability and protects the family from harm, is a key factor in Latino service utilization (Miranda, Azocar, Organista, Muñoz, & Lieberman, 1996). The development of recruitment and engagement strategies sensitive to *machismo* may be beneficial.

Several additional limitations to this study should be noted. Again, the sample was small and uncontrolled; thus, results may be unstable, and it is possible a comparison group also would have done quite well in this setting. Without a control condition showing differential improvement, we cannot attribute improvements specifically to BAL in this study. A second limitation is that therapist adherence data were collected via therapist self-report rather than direct observation, and BAL therapists may have biased their responses to favor BA techniques in order to be seen as adherent therapists. Future research should involve direct observation of therapist behavior to ensure that BAL is implemented as intended.

A third limitation is that because several additions were made to the BA package developed by Martell et al. (2001) and evaluated by Dimidjian et al. (2006), even if we were to attribute improvements to the treatment, it is unknown whether results of the current study are a function of the original treatment or the modifications. In other words, though certain basic cultural adaptations of BA were necessary simply to make the treatment work, it is unclear whether the more elaborate adaptations included in the BAL treatment manual are necessary. Without more sophisticated adherence data documenting the specific therapist behaviors engaged in by BAL therapists, there is little information available in the current study to speak to this issue.

A final limitation is the lack of follow-up data on clients. It is noted that it is relatively easy to achieve acute response and remission in depression trials, especially when the allegiance effect is in place as it was in the current trial (Luborsky et al., 1999). It is necessary to show sustained response and remission over extended follow-up periods to demonstrate that a treatment is robust with respect to relapse and has lasting effects (Hollon et al., 2005; Hollon, Thase, & Markowitz, 2002).

Despite these limitations, this study adds to the growing number of pilot studies that suggest that BA may be feasible, acceptable, and effective, not just in large trials of depression but also with specific populations in specific settings (Hopko et al., 2008; Hopko et al., 2003; Jakupcak et al., 2006; Porter, Spates, & Smitham, 2004), suggesting that the underlying model, emphasizing contact with positive reinforcement, and corresponding activation techniques may be broadly applicable. Several variants of BA now exist (Hopko, Lejuez, Ruggiero, & Eifert, 2003), including attempts to unify and organize all available BA techniques under one protocol designed to maximize the simplicity, disseminability, and power of the approach (Kanter et al., 2009). The current data are especially important given the need to address clear health disparities related to depression for Latinos with a simple, easy-to-train, and disseminate approach. In future, well-designed randomized trials are needed to explore the potential of BA to ameliorate depression (and coexistent anxiety), prevent relapse, and improve quality of life in this population.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

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Bios

Jonathan W. Kanter is an associate professor of psychology at the University of Wisconsin-Milwaukee. He directs the Depression Treatment Specialty Clinic and conducts research on depression, behavioral activation, and functional analytic psychotherapy, with a focus on underserved populations.

Azara L. Santiago-Rivera is a professor of counseling psychology at the University of Wisconsin-Milwaukee. She conducts research on Latinos and mental health issues, bilingual therapy, and the impact of environmental contamination on biopsychosocial well-being.

Laura C. Rusch is a pre-doctoral intern in clinical psychology at Duke University Medical Center, Durham, North Carolina. Her interests include behavioral psychotherapy for depression and reducing stigma associated with depression.

Andrew M. Busch is a post-doctoral fellow at the Centers for Behavioral and Preventative Medicine at the Alpert Medical School of Brown University. His research interests include behavioral treatments for depression and the adaptation of Behavioral Activation for novel populations.

Paul West is a Licensed Psychologist having obtained his doctorate at the University of Wisconsin-Madison. He directs the Behavioral Health Department of the 16th Street Community Health Center in Milwaukee, Wisconsin.