



Published in final edited form as:

Soc Sci Med. 2008 June ; 66(12): 2413–2424.

“Azúcar y Nervios: Explanatory Models and Treatment Experiences of Hispanics with Diabetes and Depression”

Leopoldo J. Cabassa [Assistant Professor],

University of Southern California Los Angeles, California, UNITED STATES, cabassa@usc.edu

Marissa C Hansen, M.S.W.,

University of Southern California, mchansen@usc.edu

Lawrence A Palinkas, Ph. D., and

University of Southern California, palinkas@usc.edu

Kathleen Ell, D. S. W.

University of Southern California, ell@usc.edu

Abstract

This study examined the explanatory models of depression, perceived relationships between diabetes and depression, and depression treatment experiences of low-income, Spanish-speaking, Hispanics with diabetes and depression. A purposive sample (n = 19) was selected from participants enrolled in a randomized controlled trial conducted in Los Angeles, California (US) testing the effectiveness of a health services quality improvement intervention. Four focus groups followed by 10 in-depth semi-structured qualitative interviews were conducted. Data were analyzed using the methodology of coding, consensus, co-occurrence, and comparison, an analytical strategy rooted in grounded theory. Depression was perceived as a serious condition linked to the accumulation of social stressors. Somatic and anxiety-like symptoms and the cultural idiom of *nervios* were central themes in low-income Hispanics' explanatory models of depression. The perceived reciprocal relationships between diabetes and depression highlighted the multiple pathways by which these two illnesses impact each other and support the integration of diabetes and depression treatments. Concerns about depression treatments included fears about the addictive and harmful properties of antidepressants, worries about taking too many pills, and the stigma attached to taking psychotropic medications. This study provides important insights about the cultural and social dynamics that shape low-income Hispanics' illness and treatment experiences and support the use of patient-centered approaches to reduce the morbidity and mortality associated with diabetes and depression.

Keywords

USA; diabetes; depression; Hispanics; qualitative research; depression treatments

Introduction

The co-occurrence of diabetes and depression disproportionately affects low-income Hispanics served in primary care. Diabetes is the 5th leading cause of death among Hispanics and is twice

Correspondence to: Leopoldo J. Cabassa.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

as prevalent in this population as in non-Hispanic Whites (Center for Disease Control and Prevention, 2004). It is estimated that depression affects 10% to 30% of individuals with diabetes and is associated with adverse diabetes outcomes leading to reduced functioning and quality of life (Ciechanowski, Katon, & Russo, 2000; Musselman, Betan, Larsen, & Phillips, 2003). The comorbidity of diabetes and depression is estimated to be around 25% in the elderly Mexican American population (Black, Lay, & Markides, 1999) and as high as 33% in Hispanic primary care samples (Gross, Olfson, Gameroff, Carasquillo, Feder, Lantigua, et al., 2005). Hispanics are also at higher risk than non-Hispanic Whites of developing diabetes-related complications, such as heart disease, blindness, kidney disease, and of receiving lower quality of care for their diabetes and depression (Lanting, Joung, Mackenbach, Lamberts, & Boostma, 2005; Institute of Medicine, 2003). Compared to non-Hispanic Whites, Hispanics are less likely to receive guideline congruent depression care even after controlling for clinical and economic factors (U. S. Department of Health and Human Services [USDHHS], 2001), more likely to be served by physicians who fail to detect a mental health problem when one exists (Borowsky, Rubenstein, Meredith, Camp, Jackson-Triche, & Wells, 2000) and at higher risk to discontinue antidepressant use during the first 30 days of treatment (Olfson, Marcus, Tedeschi, & Wan, 2006). As a result of these disparities in health and mental health care, Hispanics with diabetes and depression experience a disproportionate burden of disability associated with these conditions (Lanting et al., 2005; USDHHS, 2001).

Despite the high prevalence and disparities associated with diabetes and depression in the Hispanic community, little is known about the illness experiences of low-income Hispanics with these conditions. An *experience-near* (López & Guarnaccia, 2000) approach that relies on qualitative methods to examine the social and cultural context surrounding illness experiences from the individual's point of view can help address this lacuna in knowledge and elucidate how Hispanics make sense and attach meaning to these complex symptoms, experience treatments, and cope with these chronic illnesses. This study used a combination of focus group and in-depth qualitative interviews among Hispanics with diabetes and depression to examine explanatory models of depression, perceived relationships between diabetes and depression, and experiences with depression treatments.

Previous studies consistently find that Hispanics tend to perceive depression as a mental health problem caused by social stressors rather than biological or genetic factors (e.g., Cabassa, Lester, & Zayas, 2007; Givens, Houston, Van-Voorhees, Ford, & Cooper, 2007; Heilemann, Coeffey-Love & Frutos, 2004). Pincay and Guarnaccia (2007) reported that among different Hispanic groups (e.g., Puerto Ricans, Dominicans, Mexicans, Cubans), depression was equated to social isolation and the consequence of multiple stressors and losses, such as death of a loved one, loss of employment, financial crises, traumatic experiences, and physical illnesses. Similarly, Cabassa et al. (2007) and Helimann et al. (2004) found that low-income Hispanics, mostly of Mexican origin, attributed depression to interpersonal problems (e.g., divorce, domestic violence), lack of social support, and other external stressors. These conceptualizations of depression differ markedly from contemporary biopsychiatric models of depression and highlight how social and cultural dimensions of illness are essential in shaping Hispanics' explanatory models of depression. The explanatory models individuals hold about depression and its treatments influence their help-seeking behaviors (Kleinman, 1988) and, along with structural and economic barriers, may help explain some of the disparities that Hispanics face in the entry, retention, and treatment of depression (Lewis-Fernandez, Das, Alfonso, Weissman, & Olfson, 2005).

A salient limitation of the existing literature is that few studies have examined Hispanics' explanatory models of depression in the context of other comorbid conditions, such as diabetes. In one of the few studies exploring how Hispanic adults with type-2 diabetes viewed depression, Cherrington, Ayala, Sleath, and Corbie-Smith (2006) reported that depression and

diabetes were closely linked to the illness experiences of these individuals. For some, the diagnosis of diabetes evoked strong emotional reactions leading to anger and hopelessness, while difficulties in diabetes management led to anxiety and depression. The reciprocal link between diabetes and depression was also associated with the presence of social stressors and the availability or lack of family support. Previous studies among Latinos with diabetes have described a connection between strong emotions and diabetes through the folk illness of *susto* (e.g., Poss & Jezewski, 2002). This culturally-bound syndrome, translated literally as fright or soul loss, is mostly seen in some U.S. Latino groups and individuals from Mexico, Central and South America (American Psychiatric Association [APA], 2000). *Susto* is commonly attributed to a frightening event that causes the soul to leave the body resulting in bodily changes, somatic symptoms, vulnerability to physical and mental illnesses, and in extreme cases death (APA, 2000; Poss & Jezewski, 2002; Weller, Baer, Garcia, Glazer, Trotter, Pachter, et al., 2002). *Susto* may be one of the culturally mediated processes by which Hispanics link depression to diabetes. Among individuals with diabetes, depression has also been linked to diabetic-related complications, unemployment, functional impairment associated with diabetes and difficulties in adapting to the lifestyle changes imposed by diabetes (Chapman, Perry, & Strine, 2005).

The co-occurrence of depression and diabetes is not only common but can influence symptom appraisal, explanatory models, help-seeking, self-care behaviors, and treatment adherence. In order to understand how Hispanics manage diabetes and depression and develop better services, it is important to examine how these individuals make sense and cope with these two conditions in their everyday lives. In an effort to examine how these conditions are integrated into individuals' explanatory models, we elicited Hispanics' perceptions of how their diabetes and depression are related to each other and how one illness may impact the other.

In the present report, we used a combination of focus groups and in-depth semi-structured qualitative interviews to study the illness and treatment experiences of low-income Hispanic with diabetes and depression. An analytical approach rooted in grounded theory was used to examine explanatory models of depression, perceived relations between diabetes and depression, and depression treatment experiences.

Methods

Participants were selected from a randomized controlled trial (RCT), the Multi-faceted Depression and Diabetes Program for Hispanics (MDDP, PI: KE) designed to test the effectiveness of a health services quality improvement intervention on improvements in depressive symptoms, patient adherence to diabetes self-care regimens, glycemic control, functional status, and quality of life among low-income Hispanic adults with diabetes. Patients were recruited from two large public urban community-based clinics in Los Angeles, California, serving low-income, predominantly Hispanic patients. Participants were enrolled in this RCT if they had diabetes and screened positive for either dysthymia or major depression. Exclusionary criteria included: current suicidal ideation, inability to speak English or Spanish fluently, active cancer or other conditions that limits remaining life expectancy to less than 1 year, indication of alcohol abuse, recent use of lithium or antipsychotic medications, and evidence of cognitive impairment. Patients were randomized into usual care or a treatment condition in which they were offered, antidepressant treatment, 12 weeks of problem-solving therapy or both and received their preferred treatment.

Recruitment

All study procedures and informed consent forms were approved by the University of Southern California Health Sciences Institutional Review Board. Patients enrolled in the parent grant by August 2006 assigned to either the intervention or usual care groups who were Spanish-

speaking Hispanics and had completed baseline interviews were invited to participate in this qualitative study. Patients selected from the intervention group also had to complete at least one visit with their Depression Diabetes Care Specialist in order to be included in the present study. In these first visits, a full psychosocial assessment was conducted, patient education materials about depression were presented and discussed, and treatment (e.g., medication or psychotherapy) was initiated. This last criterion was used because we wanted to include patients who had received some type of depression care by the time of our interviews. A total of 57 patients were invited to participate. Twenty-eight (49%) were from the usual care group. Of those invited, 32 agreed to participate and 25 refused participation. The most common reasons for refusing to participate included: lack of transportation and conflicts with medical appointments or schedules. Of the 32 individuals who agreed to participate, 19 (59%) attended the focus groups. Research assistants conducted reminder telephone calls one day prior to each focus group to maximize attendance. No statistically significant differences in age, gender, years of education, marital status, and baseline depression levels were observed between those who participated in the focus groups and those who did not. Depression symptoms were assessed with the Patient Health Questionnaire 9-item index (PHQ-9) (Spitzer, Kroenke, & Williams, 1999), a self-report instrument that measures depressive symptom severity and has been shown to be a valid and reliable measure for Hispanics and low-income populations (Ell, Vourlekis, Muderspach, Nissly, Padgett, Pineda, et al., 2002; Miranda, Azocar, Komaromy, & Golding, 1998). Focus groups were stratified by intervention or usual care groups. A total of four focus groups were conducted; two from each strata.

Once focus groups were completed, we invited participants to take part in semi-structured in-depth qualitative interviews. Four individuals were screened out from receiving an invitation to participate in these interviews because they provided little information or clinically decompensated during the focus group discussions, and five declined to participate. The participant who decompensated was escorted out of the focus group interview by one of our trained interviewers who then followed the study's protocol to assess suicidal ideation and directly referred the participant to a therapist for evaluation and treatment. In the end, 10 individuals, 5 from the usual care and 5 from the intervention groups, participated in these interviews.

Interview Methods

Informed written consent was obtained from all participants. Focus groups were held at participants' primary care clinics. Each focus group, ranging from 3 to 6 participants, lasted approximately an hour and a half. The first author, a bilingual researcher with a Ph. D. in social work and trained in qualitative methods, facilitated all focus groups. A trained bilingual doctoral student in social work served as note taker and observer for these focus groups. The focus group guide was informed by our review of the literature and consultations with experts in qualitative methods and mental health services research. Using procedures recommended by Kleinman (1988) as a guide, the following themes were explored: (1) explanatory models of depression, (2) perceived relationship between diabetes and depression, (3) help-seeking behaviors for depression, and (4) depression treatment experiences. In this study, we only report findings for themes 1, 2, and 4.

Ten individual interviews were done either in person at the participants' primary care clinic (n =7) or by telephone (n =3) and lasted approximately an hour. Both the first and second authors conducted these interviews. The interview guide included themes explored in the focus group guide as well as new themes (i.e., stigma, attitudes and knowledge of depression and its treatments) that emerged from our preliminary analysis of focus group interviews. Focus group and interview guides are available upon request. Interviewers also completed interview

summaries after each interview briefly describing their personal observations and interview process for both focus group and individual interviews.

Data Analysis

Interviews were digitally recorded and professionally transcribed. A trained research assistant checked the quality of the transcripts by simultaneously listening to the recorded interviews while reading the transcripts. This approach enabled us to evaluate the quality of the transcripts and correct any mistakes found in the transcription process. Cleaned transcripts were purged of identifying information and entered into *Atlas.ti* (Muhr, 2004), a qualitative data management software.

Data were analyzed using the methodology of coding, consensus, co-occurrence, and comparison (Willms, Best, Taylor, Gilbert, Wilson, Lindsay, et al., 1992), an analytical strategy rooted in grounded theory (Glaser & Strauss, 1967). We developed a code book from the focus group interviews and then added new codes as we analyzed the individual interviews. The following steps were taken to create this coding scheme. First and second authors: (1) reviewed transcripts and interview summaries; (2) independently developed codes based on a priori (i.e., themes from the focus group or individual interview guides) and emergent themes; and (3) wrote analytical memos describing analytical decisions, and definitions of codes using direct quotes from text segments. We then conducted weekly meetings to debrief, discuss interpretations, resolve disagreements through consensus, refine and identify new codes, and finalize the code book. We used *Atlas.ti* software for line-by line coding of all transcripts and drafted reports, queries, and memos to compare findings from both focus group and individual interviews. We then combined results from these two sets of data because there was extensive overlap in themes between them.

Results

Participants

Nineteen individuals participated in the current study. Participants averaged age was 55 years (range 44–63 years, $SD = 5.6$). Sixteen were female and three were male. Only one participant had completed 12 years of education, seven had some high school, and 11 had less than 7 years of education. All participants were foreign-born; 18 were of Mexican origin and one was Peruvian. On average, participants had lived in the U.S for 25 years (range 2–49 years, $SD = 10.8$). Twelve were married, two were separated, one was widowed, one was divorced, and three were never married. Only 12 reported having some type of health insurance. Their baseline depression level measured by the PHQ-9 ranged from 10 to 20 and averaged 15 ($SD = 2.5$) indicating that most patients had significant depression by the time they were enrolled in the parent grant and their depressive symptoms ranged from moderate to severe. Their average HbA1c (glycosylated hemoglobin, a measure of blood glucose) level at the time of enrollment into the parent grant was 8.4 % (range 6%–11.5%, $SD = 1.57\%$). We categorized participants into good and poor glycemic control using the established recommendations from the American Diabetes Association (2003) of what constitutes good metabolic control of glucose (HbA1c below 7%) among diabetic patients to prevent complications. Based on this criterion, 8 (42%) reported good glycemic control. No significant differences were reported on age, gender, years living the U.S. marital and health insurance status, depression and HbA1c levels between participants from the intervention and usual care groups (results not shown, available upon request). We also examined trends in the data across all these variables and found no potential differences between these two groups.

The Experience of Depression

Typical symptoms—Virtually all participants described depression as a serious condition that impacted their functioning and ability to engage in daily activities. The most salient symptoms used to describe depression included lack of energy, motivation and interest in pleasurable activities, feeling *decaida(o)* (downhearted) and *debil* (weak/frail).

For me depression is ... when one stops doing many things that one does. Not because one wants to stop doing them, but because one doesn't have the energy ... one doesn't have the interest or sometimes one says: Why live? (Female Respondent: Interview)

Most participants described their depression not as a chronic ailment but as a cyclical and intermittent condition, "something that comes and goes." Suicidal thoughts were also commonly reported. These thoughts ranged from describing lethal intents (e.g., jumping out of a building) to more subtle suicidal ideations with no clear intent or means, such as wanting to sleep and not wake up. Suicide was described as a way to stop one's suffering and despair, as relayed by this female focus group participants:

There are moments when I want to get on top of the building without telling anyone, without anything and throw myself of the desperation I have.

Somatic complaints and anxiety-like symptoms played a prominent role in how participants described their depression. Headaches, chest pains, feeling tired, and muscle aches were some of the symptoms equated with depression. Common anxiety-like symptoms included wanting to run away, shortness of breath, heart palpitations, and feeling as if they are losing control of their emotions. The term *desesperación* (desperation) was used by many participants to describe how these somatic and anxiety-like symptoms were linked to their emotional health. For example, a female participant in her in-depth interview described how her worries turned into ruminating thoughts that impacted her ability to function. These excessive worries and intrusive thoughts transcended the emotional sphere and were experienced through physical symptoms, as if her head was going to explode.

My head goes crazy of so much thinking. Sometimes I don't want to think anymore because I feel, you know what I feel, like a pain in my head ... as if my head was going to explode. As if a balloon was inflating in here [pointing to her head]... with pain. ... I don't know why.

Nervios—In three of four focus groups and in seven of ten in-depth interviews, the cultural idiom of *nervios* was used to describe a range of symptoms associated with depression, such as feeling anxious and stressed, inability to fall asleep, and headaches. Most patients talked about how their *nervios* were exacerbated by presence of stressful life circumstances (e.g., loss of employment, death of loved one, interpersonal problems). *Nervios* was also used to describe the emotional changes associated with their diabetes. A female participant from one of the focus groups discussed how her diabetes altered her nerves. She noticed how diabetes impacted her mood and made her vulnerable to becoming irritable.

When I started with my diabetes, my character changed. ... Any little thing alters your nerves. Then my son would tell me: "Mom, you used to be hot-tempered but now you are worse."

Cause—Participants equated depression to the accumulation of multiple external and interpersonal stressors. Although we explored biological causes of depression (e.g., chemical changes in the brain), participants did not endorse these causes in any of the focus groups or in-depth interviews. Common causes of depression reported included loss of employment and functioning, failing health, economic strains, domestic violence, and caregiving burdens. Illustrative quotes describing common causes are presented in Table 1. These quotes exemplify

how participants' explanatory models of depression were linked to the social dimensions and consequences of their illness.

Diabetes and Depression

Participants described the relationships between their diabetes and depression in several ways. First, many participants attributed their depression to the loss of functioning associated with their diabetes. Diabetes brought about major changes in functioning that limited participants' ability and capacity to work and engage in daily activities. The comments made by this male participant in his in-depth interview exemplify how reductions in functioning lead to his depression:

There are many things one can't do. For example, be out in the sun, do lots of exercise, it affects you because your blood is not as strong as before. Then one is weak ... that affects you a lot. Then comes depression ...

Second, the struggles to adapt and cope with the lifestyle changes in diet, exercise, reduction in sexual activity, and the demands of treatments imposed by their diabetes had an emotional impact in participants' life. Many felt diabetes was a complicated illness that was stronger than them. Several considered diabetes a death sentence since they had seen family members die from complications of diabetes. Some worried about the long-term effects of diabetes on their health and well-being. Those unable to accept and cope with their diabetes talked about how they isolated themselves from friends and family members, stopped engaging in pleasurable activities, did not follow their diets and treatment regimen and began to experience common depressive symptoms (e.g., lack of energy, insomnia, anhedonia).

Many participants expressed concerns about having to rely on medications to control their diabetes and the long-term effects that these medications will have to their bodies. They felt dependent on these medications and that their health was no longer in their hands. These uncertainties about the future and loss of control over their own health and bodies affected many at an emotional level and caused emotional distress. Male and female participants also talked about how diabetes diminished their sexual drive impacting their intimate relationships with their spouses. These difficulties strained relationships and contributed to their depression.

Third, participants discussed how diabetes directly impacted their emotional health. They described how mood swings were related to their diabetes. Many noticed how fluctuations in blood sugar levels evoked strong emotional reactions, such as feeling fatigued, irritable, and *sin animo* (discouraged). Diabetes was seen as an illness that affected a person's physical and emotional health. Lastly, several participants discussed how depression disrupted their self-care behaviors. These participants described how depression directly impacted their ability to take care of their diabetes by losing interest in caring for their diabetes, forgetting to take medications, and not following their diet and exercise regimen. One female participant in her in-depth interview shared, "when I fell into a depression I didn't care about the *azúcar* (sugar) because I even stopped eating and I was very skinny."

Depression Treatment Experiences

Thirteen participants had received some type of depression treatment by the time they were interviewed. Nine received antidepressant and counseling; two received antidepressants only; and two received counseling only. When discussing their treatment experiences, these participants discussed concerns and benefits of taking antidepressants and their experiences and satisfaction with psychotherapy. Consistent with existing studies, many felt that antidepressants were addictive and described how these attitudes impacted their initiation and adherence, as illustrated in the following comment.

The only one I sometimes don't want to take is the one for my nerves. Because, I don't know, many people tell me ... one pill is not going to work, you will have to take two, you will have to take three. I don't want to be taking and taking the medicine... many people say that by taking these pills you become addicted and then you want it like it was a drug, those pills for depression or for nerves. (Female Respondent: Interview)

The fear of addiction and harm was prevalent among our sample. Many reported that these negative attitudes were reinforced by comments from friends, family members, and information heard from Spanish-language media in popular radio and television shows.

I don't know a lot about that [referring to antidepressants] but I've heard from a program on the radio... that they have hurt people ... and sometimes they haven't come out better. (Female Respondent: Focus Group)

Another common concern was adding another "pill" to an already complicated medication regimen. The majority were fearful of adding another medication because they felt it could be harmful to their bodies. In fact, some participants strongly believed that taking many medications could damage specific organs (e.g., bladder, kidneys). One female participant in her in-depth interview explained this concern:

When one takes all these medicines, then there comes all these repercussions that bring other things, other illnesses... with your heart, your kidneys, with this or that... because medicines have their good side and they have their bad side because they provide relief for one thing but do harm to another.

Participants also talked about the stigma attached to taking antidepressants. Many believed these medications were only used to treat crazy individuals (*locos*) with serious mental health problems and were afraid these medications could damage their brains. Some reported hiding their diagnosis and treatments from family members and friends in order to avoid being labeled as *locos* and bringing shame to their families.

My sister began to take medicines for depression and her husband would often say to her "you are crazy" ... Then if I say that I'm also taking medicines for depression, he is going to say that now everyone in the family is crazy, that is why I didn't want to say. (Female Respondent: Interview)

Others resisted taking these medications because they did not see their problem as a mental illness that required medications as one female participant in her in-depth interview put it:

I said that is being *loco*, taking medicines for depression. I'm not depressed... depression is a mental problem... I don't have that, I have diabetes. I have other problems, but not a mental problem.

Participants who took antidepressants (n = 11) mentioned the positive effects and perceived benefits of taking these medications. Participants described how antidepressants made them feel relaxed and less depressed, helped them sleep through the night, and gave them more energy during the day. They reported that these changes were gradual and took weeks for them to notice relief from their symptoms.

The pill really helps a lot ... because it's a terrible thing when one has all those things of depression, that one feels all that anxiety, with the wish to run, to cry... it's a horrible thing what one feels and well with the pill, well it does help. (Female Respondent: Focus Group)

Participants also noted the importance of taking personal responsibility in following doctors' recommendations and adhering to antidepressant treatment. As illustrated in the following

comment by a female respondent in her in-depth interview, medicines help individuals overcome their depression only if they make the effort to take their pills.

Well it does help, we can say physically it helps your body from the inside. It is working from the inside and we are working with the will to do it. Look, because if you don't do it and don't take your medicines it's not even caring about yourself, because you are taking care of yourself if you are taking the medicines your doctor is prescribing. Then the doctor does his part by prescribing it and now comes your will-power to continue living, to continue moving forward you have to take your medicine.

All participants recruited from the intervention arm (N = 12) and one from the usual care group had received some type of psychotherapy by the time they were interviewed. The majority reported positive experiences with therapy and talked about how it helped them cope with interpersonal problems, abusive relationships with spouses, and gained problem solving skills to confront life stressors.

It helped me improve my character, to not feel with so much anger. It helped me to improve with my husband. (Female Respondent: Interview)

Many female participants who were experiencing violent relationships with their spouses expressed how therapy helped restored their self-worth. One female respondent shared with the group, “[my counselor] made me feel that I have lots of *valor* (self-worth).” Therapy provided them a safe place to talk about these difficult relationships and gain valuable skills to cope with their abusive husbands.

Psychoeducation was an important aspect of therapy for many participants. They appreciated how therapists took the time to explain how therapy and medications work and were available to answer any questions participants had about their treatments. As one female participant in group discussion noted while describing her therapist, “The patience to explain everything. Tell us what we ignore and yes one starts to feel more relaxed with her.” Participants also mentioned how the reassurance and support they received from therapists was instrumental in dispelling misconceptions about antidepressants and helping them continue their treatment.

But [my counselor] told me, many people think antidepressants bring lots of consequences but they are like any other pill, like the ones you take for your diabetes. (Female Respondent: Focus Group)

Therapy was described as a safe place where participants could openly discuss their problems and receive support and advice from a trusted individual. *Desahogarse* (unburdening oneself), described as a process of expunging emotions from the body through the act of *platicando* (talking), praying and crying, was a central theme of how participants talked about the benefits of therapy. Therapy provided a secure outlet where participants could engage in the act of *desahogarse* with someone they trusted and who listened to them without rendering any judgments. This release of emotions helped them feel less isolated and represented for many a tangible way to cope with their problems and receive relief from their suffering.

I unburden myself by talking, I try to take it all out because if I keep it in is worse for me. (Female Respondent: Focus Group)

Most participants focused on the interpersonal aspects of care when discussing their experiences with psychotherapists and other medical providers (e.g., nurses, doctors). They valued providers who were warm, listened to them, and showed genuine respect and trust. As one female participant noted in the group discussion, she wanted a provider “that listens to her ... inspires trust.” Lastly, participants talked about the importance of having providers who show sympathy and interest to their patients. A female participant in her in-depth interview

captured a common sentiment about what can be done to improve depression care at her clinic and illustrated the saliency interpersonal aspects of care have for these participants:

Moderator:: What recommendations do you have for improving depression treatments?

Patient:: I think talking to patients, trying to understand what we feel. Doctors play an important role by the care they give... I mean one word can hurt someone... On the other hand, if one nurse treats you well, the receptionist, the doctor, one feels the trust to talk, to tell them how I feel... Then if you come and they don't give you the opportunity to talk, to express how you feel, then they are not going to know.

Discussion

Participants perceived depression as a serious debilitating condition. Somatic and anxiety-like symptoms were commonly used to describe depression, and these symptoms were connected to the emotional distress surrounding participants' suffering. The experience of *desesperación*, common among many of our participants, illustrated how individuals' emotional distress caused by the accumulation of social stressors surfaced as physical symptoms (e.g., headaches, chest pain, shortness of breath). Depression was characterized as a condition that blends somatic, anxiety-like, and emotional symptoms that seriously impacts a person's functioning.

Another important finding regarding participants' experiences of depression was the use of the cultural idiom of *nervios* to describe, categorize, and make senses of depression. Cultural idioms of distress encode local understanding of symptoms and provide individuals meaningful expressions for explaining their illness experiences and suffering (Kleinman, 1988). *Nervios*, a common idiom of distress among Latinos in the U. S. and Latin America, includes an array of symptoms, such as fear, anxiety, irritability, depression, headaches, anger, worries, and loss of control (Guarnaccia, Lewis-Fernandez, & Marano, 2003). This idiom "refers both to a vulnerability to stressful life experiences and to a syndrome brought on by difficult life circumstances" (e.g., interpersonal problems, strain in social roles, death of loved ones; APA, 2000, p. 901). *Nervios* and not the cultural idiom of *susto* was used by participants to describe their illness experiences. Depression was not linked to a specific frightening event or soul loss, key features of *susto* (Weller et al., 2002). Instead, their illness experiences were placed within a larger social context characterized by stressful life circumstances (e.g., poverty, caregiving burden) that impacted their physical and mental health. *Nervios* provided our participants what Guarnaccia and colleagues (2003) have called a "popular nosology", that is a common language informed by local knowledge and used to express and articulate the intersection they perceived between their illness and social suffering.

The saliency of the social context in participants' experiences of depression was also apparent in the causes they attributed to this condition. Consistent with other studies (Cabassa et al., 2007; Pincay & Guarnaccia, 2007), depression was perceived as a cyclical condition linked to the accumulation of interpersonal turmoil and social stressors. Participants' explanatory models of the causes of depression were inseparable from the social dimensions (e.g., economic strains, loss of employment, caregiving burdens) that surrounded their illness experiences. Depression was described as a condition caused by outside pressures and stressors that impacted the individual at both an emotional and physical level.

Participants' discussions about diabetes and depression revealed a reciprocal relationship between these two conditions. For some, diabetes was a major contributing factor of depression either through reductions in functioning or the burden of living and coping with a chronic medical illness. These findings are consistent with those reported in other studies examining mechanisms linking diabetes and depression (e.g., Chapman et al., 2005). Others reported how

diabetes induced an array of symptoms related to depression. Proinflammatory cytokines, common among individuals with diabetes, produce a cluster of symptoms, such as fatigue, anhedonia, and reduced psychomotor activities among others, that overlap with depression and may be a plausible physiological explanation for this perceived relationship (Musselman et al., 2003). As reported elsewhere (Ciechanowski et al., 2000; Cherrington et al., 2006), depression interfered with self-care behaviors and management of diabetes. These findings highlight the different pathways by which diabetes and depression impact one another among low-income Hispanics.

Several intriguing findings emerged regarding participants experiences with depression treatments. Fears about the addictive and harmful properties of antidepressants, worries about taking too many pills, and the stigma attached to taking psychotropic medications were some of the common concerns reported. These findings contribute rich contextual evidence to the existing literature (Cooper, Gonzales, Gallo, Rost, Meredith, Rubenstein, et al., 2003; Givens et al., 2007) reporting common apprehensions and misconceptions Hispanics have toward antidepressants. Many of our participants described how these concerns were prevalent in the community and directly impacted initiation and adherence to treatments. However, these misconceptions toward antidepressants were not static. Some participants talked about how the information and encouragement they received from their therapists and/or primary care doctors helped appease their fears and concerns toward antidepressants. Those who took antidepressants reported positive experiences with these medications. These findings suggest that a proactive approach in which clinicians assess and address the concerns and fears Hispanic clients may have toward antidepressant medications can help reduce misconceptions about treatment and improve treatment initiation and adherence.

Previous studies have documented Hispanics' preference of psychotherapy over medications, yet little is known about why this preference exists (Cooper et al., 2003; Dwight-Johnson, Sherbourne, Liao, & Wells, 2000; Givens et al., 2007). Our study provides some explanations for this preference. The saliency of social stressors in participants' explanatory models of depression suggest that psychotherapy is more aligned with their perceived needs and may provide a more tangible treatment to address these social problems than medications. Psychotherapy contrasted with other medical encounters in that participants felt they received much needed information that raised their awareness about depression, reduced stigma, and provided valued interpersonal support and encouragement to remain in treatment. Psychotherapy was also congruent to the cultural value of *desahogarse* (Jenkins & Cofresi, 1998), providing a safe context where participants could unburden their problems and receive advice and support from a trusted individual. Lastly, participants talked about how they valued providers who were warm and respectful, showed genuine sympathy, and listened to them. These characteristics reflect key cultural norms, such as *respeto*, *simpatía*, and *confianza*, that Hispanic cultures value in interpersonal relationships and can inform the tailoring of depression treatments to fit Hispanics' cultural values and norms (Interian & Díaz-Martínez, 2007).

Limitations

This study has several limitations. Results may not be generalizable to other low-income Hispanics with diabetes and depression in the U. S. since participants were not randomly selected and came from an RCT study based at two large public community-based clinics in Los Angeles, California. As noted earlier, most of our participants were foreign-born Mexican females, thus results may not accurately portray the illness and treatment experiences of Hispanic males, U.S.-born Mexicans and other Hispanic subgroups. Future studies are needed to include more Hispanics males, an under-studied population, and examine variations among different Hispanic groups. In addition, the use of a clinical sample involved in diabetes and depression care may have overestimated knowledge about these conditions and its treatments.

It may have also excluded individuals who somatized their depression since they may have been missed by the depression screener (PHQ-9) used in the parent grant. However, the uniqueness of our sample and the combination of focus group and in-depth interviews enabled us to elicit rich contextual information rarely reported in the literature. The lack of a comparison group prevents us from concluding whether these findings are unique to low-income Hispanics or are generalizable to other ethnocultural groups. Lastly, given the exploratory nature of this study results should be used as hypotheses and tested in larger representative samples.

Implications and Conclusion

This study used an *experience-near* approach that produced important insights about the cultural and social dynamics that shaped low-income Hispanics' illness and treatment experiences with diabetes and depression. Findings revealed that somatic and anxiety-like symptoms, *nervios*, and the accumulation of social stressors were central themes in low-income Hispanics' explanatory models of depression. These findings suggest that clinicians elicitation and attention to individuals' explanatory models in the assessment and treatment process can help identify key cultural (e.g. idioms of distress) and social (e.g., unemployment, caregiving burdens, poverty) factors that may impact diagnostic accuracy, patient-provider communication, treatment engagement, and quality of care. Moreover, depression treatments that ignore the social dimensions surrounding the experience of depression risk alienating Hispanic patients, resulting in premature termination of services or low adherence to care. The incorporation of case managers into evidence-based depression treatments can help address the social stressors faced by low-income individuals improving access, quality, and outcomes of care (e.g., Miranda, Azocar, Organista, Dwyer, & Areán, 2003).

The perceived reciprocal relationships between diabetes and depression observed in this study highlight the multiple pathways by which these two illnesses impact each other. These findings support the integration of diabetes and depression treatments to improve clinical outcomes and quality of life (Katon, Von Korff, Lin, Simon, Ludman, Russo, et al., 2004). Treatment experience findings emphasize the need to develop community-based psychoeducational approaches in Hispanic communities to dispel misconceptions about antidepressants, reduce stigma, and raise awareness about the benefits of depression treatments. These findings also suggest that structured medication management programs that actively address patients' concerns and fears about medications, engage patients into treatment, and provide ongoing support and monitoring can reduce treatment drop-out and non-compliance among low-income Hispanics. Lastly, Hispanics' preferences for psychotherapy seem to be linked to the saliency of social stressors in illness experiences, the cultural value of *desahogarse* and the importance of interpersonal aspects of care. Given the high prevalence and detrimental outcomes associated with the co-occurrence of diabetes and depression, more studies are needed to examine how low-income Hispanics and other underserved communities conceptualize and cope with these illnesses in order to develop better patient-centered interventions aimed at reducing the morbidity and mortality associated with these disabling conditions.

Author Comments

This research was supported in part by the National Institute of Mental Health (NIMH) grant 5R01MH068468 to K. Ell and an NIMH supplement award to this same grant. We wish to thank Judith Pleitez, Erica Lizano, and Yvonnee Paredes-Alexander for their help in the recruitment and interviewing of participants, and review of transcripts.

References

- American Diabetes Association. Report of the expert committee on the diagnosis and classification of diabetes mellitus. *Diabetes Care* 2003;26:S5–S20. [PubMed: 12502614]
- American Psychiatric Association. *Diagnostic and statistical manual of mental disorders: Text Revision*. 4 ed.. Washington, D. C: American Psychiatric Association; 2000.

- Black SA, Ray LA, Markides KS. The prevalence and health burden of self-reported diabetes in older Mexican Americans: findings from the Hispanic established populations for epidemiologic studies of the elderly. *American Journal of Public Health* 1999;89(4):546–552. [PubMed: 10191799]
- Borowsky SJ, Rubenstein LV, Meredith LS, Camp P, Jackson-Triche M, Wells KB. Who is at risk of nondetection of mental health problems in primary care? *Journal of General Internal Medicine* 2000;15:381–388. [PubMed: 10886472]
- Cabassa LJ, Lester R, Zayas LH. "It's like being in a labyrinth." Hispanic immigrants' perceptions of depression and attitudes toward treatments. *Journal of Immigrant and Minority Health* 2007;9:1–16. [PubMed: 17001516]
- Center for Disease Control and Prevention. Health disparities experienced by Hispanics: United States. *Morbidity and Mortality Weekly Report* 2004;53(40):935–937. [PubMed: 15483525]
- Chapman DP, Perry GS, Strine TW. The vital link between chronic disease and depressive disorders. *Preventing Chronic Disease* 2005;2(1):1–10.
- Cherrington A, Ayala GX, Sleath B, Corbie-Smith G. Examining knowledge, attitudes and beliefs about depression among Latino adults with type 2 diabetes. *The Diabetes Educator* 2006;32(4):603–613. [PubMed: 16873598]
- Ciechanowski PS, Katon WJ, Russo JE. Depression and Diabetes: Impact of depressive symptoms on adherence, function, and costs. *Archives of Internal Medicine* 2000;160(21):3278–3285. [PubMed: 11088090]
- Cooper LA, Gonzales JJ, Gallo JJ, Rost KM, Meredith LS, Rubenstein LV, Wang NY, Ford DE. The acceptability of treatment for depression among African-American, Hispanic and White primary care patients. *Medical Care* 41 Apr;:479–489.
- Dwight-Johnson M, Sherbourne CD, Liao D, Wells KB. Treatment preferences among depressed primary care patients. *Journal of General Internal Medicine* 2000;15:527–534. [PubMed: 10940143]
- Ell K, Vourlekis B, Muderspach C, Nissly J, Padgett D, Pineda D, Sarabia O, Lee P. Abnormal cervical screen follow-up among low-income Latinas: Project SAFE. *Women's Health & Gender Based Medicine* 2002;11:1–13.
- Givens JL, Houston TK, Van Voorhees BW, Ford DE, Cooper LA. Ethnicity and preferences for depression treatment. *General Hospital Psychiatry* 2007;29(3):182–191. [PubMed: 17484934]
- Glaser, BG.; Strauss, AL. *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine Publishing Company; 1967.
- Gross R, Olfson M, Gameroff MJ, Carasquillo O, S S, Feder A, Lantigua R, Fuentes M, Weissman MM. Depression and glycemic control in Hispanic primary care patients with diabetes. *Journal of General Internal Medicine* 2005;20:460–466. [PubMed: 15963173]
- Guarnaccia PJ, Lewis-Fernandez R, Marano MR. Toward a Puerto Rican popular nosology: *Nervios and Ataque de Nervios*. *Culture, Medicine, & Psychiatry* 2003;27:339–366.
- Heilemann MV, Coffey-Love M, Frutos L. Perceived reasons for depression among low income women of Mexican descent. *Archives of Psychiatric Nursing* 2004;18(5):185–192. [PubMed: 15529284]
- Institute of Medicine. *Unequal treatment: Confronting racial and ethnic disparities in healthcare*. Washington D. C: National Academies Press; 2003.
- Interian A, Díaz-Martínez AM. Considerations of culturally competent cognitive-behavioral therapy for depression with Hispanic patients. *Cognitive and Behavioral Practice* 2007;14:84–97.
- Jenkins J, Cofresi N. The sociosomatic course of depression and trauma: a cultural analysis of suffering and resilience in the life of a Puerto Rican woman. *Psychosomatic Medicine* 1998;60(4):439–447. [PubMed: 9710289]
- Katon WJ, Von Korff M, Lin EHB, Simon G, Ludman E, Russo J, Ciechanowski P, Walker E, Bush T. The Pathways Study: A Randomized Trial of Collaborative Care in Patients With Diabetes and Depression. *Archives of General Psychiatry* 2004;61(10):1042–1049. [PubMed: 15466678]
- Kleinman, A. *The illness narratives: Suffering, healing and the human condition*. New York: Basic Books; 1988.
- Lanting LC, Joung I, Mackenbach JP, Lamberts SW, Boostma AH. Ethnic differences in mortality, end-stage complications, and quality of care among diabetic patients. *Diabetes Care* 2005;28(9):2280–2288. [PubMed: 16123507]

- Lewis-Fernandez R, Das AK, Alfonso C, Weissman MM, Olfson M. Depression in US Hispanics: Diagnostic and management considerations in family practice. *Journal of the American Board of Family Practice* 2005;18(4):282–296. [PubMed: 15994474]
- López S, Guarnaccia PJ. Cultural Psychopathology: Uncovering the social world of mental illness. *Annual Review of Psychology* 2000;51:571–598.
- Miranda J, Azocar F, Komaromy M, Golding JM. Unmet mental health needs of women in public-sector gynecologic clinics. *American Journal of Obstetrics and Gynecology* 1998;178:212–217. [PubMed: 9500476]
- Miranda J, Azocar F, Organista KC, Dwyer E, Areán P. Treatment of depression among impoverished primary care patients from ethnic minority groups. *Psychiatric Services* 2003;54(2):219–225. [PubMed: 12556604]
- Muhr, T. User's manual for ATLAS.ti 5.0. 2nd Edition. Berlin, Germany: Scientific Software Development; 2004.
- Musselman DL, Betan E, Larsen H, Phillips LS. Relationship of depression to diabetes Types 1 and 2: Epidemiology, biology, and treatment. *Biological Psychiatry* 2003;54:317–329. [PubMed: 12893107]
- Olfson M, Marcus SC, Tedeschi M, Wan GJ. Continuity of Antidepressant treatment for adults with depression in the United States. *American Journal of Psychiatry* 2006;163(1):101–108. [PubMed: 16390896]
- Pincay IEM, Guarnaccia PJ. "It's like going through an earthquake": Anthropological perspectives on depression among Latino immigrants. *Journal of Immigrant and Minority Health* 2007;9:17–28. [PubMed: 17006767]
- Poss J, Jezewski MA. The role and meaning of *susto* in Mexican Americans' explanatory model of type 2 diabetes. *Medical Anthropology Quarterly* 16 Mar;:360–377.
- Spitzer RL, Kroenke K, Williams JB. Validation and utility of a self-report version of PRIME-MD: the PHQ primary care study. *Journal of the American Medical Association* 1999;282:1737–1744. [PubMed: 10568646]
- United States Department of Health and Human Services. *Mental Health: Culture, Race, and Ethnicity: A supplement to mental health: A report of the Surgeon General*. Rockville, MD: U. S Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services; 2001.
- Weller SC, Baer RD, Garcia JGA, Glazer M, Trotter R, Pachter L, Klein RE. Regional variations in Latino descriptions of *Susto*. *Culture, Medicine, & Psychiatry* 2002;26:449–472.
- Willms DG, Best AJ, Taylor DW, Gilbert JR, Wilson DMC, Lindsay EA, Singer J. A systematic approach for using qualitative methods in primary prevention research. *Medical Anthropology Quarterly* 1992;4:391–409.

Table 1

Common Causes Attributed to Depression

Causes	Illustrative Quotes
Loss of functioning	Because you don't have the same agility... you can't work like you are accustomed. You have to stop doing lots of things... you feel like you are worthless.
Economic Strains	Well with nerves, with lots of depression, like everything is coming down on you. The lack of money because in that time my husband was not working, he couldn't work. ... Then the bills, then this and that... I think all of that disturbs me.
Health problems	I feel sad, with the wish to cry, but what depresses me more than anything... is my illness... what depresses me are the illnesses that begin to affect me.
Caregiving burdens	My problem started because my husband was sick. That hurt me a lot and I couldn't overcome that.
Loss of employment	I noticed that I felt depressed when I stopped working. It's been four years since I stopped working because of a surgery for carpal tunnel... For the first two weeks I cleaned, took out and rearranged everything. Then when I was done cleaning what I had to clean, I didn't even have the desire to get up, not even to eat because I felt I did not deserve the food I was eating... Then when I left my job, I felt like I was worthless.