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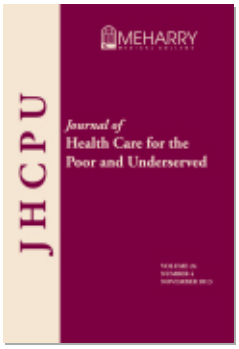

Journal of Health Care for the Poor and Underserved, Volume 19, Number 2, May 2008, pp. 466-477 (Article)

Published by The Johns Hopkins University Press
DOI: 10.1353/hpu.0.0032

Problem-solving Treatment for Depression among Mexican Americans in Primary Care

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Abstract: The need to identify and improve access to evidence-based treatments for depressive disorders and other mental health problems is a public health priority, particularly in relation to racial/ethnic minorities and other underserved groups. One hundred forty-six Mexican American primary care patients who met diagnostic criteria for major depressive disorder, dysthymic disorder, or depressive disorder not otherwise specified (NOS) were offered eight sessions of an evidence-based behavioral treatment, problem-solving treatment for primary care (PST-PC). Among participants who agreed to treatment (N=117), depressive symptom scores decreased over time; a minority of participants completed four or more sessions of PST-PC (N=55), and those participants had greater decreases in depressive symptom severity than participants who completed three or fewer PST-PC sessions (N=62) (Hopkins Symptom Checklist-20 scores declined on average 0.86 ± 0.97 and 0.40 ± 0.66 points for these groups, respectively, $p<.05$). More work is needed to enhance the engagement in treatments for depression, especially among Latinos in primary care.

Key words: Depression, Latino, primary care, behavior therapy, problem solving therapy.

Unipolar major depression ranked fourth among causes of the global disease burden in 2000[1] because of its early onset, prevalence, and associated morbidity and mortality. Depressive disorders are more common in primary care settings than in the general population. The 12-month prevalence of major depressive disorder in primary care settings is 14%[2] compared with 10.3% in the population.[3] Dysthymic disorder is about twice as prevalent in primary care (5.1%)[2] as in the population (2.5%).[3] The detection and treatment of depression in primary care is a high priority because more depressed patients are seen in primary care than in specialty care settings.[4,5]

Depression among Latinos. Some studies have found higher rates of depressive disorders among Latinos than among non-Latino Whites in population-based studies.[6,7] In primary care, significant depressive symptoms and depressive disorders have been reported as both more and less frequent among Latinos than among non-Latinos.[8–10] Factors that could account for racial/ethnic differences in rates of diagnosis include the sampling setting (primary care-based versus population-based samples), cultural

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differences in symptom reporting, degree of cultural competence of clinicians making the diagnoses, and degree of linguistic match between patient and practitioner.[7]

The Surgeon General's report calls for increased dissemination of and access to evidence-based treatments for mental disorders.[11] This need is especially acute in racial/ethnic minority populations.[12,13] Existing treatment guidelines[14] and reviews of efficacious treatments for depression[15] include both medication and non-medication treatment options for depressive disorders. For example, behavior therapy is considered a well-established, empirically-validated treatment for depression.[15] It has been noted in several studies that Latinos with depressive disorders are less likely to find antidepressant medications acceptable than non-Latino Whites are[16] and are less likely to take prescribed antidepressant medications.[17] Other research has found that Latinos are more likely to find counseling acceptable than Whites,[16] but that they tend to drop out of psychotherapy more frequently than non-Latino Whites.[12]

We previously reported the results of a study on the systematic screening and diagnosis of the presence of depressive disorders in Mexican American adults seeking primary care, and examined case detection rates by primary care providers.[18] In this paper we focus on the effectiveness of problem-solving treatment for primary care (PST-PC), a brief behavior therapy to treat depression in the primary care setting among individuals who met criteria for major depressive disorder, dysthymic disorder, or depressive disorder not otherwise specified (NOS). The primary purposes of this study were to investigate (1) the effectiveness of an evidence-based treatment, developed and tested previously for efficacy in racial/ethnic majority and minority samples in primary care settings,[19–22] among a Mexican American sample, and (2) patient satisfaction with treatment. Evidence of PST-PC's efficacy for depression suggested that it was suitable to disseminate and test in a single-group effectiveness study in primary care.

Methods

Participants. Potential participants were established patients of two rural primary care clinics in Fabens, Texas and Montana Vista, Texas. These communities are in federally designated health professional shortage areas and serve the surrounding impoverished *colonias* (neighborhoods); the population of each community is approximately 8,000. The screening and diagnosis procedure yielded 146 adults ages 18 and older who met diagnostic criteria for major depressive disorder (94.52%), dysthymic disorder (39.73%, with nearly all of these participants also meeting criteria for major depressive disorder), or depressive disorder NOS (4.11%).[23] In addition, these individuals did not have bipolar disorder or other psychotic disorders, and were not in psychotherapy.

Procedure and measures. As described in a previous paper,[18] 486 people were screened for the presence of depressive symptoms and 200 endorsed symptoms of dysphoria and/or anhedonia. Patients endorsing either one or both of those symptoms were invited to participate in the study, which included a diagnostic interview and, if the patient was diagnosed as depressed, completion of self-report questionnaires, eight sessions of behavioral therapy for depression (PST-PC), and a follow-up evaluation three months after the baseline evaluation. People who were willing to be screened, at least 18 years of age, and current clinic patients were escorted to private rooms and

administered the Patient Health Questionnaire (PHQ),[24] a 27-item questionnaire that queries symptoms associated with several possible classes of psychiatric disorders. The PHQ is the screening tool for the Primary Care Evaluation of Mental Disorders (PRIME-MD),[25] a structured diagnostic interview that evaluates mood and alcohol use disorders, including rule-outs for bipolar disorder, medication effects, or physical illness.

Participants who met criteria for one or more depressive disorders completed the HSCL-20 depression scale,[26] a 20-item inventory of self-reported depressive symptoms that has been shown to be reliable, valid, and sensitive to change as a function of treatment;[21,27] the 21-item version of the instrument demonstrated equivalence between Latino and European American college students.[28] Each item is rated on a 0 (*not at all*) to 4 (*extremely*) severity scale. The ratings on the 20 items were averaged and change in scores on the HSCL-20 (calculated as baseline minus follow-up scores) was retained for analysis. In this sample, internal consistency for the HSCL-20 items was good: $\alpha=0.88$ at baseline ($N=109$ with all items completed) and $\alpha=0.92$ at follow-up ($N=72$ with all items completed).

The follow-up evaluation was targeted to be scheduled three months after the baseline evaluation. If the participant completed the baseline evaluation (irrespective of the number of treatment sessions completed) and the staff had his or her telephone number, then, three months after the baseline evaluation, the staff made at least six attempts to contact him or her (on varying days and at different times of day). At the follow-up appointment, participants again completed the HSCL-20 and the Mental Health Statistics Improvement Program (MHSIP) Consumer Survey.[29] The MHSIP Consumer Survey is a 21-item self-report survey of general satisfaction, and satisfaction with access, quality, and outcomes regarding mental health treatment services in the past two months. Each item is rated as *not applicable* or on a 1 (*strongly agree*) to 5 (*strongly disagree*) scale. The average score of all applicable items was retained for analysis. In this sample, internal consistency was good, $\alpha=0.90$, based on $N=28$ who answered all 21 items as applicable (72 participants completed at least some of the items at the follow-up evaluation).

All research staff were Latino and fluently bilingual in Spanish and English, with Spanish being the first language for 80% of the staff. Because of concerns about a high rate of functional illiteracy in this population, participants were asked if they would prefer to complete the questionnaires on their own, or to have the researcher administer it via interview. Most participants (98.6%) chose to complete the instruments via interview. Of the participants who agreed to be interviewed, 88.3% preferred to be interviewed in Spanish. Valid versions of the PHQ and MHSIP Consumer Survey have been developed in Spanish,[29,30] but to assure that all measures were appropriate for the Mexican Spanish used along the U.S.-Mexico border, the measures were checked using translation and back-translation methods.[31]

The Institutional Review Board at the authors' institution approved this study. Participants who declined treatment in this study were offered referrals. Participants were given a gift certificate of their choice from local restaurants and variety stores worth $5 after completing the baseline and follow-up evaluations.

Treatment. The three therapists were students in a master's degree program in clinical psychology, of Latino ethnicity, and fluently bilingual in Spanish and English,

with Spanish being the first language for two of the three therapists. Two therapists were female and one was male. Training in PST-PC was provided by one of the authors (K.S.), who was initially trained by Drs. Mynors-Wallis[16] and Hegel for a multi-site trial of PST-PC,[20,32] and subsequently was the PST-PC trainer and supervisor for the trial by Ciechanowski and colleagues.[21] A primary purpose of this study was to examine PST-PC effectiveness in a community setting, which has been found to reduce depressive symptoms, compared with placebo and usual care.[19–22] All therapists received approximately eight hours of training that included didactics, studying a treatment manual,[33] observing live and videotaped modeling, and participating in role-playing practice supervised by the trainer. After the initial training, therapists received one to two hours of group supervision and case review each week, which is characteristic of community-based practice and the methodology of effectiveness studies.

A behavioral treatment based on the premise that problems in living cause and maintain depressive symptoms, PST-PC takes a structured, skills-based approach to identifying and addressing these problems in order for depressive symptoms to abate.[33] This treatment also emphasizes increasing positive reinforcement in the environment through systematically planning and engaging in pleasant activities. Participants were offered eight 50-minute sessions of PST-PC as part of the current study.

Data analysis. Comparisons of baseline evaluation variables were drawn for two sets of participant groups. First, we compared participants who declined treatment at the end of the evaluation with those who accepted treatment in terms of demographic characteristic [age, gender, years of education, household income (proportion of participants with household incomes greater than $20,000 per year), marital status (proportion of participants married or living with a partner), employment status (proportion employed)] and depressive symptom (HSCL-20 scores) variables. Second, participants who accepted treatment at the end of the baseline evaluation but did not complete any PST-PC sessions (due to the staff's inability to reach or schedule them) were compared with participants who completed one or more PST-PC sessions on demographic and depressive symptom variables. Kolmogorov-Smirov tests were used to test for assumptions of normalcy for continuous variables; the distribution of years of education was significantly different from normal ($Z=1.59$, $p<.05$). Between-group comparisons were performed using Fisher's exact or chi-square tests for categorical variables, as appropriate depending on cell sizes; Mann-Whitney U test for years of education; and t-tests for equal or unequal variances, as appropriate, for age and HSCL-20 scores.

Change in depression symptom severity over time was examined among participants who did not decline treatment at the end of the baseline evaluation, using a t-test to compare the differences between baseline and follow-up HSCL-20 scores for participants who received an adequate amount, or *dose*, of PST-PC (defined as 4 or more sessions equivalent to the total treatment time of 3.5 hours in the PST-PC trial by Mynors-Wallis and colleagues[19]) with those for patients who did not. Finally, follow-up evaluation values of the MHSIP Consumer Survey were examined descriptively and participants receiving an adequate dose of PST-PC versus those not receiving an adequate dose were compared using a t-test. SPSS version 14 (SPSS Inc., Chicago, IL) was used for data analysis.

Results

Participant characteristics. Most of the 146 participants were female (88%), were Mexican American (98%), were not employed (62%), had household incomes in the past year of less than U.S. $20,000 (83%), and were married or living with a partner (58%); on average, participants were 43 years of age, and had completed 8 years of formal education.

Treatment engagement. *Participants declining treatment*. At the end of the baseline evaluation, the majority of the participants eligible to receive treatment agreed to schedule one or more sessions (117 of 146, or 80%). The remaining 29 patients, however, changed their minds at the end of the evaluation and declined treatment; time conflicts and conflicting commitments were the most frequently cited reasons. As shown in Table 1, comparisons of patients who declined treatment versus those who accepted treatment at the end of the baseline evaluation revealed no significant differences.

Participants agreeing to but not engaging in treatment. The majority of participants who agreed to treatment could not be contacted to schedule an appointment or scheduled but did not keep their appointment (62 of 117, or 53%). As shown in Table 1, participants who completed no sessions were more likely to be younger than those who completed one or more appointments.

Participants completed an average of 1.86 PST-PC sessions. Among participants who kept one or more appointments, the number of completed appointments was one (n=18), two (n=10), three (n=3), four (n=3), five (n=1), six (n=3), or the maximum offered (eight sessions) (n=17). The reason for attending fewer than eight sessions (n=100) was most frequently staff being unable to reach the participant to schedule an initial appointment (phone disconnected or phone not answered after multiple attempts) (n=46). Other reasons for scheduling difficulties cited by participants were: changed his or her mind (n=34); not available when the clinic was open (n=9); lack of transportation (n=9); and lack of childcare (n=2). The association between the number of PST-PC sessions completed and baseline HSCL-20 depression score was of small absolute magnitude and did not achieve statistical significance ($r=0.16$, $p<.10$, $n=113$).

Change in depressive symptoms over time. The time between baseline and follow-up evaluations averaged 119.27 days (SD = 38.90), or approximately four months. Baseline HSCL-20 values ranged from 0.10 to 3.05. A t-test found that participants who received a putatively adequate dose of PST-PC (4 or more sessions, based on the study by Mynors-Wallis and collleagues[19]) had significantly larger decreases in their HSCL-20 scores than those who did not ($t(85) = -2.54$, $p<.05$). Participants who completed four to eight sessions experienced an average decrease in their HSCL-20 scores of 0.86 (SD = 0.97; complete pre- and post-treatment data on n=23 patients) whereas the HSCL-20 scores of participants who completed three or fewer sessions decreased less than half this magnitude (M = 0.40, SD = 0.66; complete pre- and post-treatment data on n=64 patients).

Consumer satisfaction. The association between the number of completed PST-PC sessions and the MHSIP Consumer Survey did not achieve statistical significance, despite a trend for more satisfaction reported by those who attended more sessions

Table 1.

PARTICIPANT CHARACTERISTICS AND GROUP COMPARISONS[a]

	Declined treatment (N=29)	Agreed to treatment (N=117)	Significance: declined vs agreed	Completed 0 sessions (N=62)	Completed 1–8 sessions (N=55)	Significance: 0 vs 1–8 sessions
Female, n (%)	26 (89.7)	101 (87.1)	p = 1.00	57 (93.4)	44 (80.0)	p = .05
Employed, n (%)	4 (15.4)	16 (14.2)	p = 1.00	12 (19.7)	4 (7.7)	p = .10
Income > $20K, n (%)	1 (3.7)	8 (7.2)	p = 1.00	4 (6.7)	4 (7.8)	p = 1.00
Coupled, n (%)	17 (58.6)	67 (57.3)	χ^2 (1) = 0, p = .90	34 (54.8)	33 (60.0)	χ^2 (1) = .3, p = .57
Mean years of education (SD)	8.1 (5.0)	8.2 (3.9)	U = 1669.5, p = .89	7.9 (4.0)	8.6 (3.7)	U = 1540.0, p = .36
Mean age (SD)	48.0 (14.6)	42.2 (14.2)	t (143) = 1.9, p = .05	39.6 (15.3)	45.2 (12.4)	t (114) = -2.1, p = .04
Mean initial HSCL-20 score (SD)	1.3 (.8)	1.6 (.7)	t (143) = -1.9, p = .06	1.6 (.7)	1.6 (.7)	t (114) = .1, p = .90

[a]Group differences tested by Fisher's exact test for gender, employment status, and income; by chi-square test for relationship status; by Mann-Whitney U test for years of education; and by t test for age and initial HSCL-20 score.

($r=-.22$, $p<.10$, $n=72$). There was no difference in consumer satisfaction for participants who completed four or more PST-PC sessions versus those who completed three or fewer ($t(70) = 1.59$, $p=0.12$), however; participants' scores ($M = 1.76$, $SD = 0.58$) indicated that on average they *agreed* (rating of 2) or *strongly agreed* (rating of 1) that their mental health services, access, and outcomes were satisfactory.

Discussion

The purpose of the study was to assess the effectiveness of a brief behavior therapy for depression in a sample of Mexican Americans attending primary care clinics. Due to the rapid growth of this demographic group in the United States,[34] the dissemination of treatments for depression shown to be effective in controlled clinical trials among Mexican Americans in primary care is a high priority. The treatment chosen was PST-PC because its efficacy had been demonstrated in multiple clinical trials, suggesting that it was suitable to test in a single-group effectiveness study; additionally, PST-PC has been successfully executed in clinical trials by people without extensive psychotherapy training (such as the student therapists in this study), a quality that facilitates dissemination.

Depressive symptom severity decreased significantly more among participants who completed four or more sessions of PCT-PC than among participants who completed three or fewer sessions. The average decrease in HSCL-20 scores of 0.86 among these participants compares favorably with HSCL-20 decreases observed in other depressed samples treated by PST-PC: decreases of 0.59 and 0.60 (Latino sample) were achieved in two studies,[21,22] although these studies' treatments also may have included antidepressant medications and although the participants were older than participants in the present study.

This study also presented an opportunity to provide behavior therapy to a population that typically would have little access to treatment. Unfortunately, we found that most depressed participants did not complete any treatment sessions: some participants declined treatment at the evaluation, others declined to schedule an appointment when a therapist contacted them, and still others never started because the staff was unable to reach them.

The challenge of retaining Latinos in psychotherapy has been noted previously, in general[12,35] and in psychotherapy research trials specifically.[36] Others have noted the difficulty of retaining low-income families in intervention studies due to frequent stressful life events (which could make therapy a lower priority than dealing with crises) and due to having fewer resources (such as telephones or cars).[37] Our study included several of the procedures that have been recommended previously by researchers working with depressed Latinos,[36] such as using bilingual and bicultural staff, and providing services free of charge. The practical barriers of attending treatment cited previously by others,[36] such as transportation and childcare, were mentioned by a minority of participants in the present study as reasons for not completing eight sessions. The primary challenge the staff encountered was being unable to reach participants to schedule PST-PC sessions. When valid telephone numbers for participants were available, the

therapists called participants in advance of each session, as previous researchers have recommended.[36]

There are many facets of the collectivist Latino culture that could contribute to under-use of mental health services and low therapy retention, including *simpatía* or *respeto* (respect), familism, and allocentrism.[35,38–40] *Simpatía* is defined as culturally mandated politeness, respect, and harmonious interpersonal relations;[38–40] courteous initial assent to study participation would be consistent with *simpatía*. Familism promotes a strong family identification, family loyalty, and feelings of obligation to support the family emotionally and materially.[38,39] Traditional Latino families rely more on themselves than on non-family members,[39] which may have important implications for the use of mental health services and outside assistance.[41] Allocentrism, closely tied to familism and similar to collectivism, emphasizes group rather than individual goals.[35,42] Overall, then, psychotherapy may be inconsistent with important cultural values for many Latinos.

Another source of retention difficulties could have been that participants agreed to receive treatment for their depression, but were not seeking it. Many Latinos attach a social stigma to seeking out or participating in mental health services.[41,43] Consistent with this notion, several study participants stated that they must be "crazy if they needed therapy."

Referring to cultural values of familism, *respecto*, and allocentrism, La Roche suggests that treatment for Latinos should focus on rapid symptom reduction in the early sessions, provide specific recommendations, and use structured and directive techniques.[35] Treatment with PST-PC seems to have these characteristics. However, the assumptions underlying PST-PC may not align with other cultural characteristics of Latinos, such as fatalism, or the belief that life problems are outside of one's control. Fatalism is associated with passivity,[44] which may be incongruent with the PST-PC model of empowerment and change through active engagement.

We did not query participants about their citizenship because of the potentially alienating effects of this question. But, as the clinics were in communities along the U.S.-Mexico border, it is likely that some participants were Mexican citizens and that difficulties crossing the border contributed to not coming to appointments or to having out-of-date contact information.

The psychotherapy outcomes literature suggests a positive association between number of therapy sessions and extent of improvement.[45] In the present study, participants who completed 4 or more sessions of PST-PC evidenced significantly more improvement than participants who completed fewer sessions. These results are encouraging in spite of the low number of study participants who completed the adequate dose of treatment because they suggest that some improvement in depressive symptoms can be achieved with few sessions, which is important given the challenges of retention of minority and low-income individuals in treatment. It should be noted that retention issues plague psychotherapy research. In an extensive naturalistic study of psychotherapy dose-response associations, the average number of sessions received by 6,000 psychotherapy patients was fewer than 5.[45]

Limitations and future directions. Limitations of the current study include the

use of a consecutive sample seeking primary care services, a single-group design, and the lack of longer-term follow-up information to investigate the durability of PST-PC effects among those who engaged in treatment. Although the internal consistency of the HSCL-20 and MHSIP Consumer Survey in this sample was quite good, we are not aware of studies that have demonstrated the validity of these measures when administered verbally, as was done in this study. These limitations and others can inform future studies with similar populations. For example, we did not assess the constructs of familism, *simpatìa*, allocentrism, or *respecto*, which would have allowed us to investigate their possible associations with treatment retention.

Several recommendations by earlier researchers to increase retention were followed in the current study (such as providing treatment with therapists of the same ethnicity and providing it free of charge) but these efforts were not sufficiently effective in increasing attendance. Identifying and addressing possible reasons for low retention, such as immigration and acculturation status, is another area for future efforts. Additionally, studies of Latino samples with more heterogeneity in countries of origin than the present study should consider potential differences in treatment engagement and effectiveness by country of origin.

Conclusion

In conclusion, 146 depressed Mexican American primary care patients were offered 8 sessions of PST-PC. Participants' depressive symptoms decreased over time, and the minority of participants who completed 4 or more sessions of PST-PC had greater decreases in depressive symptoms than participants who completed 3 or fewer. More work is needed to enhance the retention of depressed Latinos in treatment for depression.

Acknowledgments

The Texas Higher Education Coordinating Board provided funding for this study. The authors wish to express their appreciation to the staff and patients of the W.K. Kellogg Community Partnerships Clinics in Fabens and Montana Vista, Texas.

Notes

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