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Mental Health Literacy of Latina Women in the United States for Their School-Aged Children

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Mental Health Literacy of Latina Women in the United States

for their School-Aged Children

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Abstract

Despite known mental health (MH) disparities faced by Latino children relative to children from other minority groups of similar socioeconomic status (SES), little is known about how Latina mothers make MH decisions for their children. The present study examined links between Latina mothers' mental health literacy (MHL), including the recognition of and response to child psychiatric symptoms, and maternal acculturation factors as well as interpersonal violence (IPV) related symptomatology. Participants were 80 Latina mothers from Denver, Colorado and Modesto, California with at least one child between the ages of 8-12 years. Mothers were presented vignettes depicting child internalizing and externalizing disorders as well as interviewed about their help seeking behaviors. Maternal acculturation was not related to identification of disorders, but was related to more symptoms recognized for child internalizing and externalizing symptoms. Acculturation predicted use of formal source of care for child internalizing and externalizing disorder. Women demonstrated a preference for informal source of care, with the exception of IPV-related child symptoms, where women demonstrated a preference for formal source of care. IPV-related symptoms did not moderate the relationship between acculturation and MHL. The relationship between maternal

acculturation, IPV-related symptomatology and their combined effect on MHL for child

psychiatric disorders are discussed.

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Latinos represent the fastest-growing racial/ethnic group in the United States (U.S. Census Bureau, 2011). Although Latinos make up the largest racial/ethnic minority in the U.S. (16% of the U.S. population), Latinos are often underrepresented the mental health (MH) care system. For example, less than one in 11 Latinos with a mental disorder contacts a MH specialist, while fewer than one in five contacts a general health care provider (Surgeon General Report, 2001). The underutilization of MH services extends to Latino children despite increased risk for worse MH outcomes (Bozzette, Duan, & Berry, 1994; CDC, 1999; Flores et al., 2002). Addressing this important problem, the present study explores how and when caregivers, specifically Latina mothers, seek MH services for their children. In particular, we examine how maternal acculturation relates to Latina mothers' recognition of and response to school-aged children's MH disorders, referred to as mental health literacy (MHL). MHL is the knowledge and beliefs about mental disorders that aid in their recognition and management (Jorm et al., 1997, p. 182). In relation to MHL, we also consider maternal psychiatric symptoms related to interpersonal violence (IPV) because Latina women are at high risk for IPV (e.g., Dutton, Orloff, & Aguilar Haas, 2000). IPV is a risk factor for the development of severe and chronic MH

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symptoms, including posttraumatic stress disorder (PTSD), dissociation, and depressive symptoms (e.g., Bean & Moeller, 2002; DePrince & Freyd, 2007; O'Campo et al., 2006). These symptoms involve disruptions in fundamental cognitive processes that may have a negative impact on mothers' ability to process and act on MH information for their children.

Latino Children and MH Outcomes

Latino children (relative to children from other minority groups of similar socioeconomic status; SES) are at higher risk for chronic and severe MH symptoms and developmental difficulties (CDC, 1999; Flores et al., 2002). The increased risk for worse MH outcomes in Latino children has been linked to multiple factors, including immigration stress, language barriers, discrimination, acculturative stress, and parental factors (e.g., limited maternal education, low SES, parental mental illness, and parental relationship instability; Abraído-Lanza, Armbrister, Florez, & Aguirre, 2006; Cicchetti & Toth, 1998; Luthar, 1999; McLoyd, 1998b). Despite the increased risk for worse MH outcomes, Latino children consistently underutilize MH care services (Alegria, Vallas, & Pumariega, 2010). The disparities in use of MH care have been linked to lack of health insurance, parental preferences and help-seeking patterns, and an unrecognized need for services (Flores & Vega, 1998; Organista, 2000). To date, little research has explored the role that maternal MHL of child psychiatric symptoms plays in underutilization of MH services. By better understanding the role that maternal MHL plays, potential avenues for intervention to improve MH service access for Latino youth may be identified.

The present study focused on mothers because children are dependent on adult caregivers for their healthcare needs (Corkum, Rimer, & Schachar, 1999) and mothers most often act as primary caregivers in Latino families (for review see Berkman & D'Ambruoso, 2006). Further, the current study focused on mothers of school-aged children (8-12 years old) because the prevalence of internalizing and externalizing symptoms varies markedly across childhood and adolescence (e.g., Last et al., 1992; Breton et al. 1999), making it important to limit study to one developmental period. Given the many academic and social stressors as well as biological changes that occur during the transition from elementary school to middle school or junior high, early adolescence is associated with increased risk for psychopathology and maladjustment (Eccles et al., 1993; Robinson et al., 1995; Seidman et al., 1994). Moreover, an increase in rates of major depression in females occurs between the ages of 13 and 15 (Twenge & Nolen-Hoeksema, 2002). Social phobia and panic disorder (Last et al., 1992) as well as generalized anxiety disorder (Cambell et al., 2003) onset also occur during this time period. Thus, examination of mothers' MHL for Latino children prior to adolescence, when prevalence of MH disorders increases, may help to better understand disparities in MH and underutilization of MH services among Latino adolescents.

Acculturation and MH Outcomes

Although acculturation has been shown to be a strong predictor of physical health outcomes in Latino populations, relations among acculturation and MH outcomes are not well understood. A meta-analysis of 30 empirical studies shows three different types of

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outcomes: 1.) a negative relationship with poorer MH due to stress from inadequate social networks and unfamiliar cultural dynamics for less acculturated clients; 2.) a positive relationship such that more acculturated clients show greater MH problems from internalization of racist cultural norms and stereotypes within the host society; and 3.) a curvilinear relationship with the two ends of acculturation continuum correlating with poor MH outcomes, and good MH linked to acculturation midpoint (e.g., Hayes-Bautista, 1997). There is equal support for both the positive and negative relationship, but evidence is limited for the curvilinear relationship. Even though the direction of effects of acculturative factors on MH outcomes remains unclear, the process of acculturation and migration appear to be stressful to Latinas and related to adverse MH outcomes (Diaz Olavarrieta & Sotelo, 1996).

Because Latino immigrants with a diagnosable psychiatric disorder are the least likely to use MH services of any ethnic minority group (Surgeon General Report, 2001), cultural factors (views of symptoms and causes of MH disorder and Limited English Proficiency; LEP) are recognized as determinants for seeking care. Differences in self-reported symptoms of MH disorders among various cultures have been identified, including depression and PTSD (e.g., Lin & Cheung, 1999; Perilla, Norris, & Lavizzo, 2002), perceptions and reporting of psychiatric symptoms may be influenced by culture. Beliefs that lack of motivation or willpower and weakness of character cause MH disorders have been identified among Latinos (Alvidrez, 1999; Padilla & Salgado de Snyder, 1988). Individuals who hold the view that MH disorders are the result of personal

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shortcomings may be more reluctant to report symptoms and seek formal help (e.g., social worker, primary health care doctor, psychiatrist). Individuals, therefore, may not appropriately report or perceive particular symptoms (e.g., internalizing psychiatric symptoms) as requiring MH care compared to other symptoms (e.g. externalizing psychiatric symptoms). Furthermore, Latinos with LEP reported approximately 22 percent fewer physician visits than non-Latinos whose native language was English (Derose & Baker, 2000). Language barriers may be particularly problematic in MH care because much of MH diagnosis and treatment relies on direct communication rather than objective medical tests.

Further, availability and accessibility barriers associated with low SES are factors in differences in utilization of MH care among Latino populations. An ethnographic study of Latina women in the Rocky Mountain West found that recent immigrant or less acculturated Latina mothers described more barriers to care relative to more acculturated mothers (Clark, 2002). Further, low SES has been linked to greater perceived instrumental barriers to using services, such as lack of insurance, time and transportation among ethnic minorities (Leaf et al., 1996). Instrumental barriers (e.g., low family income) may decrease an individual's ability to plan for and appropriately manage symptoms of MH disorders.

These findings among Latino adults suggest that acculturative and SES factors need to be examined to better understand decreased utilization of MH services by Latino children given children greatly depend on caregiver's views of child MH disorders and

treatment. Therefore, the current study examines maternal acculturative and SES factors

that aid or impede the recognition and management of child MH symptoms. Less

acculturated mothers may face perceived barriers associated with acculturation (LEP or

fears about interacting with MH system related to documentation status) and/or

instrumental barriers associated with SES (e.g., lack of health insurance) to services that

affect their ability to obtain psychological services for their children.

Defining and Measuring Acculturation

Conceptualizations of acculturation include two dimensions: 1.) acculturation – a

process of adherence to the dominant culture; and 2.) enculturation – a process of

maintenance of the culture of origin (Gonzales Knight, Morgan-Lopez, Saenz, & Sirolli,

2002). These processes are suggested to represent distinct axis of cultural change (Berry,

2003; Cuéllar Arnold, & Maldonado, 1995; Zane & Mak, 2003); and therefore,

individuals may achieve simultaneously high, simultaneously low, or different levels of

adaptation to mainstream and ethnic cultures. Given this dynamic view of acculturation,

use of only language and generational status as proxy indicators of acculturation is an

area of concern (Cabassa, 2003). Although language preference is characterized as one of

the most important components of cultural identity and has consistently been used as a

strong measure of acculturation in Latinos (e.g., Lee, Winickoff, & Kim, 2006); language

preference alone is unlikely to estimate acculturation accurately. Similarly, generational

status only provides some information to the understanding of the complexity of

acculturation.

One measure that assesses both acculturative and enculturative orientation is the

Acculturation Rating Scale for Mexican Americans II (ARSMA II: Cuéllar et al., 1995).

The ARMSA II contains separate items (i.e., the extent to which respondents like to

speak Spanish and identify themselves as Mexican, and the extent to which they like to

speak English and identify themselves as Anglo) that yields two scores, Mexican and

Anglo Orientation, to examine the dimensions of cultural orientation. Thus, the present

study measures acculturation from multiple measures (language preference, generational

status and cultural orientation measured by the ARMSA II), which may more accurately

estimate acculturation.

IPV among Latinas

A growing literature has shown a high prevalence of IPV in Latina women with

lifetime prevalence rates of 21% to 35% (CDC, 2008; Fedovskiy, Higgins, Paranjape,

2008; Dearwater, Coben, Campbell, Nah, Glass, McLoughlin, et al., 1998) and past-year

prevalence rates of 4% to 33% (Fedovskiy et. al., 2008; Dearwater et. al., 1998; Lown &

Vega, 2001; Wu, El-Bassel, Witte, Gilbert, & Chang, 2003; Bauer, Rodriguez, & Perez-

Stable, 2000). The high-risk for IPV faced by Latina women (Dutton et al., 2000), has

lead investigators to examine the relationship between acculturation (e.g., language

preference and generational status) and IPV. Some authors argue that the stresses

associated with the acculturation process may increase the likelihood of abuse. In a

national probability survey of Latino families, researchers found that generational status

(third generation) and U.S. arrival age (younger age) predicted IPV after controlling for

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age, poverty, and education (Jasinski et al., 1997). In another study, using generational status (country of birth) as a proxy for acculturation, Mexican American (U.S. born) women had higher rates of reported IPV, compared to Mexican origin and non-Latina Anglo American women (Sorenson & Telles, 1991). However, low acculturation may reduce educational attainment and limit occupational choices, and these may be risk factors for IPV (Champion, 1996).

More recently, researchers have examined factors that may accompany changes in acculturation and how they might increase victimization risk. The Sexual Assault among Latinas Project (SALAS; Cuevas & Sabina, 2010) addressed significant gaps in the literature concerning IPV, and the influence of cultural factors on help-seeking efforts. Phone interviews were conducted with 2,000 Latina women throughout the U.S. Participants were asked information including lifetime victimization, help-seeking efforts, psychological distress, PTSD symptomology, religiosity, acculturation, and demographic information. Higher acculturation was associated with greater sexual assault rates and severity, suggesting that women who are more acculturated to U.S. culture are at greater risk of sexual victimization. Consistent with other studies, sexually victimized women infrequently sought formal resources (e.g., calling police, getting social services, or using legal remedies). The authors suggested that lack of material/economic resources and preference for Spanish language may have contributed to decreased formal-help seeking behaviors among the women. The current study examines acculturation factors (generational status, language preference and cultural orientation) as well as maternal

education and family income to better understand the relationship between IPV and acculturation.

Although research comparing IPV prevalence between Latina and non-Latina women is limited, one study found the prevalence of IPV for Latina versus non-Latina women was, respectively: 44.6% versus 44% lifetime; 20.1% vs. 14.5% for the past 5 years; and 11.5% vs. 7.8% for the past year. (Bonomi, Anderson, Cannon, Slesnick, & Rodriguez, 2008). Bonimo and colleagues (2008) concluded that IPV is common in Latina and non-Latina women, and adverse IPV-related MH (overall MH functioning, vitality and emotional functioning) was more pronounced in Latina women.

IPV and MH Outcomes

Despite high risk for IPV and poor IPV-related MH outcomes, few studies focus on the MH outcomes of Latinas exposed to IPV. Although depression has been long acknowledged as a consequence of IPV (e.g., O'Campo et al., 2006), fewer studies have examined PTSD and dissociation in relation to IPV in Latina samples. PTSD, an anxiety disorder, is associated with a traumatic event or a life-threatening event in which a person may be a victim or a witness (APA, 1994). Symptoms include persistent reexperiencing of the traumatic event, persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness, and persistent symptoms of increased arousal (Putnam, 1997). Dissociation has also been associated with trauma exposure (e.g., Arata, 1999; Orcutt, Erikson, & Wolfe, 2002). Dissociation is commonly conceptualized as the

breakdown of normally connected processes of consciousness and memory (American

Psychiatric Association, 1994, p.477).

PTSD, dissociation, and depression all share common disruptions in cognitive

processes that may limit women's abilities to notice and/or generate a plan for responding

to child psychiatric symptoms. For example, PTSD symptoms have been shown to impair

a woman's ability to accurately detect trauma-related cues (Elliott, 1997) and impair

responsiveness to trauma-related cues (McFarlane, 1988). Therefore, if Latina mothers

with PTSD perceive their children's psychopathological symptoms as trauma-related

cues, particularly if they occur in response to IPV in the home, their detection of

symptoms (i.e., recognizing psychiatric symptoms) and responsiveness (i.e., seeking MH

services) may be impaired. In addition, PTSD symptoms have been shown to be

associated with difficulties in concentrating (Orcutt et al., 2002), attending to new

information (Koss et al., 1996) and remembering trauma-related cues relevant to risk

detection (DePrince & Freyd, 2004; Foa & Hearst-Ikeda, 1996). Thus, mothers with

PTSD may recognize symptoms, but may have trouble managing those symptoms (e.g.,

making and keeping appointments) because of the more general cognitive difficulties

associated with PTSD. Several studies have reported that individuals with a high

dissociative propensity attempt to avoid the processing of threatening information

(Lanius et al., 2005). Individuals with dissociation may actively avoid remembering, as

when dissociative PTSD patients are asked to think about traumatic experiences in rich

detail (Molina & Basinait-Smith, 1998). Thus, Latina mothers who report higher levels of

dissociation and/or PTSD symptoms may actively avoid thinking about sensitive emotional material and therefore have difficulty processing and reacting to psychiatric symptoms in their children.

The Present Study

The present study was designed to examine the relationships between Latina mothers' MHL for child psychiatric symptoms, acculturation, and IPV related symptoms. Specifically, acculturative factors, such as stresses associated with the acculturation process and language difficulties, may interfere with mothers' ability to a.) label/identify; b.) recognition of symptoms of; and c.) plan for the management of psychiatric disorders in their children. IPV-related symptoms involve disruptions in fundamental cognitive processes that may have a negative impact on mothers' ability to process and act on MH information for their children. The current study tested several predictions. We hypothesized that lower acculturation (estimated by a composite of language preference, generational status, and cultural orientation) would predict disruptions in labeling/identifying internalizing and externalizing child MH disorders and recognizing internalizing and externalizing child psychiatric symptoms. We examined the pattern of mothers' first reported management (source of care) in response to each vignette. We further hypothesized that lower maternal acculturation would predict greater difficulties with managing internalizing and externalizing child psychiatric disorders through formal (e.g., teacher, social worker, pediatrician, psychologist, psychiatrist), but not informal (e.g., family member, friend, priest) source of care among Latina mothers. Given

concerns that Latina women's risk of IPV increases as acculturation increases, we examined links between acculturation and IPV severity. We hypothesized that higher maternal acculturation would predict greater reported IPV severity. Moreover, to examine changes in factors that may accompany an increase in acculturation, we hypothesized that acculturation would predict greater educational attainment and family income. Finally, we hypothesized that mothers exposed to IPV would report greater IPV-related symptoms; in turn, IPV-related symptom severity would moderate the acculturation-MHL relationship for all three components of MHL: label/identification of disorders, recognition of symptoms and management of child MH disorder.

<center>**Methods**</center>

Participants

Latina mothers (*N = 80*) with at least one child between the ages of 8-12 years were recruited from Denver, Colorado, and Modesto, California. Initial recruitment occurred in Denver and later expanded to Modesto. We recruited Denver-area participants (*n = 36*) from the Denver Children's Advocacy Center's (DCAC) and Servicios de la Raza as well as through distribution of study flyers in the community (e.g., grocery stores, Head Start facilities, women's shelters, outpatient health clinics and MH clinics). We recruited Modesto-area participants (*n = 44*) from El Concilio as well as through distribution of study flyers in the community (e.g., Head Start facilities, outpatient health and MH clinics). In both Denver and Modesto, community agencies that advertised the study served clientele comprised primarily of low-income community families, the majority of whom were Latino. Study flyers informed potential participants in English and Spanish that they would receive $20 for participation for a 2-hour session. Exclusion criteria included suicide attempts and/or hospitalizations for psychiatric reasons within the 6 months prior to the assessment.

A majority of the women (Age Mean= 36.88; *SD = 1.47*, range: 25 - 54) identified as Mexican/Mexican American (98%), 1% Central American and 1% South

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American. In terms of place of birth, 77% were born in Mexico, 21% in USA, 1% in Central America (Honduras), and 1% in South America (Peru). Women born in Mexico or other Latin American countries had lived in the U.S. on average of 18 years (SD= 9.08, range: 3 - 41). Of those who reported their preferred religion, 80% reported Catholic, 16% Christian, 3% Jehovah's Witness, and 1% Adventist.

In terms of highest level of education, 23% of participants completed up to the 7th grade, 18% completed up to junior high, 13% completed part of high school, 24% obtained a high school diploma, 11% completed partial college or specialized training, 5% obtained a college degree, and 6% some graduate or professional training. Of those that reported family income, participants provided the following information: 39%, <$10,000; 21%, $10,001–$20,000; 12%, $20,001–$30,000; 11%, $30,001–$40,000; 6%, $40,001–$50,000; 11%, >$50,000. In terms of marital status, 48% of participants were married, 18% were cohabiting, 11% were divorced, 14% were separated, 3% were widowed, and 6% were single. Women reported mean number of children as 3.45 (SD = 1.53, range: 1 – 9).

We examined sample characteristics for women recruited in Denver versus Modesto. We found no statistically significant differences between groups with the exception of marital status. More Modesto women reported being married or cohabiting compared to Denver women who reported greater rates of being divorced or single χ^2 (5, N = 79) = 13.36, p < .05, φ = .41.

Measures

Many of the study measures were available in both English and Spanish. When measures were not available, bilingual individuals with knowledge of medical and psychological language translated measures into Spanish (e.g., vignettes and Demographic Questionnaire). Each bilingual translator was given the instruction to translate literally, remaining loyal to the original English language, to allow for the assessment of discrepancies during the back translation and comparison stages. Because some Spanish words have different meanings in different cultures (e.g., Mexico, Central America, South America, and the Caribbean) translators carefully translated the materials into standard Spanish with basic vocabulary, grammar and syntax, which is understood by most Spanish-speaking individuals regardless of their national origin (González, Stewart, Ritter, & Lorig, 1995). Instruments were back translated by another bilingual translator to ensure between-forms equivalence. Similarly, the back translator was given the instruction to back translate literally, and into Standard English with basic vocabulary, grammar, and syntax. Once the instruments were translated and back translated, the translators met to assess discrepancies of regional idioms and discuss concepts difficult to translate. Through these discussions, variations in translation were resolved. Consultants for the proposed study provided expert feedback.

Acculturation. The Acculturation Scale for Mexican Americans-II (ARMSA-II; Padilla, 1980) Scale 1 is a 30-item self-rating scale that assesses acculturation process through an orthogonal, multidimensional approach by measuring cultural orientation

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toward Mexican and Anglo culture. The ARMSA-II has also been used with other ethnic minority groups (i.e., South and Central Americans). Responses are made on a Likert-type scale ranging from 1 (*not at all)* to 5 (*extremely often or almost always*). Thirteen items compose the Anglo Orientation Subscale (AOS) and 17 items compose the Mexican Orientation Subscale (MOS) composed of 17 items (for specific items refer to Cuéllar et al. 1995). We calculated a mean score for each subscales by summing the scales and dividing by the number of items. The MOS mean was subtracted from the AOS mean to obtain a linear acculturation score that represents an individual's score ranging from very Mexican oriented to very Anglo oriented (i.e., AOS – MOS = acculturation score). Based on suggested cutoffs (Cuéllar, et al. 1995) the acculturation score was also used to obtain the following acculturation levels: I, Very Mexican oriented; II, Mexican oriented to approximately balanced bicultural; III, Slightly Anglo oriented bicultural; IV, Strongly Anglo oriented; and Level V, Very assimilated; Anglicized. The subscales have been found to have good internal reliabilities. Coefficient alphas were .91 and .85 for the AOS and MOS subscales, respectively. Generational status and religion preference was also assessed by the ARMSA-II (1st = *You were born in a Hispanic/Latin or other country*, 2nd = *You were born in USA; either parent born in a Hispanic/Latino or other country*, 3rd = *You were born in the USA, both parents born in the USA and all grandparents born in a Hispanic/Latin or other country*, 4th = *You and your parents born in the USA and at least one grandparent born in a Hispanic/Latin or other country with the remainder born in the USA*, 5th = *You and your*

parents born in the USA and all grandparents born in the USA). Finally, each

participant's self-identified language preference (English or Spanish) created another

measure of acculturation.

   To create a composite acculturation factor from the multiple measures, we

dummy coded generational status. We then calculated standardized scores for the

following variables: acculturation score, first generation, second generation, fourth

generation, fifth generation, and language preference. Third generation status was not

endorsed and excluded. We summed the standardized scores and calculated the mean

acculturation composite score.

   IPV and Trauma History. The Conflict Tactic Scale (CTS; Strauss, Homby, &

Boney-McCoy, 1996) has been shown to be a valid and reliable measure of the type and

severity of IPV between romantic partners. For this paper, the items endorsed for each

subscale, physical aggression subscale ($\alpha = .96$), psychological aggression subscale ($\alpha =$

.96), sexual aggression subscale ($\alpha = .86$) and injury subscale ($\alpha = .94$), were summed to

obtain a tally of events that occurred in the last year for each subscale, with more

endorsed items indicative of higher incident severity. The subscale tallies were summed

to produce an overall IPV severity score (i.e., psychological aggression tally + physical

aggression tally + sexual coercion tally + injury tally = total IPV severity within the last

year). Trauma history was assessed with the Trauma History Questionnaire (THQ; Green,

1996). The 24-item report was used to assess the lifetime occurrence of potentially

traumatic events including crime-related events, general disaster, natural disasters, violent

and nonviolent crime, serious illness, and loss of a romantic partner or child using a yes/no format. For each endorsed event, frequency, age of onset and relationship to the perpetrator was also assessed. A total trauma history score was achieved by summing the number of unique trauma types endorsed by mothers. The total trauma history information obtained was used to control for potential effects of additional traumatic events on the tested relationships.

Maternal psychiatric symptoms. The Revised Civilian Mississippi Scale for PTSD (RCMS-PTSD; Norris & Perilla, 1996) is a 30 item self-report of posttraumatic symptoms derived from the original version of the scale used in veteran populations. Women rated their experience of posttraumatic symptoms using a Likert-type scale ranging from 1 (*not at all true)* to 5 (*extremely true*). All endorsed items were tallied with items 2, 6, 11, 17, 19, 22, 24, 27, 30, and 34 scored in the reverse order (i.e., subtract their rating from 6) to obtain a total score on the scale. The RCMS has been shown to be a reliable and valid measure of PTSD (Norris & Perilla, 1996). Coefficient alpha for the RCMS-PTSD in the current sample was .91.

The Beck Depression Inventory (BDI; Beck, Steer, & Carbin, 1988) is a 21-item self-report measure that assesses depression symptoms. Women rated their experience of depression symptoms using a Likert-type scale ranging from 0 (*low severity)* to 3 (*high severity*) in the 2 weeks immediately prior to the assessment. A total depression score was achieved by totaling the number of items endorsed. Test-retest reliability and

concurrent validity have been well established. Coefficient alpha for the BDI-II in the present sample was .90.

The Dissociative Experiences Scale (DES; Bernstein and Putnam, 1986) is a 28-item self-report of normal to pathological dissociative experiences. Women rated their experience of dissociation symptoms using a Likert-type scale ranging from 0 (*low severity*) to 100 (*high severity*). A mean dissociation score was obtained. The DES has been shown to be a reliable and valid measure (DES; Bernstein & Putnam, 1986). Coefficient alpha for the DES in the current sample was .92.

Presented Vignettes. Ten vignettes described children with possible psychiatric problems. Presented in randomize order, the vignettes described three externalizing disorders (attention deficit hyperactive disorder, oppositional defiant disorder, and conduct disorder), four internalizing disorders (anxiety, depression, PTSD in response to a car accident and PTSD in response to witnessing IPV), and three neutral stories. See Appendix C. The vignettes were age and gender matched to mother's child between the age of 8 – 12 years. When mothers reported having more than one child within the age range, the older child's gender and age was selected. The vignettes were adapted from the MH Module of the 1996 General Social Survey describing individual meeting Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV; American Psychiatric Association, 1994) criteria for specific disorders (Moss-Morris et al., 2002). Mothers listened to the interviewer read aloud each vignette in their preferred language. They

were also provided with written copy of the vignettes so that they may read along with the interviewer.

Problem Severity and Concern. To ensure that internalizing and externalizing vignettes were viewed as more problematic than neutral vignettes, mothers were asked "Imagine that this your child, is there a problem with him/her?" Mothers were asked to rate the severity of the problem and her concern for the child using a 5-point Likert scale that ranges from 0 (*no problem at all*/*not worried at all*) to 4 (*very big problem*/*extremely concerned*). If participants responded, "no problem at all", the follow up questions (to rate concern as well as to assess label/identification, child psychiatric symptoms recognition and management) were not administered. We calculated means for reported problem severity and concern in internalizing, externalizing and neutral conditions.

Label/Identification of Child MH disorder. A modified version of the Revised Illness Perception Questionnaire (IPQ-R; Moss-Morris et al., 2002) measured perceptions of the vignette. Based on the self-regulatory model of illness cognitions (Leventhal et al., 1992), the IPQ-R views individuals as active problem-solvers who use perception of illness to understand the illness, which in turn, influences how they respond to illness. The IPQ-R measures five core dimensions (e.g., label/identify, cause, consequences timeline, controllability). To our knowledge, the measure has been only used once with Latino immigrants by Cabassa and Zayas (2007). We replicated the authors' application by using two open-ended questions ("What would you call this situation presented in the vignette?" and "What do you think caused the situation?") to measure label/identify

psychological disorder and causes of psychological symptoms. Responses to these questions were audio recorded and recorded verbatim by the interviewer. Based on the answers given to these questions, a dichotomous variable was created to categorize mothers who correctly labeled/identified the disorder in each vignette from those who did not. For the complete list of the words used to categorize correct label/identification of disorders refer, to Appendix D. Neutral vignettes were reversed scored in that a report of "no problem" was scored as correct. Correct label/identification of the disorder of I internalizing, externalizing and neutral disorders were summed and divided by number of presented vignettes to measure label/identification of child internalizing and externalizing psychiatric disorders as well as neutral condition.

Child Psychiatric Symptom Recognition Mothers' responses to the questions of "What would you call this situation presented in the vignette?" and "What do you think caused the situation?" were also used to assess recognition of child psychiatric symptoms. From their responses, we tallied the number of child psychiatric symptoms that mothers recognized. The tallies included information repeated and/or interpreted from the presented vignette. For example, in the depression vignette, a response of "he is having trouble concentrating in school" was included in the tally because the mother repeated the symptom "Juan has been having trouble concentrating on what he is doing in school and at home" presented in the vignette (refer to Appendix C for presented symptoms). A response of "he has low self-esteem" was tallied in the total as well because this symptom was interpreted from those presented in the vignette. We tallied the

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total number of symptoms recognized rather than calculated the proportion of correct

responses so that we could include symptoms interpreted by mothers as well as those

repeated. We summed responses for internalizing and externalizing conditions and

divided by the number of presented vignettes in each condition (4 and 3, respectively).

We tallied the number of words uttered by the participant and calculated means for each

condition. The neutral condition was excluded due to the lack of clinical symptoms

presented in the vignette. Interrater reliability was tested through random selection of

20% of the data, which was coded by each of the coders. Through discussions, coders

compared results and resolved disagreements. Interrater reliability analysis using the

Kappa statistic was performed to determine consistency among raters (Kappa = .85 - .92).

Management. MHL management was measured by coding mothers' response to

the following questions for each vignette: "With your life today, for example the amount

of money you or your family makes and whether you have access to insurance, what

would you do to help your child? "How would you do that? In what order would you do

that?" Participants were then asked to rate their response to "How much of a problem

would doing that using a 5-point Likert scale that ranges from 0 (*no problem at all*) to 4

(*a very big problem*). If the participant reported a response greater than 0, she was asked

based on her rating, "What are some of the things that make it a 1 (*slight problem), 2

(somewhat of a problem), 3 (moderate problem) or 4 (very big problem)?*" Responses to

these questions were audio-recorded and recorded verbatim by the interviewer. Before

combining vignettes to analyze differences between internalizing and externalizing

conditions, we examined pattern of responses for each vignette. Specifically, we examined mothers' first reported source of care and coded for the following: *no action taken; talk to/increase attention to the child; talk to a friend; talk to a family member, priest or church, internet/library search; call or talk to a resource; school teacher/administrator; school counselor, counselor, therapist, or social worker; psychologist; psychiatrist; medical doctor; and hospital*.

We then coded all reported sources of care as either informal (*no action taken; talk to/increase attention to the child; talk to a friend; talk to a family member; priest or church;* and *internet/library search)* or formal *(call or talk to a resource; school teacher/administrator; school counselor, counselor, therapist, or social worker; psychologist; psychiatrist; medical doctor; and hospital)* and tallied responses for each vignette. We then calculated the means of formal and informal sources of care for internalizing and externalizing conditions. We also summed the number perceived barriers reported per vignette and calculated means for internalizing and externalizing conditions. Interrater reliability was examined to determine consistency among raters (Kappa = .91 - .96).

Demographic characteristics. Demographic variables included maternal age, place of birth, number of years living in the U.S. for those not born in the U.S., education, family income, marital status and number of children.

Child health insurance coverage and family use of services. Women were asked to report on their child's (age 8 – 12 years) insurance coverage (0 = uninsured, 1 =

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insured). Women were also asked to indicate the number of times their family members have used MH, medical, and social services in the last year.

Procedures

The university's Office for Protection of Human Subjects approved this study before any data collection. Volunteers were screened in their preferred language either in person or by phone by a bilingual community agency staff or the project coordinator. Women who met inclusion criteria were tested a participating local community agency. Upon arrival, women were given a choice as to which language they would prefer to complete the study. All information including measures and verbal instructions were available in both Spanish and English.

Participants reviewed and signed consent forms in their preferred language, which was carefully explained to ensure complete understanding. All participants completed an extensive informed consent process. The project coordinator administered a consent quiz to ensure understanding of consent information (DePrince & Chu, 2008). Participants had to answer all quiz questions correctly in order to take part in the study. All data were collected by means of interviews and questionnaires in paper and pencil format in a private room. Participants completed a demographic information questionnaire. Participants listened to vignettes read aloud by the trained bilingual interviewer as well answered open-ended questions to assess recognition and open-ended questions to assess management of child psychiatric symptoms. Participants completed several questionnaires to assess their acculturation status, IPV exposure, as well as posttraumatic

stress, dissociation, and depression symptoms. A bilingual research assistant was present to answer any questions and assist the participant, but did not observe the participants while they responded to the questionnaires. At assessment completion, participants were debriefed and compensated monetarily for their time. Debriefing included information on available national and local health and MH resources, experimental tasks, and hypotheses tested in the study.

Results

Descriptive Statistics

One of the 80 participants (1.25%) did not complete a majority of the measures. Thus, the data that we present were collected from a sample of 79 participants. Furthermore, two women only completed eight of the 10 randomized vignettes. Analyses involving IPV severity and PTSD symptoms only included 77 participants because of incomplete data on the CTS and RCMS, respectively for two participants. Analyses of child health insurance coverage and family service use only included 47 participants because of missing data. All variables were examined for violations of statistical assumptions underlying the planned analyses.

Acculturation. Based on women's report on the ARMSA-II, the mean AOS score was 2.84 (*SD* = .95) and MOS score was 4.22 (*SD* = .60). Bivariate Pearson correlation analyses (see Table 1) indicated a significant negative correlation between AOS and MOS scores. The mean acculturation score (AOS - MOS) was -1.38 (*SD* = 1.24), suggesting an overall greater Mexican or Hispanic orientation relative to Anglo orientation. Based on suggested cutoffs (Cuéllar et al., 1995), 55% of women responded as very Mexican or Hispanic-oriented (Level I), 29% as Mexican-oriented to approximately balanced bicultural (II), 15% as slightly Anglo-oriented bicultural (III),

and 1% as strongly Anglo-oriented (IV). No scores fell within the 5th level or very assimilated; Anglicized. Of those that reported generational status, 78% reported as 1st generation (*participant born in Mexico or other country*), 17% as 2nd generation (*participant born in USA, either parent born in Mexico or other country*), 1% as 4^{th}generation (*participant and parents born in USA, and at least one grandparent born in Mexico or other country with remainder born in the USA*), and 4% as 5th generation (*participant, parents and grandparents born in USA*). Of the 80 Latina mothers, 57 (70%) preferred to complete the study in Spanish. Prior to creating the acculturation composite, we examined the acculturation factors for women recruited in Denver versus Modesto. No statistically significant differences were detected for acculturation orientation ($M = -1.23$, $SD = 1.37$ vs. $M = -1.49$, $SD = 1.12$, respectively; $t(77) = 0.91$, $p = .36$, $d = 0.20$), generational status (χ^2 (3, $N = 78$) $= 5.29$, $p = .15$, $\varphi = .26$), or language ($M = 0.22$, $SD = 0.42$ vs. $M = 0.36$, $SD = 0.48$, respectively; $t(78) = -1.37$, $p = .17$, $d = -0.31$) between groups. Bivariate Pearson correlation analyses (see Table 1) resulted in a significant negative correlation between language and first generation status as well as MOS. Language was significantly and positively associated with second and fifth generation status as well as the AOS-MOS (linear acculturation score) and acculturation. First generation status was negatively and significantly correlated with second and fifth generation as well as AOS, AOS-MOS. There was a significant positive association between first generation status and MOS.

Additional Bivariate Pearson correlation analyses (see Table 2) between the acculturation composite and study variables revealed significant and positive correlation between maternal acculturation and maternal education, child health insurance coverage and formal source of care for internalizing and externalizing vignettes. Maternal acculturation was significantly and negatively correlated with child psychiatric symptom recognition for internalizing and externalizing vignettes.. Maternal acculturation was not significantly associated with maternal psychiatric symptoms.

      IPV and Trauma History. Fifty-two women (68%) reported exposure to at least one type of IPV (psychological, physical, sexual or injury) in the last year on the CTS, with a mean severity of 32.04 ($SD = 49.86$). Rates of victimization in the preceding year were as follows: 64% of women reported psychological aggression, 26% reported physical assault, 23% reported sexual coercion, and 23% reported injury. Sixty-nine participants (87 %) reported at least one lifetime stressful or traumatic event, with a range of exposure to one to eighteen event types (THQ $M = 4.77$, $SD = 3.68$). We examined IPV and trauma history for women recruited form Denver versus Modesto. No statistically significant differences were detected for reported IPV severity ($M = 45.84$, $SD = 52.85$ vs. $M = 19.26$, $SD = 44.10$, respectively; $t(50) = 1.97$, $p = .05$, $d = 0.54$), or trauma history ($M = 4.10$, $SD = 4.12$ vs. $M = 3.40$, $SD = 3.45$, respectively; $t(77) = 1.51$, $p = .13$ $d = 0.18$). Bivariate Pearson correlation analyses (see Table 2) revealed that IPV severity was significantly and negatively associated with family income and formal

source of care for internalizing and externalizing vignettes. IPV severity was significantly and positively correlated with PTSD severity.

Maternal Psychiatric Symptoms. Descriptive statistics for symptoms of depression, dissociation, and PTSD were as follows: BDI-II: $M = 10.76$, $SD = 11.08$; DES: $M = 8.94$, $SD = 9.90$; and RCMS: $M = 52.37$, $SD = 20.22$. We examined Denver versus Modesto mothers' depression ($M = 13.26$, $SD = 14.76$ vs. $M = 8.70$, $SD = 8.13$, respectively; $t(77) = 1.81$, $p = .07$, $d = 0.38$), dissociation ($M = 8.03$, $SD = 8.34$ vs. $M = 9.67$, $SD = 11.02$, respectively; $t(77) = -0.72$, $p = .47$, $d = -0.16$), and PTSD ($M = 56.91$, $SD = 24.27$ vs. $M = 48.59$, $SD = 15.39$, respectively; $t(75) = 1.82$, $p = .07$, $d = 0.40$) symptoms; and found no statistically significant differences between groups. Bivariate Pearson correlation analyses (see Table 2) showed that maternal PTSD severity was significantly and positively correlated with IPV severity, depression and dissociation. Maternal PTSD was significantly and negatively associated with family income and internalizing symptom recognition for child MH disorder.

MHL: Problem Severity and Concern. The means of mothers' severity rating for vignette conditions were as follows: internalizing: $M = 3.42$, $SD = 0.63$; externalizing: $M = 3.54$, $SD = 0.67$; and neutral: $M = 1.68$, $SD = 0.86$. The means of mothers' reported concern were as follows: internalizing: $M = 3.48$, $SD = 0.70$; externalizing: $M = 3.63$, $SD = 0.70$; and neutral: $M = 1.74$, $SD = 0.86$. One-way repeated measures ANOVAs revealed significant differences in rated problem severity, $F(1 , 66) = 273.78$, $p < .001$ and

reported concern, $F(1, 66) = 269.9$, $p < .001$ across the three conditions. Post hoc tests using Bonferroni corrections revealed that mothers significantly rated internalizing and externalizing vignettes as greater in problem severity than neutral vignettes. Comparison between report of internalizing and externalizing problem severity was not statistically different. Reported concern means differed significantly across three conditions. Mothers rated externalizing vignettes as most concerning, followed by internalizing and neutral vignettes.

MHL: Label/Identification of Child MH disorder. The means of correctly labeling/identification of disorders for each of the conditions were as follows, internalizing $M = 0.46$, $SD = 0.31$ and externalizing $M = 0.28$, $SD = 0.30$, Neutral $M = 0.43$, $SD = 0.37$. One-way repeated measures ANOVA showed significant differences across the three conditions, $F(1, 77) = 235.47$, $p = .001$. Post hoc tests using Bonferroni corrections revealed that mothers more accurately labeled disorders in the internalizing and lack thereof in neutral vignettes relative to externalizing vignettes. Mothers did not correctly label/identify more internalizing disorders relative to the neutral condition. Bivariate Pearson correlation analyses did not show significant associations between number of words uttered and correct label/identification of child MH disorder.

MHL: Child Psychiatric Symptom Recognition. Although mothers recognized more child psychiatric symptoms for externalizing ($M = 0.82$, $SD = 0.90$) than internalizing ($M = 0.67$, $SD = 0.53$) vignette, differences were not significant; $t(77) = -$

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1.51, $p = .13$, $d = 0.20$. Bivariate Pearson correlation analyses (see Table 2) showed that internalizing child psychiatric symptom recognition was significantly and negatively correlated with acculturation, education, and family income. Internalizing child psychiatric symptoms recognition was significantly and positively associated with maternal PTSD and externalizing child psychiatric symptom recognition. Analyses indicated a marginally negative significant correlation between internalizing child psychiatric symptom recognition and child insurance coverage. Externalizing child psychiatric symptom recognition was significantly and negatively correlated with acculturation. Analyses indicated a marginally negative significant associated between externalizing child psychiatric symptoms recognition and family income; and a marginally positive correlation between externalizing child psychiatric symptoms recognition and the following variables: maternal PTSD, maternal depression and maternal dissociation.

  MHL: Management. There was a notable difference in pattern for the reported first source of care. In all but one of the internalizing and all externalizing vignettes, mothers reported that they would *talk to the child* as their first source of care with the highest frequency (55% for the Anxiety vignette, 42% in the Depression, 39% in the PTSD vignette in response to a car accident, 33% in the ADHD, in 35 in the CD, and 46% in the ODD vignette) relative to other sources of care. However, in the PTSD vignette in response to witnessing IPV vignette, more mothers reported that they would

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first *talk to counselor or therapist* (33%) than other sources.

Means of informal and formal sources of care reported for conditions were as follows: internalizing informal $M = .80$, $SD = .45$, internalizing formal $M = 1.2$, $SD = 0.70$, externalizing informal $M = 0.79$, $SD = 0.58$, externalizing formal $M = 1.28$, $SD = 0.78$. One-way repeated measures ANOVA showed significant differences across the conditions, $F(1, 78) = 14.22$, $p < .001$. Post hoc tests using Bonferroni corrections revealed women reported a greater number of formal sources of care relative to informal sources in the internalizing and externalizing conditions. Although mothers endorsed minimal difficulty with and barriers to source of care, they rated significantly greater difficulty with externalizing disorders ($M = 0.91$, SD $= 1.19$) relative to internalizing disorders ($M = 0.52$, SD $= 0.74$), $t(77) = -3.74$, $p < .001$, $d = 0.39$.

Child insurance status and family use of services. Sixty percent of mothers (*SD* $= 0.49$) reported that their child had access to private or public health insurance. Mean number of service visits by family members over the last year were as follows: MH: $M = 0.96$, $SD = 5.17$; and Medical: $M = 5.49$, $SD = 9.19$; and Social: $M = 4.40$, $SD = 24.42$. We examined reported child insurance coverage and family use of services for women recruited in Denver versus Modesto. There was no statistically significant difference in child insurance coverage. However, relative to Modesto women, Denver women reported greater family use of MH services ($M = 0.29$, $SD = 0.95$ vs. $M = 2.64$, $SD = 9.60$, respectively; $t(47) = 1.45$, $p < .01$, $d = -0.34$), medical services ($M = 4.88$, $SD = 5.64$ vs.

M = 6.92, *SD* = 15.02, respectively; *t*(47) = 0.69, *p* < .05, *d* = -0.17) and social services

(*M* = 0.51 *SD* = 0.91 vs. *M* = 14.14, *SD* = 12.12, respectively; *t*(47) = 1.80, *p* = .001, *d* = -1.58). Bivariate Pearson correlation analyses (see Table 2) showed that child insurance coverage significantly and positively correlated with family income and maternal acculturation as well as marginally significant and negatively correlated with internalizing child psychiatric symptom recognition. Family use of MH was not significantly correlated with variables of interest in the present study. Family use of medical services was highly and significantly correlated with family use of social services *r*(49) = .82, *p* < .001. However, neither use of medical nor social services was significantly correlated with variables of interest of the present study. Given the lack of statistical significant relationships between reported family use of services with the present study's variables of interest, we excluded them from display in Table 2 or additional analyses.

We examined the descriptive statistics of the variables of interest, which revealed a positive skew (see Table 2). We conducted analyses with the raw, standardized and transformed values derived from a square root; and found similar results. For ease of interpretation, the following analyses report on raw values.

Examining links between Acculturation, IPV, Related Symptomatology, SES and MHL

Acculturation and MHL. We examined bivariate Pearson correlation

coefficients (see Table 2) to determine whether the demographic variables would need to be controlled for in the regression analyses. Given statistically significant relationships between the demographic variables, trauma symptoms and MHL, we controlled for education and family income. The acculturation composite as well as control variables were entered into the model simultaneously. Multicollinearity diagnostics were assessed and were not problematic (Pedhazur, 1997).

Simultaneous multiple regressions were used to test our hypothesis that mothers with lower acculturation would have greater difficulties with MHL label/identification of child MH disorder in internalizing, externalizing, and neutral conditions relative to their peers. The overall models predicting recognition of internalizing ($R^2 = 0.06$, $F[3, 66] = 1.47$, $p = .23$), externalizing ($R^2 = 0.03$, $F[3, 67] = 0.76$, $p = .51$), and neutral ($R^2 = 0.06$, $F[3, 67] = 1.59$, $p = .91$) conditions were non-significant. Contrary to our hypothesis, lower acculturation did not predict greater difficulty with accurate identification of disorders in all three conditions.

Simultaneous multiple regressions were used to test our hypothesis that mothers with lower acculturation would have greater difficulties with MHL recognition of child psychiatric symptoms relative to their peers. As predicted, acculturation predicted number of child psychiatric symptoms mothers recognized for internalizing ($R^2 = 0.23$, $F[3, 66] = 6.52$, $p = .001$) and externalizing ($R^2 = 0.13$, $F[3, 67] = 3.31$, $p < .05$) vignettes. However, contrary to our expectation, lower acculturation was associated with

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greater number of child psychiatric symptoms recognized. Acculturation, and not family income or maternal education, was a significant predictor of child psychiatric symptoms recognized in the internalizing and externalizing conditions (see Table 3).

Simultaneous multiple regression was used to test our hypothesis that lower acculturation would predict greater difficulties with MHL management with formal, and not informal, source of care. The models predicting formal MHL for internalizing ($R^2 = 0.16$, $F[3, 67] = 4.32$, $p < .01$) and externalizing ($R^2 = 0.16$, $F[3, 67] = 3.96$, $p < .05$) conditions were significant. As hypothesized, acculturation, and not family income or maternal education, was associated with MHL management formal source of care (see Table 4), where higher acculturation was associated with greater number of formal source of care reported for internalizing and externalizing vignettes. As hypothesized, acculturation did not predict informal source care in internalizing ($R^2 = 0.08$, $F[3, 67] = 1.92$, $p < .13$) and externalizing ($R^2 = 0.03$, $F[3, 67] = 0.68$, $p < .56$) conditions.

Acculturation and IPV Severity. Simultaneous multiple regression was used to test our hypothesis that higher acculturation would predict greater severity of IPV reports. We entered the following variables in the models: family income and acculturation composite. Maternal education was not entered in the model because it was not statistically correlated with IPV severity. The overall model predicting IPV severity was only marginally significant ($R^2 = 0.15$, $F[2, 41] = 3.85$, $p = .05$). Contrary to our hypothesis, acculturation did not predict IPV severity.

Acculturation and SES. We conducted simultaneous multiple regressions to test

our hypothesis that mothers with higher acculturation would report greater educational

attainment and income compared to those with lower acculturation. For the model

predicting family income, we entered the following variables in the model: maternal

education and acculturation. Although the overall model predicting family income was

significant ($R^2 = 0.17$, $F[2, 41] = 4.19$, $p < .05$), contrary to our hypothesis, acculturation

was not a significant predictor. Maternal education was a significant predictor (see Table

5). For the model predicting maternal education, we entered family income and

acculturation. The model was significant ($R^2 = 0.33$, $F[2, 41] = 10.46$, $p < .001$).

Acculturation and income were significant predictors, where greater acculturation and

family income were associated with greater educational attainment (see Table 5).

IPV and Related Psychiatric Symptoms. We conducted a bivariate Pearson

correlation to test our hypothesis that mothers exposed to IPV would report greater

symptom severity (PTSD, depression and dissociation) compared to mothers without IPV

exposure. As predicted, IPV severity was significantly and positively correlated with

PTSD symptoms (see Table 2). Neither depression nor dissociation was associated with

IPV severity. Given the lack of a statistically significant relationship between IPV,

depression and dissociation, we excluded depression and dissociation in the following

analysis.

Acculturation, PTSD Symptoms and MHL. We conducted simultaneous

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multiple regressions to test our hypothesis that maternal PTSD symptoms would moderate the relationship between acculturation and internalizing and externalizing MHL (recognition of symptoms and management of disorder). Given the lack of a statistically significant relationship between acculturation and MHL recognition, we did not examine the hypothesis that PTSD would account for the relationship between acculturation and MHL recognition. We tested our hypothesis that women with low or high acculturation and greater PTSD symptoms would show disruptions in recognizing child internalizing and externalizing psychiatric symptoms relative to their peers. We entered the following variables in the model: family income, maternal education, PTSD severity, acculturation composite and the interaction term. For the internalizing condition, the overall model was significant, $R^2 = 0.36$, $F[5, 38] = 4.30$, $p < .01$. Education was a significant predictor; however, the interaction term was non-significant (see Table 6). For the externalizing condition, the overall model was marginally significant, $R^2 = 0.21$, $F[5, 38] = 2.03$, $p < .10$, with acculturation as a marginally significant predictor.

Finally, we tested our hypothesis that women with low or high acculturation status and greater PTSD symptoms would show disruptions in MHL formal, but not informal, source of care for internalizing and externalizing conditions relative to their peers. We entered the following variables in the models: family income, maternal education, PTSD severity, acculturation composite and the interaction term. As hypothesized, informal source of care for internalizing ($R^2 = 0.13$, $F[5, 38] = 1.25$, $p <$

.31) and externalizing (R^2 = 0.10, F[5, 38] = 0.88, p < .50) conditions were non-significant. However, contrary to our hypothesis formal source of care for internalizing (R^2 = 0.18, F[5, 38] = 1.69, p < .15) and externalizing (R^2 = 0.11, F[5,38] = .99, p < .43) conditions were also non-significant. Thus, our hypothesis was not supported.

Discussion

In this study, we examined Latina mothers' ability to label/identify, recognize symptoms of, and seek care for child MH disorders in relation to maternal acculturation and IPV-related factors. After presenting vignettes depicting child internalizing and externalizing MH disorders, results showed that mothers rated vignettes of child MH disorder as problematic and concerning. Although acculturation did not predict mothers' ability to label/identify child MH disorders, acculturation did predict maternal recognition of child psychiatric symptoms. Specifically, lower acculturation was associated with increases in the number of child psychiatric symptoms mothers recognized in the vignettes. This result suggests that less acculturated mothers may more appropriately perceive child psychiatric symptoms and be more willing to report symptoms during the process of seeking help for their children than more acculturated mothers. Alternatively, mothers' perception of psychiatric symptoms may overlap with perceptions of children's assimilation to U.S. cultures and behaviors. The acculturation process can be stressful for families, particularly when parents and their children acculturate to the mainstream culture at different rates, with children typically acculturating more quickly than their parents (Szapocznik & Kurtines, 1993). Thus, less

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acculturated mothers who view their children as less involved in Latino culture may pay

closer attention to potential signs of distress in their children, resulting in greater

numberof recognized psychiatric symptoms compared to more acculturated mothers.

In terms of seeking MH care in response to the child witnessing IPV vignette,

Latina mothers were more likely to first report seeking help from a counselor or therapist

relative to other sources of care. This preference for care beyond immediate social

networks suggests that IPV may uniquely affect the process of seeking care for children's

MH problems among Latina mothers. Furthermore, this finding exemplifies how

caregivers may avoid speaking directly with their children about IPV and related

symptomatology. Taken together, this suggests that caregivers may benefit from

appropriate intervention that encourages them to engage their family in the treatment of

and talk directly with their child about IPV-related distress. One evidence-based

treatment for PTSD is Trauma-Focused Cognitive Behavioral Therapy (TF-CBT). TF-

CBT is a structured individual and parent trauma-focused model that includes skills-

based and trauma-specific components with integrated gradual exposure (Cohen,

Mannarino, & Deblinger, 2006; www.musc.edu/tfcbt). In TF-CBT, the parent component

occurs in parallel to and is believed to optimize the benefits of the child's treatment.

With the exception of the witnessing IPV vignette, Latina mothers were more

likely to report speaking with or increasing attention to their children as their first source

of care in all of the presented vignettes. This finding suggests that Latina mothers' search

for care for their children's MH problems often begins with increasing communication and involvement with their children. Parent-child communication and parental involvement have been found to be particularly important in research examining parent-child relationship and child and adolescent well-being (e.g., Brody, Flor, Hollett-Wright, McCoy, & Donovan, 1999; Loeber & Stouthamer-Loeber, 1986; Smith & Krohn, 1995). Although research of these parental components specific to Latino children and adolescent well-being is relatively limited, studies have found similar results (e.g., Davalos et al., 2005; Florsheim, Tolan, & Gorman-Smith, 2006).

Given child MH disorders presented in the vignettes depicted clinical symptom levels that had an impact on the child's functioning in multiple settings, it may be beneficial to seek sources of care beyond increasing attention and communication with the child. Overall, mothers reported greater number of formal, relative to informal, source of care for internalizing and externalizing disorders. Consistent with previous research (Cabassa & Zayas, 2007; Rogler, Malgady, & Rodriguez, 1989), this result suggests that although mothers reported an informal source as their first preference, mothers expanded the search to more formal sources if child symptoms did not improve. Latinos reliance on both informal and formal sources of care to cope with MH problem has been reported in previous studies (Cabassa & Zayas, 2007; Guarniccia & Parra, 1996; Pescosolido, Wright, Alegría, & Vera, 1998; Vega, Kolody, & Aguilar-Gaxiola, 2001). These findings suggest that Latina mothers' search for care for their children's MH disorders is a process

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in which different sources of care are consulted between the onset of symptoms and use of MH services.

Maternal acculturation predicted formal source of care for internalizing and externalizing child psychiatric disorder. As hypothesized, the number of reported formal sources of care increased for child psychiatric disorders as maternal acculturation increased. This finding suggests that more acculturated Latina mothers may have increased access to and or knowledge of formal sources of care (e.g., school psychologist, social worker, therapist, counselor). Because the number of Spanish-proficient providers remains insufficient to meet the needs of Latinos, especially monolingual immigrants (Barrio et al., 2008; Falicov, 2009), mothers with higher English proficiency may have greater access to child MH services provided in English. Although women in the present study reported minimal barriers to care, other studies have found that language barriers contribute to the difficulties Latinos face when accessing public transportation to visit MH clinics and completing required paperwork at clinics (Barrio et al., 2008; Kouyoumdjian, Zamboanga, and Hansen, 2003).

Moreover, maternal education was predicted by family income and acculturation, where greater acculturation and family income were associated with greater maternal educational attainment. Thus, higher acculturation might be associated with increased knowledge including appropriate formal intervention (e.g., counseling, therapy) as well as greater economic resource that may encourage some Latina mothers to initiate more

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formal help-seeking behaviors. Furthermore, higher maternal acculturation was associated with child insurance coverage. This corresponds with research that shows higher acculturation, specifically greater length of U.S. residence, is associated with higher rates of insurance coverage among Latino immigrants (Thamer et al., 1997). Anglo-oriented cultural practices and English language competency may be associated with increased ability to secure child insurance. Access to private or public child insurance may in turn provide greater access to available MH resources including referral lists of MH providers.

Contrary to our hypothesis higher maternal acculturation did not predict greater reported IPV severity. Although research in this area is relatively sparse, our finding is similar to previous research by Caetano, Ramisetty-Mikler, and McGrath (2005), where acculturation was assessed by language use, ethnicity of people they spent time with, and Hispanic values. Prevalence rates of physical violence incidence and recurrence did not vary significantly based on acculturation degree.

Women reported a high prevalence of IPV in the past year. The rates of reported psychological aggression (64%), physical assault (26%), and sexual coercion (23%) in the preceding year were similar to those reported in a study examining IPV among 292 U.S. born, immigrant, and migrant Latina women (Hazen & Soriano, 2005; 73%, 19%, and 15%; respectively). In contrast, the rate of any past year physical violence by an intimate partner in the current sample was substantially higher than that obtained by the

National Violence Against Women Survey (i.e., 26% vs. 1.3%; respectively, Tjaden & Thoennes, 2000).

As hypothesized, greater maternal IPV severity predicted greater maternal PTSD symptom severity. However, contrary to our hypothesis, IPV severity was not associated with severity of depression or dissociation symptoms. The difference in the trauma indices may indicate that PTSD symptoms may be directly related to IPV, whereas depression and dissociation may be related to how IPV is appraised (Martin, Cromer, DePrince, & Freyd, 2013). Alternatively, Latino cultural characteristics may encourage the development of coping strategies such avoidance (Pole, 2005), which in turn increases severity of PTSD symptoms. Contrary to our hypothesis, PTSD severity did not moderate the relationship between acculturation and MHL, suggesting that greater maternal PTSD symptoms may not be associated with worse MHL for child psychiatric disorders among Latina mothers.

Limitations and Future Directions

This study contributes to our understanding of links between maternal acculturation, IPV-related symptomatology, and MHL for child psychiatric symptoms. However, several limitations need to be considered. First, we focused the present study on mothers; future studies are needed to examine the effects of primary caregiver's gender on MHL for child psychiatric disorders. Second, our sample was largely comprised of Latina immigrants of Mexican origin who have resided in the U.S. for

nearly two decades and may be at later stages of the acculturation process. Therefore, access to resources and perceived barriers may be fundamentally different from recent immigrants who may be at earlier stages of the acculturation process. Furthermore, we did not assess years of residence in Denver or Modesto. Women who have resided in Denver or Modesto longer may be more familiar with their city's resources and MH services compared to their peers. Third, we did not sample other racial and ethnic groups; thus, preventing cross-cultural comparisons and establishing whether the present results are unique to Latinos or common to other racial and ethnic groups. Fourth, our sample reported family use of MH and social services in the last year. Thus, our sample may have been more familiar with formal services relative to peers with no previous use of MH or social services. Moreover, cultural norms, such as reverence and respect that Latino immigrants have for authority figures (Cabassa et al., 2007; Fisher et al., 2002) may have contributed to variations in reported greater use of formal versus informal source of care. Future studies using more representative samples can directly examine how race and ethnicity and symptomatology influence MHL for child psychiatric disorder.

Furthermore, the vignette methodology and modified IPQ measure used to interview women are approximations of what mothers would do if their children were faced with similar situations. However, plans can vary over time and other variables may prevent mothers from acting on initial plans. Our cross-sectional design prevents us from

making causal inferences. Prospective studies of Latina mothers' use of services for child psychiatric disorders are needed to address this limitation by directly examining the correspondence between planned and actual behaviors and modeling the roles that acculturation and maternal symptomology play in MHL for child psychiatric disorders. Future research would also benefit from longitudinal designs to examine how Latina mothers MHL affects child MH outcomes.

Finally, mothers' responses to the modified IPQ were coded to measure MHL, in particular label/identification of child MH disorder, number of recognized symptoms and management of MH problems through use of informal and formal source of care. In the present study, we did not assess whether mothers attributed the child's disorder to internal (e.g., lack of motivation or willpower, weakness of character) or external (e.g., lack of effective parenting, neglect) causes. Future analysis of mothers' responses would benefit from identifying whether MHL and intentions to seek care is a function of maternal views of causes of child MH disorders. Attention to such factors may reduce barriers to and help practitioners better engage Latino families in treatment of child MH disorders.

Conclusion

Given the increased risk for worse MH outcomes faced by Latino adolescents, continued research in maternal acculturation, IPV-related factors and MHL for child psychiatric disorders is needed to better inform intervention and treatment efforts. The

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results from the present study suggest that level of Latina mothers' acculturation is an important factor in the recognition of and response to child psychiatric symptoms. More specifically, after controlling for SES, lower acculturated mothers recognized greater number of child psychiatric symptoms and higher acculturated mothers demonstrated greater intended use of formal MH sources of care. Latina mothers were more likely to report first seeking formal, relative to informal, source of care in response to IPV-related child symptoms; suggesting that IPV uniquely affects search for child MH care. Moreover, maternal IPV severity was associated with greater maternal PTSD symptoms. However, maternal PTSD symptoms did not moderate the acculturation and MHL relationship. These results suggest that maternal factors including acculturation, IPV and IPV-related symptomatology should be considered to better understand critical disparities in MH service use and MH outcomes among Latino youth.

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Appendices

Appendix A

Table of Correlations Between Study Variables and Descriptive Statistics

Table 1

Correlations Between Acculturation Variables (N = 79)

Variable	1	2	3	4	5	6	7	8	9
1. Language	—								
2. First Generation	-.40**	—							
3. Second Generation	.23*	-.84**	—						
4. Fourth Generation	.17	-.21	-.05	—					
5. Fifth Generation	.30**	-.37**	-.08	-.02	—				
6. AOS	.54	-.60**	.48**	.19	.24**	—			
7. MOS	-.35**	.39**	-.18	-.12	-.42**	-.22*	—		
8. AOS-MOS	.59**	-.65**	.46**	.20	.39**	.88**	-.66**	—	
9. Acculturation	.82**	-.64**	.30**	.47**	.51**	.74**	-.58**	.86**	—
M	0.30	0.78	0.16	0.01	0.03	2.84	4.22	-1.38	-0.03
SD	0.46	0.41	0.37	0.11	0.19	0.95	0.60	1.24	0.40
Range	0-1	0-1	0-1	0-1	0-1	1.20-4.62	2.47-5.00	-3.80-1.30	-0.39-1.59

Note. Language = preferred language: Spanish = 0, English = 1; First Generation = born in a Hispanic/Latin or other country,

no = 0, yes = 1; Second Generation= born in USA, either parent born in a Hispanic/Latino or other country: no = 0, yes = 1;

Third generation status was not endorsed and excluded; Fourth Generation = parents born in the USA and at least one grandparent

born in a Hispanic/Latin or other country with the remainder born in the US, no = 0, yes = 1; Fifth Generation = parents born in the

USA and all grandparents born in the US, no = 0, yes = 1; AOS = mean Anglo orientation scale; MOS = mean Mexican orientation

scale; AOS-MOS= Linear orientation score, MOS score was subtracted from AOS score; Acculturation = acculturation composite.

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

Table 2

Correlations Between Study Variables and Descriptive Statistics (N = 79)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Education	—																
2. Income	.38**	—															
3. Insurance	.16	.46**	—														
4. Acculturation	.40***	.20†	.29*	—													
5. IPV Severity	-.27†	-.36*	.16	-.02	—												
6. PTSD	-.04	-.35**	.06	-.01	.41**	—											
7. Depression	-.06	-.22†	.01	.00	.08	.56**	—										
8. Dissociation	.09	-.07	-.13	-.05	-.03	.42**	.38**	—									
9. INT Label	.21†	.07	.08	.19†	-.08	-.03	.04	.07	—								
10. EXT Label	.14	.03	-.03	.01	-.20	-.13	-.05	-.03	.41**	—							
11. NEU Label	-.08	.20	-.11	.06	.00	-.13	-.04	-.22*	.08	.15	—						
12. INT Recognition	-.33**	-.25*	-.29†	-.39**	.24	.26*	.07	.01	-.14	.03	-.09	—					
13. EXT Recognition	-.06	-.23†	-.05	-.28*	.14	.21†	.07†	.06†	-.09	-.06	-.07	.39***	—				
14. INT Informal	.26*	.18	.07	.16	-.01	-.15	-.15	-.02	.00	-.09	-.09	.01	.05	—			
15. INT Formal	.11	.19†	-.07	.37**	-.28*	-.12	.20†	.08	.22*	.05	-.01	-.15	-.10	-.09	—		
16. EXT Informal	-.12	-.12	-.01	-.05	.05	.07	.00	.07	.13	-.24*	-.11	.11	-.02	.31***	.04	—	
17. EXT Formal	.1	.16	.05	.31**	-.28*	-.03	.11	.09	.28*	.07	-.02	-.11	-.08	.09	.48***	-.32**	—

Table 2

Continued

M	2.56	2.82	0.60	-0.03	32.04	52.98	11.19	8.97	0.45	0.29	0.42	0.65	0.91	0.84	1.19	0.81	1.40
SD	1.76	1.94	0.49	0.40	49.86	19.87	9.22	8.75	0.32	0.31	0.35	0.54	1.00	0.43	0.66	0.62	0.78
Range	0-6	0-6	0-1	-0.39-1.59	1-184	5-113	0-36	0-36.43	0-1	0-1	0-1	0-2	0-4	0-2	0-2.5	0-4	0-3

Note. Education: < 7th grade = 0, < 9th grade = 1, partial high school = 2, high school graduate = 3, partial college = 4, standard college = 5, graduate training = 6. Income yearly family income: < \$10,000 = 1, < \$20,000 = 2, < \$30,000 = 3, < \$40,000 = 4, < \$50,000 = 5, ≥ \$50,000 = 6. Insurance coverage: 0 = child not insured, 1 = child insured. Acculturation = acculturation composite; IPV = interpersonal violence; PTSD = posttraumatic stress disorder; INT = internalizing disorder; EXT = externalizing disorder; NEU = neutral condition; Label = label/identification of child psychiatric disorder; Recognition = child symptom recognition; Informal = informal source of care; Formal = formal source of care.

† *p* < .10. * *p* < .05. ** p < .01. *** *p* < .001.

Appendix B

Tables of Regression Analyses

Table 2

Simultaneous Regression Models Predicting Mental Health Literacy: Child

Psychiatric Symptom Recognition

Model tested	Predictor Variables	*B*	*SE*	*β*	*t*
INT Recognition	Income	-.03	.03	-.11	-.97
	Education	-.10	.06	-.20	-1.58
	Acculturation	-.40	.15	-.30	-2.56[*]
EXT Recognition	Income	-.10	.06	-.02	-1.63
	Education	.04	.06	.09	.68
	Acculturation	-.68	.28	-.30	-2.40[*]

Note. INT = internalizing condition; EXT = externalizing condition;

Recognition = child psychiatric symptom recognition; Income = family income; Education =

maternal education; Acculturation = acculturation composite.

† p < .10. * p < .05. ** p < .01. *** p < .001.

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Table 3

Simultaneous Regression Models Predicting Mental Health Literacy: Management

Model tested	Predictor Variables	*B*	*SE*	*β*	*t*
INT Formal	Income	.06	.05	.14	1.23
	Education	-.03	.05	-.07	-.59
	Acculturation	.67	.21	.38	3.07**
EXT Formal	Income	.05	.05	.14	.96
	Education	-.02	.05	-.05	-.38
	Acculturation	.64	.25	.32	2.57*

Note. INT = internalizing condition; EXT = externalizing condition; Formal = formal source of care. Income = family income; Education = maternal education; Acculturation = acculturation composite.

† *p* < .10. * *p* < .05. ** *p* < .01. *** *p* < .001.

Table 4

Simultaneous Regression Models Predicting Socioeconomic Factors

Model tested	Predictor Variables	*B*	*SE*	*β*	*t*
Income	Education	.33	.11	.36	2.93**
	Acculturation	.23	.53	.05	.43
Education	Income	.33	.11	.31	2.93**
	Acculturation	1.66	.49	.35	3.38**

Note. IPV = interpersonal violence; Income = family income; Education = maternal

education; Acculturation = acculturation composite.

† *p* < .10. * *p* < .05. ** *p* < .01. *** *p* < .001.

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Table 5

Simultaneous Regression Models Predicting Mental Health Literacy Moderated by

Posttraumatic Stress Disorder

Model tested	Predictor Variables	*B*	*SE*	*β*	*t*
INT Recognition	Income	-.03	.03	-.1	-.82
	Education	-.06	.03	-.23	-1.87[†]
	Acculturation	-.35	.15	-.27	-2.27[*]
	PTSD	.03	.07	.65	.49
	Acculturation x PTSD	-.32	.22	-.18	-1.45
EXT Recognition	Income	-.10	.07	-.19	-1.43
	Education	.03	.06	.06	.45
	Acculturation	-.62	.29	-.27	-2.15[*]
	PTSD	.04	.13	.05	.36
	Acculturation x PTSD	-.41	.41	-13	-.98

Note. INT = internalizing disorder; EXT = externalizing disorder; NEU = neutral condition;

Recognition = child psychiatric symptom recognition; PTSD = posttraumatic stress disorder; IPV

= interpersonal violence; Income = family income; Education = maternal education;

Acculturation = acculturation composite; Acculturation x PTSD = interaction term.

[†] *p* < .10. [*] *p* < .05. ** *p* < .01. *** *p* < .001.

Appendix C

English and Spanish Vignettes with Repeated Symptoms

Internalizing disorder

   Anxiety. (Juan/Maria) is a (boy/girl) who is _____ years old. Imagine that (Juan/Maria) is your child. (Juan/Maria) has always done well in school. But she (he/she) has to do (his/her) homework over and over because (he/she) thinks it is not good enough and (he/she) feels that it has to be perfect. (He/She) often gets a stomachache the night before and the morning of school exams and sporting events. (He/She) often cries and yells if things don't go exactly the way (he/she) thinks they should. Most nights, (he/she) also has a hard time falling asleep and staying asleep. (He/She) is also afraid of dark and will not go to bed without the lights being left on. (Juan/Maria) also worries about tornadoes and earthquakes even though (he/she) has never experienced one in person.

   Repeated Anxiety Symptoms: 1.) has to do (his/her) homework over and over; 2.) has to be perfect; 3.) stomachache the night before and the morning of school exams and sporting events; 4.) cries and yells if things don't go exactly the way (he/she) thinks they should; 5.) hard time falling asleep and staying asleep; 6.) afraid of dark and will not go to bed without the lights being left on; and 7.) worries about tornadoes and earthquakes even though (he/she) has never experienced one in person.

   Major depression. (Juan/Maria) is a (boy/girl) child who is _____ years old. Imagine that (Juan/Maria) your child. In the last few months, (Juan/Maria) has been more

moody and irritable, staying in (his/her) room after school and not playing (his/her) with his favorite games or friends. (Juan/Maria) says that (he/she) feels tired even though (he/she) is sleeping more than (he/she) used to, and (he/she) doesn't feel like eating. (Juan/Maria) has been having trouble concentrating on what (he/she) is doing in school and at home, and has told you "I wish I hadn't been born." One of (Juan/Maria)'s friends has also heard (him/her) talk about wanting to kill (himself/herself).

Repeated Depression Symptoms: 1.) moody and irritable; 2.) staying in (his/her) room; 3.) not playing (his/her) with his favorite games or friends; 4.) feels tired even though (he/she) is sleeping more than (he/she) used to; 5.) doesn't feel like eating; 6.) trouble concentrating; 7.) told you "I wish I hadn't been born."; and 8.) friend heard (him/her) talk about wanting to kill (himself/herself).

Posttraumatic stress disorder (PTSD; car accident). (Juan/Maria) is a (boy/girl) who is _____ years old. Imagine that (Juan/Maria) is your child. (Juan/Maria) was in a car accident where (his/her) father had to go to the emergency room for a broken foot and was sent home after a few hours. A few days after the accident, (Juan/Maria) had some nightmares about the car accident and (his/her) father in the hospital. A few weeks later, (Juan/Maria) started to have nightmares almost every night about monsters in (his/her) closet and (his/her) house being on fire. (Juan/Maria) also spends a lot of (his/her) free time drawing cars crashing into each other. In the last few months, (Juan/Maria) has been

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more moody and seems to have lost interest in (his/her) favorite hobbies and in friends. (Juan/Maria)'s teachers say that (his/her) grades are getting worse.

Repeated PTSD (car accident) symptoms and criteria: 1.) was in a car accident; 2.) saw father had to go to the emergency room; 3.) nightmares about the car accident/ nightmares almost every night about monsters; 4.) drawing cars crashing into each other; 4.) more moody; 5.) lost interest in (his/her) favorite hobbies and in friends; and 6.) grades are getting worse.

PTSD (witnessing IPV). (Juan/Maria) is a (boy/girl) who is _____ years old. Imagine that (Juan/Maria) is your child. (Juan/Maria) often overhears fights in the house. During one of the fights, imagine that (Juan/Maria)'s father hit you. Because of the noise, the neighbors called the police. (Juan/Maria) saw (his/her) father arrested and taken away. A few days after the fight, (Juan/Maria) did not want you to leave you even for a few minutes. Also, when (he/she) hears yelling in the house, (Juan/Maria) usually hides in the closet. (Juan/Maria) also did not want to go to school and cried every morning when you dropped (him/her) off at school. In the last few months, (Juan/Maria) has been more jumpy or nervous and has been waking up in the middle of the night because of nightmares.

Repeated PTSD (witnessing IPV) symptoms and criteria: 1.) overhears fights in the house; 2.) father hit you; 3.) father arrested and taken away; 4.) did not want you to leave you even for a few minutes; 5.) when (he/she) hears yelling in the house,

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(Juan/Maria) usually hides in the closet; 6.) did not want to go to school and cried every morning when you dropped (him/her) off at school; 7.) has been more jumpy or nervous; and 8.) has been waking up in the middle of the night because of nightmares.

Externalizing disorders

Attention deficit hyperactivity disorder (ADHD). (Juan/Maria) is a (boy/girl) who is ____ years old. Imagine that (Juan/Maria) is your child. (Juan/Maria) has always had trouble in school; especially in finishing assignments on time, even though (he/she) is smart. (Juan/Maria)'s teachers say that (Juan/Maria) does not pay attention in class, and that they always have to remind (Juan/Maria) to get back to (his/her work). (Juan/Maria) is often up and down, out of (his/her) seat, looking out the window, or talking to classmates. (Juan/Maria) does the same things at home. You notice that (he/she) easily forgets what (he/she)'s supposed to be doing, has trouble waking up in the morning, and going to bed at night, and loses things like toys and games.

Repeated ADHD Symptoms: 1.) has always had trouble in school; 2.) especially in finishing assignments on time; 3.) does not pay attention in class; 4.) teachers always have to remind (him/her) to get back to (his/her work); 5.) is often up and down; 6.) out of (his/her) seat; 7.) looking out the window; 8.) talking to classmates; 9.) does the same things at home; 10.) easily forgets what (he/she)'s supposed to be doing; 11.) has trouble waking up in the morning, and going to bed at night; 12.) and loses things like toys and games.

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Conduct Disorder (CD). (Juan/Maria) is a (boy/girl) who is _____ years old. Imagine that (Juan/Maria) is your child. Since (Juan/Maria) was very young, (he/she) was often in trouble for fighting, hitting (his/her) brothers and sisters, and lying. (He/She) also often hurts the family dog. (His/Her) teachers say that (he/she) is often sent to the principal's office for bullying, fighting, hitting, lying, and stealing from other students and teachers. (Juan/Maria) does not have any friends. (His/Her) older brother once caught (him/her) with a lighter trying to set (his/her) bed on fire. Last week, (Juan/Maria) ran away from home after breaking (his/her) radio with a baseball bat. (He/She) did not return home for several hours.

Repeated CD Symptoms: 1.) (he/she) was often in trouble for fighting; 2.) hitting (his/her) brothers and sisters; 3.) and lying; 4.) often hurts the family dog; 5.) often sent to the principal's office; 6.) bullying; 7.) fighting/lying/hitting; 8.) stealing from other students and teachers; 9.) does not have any friends; 10.) trying to set (his/her) bed on fire. 11.) ran away from home.

Oppositional Defiant Disorder (ODD). (Juan/Maria) is a (boy/girl) who is _____ years old. Imagine that (Juan/Maria) is your child. (Juan/Maria) has always had trouble with (his/her) anger and often loses (his/her) temper. (He/She) is also disobedient and almost never listens to adults. (Juan/Maria) often annoys (his/her) siblings and friends. (His/Her) school principal sent a letter home to you saying that (Juan/Maria) does not get along on the playground because (he/she) is mean to other children. (He/She) also teases

other children and disobeys school rules. (His/Her) teachers say that when (he/she) makes a mistake or misbehaves, (he/she) often blames others and argues with adults (Juan/Maria) is often touchy or easily annoyed by others.

Repeated ODD Symptoms: 1.) has always had trouble with (his/her) anger; 2.) often loses (his/her) temper; 3.) disobedient; 4.) almost never listens to adults; 5.) often annoys (his/her) siblings and friends; 6.) does not get along on the playground because (he/she) is mean to other children; 7.) (he/she) also teases other children; 8.) and disobeys school rules; 9.) often blames others; 10.) argues with adults (Juan/Maria); and 11.) often touchy or easily annoyed by others.

Neutral

Neutral A. (Juan/Maria) is (boy/girl) who is ____ years old. Imagine that (Juan/Maria) your child. (Juan/Maria) has several friends in (his/her) neighborhood that (he/she) gets together with one or two times per week, and is involved in a few hobbies, like sports and music. (Juan/Maria) usually gets along fairly well with other kids, but sometimes has some problems with needing to have (his/her) own way or to go first in games. (Juan/Maria) is pretty smart and usually follows all the rules at school, but (he/she) tends to be somewhat shy about raising (his/her) hand in class. You notice that (he/she) is sometimes moody, but this comes and goes.

Neutral B. (Juan/Maria) is (boy/girl) who is ____ years old. Imagine that (Juan/Maria) is your child. (Juan/Maria) usually gets along well with other kids, but

sometimes gets into arguments over sharing with others, especially with (his/her) younger

sibling. (Juan/Maria) attends a small school and has some friends in his neighborhood.

(He/She) enjoys playing sports and music. (Juan/Maria) is a bright and talkative child and

usually does what (he/she) is told. You say that (he/she) is sometimes sad because

(he/she) wants to have more friends.

Neutral C. (Juan/Maria) is (boy/girl) who is _____ years old. Imagine that

(Juan/Maria) is your child. (Juan/Maria) just moved with your family to a different

neighborhood and started going to a new school. (He/She) has been having some trouble

making friends at school, because (he/she) is shy. Last week, (Juan/Maria) made a friend

at school who (he/she) is going to invite to play at your house on Saturday. (He/She) gets

good grades, usually A's and B's. (He/She) enjoys reading books and playing

videogames. (His/Her) teachers are sometimes worried about (him/her) because (he/she)

is having trouble making friends.

Trastorno de internalización

Ansiedad. (Juan/María) es (un/a niño/niña) de _____ años de edad. Imagina que

(Juan/María) es su (hijo/hija). (Juan/María) siempre ha tenido éxito en la escuela. Pero

tiene que repetir y hacer su trabajo de nuevo seguidamente porque (él/ella) siente que no

es suficiente y tiene que ser perfecto. Antes de exámenes de escuela y eventos deportivos

le da dolor de estómago durante la noche anterior y madrugada. (Él/Ella) se enoja o se

pone irritable cuando las cosas no salen exactamente como (él/ella) pensaba que pasaría.

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La mayoría de las noches, (él/ella) tiene dificultad de dormir y mantenerse dormido. (Él/Ella) también tiene miedo de la oscuridad y no se va a cama si las luces no están encendidas. También a (Juan/María) le preocupa los tornados y terremotos aunque nunca ha pasado por uno.

Repetidos síntomas de la ansiedad 1.) tiene que repetir y hacer su trabajo de nuevo seguidamente; 2.) tiene que ser perfecto; 3.) Antes de exámenes de escuela y eventos deportivos le da dolor de estómago durante la noche anterior y madrugada; 4.) se enoja o se pone irritable cuando las cosas no salen exactamente como (él/ella) pensaba que pasaría; 5.) tiene dificultad de dormir y mantenerse dormido; 6.) tiene miedo de la oscuridad y no se va a cama si las luces no están encendidas; and 7.) le preocupa los tornados y terremotos aunque nunca ha pasado por uno.

Depresión mayor. (Juan/María) es (un/a niño/niña) de _____ años de edad. Imagina que (Juan/María) es su (hijo/hija). En los últimos meses, (Juan/María) ha estado de mal humor e irritable permaneciéndose en su habitación después de la escuela y deja de andar con sus amigos y jugar sus juegos favoritos. Aunque está durmiendo más de lo normal, (Juan/María) dice que siempre está cansado/a y que no tiene ganas de comer. (Juan/María) ha tenido problemas concentrándose en lo que hace en la escuela y en casa y también le ha dicho a usted que "Deseo hubiera nunca nacido." También, un amigo de Juan/María le había escuchado hablar sobre el deseo de suicidarse.

Repetidos Síntomas de la depression mayor: 1.) ha estado de mal humor e irritable; 2.) permaneciéndose en su habitación; 3.) deja de andar con sus amigos y jugar sus juegos favoritos; 4.) Aunque está durmiendo más de lo normal, (Juan/María) dice que siempre está cansado/a; 5.) no tiene ganas de comer; 6.) ha tenido problemas concentrándose en lo que hace; 7.) también le ha dicho a usted que "Deseo hubiera nunca nacido."; and 8.) un amigo de Juan/María le había escuchado hablar sobre el deseo de suicidarse.

Trastorno de estrés postraumático (TEPT; accidente automovilístico). (Juan/María) es (un/a niño/niña) de _____ años de edad. Imagina que (Juan/María) es su (hijo/hija). (Juan/María) estuvo en un accidente automovilístico en que su papá fue admitido al departamento de emergencia por haber fracturado su pie y fue enviado a casa después de unas horas. Algunas días después del accidente, (Juan/María) tenía algunas pesadillas del accidente y de su papá en el hospital. Unas semanas más tarde, (Juan / María) comenzó a tener pesadillas casi todas las noches sobre monstruos en su closet y de su casa prendido en fuego. (Juan/María) pasa mucho tiempo dibujando accidentes de automóviles. En los últimos meses, (Juan/María) ha estado de mal humor más frecuente y parece haber perdido su interés en sus pasatiempos favoritos y con sus amigos. Los maestros de (Juan/María) dicen que sus notas están empeorando.

Repetidos síntomas y criterios de TEPT (accidente automovilístico): 1.) estuvo en un accidente automovilístico; 2.) su papá fue admitido al departamento de emergencia;

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3.) tenía algunas pesadillas del accidente/tener pesadillas casi todas las noches sobre

monstruos en su closet; 4.) pasa mucho tiempo dibujando accidentes de automóviles; 4.)

ha estado de mal humor más frecuente; 5.) parece haber perdido su interés en sus

pasatiempos favoritos y con sus amigos; and 6.) sus notas están empeorando.

TEPT (testigo de violencia interpersonal). (Juan/María) es (un/a niño/niña) de

_____ años de edad. Imagina que (Juan/María) es su (hijo/hija). En muchas ocasiones

(Juan/María) escucha las peleas en casa. Durante una de las peleas, imagina que el padre

de (Juan/María) le golpea a usted. Debido al ruido, los vecinos llaman a la policía.

(Juan/María) vio a su padre ser arrestado y llevado. Algunos días después de la pelea,

(Juan/María) no desea alejarse, ni por unos minutos. También, cuando (él/ella) escucha

gritos en la casa, (Juan/María) se esconde en el closet. (Juan/María), también, no ha

querido ir a la escuela y lloraba todas las mañanas cuando lo dejaba en la escuela. En los

últimos meses, (Juan/María) ha estado más nervioso y se despierta en medio de la noche

a causa de las pesadillas.

Trastorno de externalización

Repetidos síntomas y criterios de TEPT (testigo de violencia interpersonal) : 1.)

escucha las peleas en casa; 2.) le golpea a usted; 3.) vio a su padre ser arrestado y llevado;

4.) no desea alejarse, ni por unos minutos; 5.) cuando (él/ella) escucha gritos en la casa,

(Juan/María) se esconde en el closet; 6.) o ha querido ir a la escuela y lloraba todas las

mañanas cuando lo dejaba en la escuela; 7.) ha estado más nervioso; and 8.) e despierta en medio de la noche a causa de las pesadillas.

Trastorno de déficit de atención e hiperactividad (TDAH). (Juan/María) es (un/a niño/niña) de _____ años de edad. Imagina que (Juan/María) es su (hijo/hija). (Juan/María) siempre ha tenido problemas en la escuela; aunque es inteligente tiene dificultad de terminar sus tareas a tiempo. Los maestros (de Juan/María) reportan que (Juan/María) no presta atención en clase y que siempre tiene que recordarle a (Juan/María) a regresarse a su trabajo. Muchas veces (Juan/María) está corriendo por todo el salón, fuera de su silla, mirando afuera de la ventana o hablando con sus compañeros de salón. (Juan/María) hace cosas muy aparecidas en la casa. Usted dice que también, (el/ella) se le olvida fácilmente las cosas que debe hacer y que tiene dificultad a despertarse en la mañana y dormirse por la noche, y pierde cosas como juguetes y juegos.

Repetidos síntomas de TDAH: 1.) siempre ha tenido problemas en la escuela; 2.) tiene dificultad de terminar sus tareas a tiempo; 3.) no presta atención en clase; 4.) que siempre tiene que recordarle a (Juan/María) a regresarse a su trabajo; 5.) Muchas veces (Juan/María) está corriendo por todo el salón; 6.) fuera de su silla,; 7.) mirando afuera de la ventana; 8.) hablando con sus compañeros de salón; 9.) hace cosas muy aparecidas en la casa; 10.) se le olvida fácilmente las cosas que debe hacer; 11.) que tiene dificultad a despertarse en la mañana y dormirse por la noche; 12.) y pierde cosas como juguetes y juegos.

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Trastorno de Conducta (TC). (Juan/María) es (un/a niño/niña) de _____ años de edad. Imagina que (Juan/María) es su (hijo/hija). Puesto que era muy joven, (él/ella) siempre tenia problemas por golpear y pelear sus hermanos y hermanas y también por decir mentiras. (El /Ella) también frecuentemente perjudica al perro de la familia. Sus maestros también dicen que lo mandan seguido a la oficina de la directora por razones de intimidar, pelear, pegar, mentir y robar a los otros estudiantes y maestros. (Juan/Maria) no tiene amigos. Su hermano mayor lo encontró una vez con un encendedor intentando de quemar su cama. La semana pasada, (Juan/María) huyo de la casa después de quebrar su radio con un bate de béisbol. Por varias horas (El/Ella) no regresó a casa.

Repetidos síntomas de TC: 1.) siempre tenia problemas por golpear; 2.) pelear sus hermanos y hermanas; 3.) decir mentiras; 4.) frecuentemente perjudica al perro de la familia; 5.) frecuentemente perjudica al perro de la familia; 6.) intimidar; 7.) pelear, pegar/mentir/fighting; 8.) robar a los otros estudiantes y maestros; 9.) no tiene amigos; 10.) lo encontró una vez con un encendedor intentando de quemar su cama; 11.) huyo de la casa.

Trastorno desafiante oposicional (TDO). (Juan/María) es (un/a niño/niña) de _____ anos de edad. Imagina que (Juan/María) es su (hijo/hija). (Juan/María) siempre ha tenido dificultad con su coraje y muchas veces pierde control de su temperamento. También es desobediente y casi nunca le hace caso a los adultos. En muchas ocasiones, (Juan/María) molesta a sus hermanos y amigos. La directora de la escuela envió una carta a casa para

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decir que (Juan / María) no se la lleva bien con otros niños durante el tiempo de recreo

porque (él/ella) se comporta con maldad. (El/Ella) también se burla de otros niños y

desobedece las reglas de la escuela. Sus maestros notan que cuando está equivocado/a,

hace un error, o se comporta mal, (el/ella) hecha la culpa a otros y alega con los adultos.

(Juan/María) es muy sensible y se molesta fácilmente .

Repetidos síntomas de TDO: 1.) siempre ha tenido dificultad con su coraje; 2.)

muchas veces pierde control de su temperamento; 3.) desobediente; 4.) casi nunca le hace

caso a los adultos; 5.) En muchas ocasiones, (Juan/María) molesta a sus hermanos y

amigos; 6.) no se la lleva bien con otros niños durante el tiempo de recreo porque (él/ella)

se comporta con maldad; 7.) (El/Ella) también se burla de otros niños; 8.) desobedece las

reglas de la escuela; 9.) hecha la culpa a otros; 10.) alega con los adultos; and 11.) often

es muy sensible y se molesta fácilmente.

Neutral

Neutral A. (Juan/María) es (un/a niño/niña) de ____ años de edad. Imagina que

(Juan/María) es su (hijo/hija). (Juan/María) tiene varios amigos de su cuadra con que

(el/ella) se reúne una o dos veces por semana, y está involucrado en varios pasatiempos

como los deportes y música. (Juan/María) se lleva bien generalmente con los otros niños

pero a veces tiene algunos problemas con necesidad de tener sus propios maneras o de

siempre ser primero en jugar. (Juan/María) tiene buena inteligencia y se comporta

apropiadamente en la escuela aunque es muy (tímido/a) a participar en clase. A veces usted nota que (Juan/María) tiene mal humor que va y viene.

Neutral B. (Juan/María) es (un/a niño/niña) de _____ años de edad. Imagina que (Juan/María) es su (hijo/hija). Usualmente (Juan/María) se lleva bien con los otros niños, pero a veces se pelea con otros, especialmente sus hermanos menores cuando tiene que compartir. (Juan/María) asiste una escuela pequeña y tiene varios amigos por su cuadra. Le encanta jugar deportes y escuchar música. (Juan/María) es un (niño/niña) brillante y conversador quien se comporta apropiadamente la mayoría del tiempo. Usted nota que (el/ella), a veces, está triste porque quiere tener más amigos.

Neutral C. (Juan/María) es (un/a niño/niña) de _____ años de edad. Imagina que (Juan/María) es su (único/única) (hijo/hija). (Juan/María) acaba de mudarse con usted a una residencia diferente y empezó asistir una escuela nueva. Porque es bien tímido/a (él/ella) ha tenido dificultad formando nuevos amistades. Normalmente, (Juan/María) tiene una buena relación con los otros niños. La semana pasada (Juan/María) hizo un amigo en la escuela que va invitar a su casa para jugar el sábado. (Él/Ella) recibe buenas notas, usualmente A's y B's. Disfruta leer libros y jugar en la computadora. A veces, sus maestros se preocupan porque esta teniendo problemas formando amistades.

Appendix D

List of Words Categorized as Correct Labels/Identification of Child mental health

disorders

Internalizing Disorders

Anxiety:

English: anxiety, anxious, nervous, OCD, obession compulsion disorder.

Spanish: ansiedad, tiene nervios, nervioso/a, inseguridad, trastorno de

perfección

Major Depression:

English: Major Depression, depression, depressed, suicidal, mood

problem.

Spanish: depresión, deprimido/a, mal humor, falta de animo, intento de

suicido, quiere/quería suicidarse, quitarse la vida

PTSD (car accident):

English: posttraumatic stress, PTSD, fear, trauma, traumatized

Spanish: trauma, quedo traumado/a, ansiedad, asustado/a, miedo, shock

traumático, terror

PTSD (witnessing IPV):

English: posttraumatic stress, PTSD, fear, separation axiety, afraid, fear,

domestic violence

Spanish: trauma, ansiedad, asustada, miedo, maltrato moral, traumado/a,

nerviosidad/inseguridad, violencia domestica

Externalizing Disorders

ADHD:

English: ADHD, Attention Deficit Disorder, ADD, hyperactive,

focus/focusing problem, attention problems, distractability

Spanish: ADHD, hiperactivo, distraído/a, no se concentra, no puede

concentrar, falta de atención, dificultad de concentración

CD:

English: agression, violent, violence

Spanish: tiene furia por dentro, agresivo/a, agresión, muy violente

ODD:

English: defiant, disobedient

Spanish: comportamiento de desobediencia, desobedece, agresivo/a