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Understanding Service Utilization Disparities and Depression in Latino Parents and Children: The Role of Fatalismo

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Understanding Service Utilization Disparities and Depression in Latino Parents and Children:
The Role of Fatalismo

Understanding Service Utilization Disparities and Depression in Latino Parents and Children:
The Role of Fatalismo

A thesis submitted in partial fulfillment
of the requirements for a degree of
Master of Arts in Psychology

By

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Abstract

Research has repeatedly demonstrated a disparity between need and utilization of mental health services for Latino adults and children. The adapted Health Beliefs Model (Henshaw & Freedman-Doan, 2009) provides a useful framework for conceptualizing the roles of perceived severity and therapy expectations in the relation between demographic variables and service utilization. Cultural variations in perceptions of mental illness by Latinos may be linked with lower service utilization rates for Latino parents and children. It was speculated that fatalismo, a cultural construct similar to external locus of control, may be related to perceptions of mental illness and service utilization outcomes for Latino parents and their children. Past research with Latino adults has shown links between fatalismo and both depression and lower service utilization in medical care, while links between fatalismo and psychiatric care have been hypothesized but not investigated. The current study therefore aimed to (1) develop a clear conceptualization of the fatalismo construct, (2) examine the relation between parental fatalismo and parent perceptions of depression for themselves and their children, and (3) explore the association between parental fatalismo and mental health service utilization for Latino parents and their children. Participants were 83 Latino parents (68 female participants, M age = 36.35 years, SD = 6.83) with at least one child between the ages of six and twelve, who were recruited during local cultural events. Participants completed self-report and parent-report measures. Factor analysis results suggested fatalismo is similar to, but not redundant with, external locus of control. Findings showed fatalismo predicted self-reported depressive symptoms in Latino adults and parent-reported depressive symptoms in their children, though the link between fatalismo and perceived depressive symptoms in children was no longer significant when parent depressive symptoms were included in the model. Fatalismo did not predict medical or mental health

service utilization for Latino parents or their children. Therefore, it appears that fatalismo may be an important consideration for treatment for depression in Latino adults. Further, it is likely that other barriers serve as more salient deterrents of service utilization for Latino parents and their children than fatalismo.

Keywords: fatalismo, Latino, service utilization, depression, child, parent

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I. Introduction

Research has repeatedly demonstrated underutilization of mental health services by Latinos (e.g., Alegría et al., 2008; Vega & Lopez, 2001). Keyes et al. (2012) found that strong Latino ethnic identity and Spanish linguistic preference were linked with lower service utilization for Latino adults, even after controlling for disorder severity, time spent in the U.S., and age of immigration. This strong association between Latino ethnic identity, Spanish linguistic social preference, and low service utilization was extended to depression specifically. A study by Alegría et al. (2008) indicated 63.7% of Latinos with a depressive disorder in the past year did not utilize any mental health care services. Similarly, Lagomasino and colleagues (2005) found that in managed primary care clinics, Latino patients experiencing depressive symptoms were less than half as likely as Whites to have received any depression care (i.e., antidepressant medication or specialty counseling) in the prior six months, even after controlling for other sociodemographic and clinical differences.

Some barriers to service utilization for Latinos are rooted in situational factors. For example, potential legal and social consequences of seeking mental health services, such as fear of deportation or social isolation, may discourage Latinos from seeking services (Workgroup on Adapting Latino Services, 2008). Limited access to health insurance, resulting from lower rates of full-time employment for Latinos compared to other ethnic groups, may be partially responsible for their underutilization of mental health services as well (Lopez, Bergren, & Painter, 2008; Workgroup on Adapting Latino Services, 2008). Cultural differences in internal factors, such as beliefs and values, may also play a role in lower rates of utilization of mental health services by Latinos (Kouyoumdjian, Zamboanga, & Hansen, 2003).

The Health Beliefs Model (HBM; Rosenstock, 1974), as adapted for mental health service utilization by Henshaw and Freedman-Doan (2009), may help explain the myriad factors that relate to mental health service utilization in Latinos. The HBM proposes that demographic factors influence perceptions of illness threat (i.e., perceived susceptibility to and severity of mental health problems) and treatment expectations (i.e., perceived benefits, barriers, and self-efficacy in regards to therapy) which, in turn, affect mental health care utilization (Figure 1). Cues to action, such as media or family motivators, may influence mental health care utilization behaviors separately from perceived threat and expectation processes.

The present study examined the associations between *fatalismo*, a Latino cultural belief comparable to external locus of control, depression threat perception, treatment expectations, and service utilization in a sample of Latino parents. The role of fatalismo in service utilization for depression was examined for both participants and their offspring. The value in focusing on the role of fatalismo beliefs lies in its modifiability, as studies have shown that experimental manipulations altered participants' control perceptions (Fisher & Johnston, 1994; Kennedy, DeVoe, Ramer-Henry, & West-Kowalski, 2008; Reich & Zautra, 1989; Slivinske & Fitch, 1987). The adapted HBM incorporates this approach by including recommendations to center psychological interventions around increased understanding of mental illness susceptibility, symptom severity, therapy benefits, and decreasing perceived barriers to treatment (Henshaw & Freedman-Doan, 2009).

A. Mental Health Perceptions and Service Utilization

One explanation for underutilization of appropriate mental health care for Latinos may lie in the conceptualization of mental health symptoms. First, mental health symptoms may not be recognized as such and instead may be labeled as medical. Some have reported that when

Latinos experience psychiatric distress, they are more likely than Whites to report somatic symptoms and therefore present to primary care providers as opposed to mental health specialists (e.g., López, 2002; Varela et al., 2004). A qualitative study by Cabassa, Lester, and Zayas (2007) found that only 55% of subjects in a Latino sample (75% female) recruited from a primary care clinic used the words “depression” or “depressed” to describe a standardized vignette of an individual who meets DSM-IV criteria for major depression.

Similarly, caregivers’ perception of a child’s mental health problem can play an important role in securing access to mental health services for children with psychological distress. Teagle (2002) found that caregivers who perceived that their child had a mental health problem were more likely to utilize specialty mental health services than caregivers who did not report any psychological problems for their child. Cultural variations in perceptions of psychopathology may contribute to lower service utilization in Latino children than in children of other ethnic groups. One study compared European, Latino, and African American caregivers’ perceptions of their adolescent child’s mental health (Roberts, Alegría, Ramsay Roberts, & Chen, 2005). Presence of psychiatric disorders was determined by parent-reported information using the Diagnostic Interview Schedule for Children (DISC-IV; Shaffer et al., 2000). European American caregivers were nearly twice as likely as Latino and African American caregivers to provide poor ratings of their adolescent’s mental health and to report perceiving that their adolescent had an emotional, behavioral, drug, or alcohol problem in the last year. Consistent with the HBM, these findings suggest that members of minority groups may have a higher threshold for labeling symptoms as mental health problems, perhaps experience increased wariness of potential consequences from identifying their child’s mental health problem, or sustain more doubt concerning the effectiveness of health care options for resolving the problem

than European Americans (Roberts et al., 2005). Importantly, caregivers who identified psychological impairment were more likely to seek mental health services for their child than those who failed to identify impairment. This finding highlights the importance of caregiver perceptions of psychological problems for utilization of mental health services by Latino children. Nevertheless, two thirds of youth with psychological problems did not receive any services, a finding that suggests underutilization of services remains an important problem to address. A notable limitation of this study was lack of further assessment of psychological disorders in addition to caregiver reports, as different prevalence rates among child participants could have influenced variation in caregiver perceptions among groups.

Not all Latinos perceive psychiatric symptoms in their children similarly. Schmitz and Velez (2003) found Mexican, Mexican American, and Puerto Rican mothers differed in perceptions of Attention Deficit-Hyperactivity Disorder (ADHD) symptoms in their children, as measured by maternal ratings of items from the Hyperactivity subscale of the Behavior Problems Index (Zill & Peterson, 1986). Mexican mothers were less likely to report impulsivity of their child than Mexican American and Puerto Rican mothers, and mothers who used Spanish more often in interviews were more likely to report restlessness than mothers who used Spanish less often. Although studies have suggested differences among cultural groups in perceptions of psychopathology that have implications for lower service utilization, research is needed that focuses on the mechanisms, such as cultural constructs, that contribute to perceptions of psychopathology in Latinos.

B. Therapy Expectations and Service Utilization

The adapted HBM highlights the role of therapy expectations as a mechanism through which demographic variables, such as ethnicity, influence mental health care behaviors

(Henshaw & Freedman-Doan, 2009). Kouyoumdjian and colleagues (2003) speculated that mental health care may be perceived as culturally insensitive or simply ineffective by Latino families, which could be reinforced when Latinos who do utilize mental health services receive inadequate care. However, several studies suggest that Latinos have positive attitudes about the effectiveness of therapy. For example, Cabassa et al. (2007) found that in a sample of Latino adults, 84% believed that counseling improves functioning for individuals with depression and 75% perceived counseling as equally effective for treating depression as medication. De Melo and Farber (2005) found that Latino college students actually reported higher willingness to seek services for depression than White students. These findings, taken together with studies showing that more positive appraisals of help-seeking for mental health problems predict higher service utilization by adults for themselves and their children (e.g., Deen, Bridges, McGahan, & Andrews, 2012; Roberts et al., 2005), suggest that barriers other than negative therapy expectations are more substantially contributing to underutilization of mental health services by Latinos.

C. Fatalismo and Service Utilization

Fatalismo (fatalism), a Latino cultural construct similar to external locus of control, emphasizes belief in the limited control of the individual over life events. Fatalismo is often associated with attributing explanations for events to a higher power, destiny, or luck (Añez, Paris, Bedregal, Davidson, & Grilo, 2005). Fatalismo tends to be more prominent in individuals who demonstrate higher levels of identification with traditional Mexican culture compared to those who are less acculturated to traditional Mexican culture (Neff & Hoppe, 1993; Ross, Mirowsky, & Cockerham, 1983). It may shape expectations about the usefulness of seeking services for mental health problems (Añez et al., 2005).

Strong adherence to fatalistic beliefs has been linked to negative psychological outcomes. In a sample of Hispanic high school students, Lorenzo-Blanco and colleagues (2011) found that participants who demonstrated higher fatalismo were more likely to report high levels of discrimination and family conflict and less family cohesion than those who indicated lower fatalismo. Although girls had higher levels of fatalismo overall, endorsement of fatalismo was more strongly linked with family conflict and low cohesion for boys. As outcomes were assessed using self-report measures, it is difficult to discern whether higher levels of fatalismo were associated with greater negative outcomes or if fatalistic beliefs reflected the tendency to perceive problems in family functioning and experiences of discrimination as more severe. Ross et al. (1983) found that not only were Hispanic women more likely to report fatalistic beliefs compared to Hispanic men, but also stronger fatalistic orientations were linked with higher levels of general psychological distress in both men and women. Findings also indicated that fatalismo endorsement mediated the relations between low social class and psychological distress and between Mexican cultural identity and psychological distress.

Fatalismo and external locus of control also appear to relate to depression specifically, not just psychological distress generally. A meta-analysis of 97 studies by Benassi, Sweeney, and Dufour (1988) showed that greater externality in locus of control was associated with greater depression. Similarly, Neff and Hoppe (1993) found higher levels of fatalismo were associated with more depression in a sample of Hispanic, Anglo, and African American adults. However, fatalismo's link to depression may be moderated by acculturation. Neff and Hoppe found that high levels of fatalismo and religiosity were related to low levels of depression in less linguistically acculturated Hispanics, whereas for Hispanics more fluent in English, high levels of fatalismo and religiosity were associated with higher levels of depression. The authors suggest

this moderation is possibly due to conflicts arising from the discrepancy between traditional values and acculturated status.

The literature on the relations between Latino cultural values such as fatalismo and help-seeking for psychological distress has been mixed. Leong, Wagner, and Tata (1995) posited that Latino cultural values deter help-seeking behaviors by promoting “avoidance of impersonal bureaucratic organizations” (p. 426) and shame for needing psychological help. On the contrary, Ramos-Sanchez and Atkinson (2009) found that traditional Mexican values (i.e., familismo, machismo, folk illness beliefs, and religiosity) did not explain variance in help-seeking intentions for a sample of 262 Mexican American college students. More research is needed to clarify the relations between specific cultural values and help-seeking for mental health problems.

To date, the relation between fatalismo and help-seeking for mental health problems has not been studied in Latinos in general, nor in Latino caregivers in particular. However, research examining the relation between fatalismo and Latinos’ help-seeking has been done in the *medical* health care domain. Overall, research has shown that fatalismo can have negative implications for health care utilization, especially regarding preventive health measures, but this has not been definitively established. For example, Lopez-McKee, McNeill, Bader, and Morales (2008) reported that Mexican American women who infrequently received mammography screens showed higher levels of cancer fatalism (the belief that death is inevitable when cancer is present), lower perceived control over participation in screening activities, and worse breast health compared to participants who regularly received mammography screens. However, Abraido-Lanza et al. (2007) criticized the inconsistency of findings linking cancer fatalism to reduced likelihood of cancer screening, emphasizing studies in which Latinos demonstrate optimism in the presence of cancer and a lack of studies that attempt to control confounds.

Espinosa de los Monteros and Gallo's (2011) systematic review found that in 64% of studies with Latina participants, fatalism was inversely linked to cancer screening after accounting for structural barriers. Although this systematic review suggests preliminary evidence that fatalism is linked to lower cancer screening service utilization, this finding is limited by some mixed findings and wide variability of measures. In a study by Flórez et al. (2009), qualitative interviews of 25 Dominican American women without cancer emphasized the complexity of the fatalism construct. The information provided in the interviews suggested that individuals who incorporated both internal and external loci of control into their overall perception of the controllability of events had positive beliefs about cancer screening and survival, which may explain some of the criticism about the coexistence of fatalism and optimism expressed by Latinos regarding cancer (Abraído-Lanza et al., 2007).

Not only have correlational studies suggested a link between fatalism or external locus of control and help-seeking for health problems, so too did an experimental study. Kennedy, DeVoe, Ramer-Henry, and West-Kowalski (2008) sought to manipulate health locus of control and examine its influence on self-care behaviors in a sample of 120 Mexican American women. Psychoeducation was implemented to manipulate health locus of control in the form of information sessions over the course of two weeks that provided training on use of a self-care manual for common medical problems. After psychoeducation, the Internal Health Locus of Control and Powerful Others Health Locus of Control dimensions of the Multidimensional Health Locus of Control Scale (Wallston & Wallston, 1978) increased, as well as self-reported engagement in self-care behaviors. Taken together, studies suggest fatalismo may be an important predictor of help-seeking for health problems.

D. Fatalismo and Parental Help Seeking for a Child

Research has consistently shown that youth mental health needs are underserved; this disparity between need and service utilization is even more pronounced for Latino children and adolescents (Kataoka, Zhang, & Wells, 2002; Lopez et al., 2008). Children rely on their caregivers for access to mental health services. Latinos encounter many barriers to seeking mental health services, including the following: social, legal, and economic consequences, lack of knowledge about services, somatic conceptualization of mental health symptoms, and lack of culturally sensitive services (Lopez et al., 2008; Workgroup on Adapting Latino Services, 2008). These barriers may deter caregivers from seeking mental health care not only for themselves, but also for their children.

Despite the importance of understanding the parental factors that relate to underutilization of services for Latino children, research on this topic is limited. Alegría et al. (2004) found that parental concern and child's level of impairment significantly positively predicted mental health service utilization in a sample of Puerto Rican caregiver-child dyads. Help seeking on behalf of children may also differ by type of mental health problem, particularly internalizing versus externalizing disorders. For instance, Alegría et al. found that parental reports of disruptive behavior were more common (11.5% of children) than reports of depressive disorders (2.4% of children). Alegría et al. postulate that this discrepancy may exist because the effects of disruptive disorders may be more noticeable to family members than symptoms of depression. McCabe (2002) found that Mexican American parents were more likely to terminate treatment if they believed they should be able to overcome their child's mental health problems on their own and thought increasing discipline would be an effective strategy for responding to their child's emotional and behavioral health problems, as compared to parents who did not share

that belief. Moreover, parents who perceived more barriers to psychotherapy treatment and expected their child to recover quickly were likely to prematurely terminate therapy after a single session than parents who perceived few barriers (McCabe, 2002). Parental beliefs, such as fatalismo, likely operate similarly for help seeking on behalf of one's child as for help seeking for oneself, but this has not yet been examined.

E. Methodological Issues Related to Fatalismo

Although the aforementioned studies shed some light on the importance of fatalismo in Latino mental and physical health care utilization, clarity and evidence of accuracy in the definition and measurement of fatalismo remain limited. Religiosity is often included in definitions of fatalismo (e.g., Antshel, 2002; Añez et al., 2005); Neff and Hoppe (1993) described fatalismo and religiosity as complementary personal and social resources. A clear distinction between fatalismo and external locus of control cognition is lacking in the literature; perhaps the two are fully redundant, but it is possible they represent different constructs. Adding to the methodological limitations is the possible existence of multiple dimensions of fatalism, something that has not been addressed in previous studies. Typically, descriptions of fatalismo in research refer to inevitability and mastery components as representing external and internal locus of control, respectively (e.g., Cuéllar, Arnold, & Gonzalez, 1995). However, Levenson (1972) identified three dimensions of locus of control (one of which was internal and two of which were external): internality, powerful others, and chance. Levenson's research suggests external locus of control may be of two varieties: the belief that the world is completely chaotic and things happen entirely by chance, or the belief that the world is controlled by powerful others and one's ability to act willfully may be impeded in part by these external, but not random, forces. Buttressing the notion that fatalism may comprise myriad dimensions, items on the most

prominent measure of fatalismo, the subscale of the Multiphasic Assessment of Cultural Constructs—Short Form (MACC-SF), showed unimpressive factor loadings ranging from .37 to .63 (Cuéllar et al., 1995).

The methodological limitations of fatalismo research may have important implications for service utilization and their more nuanced investigation could help move this research forward. For instance, Roncancio, Ward, and Berenson (2011) found cancer fatalism (lack of control over sickness) was positively associated with higher expectations of health care provider control, which could translate into *higher* service utilization rates for those with higher fatalismo compared to those with low fatalismo. Benassi et al. (1988) found that effect sizes of the association between external locus of control and depression varied significantly by both type of locus of control scale and type of depression scale, underscoring the importance of psychometrically sound measures.

F. Study Aims

This study intended to fill gaps in our understanding of the underlying processes that lead to lower mental health service utilization for Latino parents and their children. One aim of the current study was to develop a clear conceptualization of the dimensions of the fatalismo construct in comparison to locus of control cognition. A second aim of the current study was to replicate research indicating a link between fatalismo and depression in adults and explore the possible extension of this research by linking parental fatalismo to depression in offspring. Third, this study aimed to examine how components of parental fatalismo relate to service utilization of Latino parents and their children.

RQ1: The first exploratory research question asked how MACC-SF fatalismo subscale scores (i.e., inevitability and mastery) compare to the dimensions of the IPC (internal-external control) scale (i.e., Internality, Powerful Others, Chance) in a Latino sample.

RQ2 and H1: The second research question asked how fatalism and depression are related. In accordance with previous research linking higher fatalismo with greater depression (Bridges, n.d.; Neff & Hoppe, 1993), it was hypothesized that Latino parents who more strongly endorse fatalismo would be more likely to report personal depressive symptoms. The study also explored the relation between fatalismo and Hispanic caregiver perceptions of depression in their children.

RQ3 and H2: The third research question asked how fatalism and service utilization for mental health concerns were related. Consistent with Monteros and Gallos (2010), it was hypothesized that there would be a negative relation between fatalismo and rates of service utilization in Latino adults. The study also explored how parental fatalism is associated with service utilization on behalf of their child.

II. Method

A Participants

A sample of 86 adult Latino participants who were parents of a child between 6 and 12 years old were recruited from two cultural events in Northwest Arkansas. Refusal to participate, failure to meet study criteria, and inability to give consent resulted in exclusion from the study. Three participants were excluded due to failure to indicate having a child in the appropriate age range. Descriptive statistics were computed for the overall sample of Latino parents with at least one child between the ages of six and twelve ($N = 83$, ages 22-59 years, $M = 36.35$, $SD = 6.83$). Eighty-two percent of participants were female. Ninety-three percent of participants were born

outside of the United States. The average number of years spent in the U.S. for these participants was 16.78 ($SD = 7.44$). Eighty-two percent of participants were of Mexican origin and eighteen percent were of Salvadoran origin. About half (54%) of participants completed the study measures in Spanish. Thirty-nine percent of participants were employed full-time, 16% were employed part-time, 35% were homemakers, and 8% were unemployed. Seventy-two percent of participants were married, 13% were divorced or separated, and 10% had never been married. Additional participant demographic information regarding can be found in Table 1. Descriptives for study variables can be found in Table 2.

B Measures

All measures used were available in both Spanish and English and were administered in the participant's preferred language. Descriptions of specific measures and psychometric properties follow.

Demographic information.

Participants each completed a brief demographic sheet assessing the following variables: age, sex, ethnicity, immigrant status, number of years in the US, educational achievement, marital status, employment status, ages of their children, acculturation, and religiosity (Appendix A).

Parent depression.

The Brief Symptom Inventory 18 (BSI-18; Derogatis, 2001) is designed to evaluate depressive, anxious, and somatic dimensions of psychological distress. The BSI-18 consists of 18 self-report items on a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*extremely*) targeting the frequency of depressive, anxious, and somatic symptoms in the past seven days.

Scores for depression, anxiety, and somatization symptom dimensions are provided in addition to

the overall Global Severity Index (GSI) score. The BSI-18 has been translated into Spanish (Derogatis, 2000). The 6-item depression subscale of the BSI-18, which was used for the present study, includes items such as “feeling blue” and “feeling no interest in things” (Appendix B). The depression subscale has been shown to have good internal consistency ($\alpha = .84$; Derogatis & Fitzpatrick, 2004). Andreu et al. (2008) found the Spanish version of the depression subscale of the BSI-18 had good internal consistency ($\alpha = .88$), test-retest reliability ($\alpha = .82$), and convergent validity with the BDI ($\alpha = .83$) in a sample of people seeking outpatient psychological services in Spain. In the current study, the depression subscale of the BI-18 had good internal consistency ($\alpha = .80$).

Parent perceptions of child depression

The Child Behavior Checklist for Ages 6-18 (CBCL/6-18; Achenbach, 2001) is a parent-report measure developed to identify child mental health problems. The assessment instrument consists of 113 items on a 0-2 scale (0: *not true*, 1: *somewhat or sometimes true*, 2: *very true or often true*). Albores-Gallo et al. (2007) created a Spanish translation of the CBCL/6-18 for Mexican Spanish speakers that showed good internal consistency ($\alpha = .97$ for the total problem scale; .90 for internalizing problems; and .94 for externalizing problems) and differentiated children referred for outpatient treatment versus community (i.e., non-referred) children. Of the six DSM-oriented scales of the CBCL (i.e., affective, anxiety, attention deficit-hyperactivity, conduct, oppositional defiant, and somatic problems), only the affective problems scale, intended to assess dysthymia and major depression, was administered for the current study (Achenbach, Dumenci, & Rescorla, 2003). The affective problems scale consists of 13 items from the CBCL/6-18, including “Unhappy, sad or depressed” and “There is very little he/she enjoys” (Appendix C). The affective problems scale has demonstrated good reliability ($\alpha = .81$;

Nakamura, Ebesutani, Bernstein, & Chorpita, 2008). Van Lang and colleagues (2004) found this scale is strongly linked with major depression as described by DSM-IV criteria, demonstrating good concurrent validity. Nakamura et al. (2008) found the affective problems scale showed convergent validity with the Revised Children's Anxiety and Depression Scale and the Children's Depression Inventory. In the current study, the affective problems subscale of the CBCL/6-18 showed good internal consistency ($\alpha = .87$).

Parent mental and medical health service utilization

The Service Utilization Interview (SUI; Bridges, 2008) was used to assess parent service utilization. This semi-structured interview assesses multiple types of service utilization, including seeking services from mental and medical health professionals, religious leaders, occupational therapists, and spiritual healers. For each type of service, information is solicited regarding frequency of utilization, reason for seeking services, and satisfaction with the services received (Appendix D). Any participant who endorses having utilized a medical or mental health service for a psychiatric difficulty in (a) the past year, or (b) any time in their life is coded as "yes" in two dichotomous service utilization variables. The SUI is available in both English and Spanish. Bridges, Andrews, and Deen (2012) found medical service utilization rates, as assessed by the SUI, were significantly associated with current psychiatric diagnoses of Major Depressive Disorder, Generalized Anxiety Disorder, or Posttraumatic Stress Disorder in a sample of primarily immigrant Latino adults.

Child mental and medical health service utilization

In order to assess child service utilization, the SUI (Bridges, 2008) was modified. Rather than asking about personal help seeking for emotional problems, parents were asked about the

various types of helping services they may have sought for their child (Appendix E). The modifications to the SUI were translated into Spanish.

Fatalismo

Participants were asked to complete the fatalism subscale of the Multiphasic Assessment of Cultural Constructs—Short Form (MACC-SF; Cuéllar et al., 1995). This instrument is available in both English and Spanish. The fatalism subscale contains eight true or false items and has a coefficient alpha of .63 (Appendix F). “True” items are summed to form a total score that ranges from 0 to 8. Higher scores indicate higher fatalistic beliefs. The fatalism subscale of the MACC-SF is comprised of two factors: inevitability and mastery. Factor analyses conducted by Cuéllar et al. showed that inevitability and mastery accounted for 26% and 17% of the variance in scores, respectively. An example of an inevitability item is: “It doesn’t do any good to try to change the future because the future is in the hands of God.” An example of a mastery item is: “When I make plans, I am almost certain I can make them work.” Negative correlations between fatalism subscale scores and acculturation provide evidence for construct validity of the scale, consistent with acculturation theory (Cuéllar et al., 1995). In the current study, the internal consistency for the full eight-item scale was as follows: $\alpha = .64$.

Locus of control

Levenson’s IPC (Internal-External Control) Scale (1972) is composed of three dimensions of locus of control: internality (I), powerful others (P), and chance (C). The IPC Scale is comprised of 24 Likert-scale items, with eight items corresponding to each locus of control dimension. All items are rated on a +3 to -3 scale (+3: *strongly agree*, -3: *strongly disagree*). High scores on internality indicate internal locus of control while high scores on powerful others and chance show external locus of control. Examples of items include: “My life

is determined by my own actions” (internality); “Getting what I want requires pleasing those above me” (powerful others); and “To a great extent, my life is controlled by accidental happenings” (chance) (Levenson, 1974; Appendix G). Items were designed so that similar content was included in each dimension (e.g., driving, leadership status). Internal consistency calculations demonstrated moderately high reliabilities for the I, P, and C scales (Kuder-Richardson: $r = .64, .77, .78$; Spearman-Brown: $r = .62, .66, .64$; test-retest reliability after one-week: $r = .64, .74, \text{ and } .78$; Levenson, 1974). The three factors emerged in factor analysis and were differentially associated with other variables, such as involvement and information, as expected (Levenson, 1974). In the current study, internal consistency for Levenson’s I, P, and C scales was as follows: $\alpha = .67, .83, \text{ and } .80$, respectively.

C. Procedures

Research assistants recruited participants from a booth at a cultural festival. All participants were of Latino origin, over 18 years of age, and the parent of at least one child between 6 and 12 years of age. If a participant was the parent of multiple children within this age range, the participant was asked to complete the study measures for the child about whom he or she is the most concerned. Once written consent was obtained, measures were distributed in English or Spanish at the participant’s preference. Participants were then presented with measures of fatalismo (MACC-SF) and Multidimensional Locus of Control in randomly counterbalanced order. Afterward, participants completed the depression subscale of the Brief Symptom Inventory 18, the affective problems subscale of the CBCL, and mental and medical health service utilization questions for themselves and their children. Finally, participants completed the demographic worksheet. After completing the study, participants were debriefed and received \$10 compensation for completing the study. They were also provided with a list of

local resources for mental health difficulties. Approximately 20-30 minutes were needed to complete the study.

D. Power

Nunnally (1978) recommends a sample size of 10 subjects per assessment item to be factor analyzed. As the fatalismo subscale of the MACC-SF consists of eight items, a minimum of 80 subjects would be needed for the proposed analysis. In their meta-analysis, Benassi et al. (1988) found a medium effect size ($r = .31$) when exploring the relation between external locus of control and depression. A power analysis using Statistics Calculators version 3.0 revealed that to establish reasonable power ($1-\beta = .8$) for a hierarchical regression, a minimum of 70 participants would be required to detect a medium effect size at the third step after controlling for two variables (gender and age) at step one and one variable (depression) at step two. Therefore, a minimum sample of 80 participants (86 in total) was recruited for this study.

III. Results

Data were explored to determine that assumptions required for the study analyses were met. Histograms suggested significantly positively skewed distributions for adult depression (measured by the BSI-18) and parent-reported child depression (measured by the CBCL/6-18) variables. All other study variables were reasonably normally distributed. The adult depression variable was transformed using a logarithm transformation and the parent-reported child depression variable was transformed using an inverse transformation. Analyses were conducted with both the original and altered data for these two variables. As analyses using transformed variables showed a similar pattern of results, the original data are reported. When outlier values were given a score one point above the remaining cluster of scores, results did not differ from when the original data were analyzed.

Preliminary analyses also ensured no violations of linearity, homoscedasticity, and multicollinearity assumptions. As *t*-tests did not detect any significant gender differences for any study variables, data from the overall sample of male and female participants were used for study analyses. For MACC-SF fatalismo subscale, BSI-18 depression subscale, CBCL/6-18 affective problems subscale, and Levenson's I, P, and C scales, if some items were missing, but more than half of the items were completed, the average of the completed items was used as the score for that measure. These measures were missing the following percentages of data: MACC-SF fatalismo subscale: 1.5%; BSI-18 depression subscale: 1.8%; CBCL/6-18 affective problems subscale: 7.0%; Levenson's internality subscale: 6.2%; Levenson's powerful others subscale: 5.7%; and Levenson's chance subscale: 5.3%.

A. Defining Fatalismo

To analyze the first research question, the items of the MACC-SF were subjected to a series of exploratory factor analyses using SPSS Version 20. Prior to performing factor analysis, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of several coefficients of .3 and above. The Kaiser-Meyer-Okin value was .65, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached statistical significance ($p < .001$), supporting the factorability of the correlation matrix.

The first factor analysis was conducted with all eight fatalismo subscale items of the MACC-SF. The factor analysis revealed the presence of two components with eigenvalues exceeding one. An inspection of the scree plot revealed a break after the second component. This was further supported by the results of parallel analysis, which showed two components with eigenvalues exceeding the corresponding criterion values for a set of 100 randomly generated data matrices of the same size. The two-component solution explained a total of 48.34% of the

variance, with Component 1 contributing 31.39% and Component 2 contributing 16.95%. To aid in the interpretation of these two components, Varimax rotation was performed. The component matrix is presented in Table 3. Results suggested item 7 should be reverse-coded, consistent with logic as the item emphasizes belief in individual control, unlike any other subscale items, and that item 4 was problematic since it did not load well on either component.

Many additional solutions were tried, varying items included in the analysis, type of rotation (orthogonal or oblique), and number of factors extracted. Solutions were evaluated by structure (e.g., lack of complex loaded items, elimination of poor performing items) in addition to statistical metrics. The final accepted factor analysis was conducted with fatalismo subscale items 1, 2, 3, 5, and 6 only. This yielded a unidimensional factor that explained 46.95% of the variance in the original set of variables (Table 4). Therefore, a new fatalismo factor was calculated by summing the items from the MACC-SF scale but omitting items 4, 7, and 8. Internal consistency for the new fatalismo factor was slightly improved, $\alpha = .71$. Correlational analyses between the new fatalismo factor and each subscale of Levenson's scale were completed (Table 5). The new fatalismo factor was significantly positively correlated with the powerful others ($r = .43, p < .001$) and chance ($r = .40, p < .001$) subscales, but was not related to the internality subscale.

B. Bivariate Correlations between Study Variables

After computing the new fatalismo variable, bivariate correlations between it and other study variables were computed (Table 6). Fatalismo was unrelated to religiosity. Positive associations between fatalismo and both parental and child depression were evident, but not to service utilization in either parents or their children.

C. Fatalismo and Depressive Symptoms in Parents

To address the second research question, a linear regression was performed with parent fatalismo scores (from the new fatalismo factor) entered as the predictor variable and parent depressive symptoms entered as the outcome variable. As parent age and gender were not significant predictors of parental depression, they were not included in the analysis. As shown in Table 7, parent fatalismo significantly and positively predicted self-reported depressive symptoms, $N = 76$, $F(1, 74) = 6.38$, $p = .014$, $R^2 = .08$, providing support for the first hypothesis.

A series of linear regressions were conducted in post-hoc analyses to compare the incremental predictive value of fatalismo in explaining parental depressive symptoms after accounting for locus of control variables (Table 8). When chance LOC was entered on the first step of the model and fatalismo was entered on the second step, the overall model reached significance for predicted personal depressive symptoms, $N = 74$, $F(2, 71) = 6.90$, $p = .002$, $R^2 = .16$, but fatalismo did not add to explained variance above and beyond chance LOC, $\Delta F = 2.09$, $p = .152$, $\Delta R^2 = .03$. Similarly, when powerful others LOC was entered on the first step, the overall model reached significance for predicting personal depressive symptoms, $N = 73$, $F(2, 70) = 5.44$, $p = .006$, $R^2 = .14$, but fatalismo did not add to explained variance above and beyond powerful others LOC, $\Delta F = 2.71$, $p = .105$, $\Delta R^2 = .03$. When internality LOC was entered on the first step, the overall model reached significance for predicting personal depressive symptoms, $N = 43$, $F(2, 71) = 3.61$, $p = .032$, $R^2 = .09$, but internality LOC was not a significant individual predictor. Fatalismo entered at the second step explained significant variance in personal depressive symptoms above and beyond internality LOC, $\Delta F = 6.82$, $p = .011$, $\Delta R^2 = .09$.

D. Fatalismo and Depressive Symptoms in Children

To address the exploratory aim of the second research question, a linear regression was performed with parent fatalismo entered as the predictor variable and parent-reported child depressive symptoms entered as the outcome variable. As shown in Table 7, parent fatalismo significantly and positively predicted child depressive symptoms, $N = 74$, $F(1, 72) = 5.05$, $p = .028$, $R^2 = .07$.

In a post-hoc analysis, a linear regression was conducted to determine if fatalismo predicts child depressive symptoms above and beyond the influence of parent depressive symptoms. Results showed the overall model reached significance, $N = 73$, $F(2,70) = 6.33$, $p = .003$, $R^2 = .15$. Although parent depressive symptoms were a significant individual predictor, $\beta = .31$, $p = .009$, fatalismo did not predict parent reports of child depressive symptoms above and beyond parent depressive symptoms, $\beta = .17$, $p = .151$.

E. Fatalismo and Service Utilization in Parents

To address the third research question, two hierarchical logistic regressions were conducted. In the first logistic regression, depressive symptoms were entered on the first step, fatalismo was entered on the second step of the model, and use of medical services in the past year was entered as the outcome variable. The full model did not reach significance, $N = 71$, $\chi^2(2) = 4.56$, $p = .103$, explaining 8.30% (Nagelkerke R^2) of the variance in personal use of medical services in the past year and correctly classifying only 62.0% of cases. However, as shown in Table 9, fatalismo made a unique statistically significant contribution for predicting personal use of medical services in the past year, Wald $\chi^2(1) = 4.10$, $p = .043$, odds ratio (OR) = 0.72, 95% CI = 0.516, 0.989. Higher fatalismo was associated with lower odds of having utilized medical services in the past year. Therefore, the second hypothesis was partially supported for medical service utilization.

The second logistic regression predicted past year utilization of mental health services. The full model containing depression (step 1) and fatalismo (step 2) showed a trend toward significance, $N = 71$, $\chi^2(2) = 5.45$, $p = .065$. The model as a whole explained 16.8% (Nagelgerke R^2) of the variance in personal use of mental health services in the past year and correctly classified 93% of cases. As shown in Table 9, self-report of depressive symptoms was the only independent variable which made a uniquely statistically significant contribution to the model, Wald $\chi^2(1) = 4.85$, $p = .028$, OR = 1.20, 95% CI = 1.02, 1.41, indicating greater depression was associated with increased odds of mental health service utilization. Therefore, the second hypothesis was not supported for mental health service utilization.

A series of logistic regressions were conducted in post-hoc analyses to compare the incremental predictive value of fatalismo in explaining past year service utilization, above and beyond the locus of control variables (Table 10). When chance LOC was entered on the first step, fatalismo was entered on the second step of the model, and past year medical service use was entered as the outcome variable, the overall model showed a trend toward significance, $N = 70$, $\chi^2(2) = 4.94$, $p = .085$. Only fatalismo was a statistically significant individual predictor of past year medical service utilization, Wald $\chi^2(1) = 4.17$, $p = .041$, OR = 0.67, 95% CI = 0.46, 0.98. The second regression with powerful others LOC and fatalismo similarly resulted in a non-significant model as a whole, $N = 69$, $\chi^2(2) = 4.31$, $p = .116$, with only fatalismo reaching statistical significance as an individual predictor of past year medical service use, Wald $\chi^2(1) = 3.89$, $p = .049$, OR = 0.69, 95% CI = 0.47, 1.00. The third regression with internality LOC and fatalismo resulted in a significant model, $N = 70$, $\chi^2(2) = 7.24$, $p = .027$, Nagelgerke $R^2 = .13$. As individual predictors, internality LOC reached significance, Wald $\chi^2(1) = 3.99$, $p = .046$, OR =

1.07, 95% CI = 1.00, 1.14, and fatalismo showed a trend toward significance, Wald $\chi^2(1) = 2.95$, $p = .086$, OR = 0.75, 95% CI = 0.54, 1.04.

Similarly, a series of hierarchical logistic regression explored past year mental health service utilization from LOC and fatalismo variables (Table 10). When chance LOC was entered on the first step, fatalismo was entered on the second step, and past year mental health service use was entered as the outcome variable, the model was not significant, $N = 70$, $\chi^2(2) = 1.58$, $p = .454$. When powerful others was entered on the first step of the model, fatalismo was entered on the second step of the model, and past year mental health service use was entered as the outcome variable, the overall model, was not significant, $N = 69$, $\chi^2(2) = 1.16$, $p = .561$. When internality was entered on the first step of the model, fatalismo was entered on the second step of the model, and past year mental health service use was entered as the outcome variable, the model was not significant, $N = 70$, $\chi^2(2) = 0.34$, $p = .841$. These results are shown in Table 10.

F. Fatalismo and Service Utilization in Children

To address the third research question, two logistic regressions were conducted. As parent-report of child depressive symptoms was not a significant predictor of past year medical and mental health service utilization on behalf of the child, it was not included in analyses. In the first logistic regression, parent fatalismo was entered as the predictor variable and use of medical services in the past year on behalf of a child was entered as the outcome variable. The model was not significant, $N = 76$, $\chi^2(1) = 1.36$, $p = .243$. In the second logistic regression, parent fatalismo was entered as the predictor variable and use of mental health services in the past year was entered as the outcome variable. The model was not significant, $N = 74$, $\chi^2(1) = 1.39$, $p = .238$. These results are shown in Table 9.

IV. Discussion

The current study sought to examine the implications of fatalismo for depression and past year service utilization for Latino parents and their children. According to the Health Belief Model, demographic factors (e.g., Latino ethnicity, cultural values) shape perceptions of illness threat (i.e., perceived susceptibility and severity) and treatment expectations (i.e., perceived benefits, barriers, and self-efficacy in therapy), which ultimately influence service utilization outcomes (Henshaw & Freedman-Doan, 2009). Consistent with this model, study results showed fatalismo was related to increased likelihood of Latino adults' self-report of personal depressive symptoms. However, fatalismo did not significantly predict service utilization outcomes for Latino adults or their children, suggesting other factors may play a more influential role in determining service utilization outcomes for Latinos.

A. Defining Fatalismo

In order to better understand fatalismo's relation to depression and service utilization, the study first aimed to provide a clear conceptualization of the fatalismo construct. Although past research has linked fatalismo with adverse psychological outcomes (e.g., depression, family conflict, and discrimination; Lorenzo-Blanco et al., 2011; Neff and Hoppe, 1993), the construct has not been well-defined. Furthermore, Cuéllar and colleagues' (1995) fatalismo measure, the MACC-SF subscale, showed unimpressive factor loadings for their unidimensional fatalismo factor comprised of two facets of fatalismo, mastery and inevitability.

In the current study, a series of factor analyses conducted with the eight items of MACC-SF fatalismo subscale suggested the fatalismo construct was best captured by removing three subscale items to form a cohesive one-dimensional fatalismo construct. This streamlined fatalismo factor showed strong factor loadings, superior to those reported by Cuéllar et al. for the

full eight-item subscale. The remaining items reflected a broad philosophy characterized by the belief that as one does not have control over future events, one should strive to live in the present (e.g., “It is more important to enjoy life now than to plan for the future”). Bivariate correlation analyses differentiated fatalismo from religiosity.

To compare fatalismo with external locus of control, bivariate correlation analyses between the streamlined fatalismo factor and the three dimensions of Levenson’s IPC (Internal-External Control) Scale (1972) were conducted and revealed positive correlations of similar strength between fatalismo and powerful others and chance locus of control (.43 and .40 respectively). This finding suggests fatalismo is significantly related to both powerful others and chance dimensions of external locus of control, but not redundant with either. Internality was not significantly related to fatalismo, which allows for the potential coexistence of fatalistic beliefs and internal locus of control beliefs, consistent with past research (e.g., Flórez et al., 2009). Knowledge provided by study findings regarding characteristics of the fatalismo construct is useful for improving understanding of its relation to maladaptive psychological outcomes and how it may be modified to improve such outcomes.

B. Fatalismo and Depressive Symptoms

Fatalismo and depressive symptoms in Latino adults

The hypothesis which stipulated higher fatalismo would be linked with greater depression in adults was supported by current study findings, consistent with past research (Neff & Hoppe, 1993). Although the study design did not allow for analysis of the temporal ordering of the relation between fatalismo and depressive symptoms, it is probable that cultural values (i.e., fatalistic beliefs) are developed prior to the onset of depressive symptoms. Consistent with research demonstrating an association between external locus of control and depression, strong

belief in the limited control of the individual over life events may enhance a person's feelings of helplessness when difficult life events occur, thereby enhancing depressive symptom development, severity, and longevity (Benassi et al., 1988). In addition, the present-focused nature of fatalismo may highlight the discomfort of present difficulties, cast doubt on the likelihood of future improvement, and discourage behaviors that could ameliorate depressive symptoms (e.g., behavioral activation), thus resulting in greater depressive symptoms. Fatalism may reduce not only attempts to cope with depressive symptoms, but also the ability to do so effectively (Roberts, Roberts, & Chen, 2000).

Another possibility is that individuals who adhere strongly to fatalistic beliefs may be more likely to perceive they have depressive symptoms, even if they are not truly experiencing more depressive symptoms, than individuals who show low adherence to fatalistic beliefs. Supporting this possibility, the BSI-18 items refer to subjective experience of symptoms as opposed to behavioral indicators of depressive symptoms (e.g., "feeling lonely", "feelings of worthlessness"). It is important to note the possibility that fatalismo may contribute to both depressive symptoms and perceptions of depressive symptoms. Of note, bivariate correlations showed it is unlikely that the relation between fatalismo and personal depressive symptoms can be attributed to acculturation differences. Post-hoc analyses suggested although fatalismo predicted personal depressive symptoms in Latino adults, fatalismo did not add predictive value above and beyond external locus of control variables. Therefore, although fatalismo appears to have implications for better understanding and treatment of depressive symptoms in Latino adults, it appears that examining the influence of external locus of control variables on depressive symptoms may be similarly beneficial.

Fatalismo and perceptions of depressive symptoms in one's children

Study analyses indicated parent fatalismo significantly predicted parent reports of depressive symptoms in their children; however, post-hoc analyses showed the link between fatalismo and perceptions of depression was no longer significant when parent depressive symptoms were included in the model. These findings are consistent with past research demonstrating children of depressed parents are more likely to develop depressive symptoms due to associated genetic and environmental factors (e.g., Lewis, Rice, Harold, Collishaw, & Thapar, 2011). If, as posited by Roberts and colleagues (2000), fatalistic beliefs reduce effectiveness of coping strategies for depression, parents may be modeling ineffective strategies for coping with distress, which may result in higher levels of depressive symptoms for their children. Even so, it is unclear how much of the reports of child depressive symptoms can be attributed to the distorted perceptions of parents experiencing personal depressive symptoms. For example, depressed parents may perceive potential symptoms as more threatening due to belief in limited perceived efficacy for resolving such symptoms and be more likely to label them as a significant problem. Additionally, the affective problems subscale used to evaluate parent perceptions of child depressive contains more behavioral items than the BSI-18 (e.g., “cries a lot,” “deliberately attempts self-harm”). As children of depressed parents are predisposed to develop depressive symptoms themselves, they may also be more likely to have fatalistic beliefs, which exacerbate the development, severity, and longevity of such symptoms. In a sample of ethnically diverse adolescents (10-17 years of age), Roberts et al. (2000) found fatalism adherence predicted depression.

C. Fatalismo and Service Utilization

Study analyses revealed fatalismo did not significantly predict medical or mental health service utilization in the past year for oneself or on behalf of a child. Analyses suggested a

possible link between fatalismo and reduced likelihood of personal use of medical services in the past year that did not reach conventional standards of statistical significance. This finding is consistent with past research, suggesting slightly more than half of studies show fatalism is inversely related to medical service utilization (Espinosa de los Monteros & Gallo, 2011). From the perspective of the HBM, fatalismo may shape pessimistic expectations of treatment outcomes, resulting in low service utilization rates. Additionally, certain barriers may be more effective deterrents for seeking mental health services than for medical health services, such as stigma and perception of threat. If medical problems are perceived as more severe than mental health problems, individuals may be more willing to risk financial or legal consequences to address them. Taken together, though findings and previous research suggest a possible relation between fatalismo and personal service utilization, it appears other factors may better explain service utilization outcomes for Latino adults and their children. Interpretation of these results in the context of the HBM suggests other barriers to treatment (e.g., limited access to insurance, fear of deportation, and stigma) may play a more prominent role in determining service utilization outcomes than fatalismo adherence.

In addition to systemic barriers, cultural values other than fatalismo may have more predictive value for determining service utilization on behalf of a child. For example, familismo is a cultural value emphasizing family as the center of one's life and prioritizing the needs of family members (Añez et al., 2005). Even Latino parents with strong fatalistic beliefs may seek services for their child in order to fulfill their expectation of a good parent. Further, the aforementioned barriers to personal medical and mental health service use (e.g., economic status, stigma, fear of deportation) likely extend to decisions about service-seeking on behalf of one's child.

D. Limitations and Future Directions

Several limitations exist in this study. The sample size was small, only meeting minimum sample size requirements for the factor analysis and logistic regressions. In particular, though Nunnally's (1978) recommendation of recruiting ten participants per item to be factor analyzed was met, others have stipulated that the minimum sample size for a factor analysis should not be less than 150 participants (Tabachnik & Fidell, 2001). The logistic regressions were also likely lacking in sufficient power, potentially detracting from the predictive value of fatalismo for service utilization outcomes, especially as research suggests service utilization is infrequent for Latinos (e.g., Keyes et al., 2012). Another weakness of the current study is failure to assess depressive symptoms utilizing the clinical threshold for depression as opposed to analyzing depressive symptoms in a continuous manner. It is likely that differences would emerge between those who meet the clinical threshold for depression and those who do not in relation to fatalismo adherence and service utilization behaviors. Further, the use of self-report measures exclusively, as opposed to behavioral measures or non-parent self-report measures for child variables (including measures of fatalismo), precludes the disentangling parent perceptions of personal and child depressive symptoms from true personal and child depressive symptomatology.

As a Latino-only sample was recruited for the study, findings regarding the relations between fatalismo, depression, and service utilization for parents and children cannot be generalized to individuals of other ethnic groups. Additionally, the distribution of male and female participants was uneven (82% female). Though t-tests revealed no gender differences for any of the study variables, there may not have been enough male participants to detect such differences. A notable weakness of the current study is the absence of demographic information for the children about whom participants completed parent-report measures. Though participants

provided demographic information for all of their children, those with more than one child between the ages of 6 and 12 did not indicate for which child they had completed study measures. Finally, the environment in which participants were recruited and completed measures may have interfered with the accuracy of responses; participants completed the measures in a noisy public space to which they had arrived with specific goals, either to attend a cultural festival or complete paperwork for the Mexican consulate.

Future studies should incorporate behavioral as well as self-report and parent-report measures of depression in Latino adults and their children in order to disentangle perceptions from observable depressive symptoms. Further, research is needed to identify which barriers are more salient deterrents of service utilization by Latino adults and their children so that steps may be taken to ameliorate underutilization of services by Latinos experiencing medical or mental health problems. Recruitment of more diverse samples would provide insight into the possible generalization of trends identified in this study to members of other ethnic groups.

E. Conclusions

In sum, study findings add to our knowledge about the construct of fatalismo as well as its implications for depressive symptoms and past year service utilization for Latino parents and their children. Results suggest the fatalismo construct captures a broad belief in the limited control over life events and importance of living in the present moment; further, fatalismo appears to be similar to, but not redundant with, external locus of control. Consistent with the HBM, results suggested fatalismo was related to self-reported depressive symptoms for Latino adults, emphasizing the role of cultural factors in shaping perceptions of illness threat. Though findings indicated fatalismo may be an important consideration for depression treatment for Latinos, results suggest focusing on external locus of control more generally may constitute a

similarly positive contribution to therapy for depression. As fatalismo did not significantly predict service utilization for Latino adults or their children, other components of the HBM (e.g., other barriers to treatment) are likely prioritized over fatalismo in determining help-seeking outcomes for Latino parents and their children.

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VI. Tables

Table 1

Means and Percentages for Demographic Study Variables

	<i>n</i>	<i>M (SD)</i>	% of Respondents
Age	79	36.35 (6.83)	
Years in U.S.	79	16.78 (7.44)	
Number people in household	82	4.73 (1.31)	
Number of children	83	2.87 (1.09)	
Religiosity (Likert 1-5)	73	3.36 (1.31)	
Gender:	83		
Female	68		81.9
Male	15		18.1
Born in the U.S.	81		
Yes	6		7.2
No	75		92.6
Country of origin	66		
Mexico	54		65.1
El Salvador	10		12.0
Guatemala	1		1.2
United States	1		1.2
Language of completed measures	83		
Spanish	45		54.2
English	31		37.3
Both languages	7		8.4
Marital status	82		
Married	59		71.1
Divorced/separated	11		13.3
Never married	8		9.6
Other	4		4.8
Employment	81		
Full-time	32		38.6
Part-time	13		15.7
Homemaker	29		34.9
Unemployed	7		8.4
Education	77		
Less than high school diploma	34		41.0
High school diploma	22		26.5
Some college	15		18.1
Bachelor's degree	4		4.8
Graduate degree	2		2.4
Religion	13		
Catholic	11		13.3
Baptist	2		2.4
Evangelical	1		1.2

Note. Percentage values may not add up to 100 due to missing data and category overlap

Table 2

Means and Percentages for Study Variables

	<i>n</i>	<i>M (SD)</i>	% of Respondents
Fatalismo	77	3.03 (1.60)	
Parent depression	82	5.39 (5.02)	
Child depression	79	3.61 (4.09)	
Personal medical health service use past year	78		48.2
Personal mental health service use past year	78		7.2
Child medical health service use past year	82		71.1
Child mental health service use past year	79		14.5

Table 3

Factor Loadings for Exploratory Factor Analysis With Varimax Rotation of MACC Fatalismo Subscale

Item	Component 1	Component 2	h^2
1. It is more important to enjoy life now than to plan for the future.	.64	-.18	.45
2. People die when it is their time and there is not much that can be done about it.	.56	-.40	.48
3. We must live for the present, who knows what the future may bring.	.72	-.19	.55
4. If my doctor said I was disabled, I would believe it even if I disagreed.	.38	.32	.24
5. It is not always wise to plan too far ahead because many things turn out to be a matter of good and bad fortune anyway.	.72	.25	.58
6. It doesn't do any good to try to change the future because the future is in the hands of God.	.68	-.06	.47
7. When I make plans, I am almost certain I can make them work.	.01	.82	.67
8. I sometimes feel that someone controls me.	.39	.55	.46

Note. Major loadings above .5 are bolded for each item.

Table 4

Factor Loadings for Exploratory Factor Analysis With Varimax Rotation of MACC Fatalismo Subscale With Removed Items

Item	Component 1	Component 2	h^2
1. It is more important to enjoy life now than to plan for the future.	.68	-.42	.57
2. People die when it is their time and there is not much that can be done about it.	.60	.70	.52
3. We must live for the present, who knows what the future may bring.	.75	.26	.64
5. It is not always wise to plan too far ahead because many things turn out to be a matter of good and bad fortune anyway.	.69	-.29	.63
6. It doesn't do any good to try to change the future because the future is in the hands of God.	.70	-.18	.85

Note. Major loadings above .5 are bolded for each item.

Table 5

Bivariate Correlations Between Fatalismo and Locus of Control Variables

	1	2	3	4
1. Fatalismo	--			
2. Powerful Others	.43***	--		
3. Chance	.40***	.81***	--	
4. Internality	< -.01	.19	.19	--

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 6

Bivariate Correlations for Study Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Sex	--										
2. Age	-.25*	--									
3. Acculturation	-.11	.05	--								
4. Religiosity	-.25*	.20	.04	--							
5. Parent depression	.13	.04	-.10	.19	--						
6. Child depression	.05	-.06	-.17	.15	.35**	--					
7. Personal medical health service use past year	.18	.03	.15	-.17	.01	-.34**	--				
8. Personal mental health service use past year	-.01	.11	-.07	.17	.27*	.21	.09	--			
9. Child medical health service use past year	.27*	-.12	-.02	-.29*	-.12	-.05	.33**	-.15	--		
10. Child medical health service use past year	.20	-.05	-.01	.02	.11	.03	-.12	.15	.11	--	
11. Fatalismo	-.08	-.16	-.04	.03	.28*	.26*	-.22	.06	-.13	-.14	--

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 7

Linear Regressions Examining Fatalismo as a Predictor of Depressive Symptoms in Parents and Children

Model and predictors	<i>B</i>	<i>SE B</i>	<i>B</i>	Step R^2
Parent Depressive Symptoms				.08*
Fatalismo	0.85	0.34	.28*	
Child Depressive Symptoms				.07*
Fatalismo	0.66	0.30	.26*	

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 8

Post-hoc Linear Regressions with Fatalismo and LOC Variables Predicting Depressive Symptoms

Model and predictors	<i>B</i>	<i>SE B</i>	β	Step R^2
Model 1				
Step 1: Chance LOC	0.22	0.34	.30**	.14**
Step 2: Fatalismo	0.53	0.36	.17	.16**
Model 2				
Step 1: Powerful Others LOC	0.17	0.06	.32**	.10**
Step 2: Fatalismo	0.62	0.38	.20	.14**
Model 3				
Step 1: Internality LOC	0.04	0.07	.07	<.01
Step 2: Fatalismo	0.90	0.35	.30*	.09*

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 9

Binary Logistic Regressions Examining Fatalismo as a Predictor of Service Utilization

Model and predictors	<i>B</i>	<i>SE</i>	<i>W</i>	<i>OR</i>	CI (95%)	Nagelkerke R^2
<u>Personal service utilization</u>						
DV: Medical (past year)						
Step 1: Depressive symptoms	0.05	0.05	0.88	1.05	0.95, 1.17	<.01
Step 2: Fatalismo	-0.34*	0.17	4.10	0.71	0.52, 0.99	.08
DV: Mental health (past year)						
Step 1: Depressive symptoms	0.18*	0.08	4.85	1.20	1.02, 1.41	.17*
Step 2: Fatalismo	-0.08	0.31	0.07	0.92	0.51, 1.69	.17
<u>Child service utilization</u>						
DV: Medical (past year)						
Fatalismo	-1.93	0.17	1.34	0.83	0.592, 1.15	.03
DV: Mental health (past year)						
Fatalismo	-2.42	0.21	1.38	0.79	0.52, 1.18	.03

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 10

Post-hoc Logistic Regressions with Fatalismo and LOC Variables Predicting Personal Service Use

Model and predictors	<i>B</i>	<i>SE</i>	<i>W</i>	<i>OR</i>	CI (95%)	Nagelkerke <i>R</i> ²
<u>Medical (past year)</u>						
Model 1						
Step 1: Chance LOC	0.01	0.03	0.24	1.01	0.96, 1.07	<.01
Step 2: Fatalismo	-0.40*	0.19	4.17	0.67	0.46, 0.98	.09
Model 2						
Step 1: Powerful Others LOC	<0.01	0.03	0.02	1.00	0.95, 1.05	<.01
Step 2: Fatalismo	-0.37*	0.19	3.88	0.69	0.47, 1.00	.08
Model 3						
Step 1: Internality LOC	0.06*	0.03	3.75	1.07	0.99, 1.14	.08
Step 2: Fatalismo	-0.29	0.17	2.95	0.71	0.52, 0.99	.13
<u>Mental health (past year)</u>						
Model 1						
Step 1: Chance LOC	0.06	0.05	1.54	1.07	0.96, 1.18	.05
Step 2: Fatalismo	<-0.01	0.30	<.01	1.00	0.56, 1.78	.05
Model 2						
Step 1: Powerful Others LOC	0.05	0.04	1.16	1.05	0.96, 1.14	.04
Step 2: Fatalismo	0.01	0.30	<0.01	1.01	0.55, 1.82	.04
Model 3						
Step 1: Internality LOC	-0.01	0.05	0.06	0.99	0.89, 1.09	<.01
Step 2: Fatalismo	0.15	0.28	1.33	0.09	0.67, 1.99	.01

p* < .05 *p* < .01 ****p* < .001

VII. Figure 1

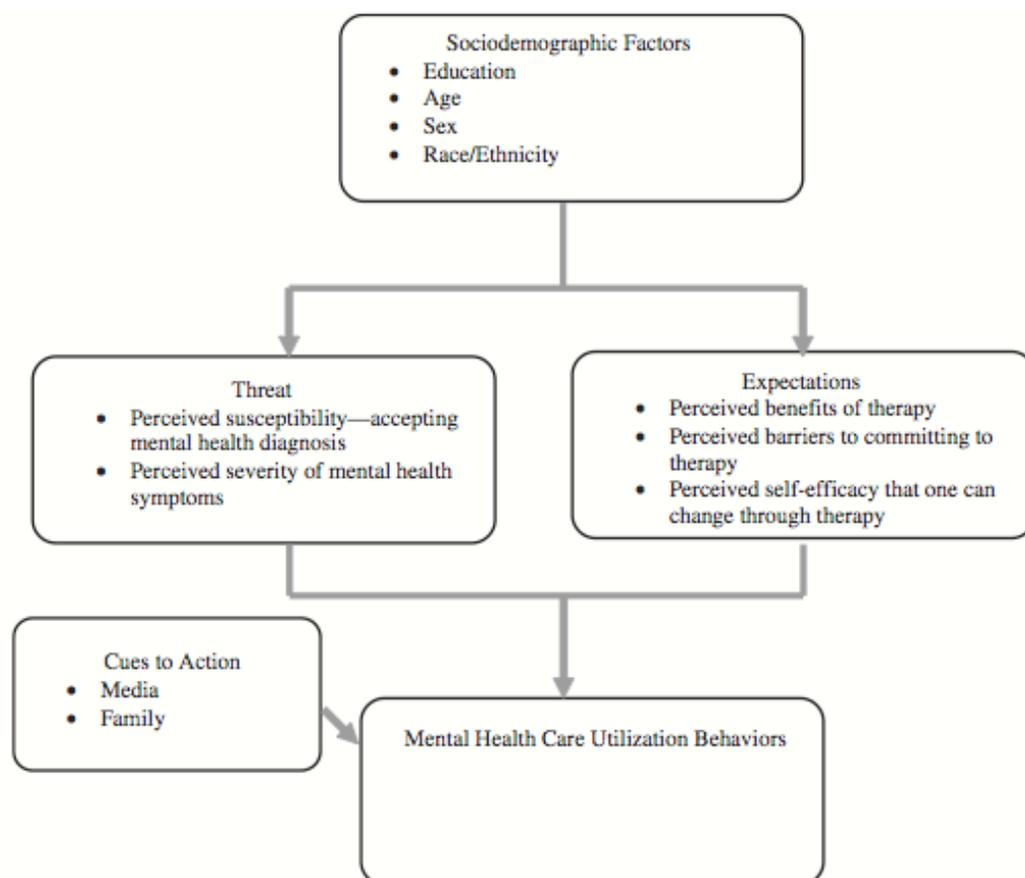


Figure 1. Conceptualizing mental health care utilization using the health belief model (adapted from the Health Belief Model proposed by Rosenstock et al., 1990).

VIII. Appendices

Appendix A Demographic Questionnaire

1. Sex: ___ M ___ F
2. Age: _____ Years
3. Ethnicity:
 ___ Hispanic or Latino
 If you are Hispanic or Latino, which country are you from? _____
 ___ Other: _____
4. Were you born in the U.S.?
 ___ Yes ___ No
5. How many years have you been in the U.S.?
 ___ Less than a year
 ___ Number of years in the U.S.
6. Education:
 ___ Less Than High School
 ___ High School Graduate
 ___ Some College
 ___ Bachelor's Degree
 ___ Graduate Degree
7. Employment status:
 ___ Full Time
 ___ Part Time
 ___ Home Maker
 ___ Unemployed
 ___ Retired
8. Current marital status:
 ___ Married
 ___ Never Married
 ___ Divorced/Separated
 ___ Widowed
 ___ Other
9. Number of people in your household (including self): _____ People

10. Which of the following people live in your household (check all that apply)?

- Partner or spouse
 My own child/children
 Unrelated child/children
 Siblings
 Parents or in-laws
 Extended family members
 Unrelated individuals or friends

11. Please list gender and age for all of your children.

- 1st child: ___ age ___ gender
2nd child: ___ age ___ gender
3rd child: ___ age ___ gender
4th child: ___ age ___ gender
5th child: ___ age ___ gender

Appendix B Brief Symptom Inventory-18

0 = Not at all 1 = A little bit 2 = Moderately 3 = Quite a bit 4 = Extremely

heet

HOW MUCH WERE YOU DISTRESSED BY:

		NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
1.	Faintness or dizziness	0	1	2	3	4
2.	Feeling no interest in things	0	1	2	3	4
3.	Nervousness or shakiness inside	0	1	2	3	4
4.	Pains in heart or chest	0	1	2	3	4
5.	Feeling lonely	0	1	2	3	4
6.	Feeling tense or keyed up	0	1	2	3	4
7.	Nausea or upset stomach	0	1	2	3	4
8.	Feeling blue	0	1	2	3	4
9.	Suddenly scared for no reason	0	1	2	3	4
10.	Trouble getting your breath	0	1	2	3	4
11.	Feelings of worthlessness	0	1	2	3	4
12.	Spells of terror or panic	0	1	2	3	4
13.	Numbness or tingling in parts of your body	0	1	2	3	4
14.	Feeling hopeless about the future	0	1	2	3	4
15.	Feeling so restless you couldn't sit still	0	1	2	3	4
16.	Feeling weak in parts of your body	0	1	2	3	4
17.	Thoughts of ending your life	0	1	2	3	4
18.	Feeling fearful	0	1	2	3	4

Turn the page and follow the directions for completing the additional information.

Page 3

Page 5

Appendix C
Child Behavior Checklist for Ages 6-18-Affective Disorders Scale

- 5. There is very little he/she enjoys
- 14. Cries a lot
- 18. Deliberately harms self or attempts suicide
- 24. Doesn't eat well
- 35. Feels worthless or inferior
- 52. Feels too guilty
- 54. Overtired without good reason
- 76. Sleeps less than most kids
- 77. Sleeps more than most kids during the day and/or night
- 91. Talks about killing self
- 100. Trouble sleeping
- 102. Underactive, slow moving, or lacks energy
- 103. Unhappy, sad, or depressed

Appendix D
Service Utilization Interview for Adults

These questions will ask you about services for health and mental health that you may have used in the past year or ever.

Each set of items asks the following:

- 1. In the past year, have you consulted with [insert provider type here] ?** NO YES

If so:

- a. How many times? _____
 b. For what reasons? _____

- c. How satisfied were you with this/these service(s)?

- 1) _____ Not at all satisfied
 2) _____ Slightly satisfied
 3) _____ Mostly satisfied
 4) _____ Completely satisfied

- d. Have you ever in your lifetime consulted [provider type]? NO YES

- e. If so, was this in the United States or another country?

- 1) _____ United States
 2) _____ Another country, *specify*:
 3) _____ Both the U.S. and another country, *specify*:

Provider types include:

1. *Religious leader, such as a priest, minister, rabbi*
2. *General practitioner, family doctor, or primary care doctor*
3. *Psychiatrist*
4. *Social worker, counselor, or therapist*
5. *Faith healer*
6. *Emergency room services of a hospital*

Appendix F

Multiphasic Assessment of Cultural Constructs—Short Form-Fatalism Subscale

1. It is more important to enjoy life now than to plan for the future.
2. People die when it is their time and there is not much that can be done about it.
3. We must live for the present, who knows what the future may bring.
4. If my doctor said I was disabled, I would believe it even if I disagreed.
5. It is not always wise to plan too far ahead because many things turn out to be a matter of good and bad fortune anyway.
6. It doesn't do any good to try to change the future because the future is in the hands of God.
7. When I make plans, I am almost certain I can make them work.
8. I sometimes feel that someone controls me.

Appendix G
Levenson's IPC (Internal-External Control) Scale

1. Whether or not I get to be a leader depends mostly on my ability
2. To a great extent my life is controlled by accidental happenings
3. I feel like what happens in my life is mostly determined by powerful people
4. Whether or not I get in to a car accident depends mostly on how good of a driver I am
5. When I make plans, I am almost certain to make them work
6. Often there is no chance of protecting my personal interests from bad luck happening
7. When I get what I want, it's usually because I am lucky
8. Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power
9. How many friends I have depends on how nice a person I am
10. I have often found that what is going to happen will happen
11. My life is chiefly controlled by powerful others
12. Whether or not I get into a car accident is mostly a matter of luck
13. People like myself have very little chance of protecting our personal interests when they conflict with those of strong pressure groups
14. It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune
15. Getting what I want requires pleasing those people above me
16. Whether or not I get to be leader depends on whether I am lucky enough to be in the right place at the right time
17. If important people were to decide they didn't like me, I probably wouldn't make many friends
18. I can pretty much determine what will happen in my life
19. I am usually able to protect my personal interests
20. Whether or not I get in a car accident depends mostly on the other driver
21. When I get what I want, it is usually because I worked hard for it.
22. In order to have my plans work, I make sure that they fit in with the desires of people who have power over me
23. My life is determined by my own actions
24. It's chiefly a matter of fate whether or not I have few friends or many friends.

Appendix H
IRB Approval

May 5, 2014

MEMORANDUM

TO: Elizabeth Anastasia
Ana Bridges

FROM: Ro Windwalker
IRB Coordinator

RE: PROJECT CONTINUATION & MODIFICATION

IRB Protocol #: 13-04-662

Protocol Title: *Padres e Hijos: Cinco de Mayo Study*

Review Type: EXEMPT EXPEDITED FULL IRB

Previous Approval Period: Start Date: 04/25/2013 Expiration Date: 04/21/2014

New Expiration Date: 04/21/2015

Your request to extend and modify the referenced protocol has been approved by the IRB. If at the end of this period you wish to continue the project, you must submit a request using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. Failure to obtain approval for a continuation on or prior to this new expiration date will result in termination of the protocol and you will be required to submit a new protocol to the IRB before continuing the project. Data collected past the protocol expiration date may need to be eliminated from the dataset should you wish to publish. Only data collected under a currently approved protocol can be certified by the IRB for any purpose.

This protocol has been approved for 100 total participants. If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or irb@uark.edu.