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Latino Immigrants' Intentions to Seek Depression Care

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Abstract

This study examined the role that illness perceptions, attitudes toward depression treatments, and subjective norms played in Latino immigrants' intentions to seek depression care. Ninety-five Latino immigrant patients were presented a vignette depicting an individual with major depression and interviewed about their intentions to seek care if confronted with a similar situation. Patients' preferences were to rely on informal sources of care first, and then turn to formal sources to cope with depression. Findings showed Latinos immigrants' help-seeking intentions for depression were a function of their views of depression, attitudes toward their doctors' interpersonal skills, and social norms related to seeking professional care after controlling for demographics, health insurance status, acculturation, clinical characteristics, perceived barriers to care, and past service use.

Keywords

Hispanics; Latinos; depression; help-seeking; immigrants; vignette methodology

Within the Latino population, immigrants with a diagnosable mental disorder, such as depression, are the least likely to use specialty mental health services (Hough et al., 1987; U. S Department of Health and Human Services [USDHHS], 2001; Vega, Kolody, Aguilar-Gaxiola, & Catalano, 1999) and often fail to receive guideline congruent mental health care (Institute of Medicine [IOM], 2003). These trends in care seeking and accessibility place Latino immigrants at greater risk than U.S. born Latinos for having their mental health needs left unmet (Vega & López, 2001).

The underutilization and disparities in mental health care have been attributed to traditional access and service use barriers, such as lack of health insurance, dearth of bilingual providers, and lack of culturally congruent mental health services (Miranda, Lawson, & Escobar, 2002). A less explored area that may help explain these inequities in mental health care are the socioculturally influenced cognitions that Latino immigrants hold about mental illness and help-seeking. Individuals' cognitive processes involved in the search for care, such as their views of mental health and attitudes toward treatments, are recognized as determinants for seeking health and mental health services (Angel & Thoits, 1987; Kleinman, 1988; Leventhal, Deifenbach, & Leventhal, 1992). However, few studies have examined the unique roles these processes play in Latino immigrants' decisions to seek depression care. This study addressed this gap in the literature by examining how three cognitive processes—illness perceptions, attitudes toward depression treatments, and

subjective norms related to seeking professional mental health care—influenced the intentions of Latino immigrants to seek *informal* (e.g., family member, friend, priest, minister) and *formal* (e.g., social worker, primary health care doctor, psychiatrist) sources of care for depression.

Conceptual Model

A conceptual model (See Figure 1) that draws from two health behavior theories, the theory of reasoned action (TRA; Fishbein & Ajzen, 1975) and the self-regulatory model of illness cognitions (SRM; Leventhal et al., 1992), framed our examination of how cognitive processes influence intentions to seek depression care. TRA is a value expectancy theory of health decision-making that has been used to study an array of health behaviors (Bayer & Peay, 1997; Cooper et al., 2003; Montañó & Kasprzyk, 2002). According to this theory, behaviors, such as the use of depression treatments, are determined by the intentions to engage in that behavior. These intentions are, in turn, influenced by attitudes toward a specific behavior and subjective norms related to that behavior. Attitudes refer to the person's evaluation and knowledge related to performing a particular behavior (Sutton, 1998). For instance, attitudes toward depression care encapsulate individuals' understanding, knowledge, and evaluation of depression care and their preferences for treatments (e.g., counseling, antidepressant medications). Prior studies have found that attitudes toward depression treatments significantly influenced patients' treatment adherence (Brown et al., 2005) and that compared to non-Hispanic Whites, Latinos were more likely to view antidepressants as addictive, less likely to find these medications acceptable as a treatment option, and to prefer counseling over medications to treat depression (Cooper et al., 2003).

The other component of TRA used in the present study were subjective norms which refer to the social expectations or pressures for performing the behavior in question and the individual's motivation to comply with these social pressures (Ajzen, 1991). Seeking treatment for depression is due, in part, to how important individuals in the person's life (e.g., family members, friends) approve or disapprove of the individual's seeking treatment and the individual's motivation to comply with these expectations. Among Latino groups (e.g., Mexicans, Puerto Ricans), informal sources of help, such as family members, religious institutions, and folk healers, are used in combination with formal services (e.g., medical and mental health care) to cope with mental health problems (Guarnaccia & Parra, 1996; Pescosolido, Wright, Alegría, & Vera, 1998; Urdaneta, Saldana, & Winkler, 1995; Vega, Kolody, & Aguilar-Gaxiola, 2001). To our knowledge, there has been no published study examining the role that subjective norms play in Latino immigrants' decisions to seek depression treatments. Given that Latino cultures value interdependence and familism (Barrio, 2000; Lugo-Steidel & Contreras, 2003), more work is needed to understand how these subjective norms deter or facilitate Latino immigrants' search for care. Overall, TRA provides a valuable theoretical framework as it enables the examination of the relationship among attitudes toward treatment, subjective norms, and intentions to seek care for depression.

The other health behavior theory used in this study was SRM, which stipulates that individuals are active problem-solvers who use perceptions of illness to make sense of the illness experience and, in turn, these perceptions influence how they cope and respond to illness (Cameron & Leventhal, 2003). This model organizes illness perceptions into five interrelated components: (a) label/identity - how people label and describe the illness and symptoms attributed to the illness; (b) causes—ideas about the cause of the illness; (c) timeline—expectations of how long the illness will last (e.g., acute, chronic); (d) consequences—effects and outcomes expected of the illness; and (e) controllability—beliefs

about whether the illness can be controlled. Illness perceptions have been widely used to study a range of chronic physical illnesses (e.g., heart disease, diabetes, cancer; Petrie, Broadbent, & Meechan, 2002) and more recently are being applied to mental health research (Brown et al., 2001; Lobban, Barrowclough, & Jones, 2003). Previous studies have found patients' illness perceptions of depression are significantly related to their prior and current mental health treatment, medication adherence, coping strategies, and treatment preferences (Brown et al., 2001; Karasz, Sacajiu, & Garcia, 2003).

We integrated TRA and SRM in our conceptual model because both theories look at how individuals' health decisions are influenced by information, perceptions, and attitudes that they hold about depression and its treatments. In contrast to other models of service use, such as Andersen's (1995) Behavioral Model of Health Service Use and Pescosolido's (1991) Network Episode Model, TRA and SRM place cognitions at the forefront of the health decision-making process. Our conceptual model also includes traditional access variables, such as patients' demographics, health insurance status, clinical characteristics, perceived barriers to mental health care, and past service use, because these variables have been consistently found in previous studies to influence Latino immigrant patients' service use for mental health problems (Cabassa, Zayas, & Hansen, 2006; Vega & Lopez, 2001). The integration of TRA and SRM as well as the inclusion of traditional access variables provide us a conceptual framework to examine the unique roles that illness perceptions, attitudes toward depression treatments, and subjective norms play in Latino immigrants' intentions to seek depression care.

The aim of this study was to examine how each of these cognitive processes influenced Latino immigrants' intentions to seek depression care. We predicted that Latino immigrants' illness perceptions, attitudes toward depression treatments, and subjective norms were each independently associated with intentions to seek depression care after controlling for patients' demographics, health insurance status, acculturation, clinical characteristics, perceived barriers to care, and past service use for mental health problems.

Method

Sample

A convenience sample of 95 Latino immigrant adult patients (18 years and older) receiving services at a primary health care clinic located in St. Louis, Missouri, was used in the present study. Recruitment procedures and methods for this study have been presented elsewhere (Cabassa, Lester, & Zayas, 2007) and are discussed here briefly. Patients were recruited from the waiting room of the clinic, which serves predominantly low-income Latino immigrants. One hundred and fifty-two Latino immigrants were approached and invited to participate in the study. One hundred and thirty (86%) enrolled in the study. No significant difference in sex was found between those who participated and those who refused. Patients who refused to participate indicated they were not interested in the study or had no time to do the interview.

Of 130 who were recruited, 95 (74%) were current patients at the clinic and 35 (26%) were family members (e.g., spouse, partner, siblings) accompanying patients for their visit. Given our focus on Latino immigrants served in primary health care settings, only patients' data were analyzed in this study. Due to limited resources for the current study, we were unable to evaluate how similar our sample of 95 patients was to the patient population served at this clinic.

Data Collection Procedures

Structured face-to-face interviews were used to collect information about patients' demographics, health insurance status, acculturation, depressive symptoms, perceived barriers to care, attitudes toward depression treatments, and past service use for mental health problems. A vignette that depicted an individual with major depression was included in the interview to query patients about their views of depression and their intentions to seek care if confronted with the situation presented in the vignette. The average time to administer the interview was 45 minutes, and all interviews were conducted in Spanish by trained bilingual interviewers in private rooms at the clinic. All study procedures and informed-consent forms were approved by the Hilltop Human Subject Committee of Washington University in St. Louis.

Vignette—As part of the structured interview, a standardized vignette adapted from the Mental Health Module of the 1996 General Social Survey (Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999), describing an individual meeting *DSM-IV* criteria for major depression was used (available upon request). The vignette was translated into Spanish using back translation techniques (Bravo, Woodbury-Fariña, Canino, & Rubio-Stipec, 1993; Brislin, 1986). The vignette was audio-recorded in Spanish and English by a male and female narrator (i.e., four versions), and participants listened to the vignettes using headphones. Participants listened to the recorded vignette in their preferred language and in the voice matching their gender. They were also given a written copy of the vignette so that they could read along with the recording. The use of a tape-recorded procedure assured consistent presentation of the vignette across patients and reduced interviewer bias (e.g., not reading the entire vignette, using different intonations with each presentation) in the presentation of the vignette. It also facilitated the presentation of the vignette to individuals with low literacy.

Measures

Intentions to seek care—Eighteen items were created based on the TRA to measure patients' likelihood of seeking *informal* and *formal* sources of care if confronted with the situation presented in the vignette. *Informal* sources of care included (a) a family member, (b) a friend, and (c) a priest, minister or rabbi. *Formal* sources of care included (a) their doctor, (b) a psychiatrist, and (c) other mental health professionals, such as a psychologist, social worker, or counselor. For each source of care, three dimensions of intentions to seek care were measured. The first dimension rated how likely patients were in *talking* to each of these sources of care (e.g., "If you were Laura [female person depicted in the vignette], how likely is it that you would talk to a family member about this situation?"). The second dimension measured how *comfortable* patients would feel talking to each of these sources of care about the situation presented in the vignette (e.g., "If you were Roberto [male person depicted in the vignette], how comfortable would you feel talking to your doctor about this situation?"). The third dimension rated how *helpful* the patient thought each of these sources of care would be in helping them with the situation presented in the vignette (e.g., "If you were Laura, how helpful do you think a psychiatrist would be in helping you with this situation?"). These last two dimensions were previously used by Lau and Takeuchi (2001) to examine the help-seeking behaviors of Chinese American parents. All items used a 7-point scale ranging from *extremely unlikely or uncomfortable or unhelpful* to *extremely likely or comfortable or helpful*. Scores across the three dimensions were averaged to derive intentions to seek care measures from each source of care. Furthermore, ratings across all intentions to seek *informal* sources of care measures were averaged to derive a summary score for *informal* sources of care. A similar approach was used to develop a summary score for *formal* sources of care. Both *informal* (Cronbach's alpha [α] = .71) and *formal* (α = .80)

sources of care summary scores had good internal consistency and were normally distributed.

Patients were also asked to rank order their sources of care preferences for dealing with the situation presented in the vignette using a measure adapted from Angermeyer, Matschinger, and Reidel-Heller (1999). First, patients were presented with seven index cards each listing a different sources of care strategy: (a) deal with the situation by themselves, or talk to a (b) family member, (c) friend, (d) priest, minister or rabbi, (e) doctor, (f) psychiatrist, and (g) other mental health professionals. Then they were asked to choose what they would do first to cope with the situation in the vignette. Once they had made their first choice, they were asked: "If that did not resolve the situation (referring to their first choice), what would you do second?" Once they had made their second choice, they were then asked: "If that did not resolve the situation (referring to their first and second choice), what would you do third?"

Illness perceptions of depression—Patients' perceptions of the vignette were measured using a modified version of the Illness Perception Questionnaire (IPQ-R; Moss-Morris et al., 2002). The IPQ-R measures five core dimensions (e.g., label/identify, cause, consequences, timeline, controllability) specified by the SRM. Because this instrument has not been used with Latino immigrants, an exploratory approach using two open-ended questions ("What would you call the situation presented in the vignette?" and "What do you think caused this situation?") was used to measure the label/identity and causes dimensions, respectively. Responses to these questions were recorded verbatim by the interviewer. Based on the answers given to these questions, a dichotomous variable was created to categorize patients who use the words *depresión* (depression) or *deprimido* (depressed) to describe the situation presented in the vignette from those who did not.

Three scales from the IPQ-R were used to assess the timeline, consequence, and perceived controllability dimensions. All items were rated on a 5-point Likert scale ranging from *strongly disagree* to *strongly agree*. Patients' scores were derived from their average rating on each dimension. Because the original wording of the IPQ-R items for these dimensions assumes that patients are experiencing the illness in question, an adaptation to the original wording was made in order to make items relevant to the nature of this study. For instance, the original wording of an item, "My illness will last for a long time." was modified to "Roberto's situation will last for a long time." All scales were translated into Spanish using back-translation techniques (Bravo et al., 1993; Brislin, 1986).

The timeline dimension included six items ($\alpha = .65$) and assessed patients' perceptions of the course of illness on a dimension from acute to chronic. The consequence dimension was composed of 6 items ($\alpha = .78$) and assessed patients' perceptions of illness severity and its effect on the person's functioning (e.g., "Roberto's situation is a serious condition." "Laura's situation has serious financial consequences."). The higher the score in the consequence dimension the higher the patient perceived the vignette as being a serious, debilitating condition. The perceived controllability dimension included five items ($\alpha = .62$) and assessed patients' perception of illness as amendable to personal and treatment control. Examples of items in this dimension include, "There is a lot Roberto can do to control these symptoms" and "Treatment can control Laura's situation." The higher the score in these items the more personal and/or treatment control patients attributed to the situation presented in the vignette. The timeline and perceived controllability dimensions have low internal consistency. We included these two important illness perceptions dimensions in our analyses since few studies to our knowledge have explored Hispanic immigrant's perceptions of depression using the IPQ-R. Results from these two scales should be interpreted with caution.

Attitudes toward depression treatments—Attitudes toward depression treatments were measured using the Patients Attitudes Toward and Ratings of Care for Depression short version (PARC-D; Cooper et al., 2000). The PARC-D is a short 16-item scale developed to measure primary health care patients' attitudes, beliefs, and knowledge of depression treatments; items were rated using a 5-point Likert scale. Items are divided into seven attitudinal domains related to depression care. Four of the seven domains were used in the present study. The Health Care Providers' Interpersonal Skills Domain ($\alpha = .70$) consisted of two items (e.g., "I trust that my doctor acts in my best interest.") and measured patient's views about whether they felt their doctors listen to them and act in their best interest. This domain provides a proxy measure of the quality of patient-provider relationship and alliance from the patient's perspective. The Effectiveness of Depression Treatments Domain ($\alpha = .69$) consisted of 4 items (e.g., "Counseling restores depressed individuals to their normal level of functioning.") and measured patients' attitudes toward the effectiveness of counseling and antidepressants in treating depression. The Intrinsic Spirituality Domain ($\alpha = .83$) included two items (e.g., "Faith in God will heal depression.") and measured patients' attitudes toward the role of religious faith as a mean to cope with depression. The Access to Depression Treatment Domain7 ($\alpha = .67$) encompassed two items (e.g., "I can afford mental health treatment for depression.") and assessed patients' view about their access to depression treatments.

The other three attitudinal domains (Treatment Problems, Patient's Education and Understanding of Depression Care, and Recognition of Depression) had low reliabilities (α less than .55) and were excluded from further analysis. A translated version of this instrument was made available by the developer (Andres Consoli, San Francisco State University, College of Health and Human Services, personal communication, June 8, 2004).

Subjective norms—Subjective norms were measured following Fishbein and Ajzen's (1975) recommendations. The first component of this measure is the individual's normative beliefs. These beliefs refer to whether important individuals (e.g., friends, family members) in the person's life approve or disapprove of the person performing the behavior in question, in this case seeking professional treatments for depression (e.g., "How likely is it that your friends would think that you should seek professional help if you were experiencing Laura's situation?"). Two items were used to measure normative beliefs associated with two groups of individuals (i.e., family members and friends), and rated on a 7-point scale ranging from *extremely unlikely* to *extremely likely*.

The second component measures patients' motivation to comply with important individuals' recommendations (e.g., "Generally, you do what your family members think you should do."). Two items were used to measure motivation to comply with the respective group of important individuals in the person's life. These items were rated on a 7-point scale ranging from *extremely disagree* to *extremely agree*. A subjective norm score for each referent group (i.e., family members and friends) was derived by multiplying the normative belief items with their respective motivation to comply items (Montaño & Kasprzyk, 2002).

Demographic characteristics and health insurance status—Demographic variables included age, gender, and years of education. Participants were also asked to report their health insurance status (insured/ not insured).

Acculturation—The bidimensional acculturation scale (BAS) for Hispanics (Marín & Gamba, 1996) was used to measure acculturation. The BAS consists of 24 items that tap into different language-related changes associated with the acculturation experiences of Latinos. Half of the items measure a Hispanic domain ($\alpha = .69$); the other half measures a non-Hispanic domain ($\alpha = .91$). The BAS combines two 4-point scales, one measuring frequency

(*almost always* to *never*) the other one measuring proficiency (*very well* to *very poorly*). Scores were averaged across items producing two independent scores for each domain (Hispanic and non-Hispanic). A 2.5 cut-off point as suggested by Marín and Gamba (1996) was used to categorize individuals as high or low in each of the domains. If patients scored high in the Hispanic domain and low in the non-Hispanic domain they were categorized as unassimilated. A bicultural indicator was created if patients score high on both domains.

Clinical Characteristics—The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) was used to measure patients' depressive symptoms. The CES-D is a widely used depression scale consisting of 20 items that assess depressive symptoms, such as mood, vegetative signs, guilt, worthlessness, and hopelessness, during the past seven days. The instrument used a 4-point frequency scale (*rarely or none of the time* to *most or all of the time*). A depression score is derived by adding all items. CES-D scores range from 0 to 60 with higher scores indicating greater depressive symptomatology. A cut-off point of 16 is commonly used to identify individuals with probable depression. The CES-D in our study had excellent internal consistency ($\alpha = .90$).

General health status was measured with a single question asking respondents to rate their current health status on a 5-point scale, ranging from *excellent* to *poor*. This global measure provides a summary of how patients perceive their health and well-being (Fayers & Sprangers, 2002), and has been found to be a powerful predictor of clinical outcomes and mortality across multiple diseases and populations (Fayers & Sprangers, 2002; Franzini & Fernández-Esquer, 2004).

Perceived access barriers—Patients were asked to indicate if any of the following 11 situations prevented them from seeking mental health services in the previous 12 months: lack of transportation, lack of health insurance, inability to pay for services, being afraid of seeking services because of immigration status, long waiting times at clinics, not being able to take time off of work, language problems, not knowing where to seek services, and operating hours were not convenient to patients. This instrument produced two variables: (a) frequencies for the type of access barriers perceived, and (b) the total number of access barriers endorsed by each patient. This list of access barriers was developed from previous pilot work and from a measure developed by Manos, Leyden, Resendez, Klein, Wilson and Bauer (2001), used in a community study examining access barriers to health care among Latino families.

Lifetime use of services for mental health problems—Patients were asked to indicate whether they have visited a mental health specialist (e.g., psychiatrist, psychologist, counselor, social worker, psychiatric nurse), and/or a general medical provider (e.g., family physician, internist, nurse) for a problem with their emotions, nerves, or mental health in their lifetime.

Vignette questions—To assess how patients identified with the situation presented in the vignette, five yes/no questions were developed. For instance, patients were asked whether they could imagine experiencing a similar situation to that described in the vignette, whether they knew of a family member or friend who had experienced a similar situation, or whether they had ever felt this way.

Analysis

Frequencies and percentages are reported for categorical variables. Measures of central tendency and dispersion are reported for continuous variables. Hierarchical multiple regression models were conducted to answer study hypothesis. These regression models are

commonly used with larger samples, but are robust in small samples (Park & Dudycha, 1974; Pedhazur, 1997). Our power calculations (Gatsonis & Sampson, 1989) also indicated that for a multiple regression model with 10 covariates with an R^2 of 0.20 and a sample size of 95 will have approximately 80% power to detect an increase in R^2 of .07 due to the inclusion of one additional covariate at alpha of .05.

The summary score measures for intentions to seek *informal* and *formal* sources of care served as dependent variables for these hierarchical multiple regression models. A three-step approach was used to test these models. In step one, patients' demographics, health insurance status, acculturation, clinical characteristics, total number of perceived access barriers, and past service use for mental health problems were entered first as control variables. In step two, each of the cognitive processes (e.g., illness perceptions, attitudes toward depression treatments, and subjective norms) found to be significantly related ($p < .05$) at the bivariate level to the intention to seek care summary score measures were added separately to the models to test their unique relationship with the intention measures. Each time a cognitive process variable was entered in step two, the significance of the increments to the model's R^2 uniquely associated with each cognitive process variable was assessed calculating a partial F test statistic. In step three, we presented final models for each intention measure with control and cognitive processes variables entered simultaneously.

Results

Patient Characteristics

Characteristics of the 95 patients who participated in this study are shown in Table 1. Patients had a mean age of 30 years, were predominantly female and of Mexican origin. The majority lacked health insurance (78%). On average, patients had lived in the U.S. for six years ($SD = 5$ years) and the majority (82%) were very low in acculturation based on their BAS scores, meaning that they spoke Spanish frequently and very well and were not proficient in speaking and understanding English. Forty-one percent of patients reported significant levels of current depressive symptoms (CESD-16) in the previous seven days. This rate of depressive symptoms is a higher than what is currently seen in general primary care samples and among low income primary care patients (Miranda et al., 2003; Pignone et al., 2002) suggesting that our sample was at high risk for depression.

The most common perceived access barriers to seeking mental health services endorsed by patients were lack of health insurance, inability to pay for services, language problems, not knowing where to seek services, and long waiting times at clinics. Most patients identified themselves with the situation presented in the vignette. More than three fourths could imagine experiencing a similar situation (83%) and reported having felt this way in the past (77%). More than half (67%) also reported having experienced a similar situation in the past. Fifty-five percent identified the vignette as depression. The other 45% of the sample viewed the vignette through a socio-situational lens describing an individual coping with interpersonal problems, economic strains (e.g., unemployment, economic insecurity), social isolation, bereavement, and other external factors. Regardless of whether patients identified the vignette as depression or not, their perceptions of the causes attributed to the vignette were dominated by external forces linked to their social environment rather than to internal mechanisms, such as biological or genetic factors (Cabassa et al., 2007).

Cognitive Processes

Patients' cognitive processes are presented in Table 2. On average, patients perceived the situation in the vignette as an acute, short lasting, and serious condition. For example, most patients agreed or strongly agreed that the situation in the vignette will pass quickly (50%),

will improve with time (88%), and that it would produce major consequences in a person's life (82%). Patients also reported that the situation could be controlled through personal efficacy and/or treatment. Ninety-one percent agreed or strongly agreed that there was a lot that could be done to control the symptoms presented in the vignette.

In regards to their attitudes toward depression treatments, most patients trusted that their doctor acted in their best interest (87%) and listened to them (89%). Patients also endorsed positive attitudes toward the effectiveness of depression treatments (i.e., counseling and antidepressants) with a preference toward counseling over antidepressants. For instance, 84% of patients agreed or strongly agreed with the statement "counseling restores depressed individuals to their normal level of functioning" and 62% agreed or strongly agreed that most antidepressant medications are effective in treating depression. Latinos preference of counseling over medications to treat depression has been observed in other studies as well (e.g., Cooper et al., 2003). On average, patients endorsed positive attitudes toward the role of faith in healing and treating depression. The majority of patients strongly disagreed or disagreed that they could not afford depression treatments (45%) and that their health insurance will cover the cost of care (77%). Based on the subjective norm scores, family members tended to exert more influence on patients' professional help seeking behaviors than friends.

Patients' Intentions to Seek Care

Table 2 shows patients' intentions to seek *informal* and *formal* sources of care. As previously mentioned, the higher the score in each scale the higher the likelihood that the patient intends to seek this source of care. Among *informal* sources of care, patients reported higher intentions to seek help from family members and a priest, minister or rabbi than from friends. Among *formal* sources of care, patients reported higher intentions to seek help from other mental health professionals (e.g., psychologist, social worker, counselor) and a psychiatrist than from their general medical provider.

Table 3 presents patients' sources of care preferences. Patients' first choice for care was *informal* sources, mostly family members, followed by *formal* sources, mostly other mental health professionals. As their second preference, patients were split between *informal* sources, friends and family members, and *formal* sources, mostly other mental health professionals. Their third preference was toward *formal* sources, mostly other mental health professionals and doctors, followed by *informal* sources of care, predominantly a priest, minister or rabbi.

Associations Between Cognitive Processes and Intentions to Seek Care

Bivariate associations between intentions to seek care measures and cognitive process were examined. Intentions to seek *informal* sources of care was negatively related to the timeline dimension of illness perceptions ($r = -.29, p = .001$), and positively related to patients' attitudes toward their health care providers' interpersonal skills ($r = .23, p = .03$), intrinsic spirituality ($r = .32, p = .001$), and family members' ($r = .28, p = .001$) and friends ($r = .35, p = .0004$) subjective norms. The consequence and perceived controllability dimension of illness perceptions, perceiving the vignette as depression, and the treatment effectiveness and access to care domains were not significantly related to intentions to seek *informal* sources of care.

Intentions to seek *formal* sources of care was positively related to identifying the vignette as depression ($r = .27, p = .008$), patients' attitudes toward their health care providers' interpersonal skills ($r = .40, p < .001$), intrinsic spirituality ($r = .20, p = .05$), and family members' subjective norms ($r = .33, p = .001$). The timeline, consequences and perceived

controllability dimension, treatment effectiveness, access to care, and friends' subjective norm were not significantly related to intentions to seek *formal* sources of care.

Two hierarchical regression models were used to test the study hypothesis. For each model, patients' demographics, insurance status, acculturation, clinical characteristics (depression and self-rated health status), past service use, and total number of access barriers endorsed were entered in the first step of each model as covariates. Table 4 presents the results of the final intention to seek *informal* sources of care model and the unique increments to the model's R^2 associated with each cognitive process tested. In step one (results not shown), the covariate model was significant, $F(10, 83) = 2.34, p = .02$, and accounted for 22% of the variance in intentions to seek *informal* sources of care. In step two, the increments to the model's R^2 uniquely associated with adding the illness perception variable (timeline dimension; $\Delta R^2 = .05, \Delta F = 5.32, p = .02$), intrinsic spirituality ($\Delta R^2 = .07, \Delta F = 7.57, p = .007$), and family members ($\Delta R^2 = .04, \Delta F = 4.30, p = .04$) and friends ($\Delta R^2 = .010, \Delta F = 11.45, p = .001$) subjective norms were all significant after controlling for covariates. In contrast, the increment to the model's R^2 associated with adding patients' attitudes toward health care provider interpersonal skills was not significant ($\Delta R^2 = .02, \Delta F = 2.42, p = .12$). In step three, the final model showed that having health insurance and friends' subjective norms were each positively associated with seeking *informal* sources of care. Moreover, visiting a doctor for a mental health problem and viewing the vignette as a chronic condition were each negatively associated with this intention measure.

Table 5 presents the results of the final intentions to seek *formal* sources of care model and the unique increments to the model's R^2 associated with each cognitive process tested. In step one (results not shown), the covariates model was not significant, $F(10, 83) = 1.04, p = .042$, and accounted for only 11% of the variance in intentions to seek *formal* sources of care. In step two, the increments to the model's R^2 uniquely associated with identifying the vignette as depression ($\Delta R^2 = .08, \Delta F = 7.57, p = .01$), patients' attitudes toward their health care provider's interpersonal skills ($\Delta R^2 = .17, \Delta F = 19.63, p < .0001$), and family members' subjective norms ($\Delta R^2 = .09, \Delta F = 9.26, p = .003$) were all significant. The increment to model's R^2 uniquely associated with intrinsic spirituality, an attitudinal measure, was the only cognitive process that was not significant ($\Delta R^2 = .03, \Delta F = 2.61, p = .11$). In step three, the final model shows that identifying the vignette as depression, patients' attitudes toward their health care provider's interpersonal skills, and family members' subjective norms were each positively related to intentions to seek *formal* sources of care after controlling for covariates.

Discussion

We examined Latino immigrants' intentions to seek depression care by presenting them a vignette depicting an individual experiencing a major depressive disorder and asking them to report their intentions to seek care if confronted with a similar situation. No other groups were included in the present study to make cross-cultural comparisons. Results showed most patients in our study identified with the situation in the vignette and most (41%) were experiencing elevated levels of depressive symptoms at the time of the interview. Both of these findings suggest that depression was a common and salient experience among our sample of Latino immigrant patients and that they could use these experiences to answer questions about their intentions to seek depression care.

Patients' preferred to combine sources of care by first relying on *informal* sources, mostly family members, and then turning to *formal* sources care, such as a psychologist, social worker, or counselor. Latinos' reliance on both *informal* and *formal* sources of care to cope with a mental health problem has been reported in previous studies (Guarnaccia & Parra,

1996; Pescosolido, Wright, Alegría, & Vera, 1998; Vega, Kolody, & Aguilar-Gaxiola, 2001). This combination of sources of care provides some support to the claim that help-seeking for a mental health problem is a pathway phenomenon (Rogler & Cortes, 1993). That is, an individual's search for care for a mental health problem is a dynamic process in which multiple steps are taken and different sources of care are consulted between the onset of illness and the actual use of mental health services. The preference to combine sources of care in this sample suggests that for some Latino immigrants the search for care begins in their immediate social milieu by consulting and seeking help from family members. Then, if the situation does not improve or care is not provided, the individual expands the search outside his or her social support system to more *formal* sources of care (Rogler, Malgady, & Rodriguez, 1989).

As predicted, our results showed that after controlling for patients characteristics intentions to seek care were uniquely influenced by cognitive processes involved in the search for care. Patients' perceptions about the chronicity of the situation presented in the vignette was not related to intentions to seek *formal* sources of care and was significantly related to intentions to seek *informal* sources, such as family members and friends. As patients' perceptions of the chronicity of the situation in the vignette increased, their intentions to seek *informal* sources decreased. Studies have found that family members, friends, and the clergy are important sources of care for Latinos suffering from mental illness (Guarnaccia & Parra, 1996; Rogler et al., 1989). However, little is known about what influences their decisions to consult and rely on these sources of care. Our finding suggests that perceiving depression as a chronic condition may deter some patients from initiating the help seeking process within their own social networks. Moreover, identifying the vignette as depression was a positive predictor of patients' intentions to seek *formal* sources of care (e.g., social worker, psychiatrist, general medical provider). Taken together, these illness perceptions findings suggest that increasing Latino immigrants' awareness of depression, its course and effectiveness of existing treatments may be an appropriate intervention target to encourage them to initiate the help seeking process in times of need.

Patients' attitudes about their health care provider's interpersonal skills (e.g., trusting their doctor acts in their best interest, feeling their doctor listened to them) were positively associated with their intentions to seek *formal* sources of care. Patients who felt that their doctors listen to them and act in their best interest were more inclined to intend to seek help from professional providers in times of need. This finding exemplifies the impact that patient-provider interactions and relationship have on Latino immigrant's health seeking behaviors. The more Latino immigrants trusted their doctor, the more likely they were to intend to seek professional mental health care for depression. The formation of a trusting patient-provider alliance seems to be an important quality that Latino immigrants valued and shape their decisions to seek professional help for depression.

Subjective norms associate with friends and family members were positively associated with patients' intentions to seek care. Friends shaped patients intentions to seek *informal* sources while family members were influential in seeking *formal* source of care. These finding exemplify how decisions to seek care are part of a social process influenced by the advice, information, and pressures provided by individuals close to the patient. The sense of obligation that patients may feel toward their family members' and friends' expectations may explain why social norms have such a positive impact on patients' help-seeking decisions. The effect of depression ripples beyond the patient and touches his or her support system, particularly in collectivist cultures that value interdependence and familism. How Latino immigrants' support system, particularly their family members, reacts to the vicissitudes imposed by depression and how they interact with the depressed individual seems to exert an important influence in their decisions to seek care.

These subjective norm findings raise interesting questions for future research. When do subjective norms exert their influence in patients' help-seeking behaviors? How are subjective norms related to seeking professional mental health care expressed in Latino families and how do they differ from other ethnic groups? Studies that address these research questions can begin to provide a better understanding of what shapes these norms, how they influence help-seeking behaviors of Latinos and other ethnocultural groups.

Lastly, health insurance and past service use, common predictors of mental health service use (Cabassa et al., 2006), were not significantly related to intentions to seek *formal* sources of care. The majority of our patients were uninsured (78%) and many had not used mental health services in their lifetime (72%). The little variance reported for these variables along with our small sample size may have limited the power to detect significant relationships between these two predictors of mental health service use and intention to seek *formal* care. After controlling for other covariates, patients' intentions to seek *informal* sources of care were positively related to having health insurance and negatively related to having visited a general medical provider for a mental health problem in their lifetime. Health insurance could be a proxy for other enabling factors associated with help-seeking, such as receptivity to discuss health problems or greater health literacy, which could explain this association with intention to seek *informal* sources of care. These relationships are preliminary at best and more studies are needed to replicate these findings with a larger and more diverse sample of Latinos. Little is currently known about the predictors of Latino immigrants' reliance on *informal* sources to cope with mental illness. Future studies can examine how the interaction of cultural, social, clinical, and economic factors influences Latino immigrants' intentions and decisions to seek help from *informal* sources of care.

Limitations

Several limitations need to be considered in evaluating the results of this study. The use of a convenience clinical sample from one primary health care clinic located in a Midwestern city limits the generalizability of our findings. These limitations of generalizability have been presented elsewhere (Cabassa et al., 2007) and are briefly discussed here. First, our sample is composed mostly of low-income, uninsured recent Latina immigrant patients who are experiencing high levels of depressive symptoms, thus their intentions to seek depression care may be substantially different to other Latinas with a different socioeconomic and immigration profile. Second, the composition of our sample also impedes us from exploring how gender norms and differences influenced intentions to seek depression care. Although in our study gender was not related to intentions to seek depression care, future studies with larger samples are needed to examine the effects that gender has on help-seeking for depression given the consistent association found between gender and depression.

Third, our sample may also differ from Latino immigrants who do not use primary health care services or who use services only during medical emergencies. The factors that influence treatment seeking intentions and behaviors for these Latino immigrants may be different from our sample of service users. Fourth, our sample was drawn from a community primary health clinic that predominately serves uninsured low-income Latino immigrants of Mexican origin who are at the beginning stages of the acculturation process and find themselves in a city with few resources and services tailored to meet their health and mental health needs. Therefore, their intentions to seek depression care and the structural challenges they face may be fundamentally different from more acculturated Latinos residing in cities with well established and diverse Latino communities that have developed deep historical, social, and political roots (e.g., New York, Los Angeles, Miami). Fifth, we did not sample other racial and ethnic groups, thus preventing us from making cross-cultural comparisons and from establishing whether our findings are unique to Latino immigrants or common to other ethnocultural groups. Future studies using more representative samples composed of

different racial and ethnic groups drawn from multiple sites can directly examine how the combination of structural barriers and cognitive processes influence these groups' help seeking behaviors.

Furthermore, the measure of intentions to seek care is limited in the sense that it is an estimate of what individuals would do if confronted with depression. Intentions can change with time, and other variables may prevent individuals from acting upon their intentions. Individuals may also report that they intend to behave in a certain way, but when confronted with the situation behave differently or confront structural barriers that may prevent them from engaging in their intended behavior. Prospective studies of Latino immigrants' help-seeking behaviors for depression are needed to address this limitation by directly examining the correspondence between intentions and actual behaviors and modeling the roles that cognitions and structural barriers play in their decision making process. The low reliability coefficients observed in several of the illness perception and attitudes toward depression care scales limits the reliability of our findings and suggest that improvements in measurement of these key concepts are greatly needed in order to move this area of research forward. Moreover, social desirability and cultural norms, such as the reverence and respect that Latino immigrants have for authority figures (Cabassa et al., 2007; Fisher et al., 2002) may have contributed to the high ratings observed in the doctors interpersonal skills dimension. The vignette methodology used in this study is also limited because it provides an approximation of what patients would do if faced with a similar situation. Future studies are needed to expand the external validity of this study by examining how the help-seeking process of Latino immigrants with major depressive disorder unfolds over time. Lastly, our cross-sectional design prevents us from making causal inferences.

Implications

This study addressed a gap in the literature by focusing on the role illness perceptions, attitudes toward care, and social norms played in Latino immigrants' intentions to seek depression care. Our findings raise interesting questions and lay the foundation for future help-seeking studies to examine how Latinos immigrants' intentions to seek depression care are influenced by structural barriers to care and are a function of their views of depression, attitudes toward their doctors' interpersonal skills, and social norms related to seeking professional care. Attention to these cognitive factors early on in the treatment process as well as reducing common barriers to care can help practitioners engage Latino immigrant patients into treatment. Policies and services aimed at improving mental health care for Latino immigrants must take into consideration not only structural barriers to care, but also the perceptions and attitudes Latino immigrants have about mental illness, help-seeking, and mental health treatments.

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Figure 1. Conceptual Model. * Concept from the Self-regulatory Model of Illness Cognitions (SRM); ** Concepts from the Theory of Reasoned Action (TRA).

Table 1

Sample Characteristics (N = 95)

	Mean (SD)	%
Demographics		
Age	30 (10)	
Years of education	9 (3.8)	
Female		75
Place of birth		
Mexico		75
Central America		17
Caribbean		5
South America		3
Health insurance		
Not insured		78
Acculturation		
BAS Hispanic Domain Score	3.45 (.3)	
BAS non-Hispanic Domain Score	1.94 (.7)	
Years living in the U.S.	6 (5)	
Unassimilated		82
Bicultural		18
Clinical characteristics		
CES-D Score	16.88 (11.5)	
CESD Score > 16 and above		41
General health status (poor/regular)		40
Lifetime use of services for mental health problems		
Mental health professionals		28
General medical providers		19
Perceived access barriers*		
Lack of health insurance		70
Inability to pay for services		68
Language problems		66
Do not know where to seek services		59
Long waiting times at clinics		41
Not being able to take time off work		40
Fearful of seeking services due to immigration status		38
Operating hours of services not convenient to patients		36
Child care		35
Not having someone to accompany you to the appointment		35
Lack of transportation		30
Total of perceived access barriers endorsed	5.15 (3.0)	
Identification with the vignette		
Imagine experiencing a similar situation		83

	Mean (SD)	%
Know of family member or friend who has experienced a similar situation		48
Experienced themselves a similar situation		67
Had felt this way in the past		77
Currently feeling this way		39
Identified vignette as depression		55

Note. One missing variable was reported for the Perceived Access Barriers ($n = 94$); Central America = Honduras, Guatemala, and El Salvador; Caribbean = Puerto Rico and Cuba; South America = Bolivia, Perú, and Venezuela.

Table 2

Means, Standard Deviations, and Ranges for Primary Study Variables (N = 95)

Cognitive processes	Mean (SD)	Obtained range	Possible range
Illness perceptions			
Timeline (acute/chronic)	1.4 (0.7)	0.0 to 3.1	0.0 to 4.0
Consequences	2.8 (0.8)	0.7 to 3.2	0.0 to 4.0
Perceived controllability	3.2 (0.5)	2.0 to 4.0	0.0 to 4.0
Attitudes toward depression treatments			
Health care provider interpersonal skills	4.2 (0.7)	1.5 to 5.0	1.0 to 5.0
Treatment effectiveness	3.9 (0.7)	1.5 to 5.0	1.0 to 5.0
Intrinsic spirituality	4.2 (0.9)	1.0 to 5.0	1.0 to 5.0
Access to care	2.2 (1.1)	0.5 to 5.0	1.0 to 5.0
Subjective norms			
Family members	23.2 (12.6)	1.0 to 49.0	1.0 to 49.0
Friends	14.2 (10.1)	1.0 to 49.0	1.0 to 49.0
Intentions to seek depression care			
<i>Informal</i> sources of care			
Family members	5.4 (1.3)	1.3 to 7.0	1.0 to 7.0
Friends	4.6 (1.6)	1.0 to 7.0	1.0 to 7.0
Priest, minister, or rabbi	5 (1.8)	1.0 to 7.0	1.0 to 7.0
Summary measure of intentions to seek <i>Informal</i> sources of care	5 (1.1)	1.8 to 7.0	1.0 to 7.0
<i>Formal</i> sources of care			
General medical provider	5.3 (1.4)	1.0 to 7.0	1.0 to 7.0
Psychiatrist	5.6 (1.4)	1.0 to 7.0	1.0 to 7.0
Other mental health providers	5.9 (1.3)	1.3 to 7.0	1.0 to 7.0
Summary measure of intentions to seek <i>Formal</i> sources of care	5.6 (1.0)	2.4 to 7.0	1.0 to 7.0

Table 3

Patients' Sources of Care Preferences and Order of Preference (N = 95)

Sources of care	Order of preference		
	First Choice	Second Choice	Third Choice
	<i>N</i> (%)	<i>N</i> (%)	<i>N</i> (%)
<i>Informal^a</i>	55 (58)	47 (49)	38 (40)
Family members	42	17	13
Friends	6	22	10
Priest, minister, or rabbi	7	8	15
<i>Formal^b</i>	30 (32)	41 (43)	44 (46)
Doctor	8	10	14
Psychiatrist	6	10	11
Other mental health professional	16	21	19
Deal with situation by themselves	10 (11)	7 (7)	13 (14)

^a *Informal* sources of care include family members, friends, and priest, minister, or rabbi.

^b *Formal* sources of care include doctor, psychiatrist, and other mental health professionals, such as social worker, psychologist, or counselor.

Table 4
Hierarchical Regression Model Predicting Intentions to Seek Informal Sources of Care

Variables	B	SE B	β	R ² Change	F Change
Gender	-.33	.24	-.14		
Age	-.01	.01	-.07		
Years of education	.03	.03	.10		
Insurance status	.49	.24	.19*		
Acculturation	-.33	.28	-.12		
CES-D score	-.02	.01	-.18		
General health status	-.37	.23	-.17		
Past Use of MH Professional	.41	.24	.17		
Past Use of MD for MH Problem	-.64	.28	-.23*		
Total access barriers endorsed	-.02	.04	-.06		
Cognitive Processes					
IP: Timeline	-.36	.15	-.23*	.05	5.32*
ATT: Health Care Provider Interpersonal Skills	.21	.15	.15	.02	2.42
ATT: Intrinsic Spirituality	.21	.11	.18	.07	7.57**
SN: Family Members	.003	.009	.03	.04	4.30*
SN: Friends	.03	.01	.26*	.10	11.45***

Note. Model $N = 94$; R^2 Change = Change in model R^2 uniquely associated with the corresponding variable; F Change = Partial F -statistic used to evaluate the significance of increments to the model's R^2 uniquely associated with the corresponding variable; Gender (Female = 1, Male = 0); Insurance Status (Insured = 1, Not Insured = 0); Acculturation (Bicultural = 1, Unassimilated = 0); General Health Status (Good or excellent = 1, Regular, Poor or Very Poor = 0); Past Service Use (Yes = 1, No = 0); IP = Illness Perceptions; ATT = Attitudes Toward Treatment; SN = Subjective Norms.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 5
Hierarchical Regression Model Predicting Intentions to Seek Formal Sources of Care

Variables	B	SE B	β	R ² Change	F Change
Gender1	-.13	.27	-.05		
Age	-.003	.01	-.03		
Years of education	-.01	.03	-.03		
Insurance status	.26	.22	.11		
Acculturation	-.20	.27	-.08		
CES-D score	.02	.01	.18		
General health status	-.18	.21	-.10		
Past Use of MH Professional	.30	.22	.14		
Past Use of MD for MH Problem	-.10	.26	-.02		
Total access barriers endorsed	-.02	.03	-.05		
Cognitive Processes					
IP: Identified the vignette as depression	.73	.19	.36***	.08	7.57**
ATT: Health Care Provider Interpersonal Skills	.58	.14	.41***	.17	19.63***
ATT: Intrinsic Spirituality	.14	.10	.13	.03	2.61
SN: Family Members	.02	.01	.27**	.09	9.26**

Note. Model $N = 94$; R^2 Change = Change in model R^2 uniquely associated with the corresponding variable; F Change = Partial F -statistic used to evaluate the significance of increments to the model's R^2 uniquely associated with the corresponding variable; Gender (Female = 1, Male = 0); Insurance Status (Insured = 1, Not Insured = 0); Acculturation (Bicultural = 1, Unassimilated = 0); General Health Status (Good or excellent = 1, Regular, Poor or Very Poor = 0); Past Service Use (Yes = 1, No = 0); Identified vignette as depression (Yes = 1, No = 0); IP = Illness Perceptions; ATT = Attitudes Toward Treatment; SN = Subjective Norms.

* $p < .05$.

** $p < .01$.

*** $p < .001$.