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**LATINO IN THE U.S.:
DO ETHNIC IDENTITY AND
FAMILY SUPPORT PROTECT AGAINST ETHNIC
DISCRIMINATION?**

by

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B.A., Psychology, California State University, Los Angeles, 2006
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DISSERTATION

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Doctor of Philosophy in Psychology

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Albuquerque, New Mexico

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DEDICATION

En memoria de Rebeca Esparza, quien para mi fue una segunda madre.

This accomplishment is dedicated to my mother, who inculcated in me a value of social justice and pride in my cultural heritage from a young age.

Mamá, tu me inspiraste a llegar lejos y a nunca darme por vencida. Todo lo que soy se los debo a ti y a mi tía, que en paz descanse.

I also dedicate this accomplishment to my husband, Travis, and our son, Joaquin, who inspire me to be a better person day in and day out.

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Latino in the U.S.: Do Ethnic Identity and Family Support Protect Against Ethnic

Discrimination?

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ABSTRACT

Latinos currently account for 16% of the total U.S. population and are projected
to account for 25% by 2050. Despite the growth in population, Latinos continue to
experience discrimination based on their ethnicity. Prior research has found that ethnic
discrimination is associated with adverse effects on mental health, including increased
risk of depression. The present study investigated the relationship between perceived
ethnic discrimination and past year depression among U.S.-born and foreign-born Latinos
using data from the National Latino and Asian American Survey (NLAAS). It also
examined how ethnic identity and family support mediated the relationship between
ethnic discrimination and depression. Perceived ethnic discrimination was associated
with an increased risk of depression for U.S.-born Latinos, but not for foreign-born
Latinos. For U.S.-born Latinos, family support partially mediated the relationship
between ethnic discrimination and depression. Although for foreign-born Latinos family
support was inversely related to depression, mediation was not observed. However,

exploratory analyses suggested that family support moderated this relationship. An effect of ethnic identity on depression was not detected in either subsample. These findings suggest that perceived ethnic discrimination contributes to Latino mental health in a complex manner that varies as a function of nativity. Significant clinical and public health implications are discussed.

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Latinos are the fastest growing ethnic minority in the United States. According to the 2010 Census, Latinos comprise 16% of the total U.S. population. In fact, more than half of the growth in the total U.S. population in the last ten years can be attributed to growth in individuals who identify as being Latino and/or Hispanic. Between 2000 and 2010, the Latino population grew by 43%, four times the growth of the general population (DeNavas-Walt, Proctor, & Smith, 2011). The U.S. Census Bureau projects that by the year 2050 one in four Americans will identify as being Latino or of Latino decent (U.S. Census Bureau, 2004).

Of the Latino population, 63% identify as Mexican, 9% as Puerto Rican, 4% as Cuban, and 31% as other Latino (DeNavas-Walt et al., 2011). The diversification of the Latino population, which has largely been driven by Central and South American migration movements in recent years, sheds light on the heterogeneity of the Latino population. Despite the utility and popularity of pan-ethnic terms (e.g., Latino, Hispanic) and despite commonalities in language and experiences associated with being Latino in the U.S., a Latino prototype is fundamentally non-existent. Latino heterogeneity is the product of a number of factors, including class, geography, interpersonal styles, and migration journeys, among others. These factors and the intersection of these with other factors (e.g., sociopolitical context, discrimination) can have either protective or adverse effects on mental health. Although there is much to be said and explored in regard to Latino heterogeneity, for purposes of the present study, we will focus on nativity status as an indicator of Latino heterogeneity.

Depression in Latinos

Depression is among the most debilitating disorders affecting approximately 16% of the general U.S. population at some point in their lifetime (Kessler et al., 2005). Much is known about depression and the extent to which it affects the American population, although for Latinos, epidemiological surveys have provided inconsistent findings on prevalence and incidence rates. For instance, foreign-born Latinos have been found to be at greater risk of depression as compared to non-Latino Whites (Plant & Sachs-Ericsson, 2004; Vega & Rumbaut, 1991). The congressionally mandated National Comorbidity Survey (Kessler et al., 1994) was the first national epidemiological survey to include a significantly large Latino sample (10% of total sample). Risk of affective disorders, including major depression, was 38% greater for Latinos relative to non-Latino Whites (Kessler et al., 1994).

A larger body of literature suggests that Latinos are at decreased risk of depression and other psychological disorders (e.g., J. Breslau, Kendler, Su, Aguilar-Gaxiola, & Kessler, 2005; Karno et al., 1987; Kessler & Merikangas, 2004). The Los Angeles-Epidemiologic Catchment Area Study (LA-ECA; Karno et al., 1987) was the first survey study to provide community-based data for psychiatric disorders in a Latino sample. The LA-ECA found lower rates of depression among Mexican-Americans (7.8%) as compared to non-Latino Whites (11.0%) (Karno et al., 1987). The National Comorbidity Survey-Replication (NCS-R; Kessler & Merikangas, 2004) provided findings contradicting its predecessor, the NCS. Risk for any mood disorder was 20% lower for NCS-R Latinos than for non-Latino Whites (Kessler et al., 2005). Like the LA-ECA and NCS-R, the National Latino and Asian American Survey (NLAAS) also found

lower prevalence rates of any depressive disorder, including major depressive disorder, among Latinos (15%) relative to NCS-R non-Latino Whites (22%) (Alegria, Canino, et al., 2008).

Disparate findings in the prevalence of depression in Latinos may be misleading. These discrepancies are problematic, particularly when implications to policy are considered (e.g., cuts in funding for mental health programs in Latino communities, stigmatization of the Latino experience). This portrayal of the Latino population is limited, as it does not account for Latino heterogeneity. Analyses using an aggregated Latino sample obfuscate the varying degrees to which depression affects different Latino subgroups. Findings from studies that have disaggregated the larger Latino sample into subsamples based on nativity, years of residence in the U.S., age of migration to the U.S., or nationalities have further illustrated Latino heterogeneity.

Nativity. Rates of lifetime and past-year depression vary across nativity. The LA-ECA (Burnam, Hough, Karno, Escobar, & Telles, 1987) reported higher rates of depression among U.S.-born Mexican Americans (6.9%) relative to their immigrant counterparts (3.3%). The Mexican American Prevalence and Services Survey (MAPSS; Vega et al., 1998) reported that U.S.-born Mexican Americans (14.8%) were more than twice as likely as immigrant Mexicans (5.2%) to have met criteria for major depression in their lifetime. The NLAAS reported a higher lifetime prevalence of any depressive disorder, including major depressive disorder, among U.S.-born Latinos (19.8%) as compared to their immigrant counterparts (14.8%) (Alegria, Canino, et al., 2008). Decreased risk for psychopathology among foreign-born Latinos provided support for the healthy immigrant paradox, which attributes this decreased risk to the selective migration

of immigrants who are psychologically and physically healthy relative to the general population of their native country. According to this hypothesis, Latinos who enjoy greater psychological health are more likely to immigrate than those with poor psychological health; therefore, they will be at a lower risk of psychiatric diagnoses upon arrival to the U.S. (Alegria, Canino, et al., 2008). However, disaggregation of Latinos into subgroups based on nationality suggested that this immigrant paradox did not hold across all Latino subgroups. The healthy immigrant paradox has only been observed among Mexicans with depressive disorders; thus providing further evidence of Latino heterogeneity. The healthy immigrant paradox has only been observed among Mexicans with depressive disorders; thus providing further evidence of Latino heterogeneity.

Years of residence in the U.S. and age of migration. Years of residence in the U.S. following migration and age at entry into the U.S. have both been linked to risk for depression among Latinos as well. Migration to the U.S. at a younger age relative to a later age is associated with a higher risk for a psychiatric diagnosis (Alegria, Mulvaney-Day, et al., 2007; Vega et al., 1998). Alegria and colleagues (2007) found that incidence for depressive disorders was comparable between immigrants whose age at arrival were 0-6 years of age and U.S.-born Latinos. Among Latinos who immigrated to the U.S. prior to the age of 7 there was a 10% increase in risk of 12-month depression.

Vega et al (2004) found that immigrants who have resided in the U.S. over 13 years are twice as likely to have any 12-month psychiatric diagnosis relative to immigrants who have resided in the U.S. for fewer than 13 years. Similarly, Alegria and colleagues (2007) reported a positive correlation between lifetime prevalence of psychiatric disorders and length of residence in the U.S. Late-arrival immigrants (after

the age of 6) show an increased risk for onset of depressive disorders after the age of 30.

Even among early childhood immigrants (0-6 years of age), there is a period following

arrival in which they are protected against risk for onset of psychiatric disorders. This

buffer dissipates after the first two years, leaving them as vulnerable as U.S.-born Latinos

to the onset of depressive, anxiety, and substance-use disorders.

Beyond Nativity and Years of Residence in the U.S.

Traditionally, mental health research has focused primarily on individual factors

that contribute to psychopathology at the expense of the social context within which these

individual factors exist. This emphasis on proximate determinants of health has been

critiqued, with some researchers advocating for greater emphasis on distal and

fundamental social determinants of health (e.g., Glass & McAtee, 2006; Link & Phelan,

1995). Critiques of this traditional approach to understanding mental health have been

extended to the field of Latino mental health, where individual level factors (e.g.,

acculturation) have predominated. Scholars have challenged the use of acculturation and

proxies of acculturation (e.g., nativity, years of residence in the U.S., age at arrival to the

U.S.) as the "central concept in the examination" of Latino mental health outcomes, given

that this approach fails to account for social contexts that are likely to influence mental

health (e.g., social networks, residential segregation, discrimination) (Viruell-Fuentes,

Miranda, & Abdulrahim, 2012). Latino mental health goes beyond nativity status and

proxies of acculturation (e.g., nativity, generational status, years of residence in the U.S.,

age at arrival to the U.S.). The complexities and nuances surrounding Latino mental

health disparities necessitate a multidimensional integrative approach that accounts for

individual-level factors and social context.

Disparate findings in incidence and prevalence of depression in Latinos are indicative of Latino heterogeneity. Various explanations can be provided as to why studies have not consistently found similar prevalence rates of psychiatric disorder. As such, it is necessary to consider the interplay of various sociocultural factors and the role of these on risk of depression. The present study will specifically examine the effect of perceived ethnic discrimination on risk of past year depression. The existing literature suggests that discrimination has an indirect effect on depression, which is mediated by additional sociocultural factors, such as ethnic identity and family support. The present study seeks to contribute to the literature explicating disparate rates of depression across Latino subgroups. It will examine the role of perceived ethnic discrimination, ethnic identity, and family support on risk of depression across Latino subgroups based on nativity. Following is a review of these sociocultural factors.

Perceived ethnic discrimination. Ethnic discrimination refers to the differential treatment based on race/ethnicity of members of ethnically diverse groups by other individuals and social institutions (Williams & Mohammed, 2009). Evidence has demonstrated that discrimination based on race and ethnicity has adverse effects on physical (Bogart, Landrine, Galvan, Wagner, & Klein, 2013; Brondolo et al., 2011; Peek, Wagner, Tang, Baker, & Chin, 2011) and mental health (Alegria, Canino, et al., 2008; Gee, Ryan, Laflamme, & Holt, 2006; Schmitt, Branscombe, Postmes, & Garcia, 2014), which subsequently contributes to health disparities (Williams & Mohammed, 2009). Discrimination is associated with an increased risk of mental health disorders (Clark, Salas-Wright, Vaughn, & Whitfield, 2015), substance use (Clark et al., 2015; Unger, Schwartz, Huh, Soto, & Baezconde-Garbanati, 2014), general psychological distress

(Krieger, Kosheleva, Waterman, Chen, & Koenen, 2011; Mossakowski, 2003),

posttraumatic stress disorder symptoms (Pole, Best, Metzler, & Marmar, 2005), anxiety

symptoms (Alamilla, Kim, & Lam, 2010; Chen, Szalacha, & Menon, 2014), and

depressive symptoms (Hudson, Puterman, Bibbins-Domingo, Matthews, & Adler, 2013;

Steffen & Bowden, 2006). The perception alone of discrimination is sufficient to produce

stress and contribute to psychological disorders (Williams & Mohammed, 2009).

Although Latinos have comprised a significant percentage of the general

population in the U.S. for several decades, they continue to be subject to discrimination

and stereotypes that further perpetuate discriminatory acts against Latinos. In conjunction

with the current political climate (e.g., anti-immigrant sentiment), stereotypic views of

Latinos have contributed to perceived ethnic discrimination among the Latino

community. According to a survey conducted by the Pew Hispanic Center (2009), 38%

of young Latinos and 31% of older Latinos reported that they, a relative, or a close friend

had been discriminated against because of their Latino background. Discrimination was

particularly high among U.S.-born Latinos (41%) than foreign-born Latinos (32%).

The adverse effects of discrimination on Latino health have been well

documented (Alegria, Canino, Stinson, & Grant, 2006; Hwang & Goto, 2008). The

correlation between discrimination and poor physical health appears to be mediated by

psychological factors, such as depression and psychological distress (Brondolo et al.,

2011; Finch, Kolody, & Vega, 2000). In a study investigating the relationship between

perceived racism and self-reported health, Brondolo and colleagues (2011) found a

significant association between perceived racism, specifically social exclusion and

threat/harassment, and poor health via depression and anxiety. An earlier study found that

depression was a major mechanism through which discrimination affects physical health (Finch et al., 2000). In light of the role of psychological distress in the relationship between discrimination and physical health, it is necessary to understand how discrimination itself is related to psychological distress.

The perception that one is discriminated against because one is Latino is a source of chronic stress and related mental health problems among Latinos (Flores et al., 2008) and is positively associated with depressive symptoms, psychological distress, anxiety, and clinical depression (Brittian et al., 2014; Hwang & Goto, 2008). Latinos who report experiencing discrimination are also more likely to endorse major depressive disorder relative to other ethnically diverse groups (Chou, Asnaani, & Hofmann, 2012).

Some researchers (Finch et al., 2000) have suggested that perceived discrimination is especially problematic for highly acculturated immigrants relative to their U.S.-born counterparts and their less acculturated foreign-born counterparts. Accordingly, as immigrants become more acculturated, they are more likely to perceive discrimination. Those who are less acculturated may remain more isolated from mainstream culture in ethnic enclaves and are thus less likely to experience or perceive discrimination than are those who venture outside ethnic enclaves (i.e., more acculturated individuals).

The degree to which discrimination negatively impacts mental health outcomes has also been shown to vary as a function of frequency and severity. Huynh, Devos, and Dunbar (2012) investigated psychological consequences of recurring experiences of discrimination in a Latino college sample. Discriminatory experiences were rated based on the degree to which they caused the individual distress: low-stress and high-stress

discrimination. Higher frequency of low-stress discrimination was associated with greater

psychological distress, while high-stress discrimination, regardless of frequency, was

associated with greater psychological distress. The gradual accumulation of perceived

slight discriminatory acts is more harmful in the long run relative to isolated incidents of

perceived egregious discriminatory acts. In light of such findings, the present study

considered the role of daily experiences (i.e., low stress, chronic) with ethnic

discrimination rather than acute (i.e., high stress) experiences.

Ethnic identity. Ethnic identity refers to "that part of an individual's self-concept

which derives from his knowledge of his membership of a social [ethnocultural] group

together with the value and emotional significance attached to that membership" (Tajfel,

1981). It is a multi-faceted and dynamic process that also refers to the acquisition of

knowledge via experience as a member of said ethnocultural group (Phinney & Ong,

2007). The protective effects of ethnic identity have been well documented in the

literature. Strong ethnic identity has been shown to have a positive effect on physical

(Wright & Littleford, 2002) and mental health even beyond acculturation factors and

discrimination (Ai, Aisenberg, Weiss, & Salazar, 2014; Mossakowski, 2003).

Ethnic identity influences intensity and recovery from experiences with ethnic

discrimination (Torres & Ong, 2010; Torres, Yznaga, & Moore, 2011). Torres and Ong

(2010) investigated the effects of discrimination on Latino mental health and explored the

degree to which ethnic identity mitigates the association between discrimination and

endorsement of symptoms of depression. Participants' experiences with discrimination

and psychological distress were obtained on a daily basis for one month. Ethnic identity,

as indicated by a sense of belonging or attachment to the Latino culture, attenuated the influence of discrimination on depression.

Ethnic identity has even been shown to augment the effects of psychotherapy (Gamst et al., 2002). Gamst et al (2002) found that mental health outcomes varied as a function of level of acculturation and Latino ethnic identity. Specifically, high orientation toward the mainstream culture (i.e., Anglo orientation) accompanied by low ethnic identity was associated with a poor mental health outcome. These findings suggest that affiliating with the mainstream culture at the expense of Latino culture is a risk factor for psychological distress and poor response to mental health treatment.

Despite the overwhelming evidence for the buffering effect of ethnic identity, empirical findings have offered mixed findings, with some studies failing to find a protective effect ethnic identity (Arbona & Jimenez, 2014; Yoo & Lee, 2008) and others finding that ethnic identity actually augments risk in the presence of discrimination (Alamilla et al., 2010; Torres & Ong, 2010; Torres et al., 2011). Alamilla, Kim, and Lam (2010) found that stronger adherence to and affiliation with the Latino culture exacerbated the relationship between ethnic discrimination and psychological distress. The authors suggested that Latinos who strongly identify with the Latino culture may perceive discrimination as more threatening to the Latino population as a whole, as well as to themselves, relative to individuals who do not strongly identify as Latino. Consequently, individuals who strongly identify as Latino are likely to experience a more aversive reaction to discrimination relative to their counterparts who do not identify as strongly. McCoy and Major (2003) asked Latino college students to read excerpts on discrimination against Latinos. Among those who reported stronger ethnic identity,

endorsement of depressive symptoms associated with discrimination was highest relative to those reported by individuals with weaker affiliations with the Latino culture.

Considering alternative mechanisms by which ethnic identity can influence the relationship between ethnic discrimination and mental health might offer a deeper understanding of the complexity of these associations. Ethnic identity not only serves as a buffer against ethnic discrimination, but it has also been shown to attenuate the effect of discrimination through mediation of the relationship between ethnic discrimination and psychological distress (Brittian et al., 2014; Donovan et al., 2013). Discrimination has also been shown to drive "linked fate" (Dawson et al., 1994), which refers to the belief that there is the fate of the individual is connected to that of other individuals of the same racial/ethnic group (Sanchez & Masuoka, 2010). According to the rejection-identification effect, experiences with discrimination trigger stronger ethnic identity, which subsequently positively contributes to mental health (Branscombe, Schmitt, & Harvey, 1999). In an initial study investigating the rejection-identification model, Branscombe et al (1999) found that discrimination had a direct negative effect on psychological adjustment while simultaneously having an indirect positive effect on well-being vis-à-vis strong ethnic identity in a sample of African Americans. More recently, these findings have been replicated with Latinos (Armenta & Hunt, 2009; Brittian et al., 2014; Cronin, Levin, Branscombe, van Laar, & Tropp, 2012).

Mixed findings regarding the role ethnic identity in maintaining psychological well-being can be attributed to a number of causes, including the conceptualization and measurement of the construct of ethnic identity. Components of ethnic identity include self-categorization (identification as member of ethnic group), commitment (sense of

belonging or attachment), exploration (seeking information and experiences relevant to ethnic group), ethnic behaviors (practices typical of ethnic group), ingroup attitudes (feelings about ethnic group), and values and beliefs (for a review see Phinney & Ong, 2007). Ethnic identity is a multidimensional and dynamic construct that cannot be reduced to "a sense of peoplehood within a group, a culture, and particular setting (Phinney & Ong, 2007). The extent to which ethnic identity is protective varies across components of ethnic identity. For instance, whereas commitment to ethnic group was protective following experiencing with discrimination, ethnic group exploration exacerbated the effect of discrimination (Torres & Ong, 2010).

Discrepant findings also highlight the complexity of Latino mental health and Latino heterogeneity. The role of ethnic identity in the relationship between discrimination and psychological distress may not hold constant across Latino subgroups. Ethnic identity may be more important among certain Latino subgroups than others. Viruell-Fuentes and Schulz (2009) reported that ethnic identity may be more important among second-generation Latinos relative to first generation Latinos. This is an important consideration when investigating the impact of ethnic identity in light of discrimination.

Family support. In Latino culture, family is at the core of all experiences and supersedes the individual experience (Miranda, Azocar, Organista, Munoz, & Lieberman, 1996). Such an emphasis on the group rather than the individual is consistent with the Latino cultural value of *familismo*, which refers to "a strong identification with and attachment to the family (nuclear and extended); strong feelings of loyalty, reciprocation, and solidary; and the belief that individuals family members should behave in ways that reflect well on the family" (Gonzalez, Fabrett, & Knight, 2009p. 120). Although the term

familismo appears to be being phased out by other disciplines as more distinct concepts

might better account for the construct, it continues to be widely used in the field of

psychology and continues to highlight the importance of family within the Latino

population. Family support is among the most essential and stable components of

familismo (Sabogal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987). Unlike other

characteristics of *familismo* that vary as a function of level of acculturation, such as

obligations to family and perception that one represents one family, family support

remains stable regardless of level of acculturation (Sabogal et al., 1987).

Evidence suggests that family support is associated with positive perceived

quality of life (Baxter et al., 1998), college adjustment (Llamas & Consoli, 2012),

increased mental health help-seeking (Villatoro, Morales, & Mays, 2014), decreased

acculturative stress (Lueck & Wilson, 2011), and improved physical (Mulvaney-Day,

Alegria, & Sribney, 2007; Schmied, Parada, Horton, Madanat, & Ayala, 2014) and

mental health (Chavez-Korell, Benson-Florez, Rendon, & Farias, 2014; Mulvaney-Day et

al., 2007). Conversely, the perception of minimal and/or ineffective family support is

associated with increased depression (Cruza-Gruet, Spokane, Caskie, Brown, &

Szapocznik, 2008; Russell & Taylor, 2009; Sheng, Le, & Perry, 2009). Family support

promotes psychological adjustment and is protective against the adverse effects of

stressors (Mendelson, Rehkopf, & Kubzansky, 2008; Plant & Sachs-Ericsson, 2004;

Vega, Kolody, Valle, & Weir, 1991). Strong family support was associated with

decreased acculturative stress in an NLAAS study (Fortuna, Porche, & Alegria, 2008).

Moreover, family support has been found to mitigate the effects of acculturation and

acculturative stress on mental health (Hovey, 2000; Rivera, 2007). Perez-Rodriguez et al

(2014) found that the effect of acculturation on risk of suicide was attenuated by high family support.

Strong ties may be particularly important for foreign-born Latinos, as social and human capital are typically lacking in this segment of the Latino population (Garcia, 2005). Within a context of anti-immigration legislation, Latino immigrants were likely to rely heavily on family and other members of their social network (Ayon & Naddy, 2013). Family support may be more important in protecting against mental illness than other forms of social support, particularly among foreign-born individuals (Almeida, Subramanian, Kawachi, & Molnar, 2011). Vega et al (1991) found that family emotional support was a predictor of depression in a sample of immigrant Mexican women. Greater perception of emotional support was associated with decreased risk for depression. Interestingly, social network was not a predictor of depression, suggesting that the role of those in the social network and the quality of support they provide is what accounts for decreased risk for depression.

The protective role of family support is well documented. However, literature on the extent to which family support buffers against ethnic discrimination is limited. The majority of the literature on ethnic discrimination pertains to social support as a general construct and does not differentiate between different sources of support, glossing across family and friend support. Nonetheless, there is evidence suggesting that social support buffers against the adverse effects of ethnic discrimination on mental health. Fortuna et al (2008) noted that among specific Latino subgroups social support may play a significant role in protecting against discrimination. Given the gap in the existing literature and the potential role of family support in Latino communities, the present study specifically

investigated the role of family support in protecting against the deleterious effects of ethnic discrimination.

Purpose and Specific Aims

The present study investigated perceived ethnic discrimination as a central factor to Latino depression in the context of the protective factors of ethnic identity and family support among U.S.-born and foreign-born Latinos in the National Latino and Asian American Study of Mental Health (NLAAS) (see figures 1a and 1b).

Specific Aim 1: Determine the direct effect of perceived ethnic discrimination on past year depression for U.S.-born and foreign-born Latinos.

Hypothesis 1: There will be a positive association between perceived ethnic discrimination and past year depression for U.S.-born and foreign-born Latinos in the NLAAS.

Specific Aim 2: Determine the mediation of the relationship between perceived ethnic discrimination and past year depression by ethnic identity for U.S.-born and foreign-born Latinos.

Hypothesis 2: Ethnic identity will mediate the relationship between perceived ethnic discrimination and past year depression for U.S.-born and foreign-born Latinos. Perceived ethnic discrimination will be negatively associated with ethnic identity, which will in turn decrease risk of past year depression.

Specific Aim 3: Determine the mediation of the relationship between perceived ethnic discrimination and past year depression by family support for U.S.-born and foreign-born Latinos.

Hypothesis 3: Family support will mediate the relationship between perceived

ethnic discrimination and past year depression for U.S.-born and foreign-born

Latinos. Perceived ethnic discrimination will be negatively associated with family

support, which will in turn decrease risk of past year depression.

Method

Design Overview and Sample

Data from the National Latino and Asian American Study of Mental Health (NLAAS), a community household survey targeting Latinos and Asian Americans, was used in this study. The NLAAS is among three national surveys that comprise the Collaborative Psychiatric Epidemiology Studies (CPES). The NLAAS aimed to: 1) estimate lifetime and 12-month prevalence of psychiatric morbidity and rates of mental health service utilization; 2) estimate the association between social status, environmental factors, and psychosocial factors and prevalence of psychiatric morbidity and mental health service utilization; and 3) draw comparisons between lifetime and 12-month prevalence of psychiatric morbidity and mental health service utilization and nationally representative samples of non-Latino whites from CPES studies (Heeringa et al., 2004).

Data for the NLAAS was collected from spring of 2002 to fall of 2003. The NLAAS survey data collection was based on a stratified probability sample design of adults (age 18 and older) living in the coterminous U.S., Alaska, and Hawaii. NLAAS sampling was based on two components: 1) sampling of primary stage units, and 2) oversampling of Latino subgroups in specified area segments with high density of these subgroups. The primary stage of sampling was designed to attain a nationally representative sample irrespective of residential patterns of Latinos by screening a general national area probability sample. The second stage was designed to oversample for Latino subgroups that were not well represented in the initial sampling stage due to residential patterns of these groups. Oversampling of geographic regions of high density of Puerto Ricans and Cubans was necessary (5% or higher population comprised by

subgroup of interest). Following the primary stage and secondary stage of sampling, sampling of housing units within selected area segments and subsequent random selection of eligible respondents from the sampling units took place. Interviews were conducted in Spanish and English by trained interviewers (Heeringa et al., 2004).

The Latino sample was divided into four strata based on self-reported nationality: Mexican, Puerto Rican, Cuban, and all Other Latinos (e.g., Central and South American). Interviews were completed for 2,554 Latinos. The final response rate was 75.5% for the Latino sample (Heeringa et al., 2004).

Measures

The NLAAS battery of questionnaires was modeled after that used in the National Comorbidity Study-Replication (NCS-R), the first of the CPES surveys. It also included surveys administered in the National Survey of American Life (NSAL), another CPES survey. Questionnaires specific to the NLAAS designed to explore differences across Latino subgroups were also included. Selected measures will be used to estimate the constructs presented in the proposed risk and resilience model.

Past year (12-month) depression. Past year (12-month) depression was assessed using the World Mental Health Composite International Diagnostic Interview (WMH-CIDI; Kessler & Ustun, 2004). The WMH-CIDI is a structured diagnostic instrument administered by a lay interviewer. It was developed for use in epidemiological surveys to be conducted in various countries around the world. Criteria for psychiatric diagnosis are based on the DSM-IV and the ICD-10 symptom criteria. The WMH-CIDI demonstrates good concordance with the Structured Clinical Interview for Disorders (SCID). Criteria for past year major depressive disorder matches DSM-IV criteria for major depressive

disorder. Current depression will be the outcome variable of interest and it will be reflected by the endorsement of any depressive disorder (major depression and dysthymia) in the past year. Current depression will be identified by a dichotomous variable (i.e, yes, no).

Nativity and generational status. Nativity was assessed with the following question: "In what country were you born?" Responses included the United States and other, which was then specified if endorsed. Nativity will be identified by a dichotomous variable (i.e., U.S.-born, foreign-born).

Generational status will be identified by a categorical variable (i.e., 2nd, 3rd, and 4th and higher). Generational status in the NLAAS is determined by responses to two demographic questions: "How many of your parents were born in the U.S.?" and "How many of your grandparents were born in the U.S.?" Second generation status will be indicated if either parent was born in another country. Third generation status will be indicated if both parents were born in the U.S. and all grandparents were born in another country. Fourth generation and higher status will be indicated if both parents were born in the U.S. and at least three grandparents were born in the U.S.

Nativity status and generational status will be used to generation two Latino subgroups: first generation and later generation. The first generation Latino sample will comprise those Latinos who are foreign-born and who indicated having immigrated to the U.S. after the age of 12. The later generation subgroup will comprise Latinos who indicated being 2nd, 3rd, or 4th generation. In addition, foreign-born Latinos who immigrated to the U.S. at age 11 or younger will be identified as later generation Latinos. Although the existing literature suggests that Latinos who immigrated to the U.S. at the

age of 6 or younger are more similar to U.S.-born Latinos than foreign-born Latinos, due to data restrictions, Latinos who immigrated to the U.S. at age 11 or younger were considered as U.S.-born Latinos.

   Perceived ethnic discrimination. Perceived ethnic discrimination was constructed by assessing three items asking respondents about the frequency of incidents in which they feel disliked or treated unfairly because of their race/ethnicity. The scale consists of the following items: 1) how often do people dislike you because you are [ethnicity/race], 2) how often do people treat you unfairly because you are [ethnicity/race], and 3) how often have you seen friends treated unfairly because they are [ethnicity/race]. The four response categories were: "often", "sometimes", "rarely", and "never". Item responses will be summed to quantify the degree to which participants perceive discrimination associated with being Latino. Higher scores will be indicative of fewer incidences of perceived discrimination. The standardized Cronbach α of the 3-item scale is 0.82 for the total Latino sample.

   Everyday discrimination. The Everyday Discrimination Scale (Williams, Yu, Jackson, & Anderson, 1997) is a 9-item scale that was used to measure the frequency of routine experiences of unfair treatment. Respondents are asked to rate with what frequency they have experienced unfair treatment (e.g., denied services, insulted, threatened, discouraged from pursuing education by teachers). Unlike the perceived discrimination scale, the Everyday Discrimination Scale does not prime respondents to consider situations attributed to ethnicity/race, thus capturing a variety of discriminatory experiences. The six response categories range from "never" (1) to "almost everyday"

(6), with higher scores suggesting greater frequency of everyday discrimination. The standardized Cronbach α of the 9-item scale is 0.91.

Ethnic identity. Three items related to social affiliation and ethnic identity comprised the ethnic identity scale: 1) how closely do you identity with others of the same racial and ethnic descent as yourself ("not at all" to "very closely"), 2) how close do you feel in your ideas and feelings about things to others of the same racial and ethnic descent as yourself ("not at all" to "very closely"), and 3) how much time do you spend with others who are of your same racial and ethnic group ("none" to "a lot"). Item responses will be summed to quantify ethnic identity. Higher scores will reflect stronger ethnic identity. The standardized Cronbach's α of the 3-item scale is 0.75 for the total Latino sample.

Family dynamics. To best capture the extent to which family support contributes to risk of depression, scales pertaining to family relations were combined to comprise a comprehensive family dynamics scale.

Family support. Family support was constructed by assessing five items: 1) frequency of phone conversations with family members who do not live with you ("most every day" to "less than once a month"), 2) degree to which you can rely on relative who do not live with you for help if you have a serious problem ("a lot" to "not at all"), 3) degree to which you can open up to relatives who do not live with you if you need to talk about your worries ("a lot" to "not at all"), 4) frequency of demands from relatives or children ("often" to "never"), and 5) frequency of arguments with family or relatives. Item responses will be summed to quantify family support ("often" to "never"). Lower scores suggest greater family support.

Family conflict. Family conflict was constructed as the experience of cultural and intergenerational conflict between respondents' and their families. Respondents were asked to rate to what degree ("hardly ever or never" to "often") they experienced the following: 1) family interference with your own goals, 2) arguments with family members because customs differ, 3) feelings of loneliness and isolation due to lack of family unity, 4) feelings that family relations are less important for people you are close to, and 5) your personal goals have been in conflict with your family. Higher scores reflected greater experiences with family cultural conflict relative to lower scores. This scale was adapted from the Family/Culture Stress subscale of the HIS. Item responses will be summed to quantify the degree to which participants experience family conflict. The standardized Cronbach α of the 5-item scale is 0.91 for the total Latino sample.

Family cohesion. Family cohesion was constructed by assessing the degree to which respondents agreed with three items about family closeness: 1) family members like to spend free time with each other, 2) family members feel very close to each other, and 3) family togetherness is very important. The NLAAS family cohesion scale derived from the Family Cohesion Scale (Olson, 1989). Scores ranged from "strongly agree" (1) to "strongly disagree" (4). Item responses will be summed to quantify family cohesion. High scores are indicative of greater family cohesion relative to low scores. The standardized Cronbach α of the 7-item scale is 0.92 for the total Latino sample.

Family pride. Family pride will be assessed using seven items from the Family Environment Scale (Olson, 1989). Respondents were asked to rate their agreement to several statements about their relationship with their families. Sample items include: "family members respect one another", "we are proud of our family", and "things work

well for us as a family". Responses ranged from "strongly agree" (1) to "strongly disagree" (4), with higher scores reflecting lack of family pride relative to lower scores. Item responses will be summed to quantify family pride. The standardized Cronbach α of the 3-item scale is 0.83 for the total Latino sample.

Years of residence in the U.S. In addition to the variables of interest specified above, years of residence will be included in the risk and resilience model for foreign-born Latinos. Years of residence is a continuous variable obtained from an item pertaining to length of residence in the U.S.

Analytic Plan

Sample demographic and descriptive information for all variables of interest were provided. Additionally, Tau correlations were conducted to identify potential covariates and to guide further analyses.

Logistic regression models were conducted on each Latino subsample to address the primary objectives: 1) determine the direct effect of perceived ethnic discrimination above and beyond that of covariates on endorsement of past year depression, and 2) determine the extent to which ethnic identity and/or family dynamics mediate the relationship between perceived ethnic discrimination and past year depression. In order to test the influence of ethnic identity and family dynamics on the relationship between perceived ethnic discrimination and past year depression, Baron and Kenny's (1986) criteria for establishing mediation were followed:

Model 1: The independent variable affects the mediator. To determine whether perceived discrimination affects the potential mediators, ethnic identity and family

dynamics were regressed on perceived ethnic discrimination in separate multiple regression models.

Model 2: The independent variable is correlated with the outcome variable. For this step, past year depression was regressed on perceived ethnic discrimination, as this establishes whether there is an effect that can be mediated.

Model 3: The mediator is correlated with the outcome variable. To establish this relationship, past year depression was regressed on ethnic identity and family dynamics while controlling for perceived ethnic discrimination.

In order to establish whether mediation exists, the relationships tested in models 1 through 3 must be significant. Complete mediation is indicated when the relationship between the independent and outcome variables decreases in magnitude and is no longer statistically significant. Partial mediation occurs when the relationships tested in models 1 through 3 are statistically significant and the relationship between the independent and dependent variables decreases in magnitude but remains statistically significant. Furthermore, in order to determine whether an apparent mediation effect is statistically significant, Sobel tests (Preacher & Hayes, 2008) were conducted. Specifically, a Sobel test is a method used to determine whether the reduction in the effect of the independent variable on the outcome variable is a statistically significant reduction. Figures 1a and b provide an illustration of the mediation models of interest.

In order to further understand the relationship between perceived ethnic discrimination and past year depression, the potential moderation of this association by ethnic identity and family dynamics was considered. Model 4 investigated whether ethnic identity or family dynamics influenced this relationship. Moderation is determined by

investigating the effect of an independent variable and potential moderator interaction

term on the outcome variable. A significant effect of the interaction term suggests that the

relationship between the independent variable and the outcome variable varies as a

function of the moderator. Figures 2a and b provide an illustration of the mediation

models of interest.
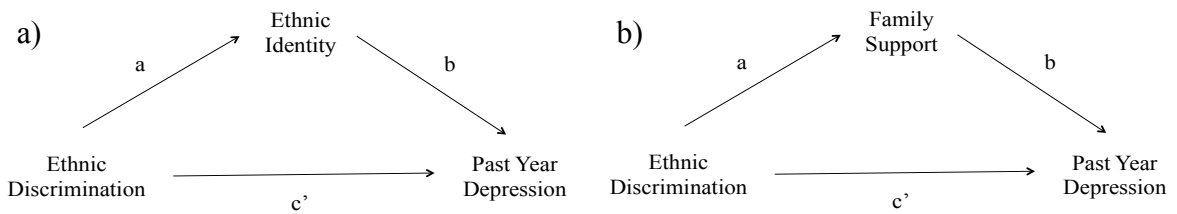
Figure 1. Model representing relationship between perceived ethnic discrimination and

past year depression with: a) ethnic identity as mediator, and b) family support as

mediator.
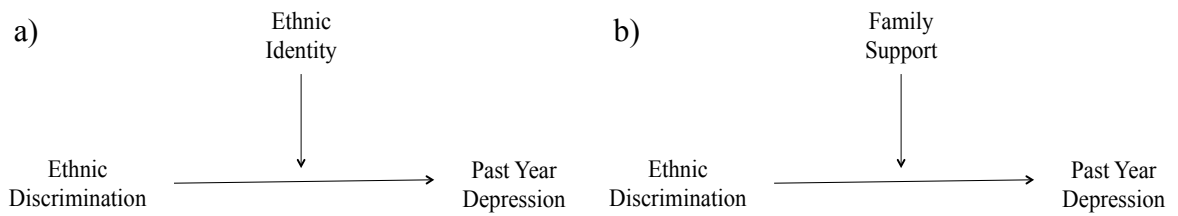
Figure 2. Model representing relationship between perceived ethnic discrimination and

past year depression with: a) ethnic identity as moderator, and b) family support as

moderator.

        Odds ratios (OR) will be provided as an index of the association between the

independent and independent variables. The OR represents the odds that the outcome

(past year depression) will occur given the independent variable relative to the odds of

the outcome occurring in the absence of the independent variable. An OR great than 1 is

indicative of a positive relationship between the independent variable and the outcome (i.e., greater likelihood), whereas an OR less than 1 is indicative of a negative relationship (i.e., lower likelihood).

STATA statistical software version 13.1 (StataCorp, 2013) was used for all statistical procedures and to account for the complex survey design. Survey weights were implemented in all analyses to compensate for over-sampling of certain Latino national groups. The application of survey weights ensures that the data will be more representative of the U.S. Latino population.

Results

Sample Characteristics

Table 1 presents demographic information for the total Latino sample, as well as the U.S.-born and immigrant Latino subsamples. No significant differences were found between the two groups in sex. Compared with U.S.-born Latinos, foreign-born Latinos were older and were more likely to have fewer years of education and lower English proficiency. Additionally, foreign-born Latinos reported greater ethnic identity, total family support, family support, family pride, family cultural conflict, and family cohesion. U.S.-born Latinos reported greater experiences with everyday discrimination; no significant differences were found in perceived discrimination. No significant differences were evident in endorsement of depression in the past year.

Correlations

Tau correlations between all potential predictors are presented in table 2. Total family support was significantly correlated with nativity, age, and ethnic identity. Ethnic identity was significantly correlated with nativity, age, years in the U.S., and English proficiency. Additionally perceived discrimination was significantly correlated with sex, age, years in the U.S., family support, family pride, family cultural conflict, family cohesion, and overall family support. Everyday discrimination was significantly correlated with nativity, sex, age, years in the U.S., education, English proficiency, ethnic identity, family support, family pride, family cultural conflict, family cohesion, and overall family support. Past year depression was associated with sex, years in the U.S., education, family support, family pride, family cultural conflict, family cohesion, and overall family support.

Table 1

Descriptives for Variables of Interest for Total Latino Sample and Nativity Subsamples.

Variable	Total sample	U.S.-born Latinos	Foreign-born Latinos
N	2,546	1,289	1,257
Sex (female, %)	1,427 (56%)	726 (56%)	696 (55%)
Age (18-97, *M [SD]*) **	38.1 (14.8)	36.3 (15.5)	39.8 (13.7)
Years in the U.S. (%) **			
< 5	250 (10%)		250 (20%)
5-10	245 (10%)	12 (1%)	233 (19%)
11-20	411 (16%)	93 (7%)	318 (25%)
20+	1,640 (64%)	1,184 (92%)	456 (36%)
Education (in years, %) **			
0-11	994 (39%)	341 (26%)	647 (51%)
12	633 (25%)	362 (28%)	270 (21%)
13-15	567 (22%)	372 (29%)	194 (15%)
> 15	360 (14%)	214 (17%)	146 (12%)
Eng Prof (3-12, *M [SD]*) **	7.1 (3.5)	9.7 (2.7)	4.5 (2.2)
Ethnic Identity (3-11, *M [SD]*)**	10.1 (1.8)	10.0 (1.7)	10.3 (1.8)
Family Dynamics (*M [SD]*) **	63.1 (7.0)	61.9 (7.4)	64.4 (6.2)
Support (5-21)*	15.8 (3.0)	15.6 (3.0)	16.0 (3.0)
Pride (7-28)**	25.5 (3.2)	24.9 (3.5)	26.1 (2.8)
Conflict (5-15)**	13.7 (1.8)	13.5 (1.9)	14.0 (1.6)
Cohesion (3-12)**	8.1 (1.4)	7.8 (1.4)	8.3 (1.2)
Perceived Discr (3-12, *M [SD]*)	5.5 (2.3)	5.4 (2.2)	5.5 (2.4)
Everyday Discr (9-54, *M [SD]*)**	16.0 (7.7)	17.7 (7.9)	14.2 (7.0)
Depression (endorsed, %)	227 (9%)	121 (9%)	106 (8%)

Notes: Range of possible scores indicated within parentheses. Eng Prof = English proficiency, Discr = discrimination.
* $p < .05$, ** $p < .001$.

Table 2

Tau Correlations for Total Latino Sample

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Nativity	--													
2. Sex	.00	--												
3. Age	.18*	-.02	--											
4. Years in U.S.	-.29*	-.00	.12*	--										
5. Education	-.13*	.01	-.05*	.06*	--									
6. English Proficiency	-.41*	.01	-.19*	.28*	.29*	--								
7. Ethnic Identity	.11*	-.00	.10*	-.06*	-.02	-.11*	--							
8. Family Support	.06*	-.03*	.09*	-.01	.02	-.05*	.10*	--						
9. Family Pride	.13*	.02*	.12*	-.08*	-.01	-.11*	.12*	.22*	--					
10. Family Conflict	.08*	.04*	.06*	-.04*	-.02	-.08*	.07*	.21*	.29*	--				
11. Family Cohesion	.10*	-.01	.09*	-.05*	-.03*	-.09*	.10*	.15*	.42*	.20*	--			
12. Family Dynamics	.11*	-.00	.13*	-.04	-.00	-.09	.13*	.56*	.54*	.41*	.42*	--		
13. Perceived Discrimination	-.02	.05*	-.08*	-.02*	.02	.02	-.01	-.12*	-.11*	-.14*	-.07*	-.15*	--	
14. Everyday Discrimination	-.18*	.04*	-.19*	.07*	.08*	.19*	-.10*	-.16*	-.20*	-.19*	-.15*	-.23*	.31*	--
15. Depression	-.00	-.02*	-.00	.02*	-.02*	.00	-.00	-.04*	-.04*	-.05*	-.01*	-.04*	.03*	.03*

Notes: * $p < .05$

Logistic Regression Analyses

    U.S.-born Latinos.

    Ethnic identity. Table 3a presents multiple and logistic regressions testing the mediating effect of ethnic identity on the relationship between perceived ethnic discrimination and past depression for U.S.-born Latinos.

    A multiple regressions analysis was conducted first (Model 1) to establish the relationship between perceived ethnic discrimination and the potential mediator of ethnic identity. In this model, years of residence in the U.S. (11-20 years: β = -0.88, p < .01, 20+ years: β = -0.75, p < .05) and English proficiency (β = -0.07, p < .01) were significantly negatively associated with ethnic identity, whereas an education level between 13 and 15 years (β = 0.54, p < .01) was significantly associated with stronger ethnic identity. More importantly, greater perceived discrimination significantly predicted stronger ethnic identity (β = 0.02, p < .01).

    Model 2 investigated the direct effect of perceived ethnic discrimination on past year depression. Among demographic variables, having 12 years of education was marginally associated with a 46% decrease in likelihood of depression (OR = 0.54, p = .07). Results showed that perceived ethnic discrimination had a direct effect on depression (OR =1.24, p < .001). Specifically, perceived discrimination was associated with a 24% increase in likelihood of depression.

    In Model 3, perceived ethnic discrimination and ethnic identity were entered simultaneously to investigate the association between the mediator of ethnic identity and past year depression while controlling for perceived ethnic identity. Among demographic variables, having 12 years of education continued to be marginally associated with a 46%

decrease in likelihood of depression (OR = 0.54, *p* = .07). Ethnic identity was not a

significant predictor of depression, nor did it impact the effect of perceived

discrimination on depression. As such, ethnic identity was not a significant mediator of

the relationship between perceived ethnic discrimination and depression.

In the moderation model (Model 4), the perceived ethnic discrimination and

ethnic identity interaction term was not significant, suggesting that ethnic identity did not

moderate the relationship between perceived discrimination and depression.

Family dynamics. Table 3b presents multiple and logistic regressions

investigating the influence of perceived ethnic discrimination on past year depression,

and the extent to which family dynamics mediates this relationship for U.S.-born Latinos.

In Model 1, the relationship between perceived ethnic discrimination and the

potential mediator of family dynamics. Age was significantly positively associated with

family dynamics (*ß* = 0.07, *p* < .001). Perceived ethnic discrimination was a significant

predictor of family dynamics (*ß* = -0.63, *p* < .001). Specifically, lower perceived

discrimination predicted greater family support.

Model 2 investigated the direct effect of perceived ethnic discrimination on past

year depression. Among demographic variables, having 12 years of education was

marginally associated with a 46% decrease in likelihood of depression (OR = 1.24, *p* =

.07). Results showed that perceived ethnic discrimination had a direct effect on

depression (OR = 1.24, *p* < .01) and was associated with a 24% increase in likelihood of

depression.

In Model 3, perceived ethnic discrimination and family dynamics were entered

simultaneously to investigate the association between the mediator of family dynamics

and past year depression while controlling for perceived ethnic discrimination. Level of education was no longer associated with past year depression. The mediator of family dynamics was significantly associated with a 5% decrease in likelihood of depression (OR = 0.95, p < .001). Its addition resulted in a decrease in magnitude of the relationship between perceived ethnic discrimination and depression (OR = 1.18, p < .01). Family dynamics partially mediated the relationship between perceived ethnic discrimination and depression (Sobel test: z = 3.68, p < .001).

In the moderation model (Model 4), the perceived ethnic discrimination and family dynamics interaction term was not significant, suggesting that family dynamics did not moderate the relationship between perceived ethnic discrimination and depression.

Foreign-born Latinos.

Ethnic identity. Table 4a presents multiple and logistic regressions of exploratory analyses investigating the influence of perceived ethnic discrimination on past year depression and whether ethnic identity mediated this relationship for foreign-born Latinos.

Model 1 was conducted to establish the relationship between perceived ethnic discrimination and the potential mediator of ethnic identity. Age was marginally positively associated with ethnic identity (β = 0,02, p = .07). Perceived ethnic discrimination was not a significant predictor of ethnic identity.

Model 2 was conducted to test the direct effect of perceived ethnic discrimination on past year depression. Being male (OR = 0.37, p < .01) was associated with 53% decrease in likelihood of depression and having resided in the U.S. for at 20 years was

Table 3a

Logistic Regression Models of Perceived Ethnic Discrimination Predicting Depression in U.S.-born Latinos with Ethnic Identity as Mediator

Predictor	Model 1[a]		Model 2[b]		Model 3[c]		Model 4[d]	
	B	*SE*	OR	95% CI	OR	95% CI	OR	95% CI
Age	0.01	0.01	0.99	0.97, 1.01	0.99	0.97, 1.01	0.99	0.97, 1.01
Sex (fem = 0)	-0.16	0.12	0.65	0.37, 1.15	0.64	0.37, 1.13	0.64	0.37, 1.13
Years in US								
11-20	-0.88**	0.31	1.76	0.13, 24.17	1.71	0.13, 22.75	1.71	0.13, 22.72
20+	-0.75*	0.32	1.49	0.13, 17.52	1.43	0.12, 16.40	1.43	0.13, 16.30
Education								
12	0.21	0.21	0.54†	0.27, 1.04	0.54†	0.27, 1.05	0.54†	0.28, 1.05
13-15	0.54**	0.18	0.68	0.33, 1.40	0.69	0.33, 1.45	0.69	0.33, 1.45
> 15	0.29	0.22	1.01	0.54, 1.91	1.04	0.55, 1.96	1.04	0.55, 1.95
English Proficiency	-0.07*	0.03	1.05	0.96, 1.15	1.05	0.96, 1.15	1.05	0.96, 1.16
Ethnic Discrimination	0.09**	0.30	1.24**	1.10, 1.40	1.24**	1.10, 1.40	1.20	0.65, 2.23
Ethnic Identity					0.97	0.84, 1.11	0.95	0.65, 1.39
Ethnic Discrimination * Ethnic Identity							1.00	0.94, 1.07
Model X^2	4.81***		9.01***		8.06***		7.37***	
Model *df*	9		9		10		11	

Notes: [a] Perceived ethnic discrimination => ethnic identity (path a). [b] ethnic identity => depression (path b). [c] perceived ethnic discrimination and ethnic identity => depression (path c'). [d] Moderation model (perceived ethnic discrimination by ethnic identity).
*$p < .05$, ** $p < .01$, *** $p < .001$, † marginal significance

Table 3b

Logistic Regression Models of Perceived Ethnic Discrimination Predicting Depression in U.S.-born Latinos with Family Dynamics as Mediator

Predictor	Model 1[a]		Model 2[b]		Model 3[c]		Model 4[d]	
	B	*SE*	OR	OR	OR	95% CI	OR	95% CI
Age	0.07***	0.01	0.99	0.97, 1.01	0.99	0.97, 1.01	0.99	0.97, 1.01
Sex (fem = 0)	0.86	0.55	0.65	0.37, 1.15	0.74	0.42, 1.30	0.74	0.42, 1.28
Years in US								
11-20	1.18	2.70	1.76	0.13, 24.17	1.58	0.11, 22.05	1.58	0.11, 22.32
20+	1.62	2.64	1.49	0.13, 17.52	1.46	0.12, 17.23	1.47	0.12, 17.38
Education								
12	-0.32	0.61	0.54†	0.27, 1.04	0.64	0.31, 1.31	0.64	0.31, 1.34
13-15	-0.43	0.58	0.68	0.33, 1.40	0.80	0.38, 1.71	0.80	0.37, 1.73
> 15	-0.83	0.80	1.01	0.54, 1.91	1.27	0.64, 2.53	1.30	0.64, 2.66
English Proficiency	0.14	0.18	1.05	0.96, 1.15	1.07	0.98, 1.17	1.07	0.98, 1.17
Ethnic Discrimination	-0.63***	0.11	1.24**	1.10, 1.40	1.18**	1.06, 1.32	1.45	0.67, 3.14
Family Dynamics					0.95***	0.93, 0.97	0.97	0.89, 1.06
Ethnic Discrimination * Family Dynamics							1.00	0.98, 1.01
Model X^2	12.73***		9.01***		8.63***		9.21***	
Model *df*	9		9		10		11	

Notes: [a] Ethnic discrimination => family dynamics (path a). [b] family dynamics => depression (path b). [c] Ethnic discrimination and family dynamics=> past year depression (path c'). [d] Moderation model (ethnic discrimination by family dynamics).
*$p < .05$, ** $p < .01$, *** $p < .001$, † marginal significance

marginally associated with a 122% increase in odds of depression (OR = 2.22, p = .05). Perceived ethnic discrimination was not a significant predictor of depression.

In Model 3, perceived ethnic discrimination and family dynamics were entered simultaneously to investigate the association between the mediator of ethnic identity and past year depression while controlling for perceived ethnic discrimination. Sex (OR = 0.37, p < .01) and years of residence in the U.S. (OR = 2.23, p < .05) continued to contribute to the model. Neither perceived ethnic discrimination or ethnic identity were significant predictors of depression. Ethnic identity did not mediate the relationship between perceived discrimination and depression.

In the moderation model (Model 4) the perceived ethnic discrimination and ethnic identity interaction term was not significant, suggesting that ethnic identity did not moderate the relationship between perceived ethnic discrimination and depression.

Family dynamics. Table 4b presents multiple and logistic regressions of exploratory analyses investigating the influence of perceived ethnic discrimination on past year depression, and the extent to which family dynamics mediates this relationship for foreign-born Latinos.

Model 1 was conducted to establish the relationship between perceived ethnic identity and the potential mediator of family dynamics. Age emerged as a significant positive predictor of family dynamics ($ß$ = 0.07, p < .01). Perceived ethnic discrimination was a significant negative predictor of family dynamics. ($ß$ = -0.58, p < .001).

In testing for the direct effect of perceived ethnic discrimination on past year depression (Model 2), being male (OR = 0.37, p < .01) was associated with a 53% decrease in likelihood of depression while having resided in the U.S. for at least 20 years

was marginally associated with a 122% increase in likelihood of depression (OR = 2.22, p = .05). Perceived discrimination did not significantly predict depression.

       In Model 3, perceived ethnic discrimination and family dynamics were entered simultaneously to investigate the association between the mediator of family dynamics and past year depression while controlling for perceived ethnic discrimination. The effect of being male persisted, with a 60% decreased in likelihood of depression (OR = 0.40, p < .05). Having resided in the U.S. for at least 20 years significantly positively contributed to the model (OR = 2.48, p < .05). Perceived ethnic discrimination did not significantly predict depression, although family dynamics was significantly associated with an 8% decrease in likelihood of depression (OR = 0.92, p < .001). Mediation was not present, as there was not a direct effect of perceived discrimination on depression.

       Model 4 tested the moderation of family dynamics of the relationship between perceived ethnic discrimination and family dynamic. The perceived ethnic discrimination and family dynamics interaction term was significant (OR = 1.02, p < .05), suggesting that the effect of perceived ethnic discrimination on depression varies as a function of family dynamics (figure 3). Foreign-born Latinos who report poor family dynamics are more likely to endorse depression in the past year relative to those who report strong family dynamics. Additionally, for foreign-born Latinos who report strong family dynamics, greater perceived discrimination is associated with an increase in likelihood of depression.

Exploratory Analyses

       A principal component analysis (PCA) was conducted to determine the extent to which the scales comprising *family dynamics* correlate with each other. Table 5 presents

Table 4a

Logistic Regression Models of Perceived Ethnic Discrimination Predicting Depression in Foreign-born Latinos with Ethnic Identity as Mediator

Predictor	Model 1[a]		Model 2[b]		Model 3[c]		Model 4[d]	
	B	*SE*	OR	95% CI	OR	95% CI	OR	95% CI
Age	0.02†	0.01	1.01	0.99, 1.03	1.01	0.99, 1.03	1.01	0.99, 1.03
Sex (fem = 0)	0.00	0.11	0.37**	0.19, 0.74	0.37**	0.18, 0.74	0.37**	0.19, 0.74
Years in US								
5-10	0.24	0.25	1.51	0.62, 3.68	1.54	0.63, 3.74	1.53	0.63, 3.72
11-20	0.15	0.20	1.25	0.54, 2.92	1.26	0.55, 2.93	1.26	0.54, 2.94
20+	-0.15	0.29	2.22†	1.00, 4.96	2.23*	1.01, 4.92	2.18*	0.93, 5.07
Education								
12	0.20	0.16	0.80	0.37, 1.76	0.83	0.38, 1.80	0.84	0.40, 1.78
13-15	-0.09	0.14	0.72	0.30, 1.68	0.73	0.32, 1.67	0.73	0.32, 1.67
> 15	-0.18	0.31	0.88	0.23, 3.37	0.87	0.22, 3.40	0.89	0.23, 3.45
English Proficiency	0.03	0.04	1.00	0.88, 1.14	1.01	0.88, 1.15	1.00	0.88, 1.15
Ethnic Discrimination	0.00	0.03	1.10	0.96, 1.25	1.09	0.96, 1.25	1.27	0.59, 2.73
Ethnic Identity					0.93	0.84, 1.03	1.01	0.62, 1.64
Ethnic Discrimination * Ethnic Identity							0.98	0.92, 1.06
Model X^2	0.92		2.06†		2.64*		2.48*	
Model *df*	10		10		11		12	

Notes: [a] Ethnic discrimination => ethnic identity (path a). [b] Ethnic identity => depression (path b). [c] Ethnic discrimination and ethnic identity => depression (path c'). [d] Moderation model (ethnic discrimination by ethnic identity). * $p < .05$, ** $p < .01$, *** $p < .001$, † marginal significance

Table 4b

Logistic Regression Models of Ethnic Discrimination Predicting Depression in Foreign-born Latinos with Family Dynamics as Mediator

Predictor	Model 1[a]		Model 2[b]		Model 3[c]		Model 4[d]	
	B	*SE*	OR	95% CI	OR	95% CI	OR	95% CI
Age	0.07**	0.02	1.01	0.99, 1.03	1.02	0.99, 1.04	1.02	0.99, 1.04
Sex (fem = 0)	0.80	0.55	0.37**	0.19, 0.74	0.40*	0.20, 0.81	0.39*	0.19, 0.79
Years in US								
5-10	0.46	0.66	1.51	0.62, 3.68	1.93	0.72, 5.15	1.89	0.71, 5.04
11-20	0.31	0.71	1.25	0.54, 2.92	1.47	0.60, 3.60	1.42	0.58, 3.50
20+	-0.47	0.83	2.22†	1.00, 4.96	2.48*	1.01, 6.05	2.41†	0.97, 5.95
Education								
12	0.97	0.62	0.80	0.37, 1.76	1.03	0.48, 2.19	1.01	0.48, 2.14
13-15	0.90	0.86	0.72	0.30, 1.68	0.91	0.35, 2.40	0.87	0.32, 2.40
> 15	1.33	0.87	0.88	0.23, 3.37	1.15	0.25, 5.23	1.13	0.25, 5.18
English Proficiency	-0.03	0.08	1.00	0.88, 1.14	0.98	0.84, 1.14	0.99	0.85, 1.14
Ethnic Discrimination	-0.58***	0.13	1.10	0.96, 1.25	1.03	0.89, 1.21	0.33*	0.13, 0.84
Family Dynamics					0.92***	0.88, 0.96	0.82***	0.76, 0.89
Ethnic Discrimination * Family Dynamics							1.02*	1.00, 1.03
Model X^2	5.74***		2.06†		3.06**		7.29***	
Model *df*	10		11		11		12	

Notes: [a] Ethnic discrimination => family dynamics (path a). [b] Family dynamics => past year depression (path b). [c] Ethnic discrimination and family dynamics => past year depression (path c'). [d] Moderation model (ethnic discrimination by family dynamics). * $p < .05$, ** $p < .01$, *** $p < .001$, † marginal significance
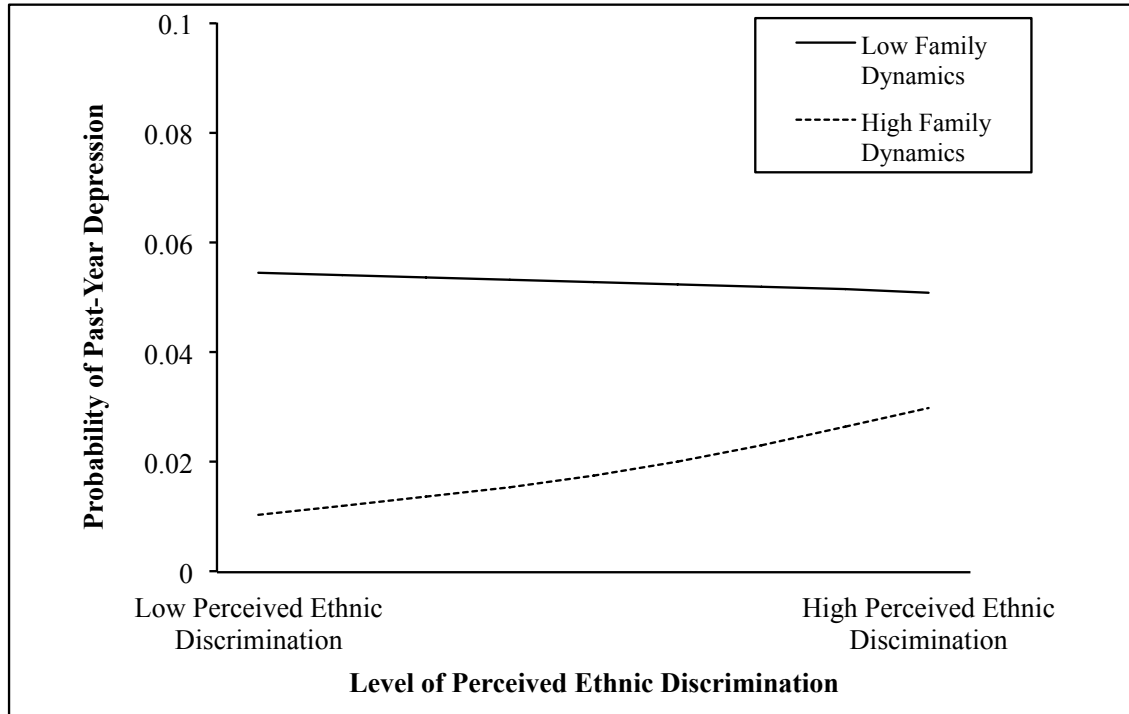
Figure 3. Graph displaying moderation of relationship between perceived ethnic

discrimination and likelihood of past year depression by family dynamics for foreign-

born Latinos.

PCA results, including factor loadings and variances accounted for by the various

components. The family support scale was highly and almost exclusively loaded on

component 2, suggesting that its relationship to the other scales is minimal. These

findings are further supported by a biplot that displays the correlations between the four

scales in a two-dimensional graph (see figure 4). Cohesion between items is reflected by

the size of the angles of the vectors. Angles approximately 90 or 270 degrees suggest

smaller correlations relative to angles approximating 0 or 180 degrees. As suggested by

the biplot, there is a lack of cohesion among the individual scales. Thus, the individual

family support scale was used by itself, as it most closely captures the extent to which

respondents rely on family members for support. All exploratory analyses investigating

the mediation of the independent variable and the outcome variable by family support

were conducted with the individual family support scale.

Table 5

Factor Loadings and Variance Accounted for by Components of Family Dynamics Variable

Variable	Component 1	Component 2	Component 3	Component 4
Family Support	0.297	0.946	-0.132	0.025
Family Pride	0.601	-0.199	-0.215	-0.744
Family Cohesion	0.569	-0.256	-0.430	0.653
Family Conflict	0.477	-0.032	0.867	0.143
Total Variance Accounted for by Components	0.549	0.222	0.165	0.064
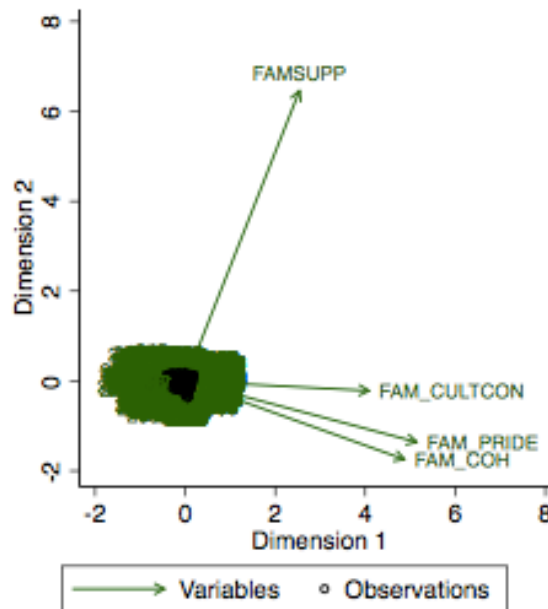
Figure 4. Biplot reflecting relationship between individual family dynamics scales

(FAMSUPP = family support, FAM_CULTCON = family conflict, FAM_PRIDE =

family pride, FAM_COH = family cohesion).

Family support as predictor of past year depression.

U.S.-born Latinos. Table 6a presents multiple and logistic regressions of exploratory analyses investigating the influence of perceived ethnic discrimination on past year depression, and the extent to which family support mediates this relationship for U.S.-born Latinos.

A multiple regression analysis was conducted first (Model 1) to establish the relationship between perceived ethnic discrimination and the potential mediator of family support. In this model, age was a significant positive predictor of family support (β = 0.02, p < .01). Perceived ethnic discrimination was a significant predictor of family support (β = -0.16, p < .01). Specifically, lower perceived discrimination predicted greater family support.

Model 2 investigated the direct of effect of perceived discrimination on past year depression. Among demographic variables, having a high school education was marginally associated with a 46% decrease in likelihood of depression (OR = 0.54, p = .07). Furthermore, the direct effect of perceived discrimination on depression was significant (OR = 1.24, p < .01). Perceived discrimination was associated with a 24% increase in likelihood of depression.

In Model 3, perceived discrimination and family support were entered simultaneously to investigate the association between the mediator of family support and depression while controlling for perceived discrimination. Among demographic variables, English proficiency was marginally associated with a 7% increase in likelihood of depression (OR = 1.07, p = .10). The mediator of family support was significantly associated with a 22% decrease in likelihood of depression (OR = 0.88, p < .05).

Furthermore, the direct effect of perceived ethnic discrimination decreased in magnitude

(OR = 1.22, p < .01), suggesting that the direct effect of perceived discrimination was

partially mediated by family support (Sobel test: z = 1.95, p = .05).

In the moderation model (Model 4), the perceived ethnic discrimination and

family support interaction term was not significant, suggesting that the effect of

perceived discrimination on depression did not vary as a function of level of social

support.

Foreign-born Latinos. Table 6b presents multiple and logistic regressions of

exploratory analyses investigating the influence of perceived ethnic discrimination on

past year depression, and the extent to which family support mediates this relationship for

foreign-born Latinos.

In the multiple regression (Model 1) conducted to establish the relationship

between perceived ethnic discrimination and the potential mediator of family support, age

(β = 0.02, p < .05) and level of education (12 years of education: β = 0.60, p < .05) and

greater than 15 years of education (β = 0.85, p < .05) emerged as significant positive

predictors of family support. Perceived ethnic discrimination was a significant negative

predictor of family support (β = - 0.24, p < .001).

In testing for the direct effect of perceived ethnic discrimination on past year

depression (Model 2), being male was associated with a 63% decrease in odds of

depression (OR = 0.37, p < .01), while having resided in the U.S. for 20 years or more

was marginally associated with a 122% increase in odds of depression (OR = 2.22, p =

.05). However, a direct effect of perceived ethnic discrimination was not present.

In testing the association between the mediator of family support and depression while controlling for perceived ethnic discrimination (Model 3), the effect of sex (OR = 0.37, $p < .01$) and years of residence in the U.S. (20+ years: OR = 2.25, $p = .05$) persisted. Although a direct effect of perceived ethnic discrimination was not present, family support was significantly associated with a 10% decrease in likelihood of depression (OR = 0.90, $p < .05$). However, given the absence of a direct effect of perceived ethnic discrimination on depression, family support was not found to be a mediator.

In the moderation model (Model 4), the perceived ethnic discrimination and family support interaction term was not significant, suggesting that the effect of perceived ethnic discrimination on depression did not vary as a function of level of social support.

Everyday discrimination. Given findings suggesting that perceived discrimination predicted depression for U.S.-born Latinos but not for foreign-born Latinos, the association between everyday discrimination and depression was investigated.

Paralleling the primary analyses, multiple and binary logistic regressions were conducted on each Latino subsample to address the primary objectives: 1) investigate the direct effect of everyday discrimination above and beyond that of covariates on endorsement of depression or dysthymia in the past 12 months, and 2) test whether ethnic identity and/or family support mediate the relationship between perceived discrimination and past year depression.

Table 6a

Logistic Regression Models of Perceived Ethnic Discrimination Predicting Depression in U.S.-born Latinos with Family Support as Mediator

Predictor	Model 1[a]		Model 2[b]		Model 3[c]		Model 4[d]	
	B	*SE*	OR	95% CI	OR	95% CI	OR	95% CI
Age	0.02**	0.01	0.99	0.97, 1.01	0.99	0.97, 1.01	0.99	0.97, 1.01
Sex (fem = 0)	-0.16	0.18	0.65	0.37, 1.15	0.64	0.37, 1.13	0.64	0.36, 1.12
Years in US								
11-20	0.54	0.99	1.76	0.13, 24.17	1.81	0.14, 23.17	1.81	0.14, 23.38
20+	0.69	0.94	1.49	0.13, 17.52	1.56	0.15, 16.45	1.51	0.14, 15.87
Education								
12	0.13	0.29	0.54†	0.27, 1.04	0.56	0.28, 1.13	0.56	0.27, 1.16
13-15	0.08	0.26	0.68	0.33, 1.40	0.71	0.34, 1.49	0.71	0.33, 1.50
> 15	-0.25	0.43	1.01	0.54, 1.91	1.02	0.50, 2.07	1.02	0.50, 2.08
English Proficiency	0.08	0.08	1.05	0.96, 1.15	1.07†	0.99, 1.15	1.07†	0.99, 1.15
Ethnic discrimination	-0.16**	0.06	1.24**	1.10, 1.40	1.22**	1.10, 1.36	1.54**	1.15, 2.07
Family Support					0.88*	0.81, 0.97	0.98	0.80, 1.19
Ethnic discrimination * Family support							0.98	0.96, 1.01
Model X^2	2.97**		9.01***		6.67***		8.88***	
Model *df*	9		9		10		11	

Notes: [a] Ethnic discrimination => family support (path a). [b] Family support => depression (path b). [c] Ethnic discrimination and family support => depression (path c'). [d] Moderation model (ethnic discrimination by family support).

* $p < .05$, ** $p < .01$, *** $p < .001$, † marginal significance

Table 6b

Logistic Regression Models of Perceived Ethnic Discrimination Predicting Depression in Foreign-born Latinos with Family Support as Mediator

Predictor	Model 1[a]		Model 2[b]		Model 3[c]		Model 4[d]	
	B	*SE*	OR	95% CI	OR	95% CI	OR	95% CI
Age	0.02*	0.01	1.01	0.99, 1.03	1.01	0.99, 1.03	1.01	0.99, 1.03
Sex (fem = 0)	-0.23	0.24	0.37**	0.19, 0.74	0.37**	0.19, 0.74	0.38**	0.19, 0.76
Years in US								
5-10	0.31	0.29	1.51	0.62, 3.68	1.53	0.63, 3.73	1.45	0.59, 3.59
11-20	0.07	0.32	1.25	0.54, 2.92	1.23	0.52, 2.90	1.26	0.54, 2.92
20+	-0.08	0.42	2.22†	1.00, 4.96	2.25†	0.99, 5.10	2.30*	1.00, 5.26
Education								
12	0.60*	0.25	0.80	0.37, 1.76	0.87	0.39, 1.93	0.84	0.37, 1.91
13-15	0.53	0.32	0.72	0.30, 1.68	0.77	0.32, 1.86	0.81	0.34, 1.90
> 15	0.85*	0.42	0.88	0.23, 3.37	1.03	0.26, 3.98	1.06	0.28, 4.05
English Proficiency	-0.06	0.06	1.00	0.88, 1.14	0.99	0.86, 1.13	0.98	0.86, 1.12
Ethnic Discrimination	-0.24***	0.05	1.10	0.96, 1.25	1.07	0.93, 1.23	0.59	0.28, 1.23
Family Support					0.90*	0.83, 0.98	0.72*	0.54, 0.97
Ethnic Discrimination * Family Support							1.04	0.99, 1.09
Model X^2	5.85***		2.06†		3.33**		4.51***	
Model *df*	10		10		11		12	

Notes: [a] Ethnic discrimination => family support (path a). [b] Family support => past year depression (path b). [c] Ethnic discrimination and family support => past year depression (path c'). [d] Moderation model (ethnic discrimination by family support).
*p < .05, ** p < .01, *** p < .001, † marginal significance

U.S.-born Latinos.

Ethnic identity. Table 7a presents multiple and logistic regressions of exploratory

analyses investigating the influence of everyday discrimination on past year depression

and whether ethnic identity mediated this relationship for U.S.-born Latinos.

In the multiple regression (Model 1) a significant relationship between everyday

discrimination and the potential mediator of family support was not established. Among

demographic variables, years in the U.S. (11-20 years: $\beta = 0.90$, $p < .01$; 20+ years: $\beta = -$

0.78, $p < .05$) and English proficiency ($\beta = -0.07$, $p < .05$) were significantly negatively

associated with ethnic identity, whereas having 13 to 15 years of education ($\beta = 0.53$, $p <$

.01) was significantly positively associated with depression.

In investigating the direct effect of perceived discrimination on depression (Model

2), being male was marginally associated with a 33% decrease in odds of depression (OR

=0.67, $p = .10$). Furthermore, the direct effect of everyday discrimination was significant

(OR = 1.07, $p < .01$). Everyday discrimination was associated with a 7% increase in

likelihood of depression.

The simultaneous inclusion of everyday discrimination and ethnic identity in

Model 3 resulted in a significant contribution of everyday discrimination (OR = 1.06, $p <$

.01), but not of family support. Everyday discrimination was significantly associated with

a 6% increase in odds of depression. However, given that absence of a significant

association between the independent variable and the mediator (Model 1) and a

significant association between ethnic identity and depression (Model 3), mediation by

ethnic identity is not concluded.

In the moderation model (Model 4), the everyday discrimination and ethnic identity interaction term (OR = 0.99, *ns*) was not significant, suggesting that the effect of everyday discrimination on depression did not vary as a function of level of ethnic identity.

Family support. Table 7b presents multiple and logistic regressions of exploratory analyses investigating the influence of perceived discrimination on past year depression and whether family support mediated this relationship for U.S.-born Latinos.

A multiple regression analysis was conducted first (Model 1) to establish the relationship between everyday discrimination and the potential mediator of family support. Demographic variables did not significantly contribute to family support. Everyday discrimination was a significant negative predictor of family support (β = -0.09, $p < .001$).

In investigating the direct effect of perceived discrimination on depression (Model 2), the direct effect of everyday discrimination was significant (OR = 1.07, $p < .01$). Everyday discrimination was associated with a 7% increase in likelihood of depression. Among demographic variables, being male was marginally associated with a 33% decrease in odds of depression (OR = 0.67, $p = .10$).

In Model 3, everyday discrimination and family support were entered simultaneously to investigate the association between the mediator of family support and depression while controlling for everyday discrimination. The mediator of family support was significantly associated with a 10% decrease in likelihood of depression (OR = 0.90, $p < .05$). Although the direct effect of everyday discrimination persisted (OR = 1.06, $p < .01$), it decreased in magnitude

with the addition of family support, suggesting that the direct effect of everyday

discrimination was partially mediated by family support (Sobel test: $z = 2.12$, $p < .05$).

In the moderation model (Model 4), the everyday discrimination and family

support interaction term was not significant, suggesting that the effect of everyday

discrimination on depression did not vary as a function of level of social support.

Foreign-born Latinos.

Ethnic identity. Table 8a presents multiple and logistic regressions of exploratory

analyses investigating the influence of everyday discrimination on past year depression

and whether ethnic identity mediated this relationship for foreign-born Latinos.

Model 1, which was conducted to establish the relationship between everyday

discrimination and the potential mediator of family support, did not result in significant

effects of either demographic variables or everyday discrimination.

In testing for the direct effect of everyday discrimination on past year depression

(Model 2), being male was associated with a 64% decrease in odds of depression (OR =

0.36, $p < .01$), while having resided in the U.S. for 20 years or more was associated with

a 168% increase in odds of depression (OR = 2.68, $p < .05$). A direct effect of everyday

discrimination was marginally significant (OR = 1.04, $p = .06$). Everyday discrimination

was marginally associated with a 4% increase in likelihood of depression.

In testing the association between the mediator of family support and depression

while controlling for everyday discrimination (Model 3), the effect of sex (OR = 0.35, p

$< .01$) and years of residence in the U.S. (OR = 2.67, $p < .05$) persisted. Although a direct

effect of everyday discrimination was marginally significant (OR = 1.04, $p = .07$), ethnic

identity was not significantly associated with depression. Ethnic identity did not mediate

Table 7a

Logistic Regression Models of Everyday Discrimination Predicting Depression in U.S.-born Latinos with Ethnic Identity as Mediator

Predictor	Model 1[a]		Model 2		Model 3		Model 4	
	B	*SE*	OR	95% CI	OR	95% CI	OR	95% CI
Age	0.01	0.01	0.99	0.98, 1.01	1.00	0.98, 1.01	1.00	0.98, 1.02
Sex (fem = 0)	-0.13	0.13	0.67†	0.41, 1.08	0.66†	0.41, 1.08	0.66†	0.40, 1.07
Years in US								
11-20	-0.90**	0.32	1.85	0.11, 30.41	1.86	0.11, 30.28	1.63	0.11, 23.13
20+	-0.78*	0.32	1.56	0.11, 22.05	1.53	0.11, 21.42	1.38	0.11, 17.38
Education								
12	0.20	0.20	0.60	0.32, 1.15	0.60	0.31, 1.15	0.61	0.32, 1.19
13-15	0.53**	0.17	0.66	0.33, 1.31	0.66	0.33, 1.34	0.69	0.33, 1.44
> 15	0.32	0.22	1.11	0.60, 2.05	1.13	0.61, 2.09	1.15	0.61, 2.16
English Proficiency	-0.07*	0.03	1.03	0.93, 1.14	1.03	0.93, 1.14	1.04	0.94, 1.15
Everyday Discrimination	-0.00	0.01	1.07**	1.03, 1.10	1.06**	1.03, 1.10	1.18†	0.97, 1.42
Ethnic identity					1.01	0.88, 1.16	1.23	0.84, 1.81
Everyday Discrimination * Ethnic Identity							0.99	0.97, 1.01
Model X^2	2.84*		6.34***		6.06***		6.08***	
Model *df*	9		9		10		11	

Notes: [a] Everyday discrimination => ethnic identity (path a). [b] Ethnic identity => past year depression (path b). [c] Everyday discrimination and ethnic identity => past year depression (path c'). [d] Moderation model (everyday discrimination by ethnic identity). * $p < .05$, ** $p < .01$, *** $p < .001$, † marginal significance

Table 7b

Logistic Regression Models of Everyday Discrimination Predicting Depression in U.S.-born Latinos with Family Support as Mediator

Predictor	Model 1[a]		Model 2		Model 3		Model 4	
	B	*SE*	OR	OR	OR	95% CI	OR	95% CI
Age	0.01	0.01	0.99	0.98, 1.01	1.00	0.98, 1.01	1.00	0.98, 1.01
Sex (fem = 0)	-0.11	0.20	0.67†	0.41, 1.08	0.67	0.42, 1.08	0.68	0.41, 1.13
Years in US								
11-20	0.50	1.02	1.85	0.11, 30.41	1.90	0.13, 27.69	1.90	0.13, 27.51
20+	0.70	0.95	1.56	0.11, 22.05	1.61	0.13, 19.82	1.58	0.13, 19.66
Education								
12	0.14	0.28	0.60	0.32, 1.15	0.63	0.33, 1.22	0.64	0.33, 1.24
13-15	0.15	0.25	0.66	0.33, 1.31	0.70	0.35, 1.40	0.71	0.34, 1.44
> 15	-0.25	0.42	1.11	0.60, 2.05	1.12	0.57, 2.21	1.13	0.56, 2.27
English Proficiency	0.10	0.09	1.03	0.93, 1.14	1.04	0.95, 1.13	1.04	0.95, 1.13
Everyday Discrimination	-0.07***	0.01	1.07**	1.03, 1.10	1.06**	1.02, 1.09	1.09	0.94, 1.27
Family Support					0.90*	0.82, 0.99	0.94	0.72, 1.24
Everyday Discrimination * Family Support							1.00	0.99, 1.01
Model X^2	8.72***		6.34***		6.10***		6.73***	
Model *df*	9		9		10		11	

Notes: [a] Everyday discrimination => family support (path a). [b] Family support => depression (path b). [c] Everyday discrimination and family support => depression (path c'). [d] Moderation model (everyday discrimination by family support).

* $p < .05$, ** $p < .01$, *** $p < .001$, † marginal significance

the association between everyday discrimination and depression.

In the moderation model (Model 4), the everyday discrimination and family support interaction term was not significant, suggesting that the effect of everyday discrimination on depression did not vary as a function of level of ethnic identity.

Family support. Table 8b presents multiple and logistic regressions of exploratory analyses investigating the influence of perceived discrimination on past year depression, and the extent to which family support mediates this relationship for foreign-born Latinos.

Model 1 was conducted to establish the relationship between everyday discrimination and the potential mediator of family support. Age ($ß = 0.03$, $p < .01$) and years of education (12 years: $ß = 0.71$, $p < .01$; beyond 15 years: $ß = 1.01$, $p < .001$) were positively associated with family support. Everyday discrimination was not a significant negative predictor of family support.

In testing for the direct effect of everyday discrimination on past year depression (Model 2), being male was associated with a 64% decrease in odds of depression (OR = 0.36, $p < .01$), while having resided in the U.S. for at least 20 years was significantly associated with a 168% increase in odds of depression (OR = 2.68, $p < .05$). However, a direct effect of everyday discrimination was only marginally associated with a 4% increase in likelihood of depression (OR = 1.04, $p = .06$).

In testing the association between the mediator of family support and depression while controlling for everyday discrimination (Model 3), the effect of sex (OR = 0.36, $p < .01$) and years of residence in the U.S. persisted (20+ years: OR = 2.61, $p < .05$). Although a direct effect of everyday discrimination was not present, family support was

marginally associated with an 8% decrease in likelihood of depression (OR = 0.92, p = .06). However, given the absence of a direct effect of everyday discrimination on depression, family support was not found to be a mediator.

In the moderation model (Model 4), the everyday discrimination and family support interaction term was significant (OR = 1.01, p < .05), suggesting that the effect of everyday discrimination on depression varies as a function of level of social support (figure 5). Among foreign-born Latinos who report low family support, the likelihood of depression is comparable across different levels of everyday discrimination. However, among those who report high family support, greater everyday discrimination is associated with a greater likelihood of depression relative to those who report less everyday discrimination.

Table 8a

Logistic Regression Models of Everyday Discrimination Predicting Depression in Foreign-born Latinos with Ethnic Identity as Mediator

Predictor	Model 1[a]		Model 2		Model 3		Model 4	
	B	*SE*	OR	95% CI	OR	95% CI	OR	95% CI
Age	0.01	0.01	1.00	0.98, 1.03	1.00	0.98, 1.03	1.01	0.98, 1.03
Sex (fem = 0)	0.05	0.11	0.36**	0.17, 0.74	0.35**	0.17, 0.74	0.35**	0.17, 0.74
Years in US								
5-10	0.15	0.26	1.70	0.65, 4.44	1.70	0.66, 4.38	1.62	0.63, 4.18
11-20	0.13	0.20	1.44	0.61, 3.41	1.43	0.61, 3.35	1.37	0.57, 3.29
20+	-0.11	0.29	2.68*	1.12, 6.40	2.67*	1.13, 6.29	2.54*	1.07, 6.02
Education								
12	0.21	0.18	0.81	0.37, 1.74	0.82	0.38, 1.77	0.84	0.40, 1.76
13-15	-0.08	0.16	0.71	0.30, 1.68	0.72	0.32, 1.65	0.72	0.31, 1.63
> 15	-0.15	0.32	0.89	0.22, 3.51	0.88	0.22, 3.52	0.90	0.22, 3.60
English Proficiency	0.03	0.04	0.99	0.86, 1.13	0.99	0.87, 1.14	0.99	0.87, 1.14
Everyday Discr	-0.02	0.01	1.04†	1.00, 1.08	1.04†	1.00, 1.08	1.12	0.92, 1.37
Ethnic identity					0.94	0.85, 1.05	1.07	0.74, 1.54
Everyday Discr * Ethnic Identity							0.99	0.97, 1.01
Model X^2	0.95		1.48		1.83†		1.68	
Model *df*	10		10		11		12	

Notes: [a] Everyday discrimination => ethnic identity (path a). [b] Ethnic identity => depression (path b). [c] Everyday discrimination and ethnic identity => depression (path c'). [d] Moderation model (everyday discrimination by ethnic identity). Discr = Discrimination.
*$p < .05$, ** $p < .01$, *** $p < .001$, † marginal significance

Table 8b

Logistic Regression Models of Everyday Discrimination Predicting Depression in Foreign-born Latinos with Family Support as Mediator

Predictor	Model 1[a]		Model 2		Model 3		Model 4	
	B	*SE*	OR	95% CI	OR	95% CI	OR	95% CI
Age	0.03**	0.01	1.00	0.98, 1.03	1.01	0.98, 1.03	1.01	0.99, 1.03
Sex (fem = 0)	-0.14	0.27	0.36**	0.17, 0.74	0.36**	0.17, 0.74	0.36**	0.17, 0.73
Years in US								
5-10	0.08	0.29	1.70	0.65, 4.44	1.67	0.64, 4.36	1.63	0.62, 4.29
11-20	-0.21	0.29	1.44	0.61, 3.41	1.37	0.58, 3.28	1.36	0.57, 3.26
20+	-0.42	0.42	2.68*	1.12, 6.40	2.61*	1.08, 6.31	2.56*	1.06, 6.18
Education								
12	0.71**	0.24	0.81	0.37, 1.74	0.87	0.39, 1.92	0.85	0.38, 1.91
13-15	0.60†	0.32	0.71	0.30, 1.68	0.77	0.32, 1.84	0.78	0.33, 1.81
> 15	1.01**	0.37	0.89	0.22, 3.51	1.02	0.26, 4.04	1.06	0.27, 4.11
English Proficiency	-0.07	0.05	0.99	0.86, 1.13	0.98	0.85, 1.12	0.98	0.85, 1.13
Everyday Discr	-0.09***	0.02	1.04†	1.00, 1.08	1.03	0.99, 1.08	0.83	0.66, 1.04
Family Support					0.92†	0.84, 1.00	0.74*	0.59, 0.94
Everyday Discr * Family Support							1.01*	1.00, 1.03
Model X^2	7.42***		1.48		2.38*		3.25**	
Model *df*	10		11		11		12	

Notes: [a] Everyday discrimination => family support (path a). [b] Family support => depression (path b). [c] Everyday discrimination and family support => depression (path c'). [d] Moderation model (everyday discrimination by family support). Discr = Discrimination. * $p < .05$, ** $p < .01$, *** $p < .001$, † marginal significance
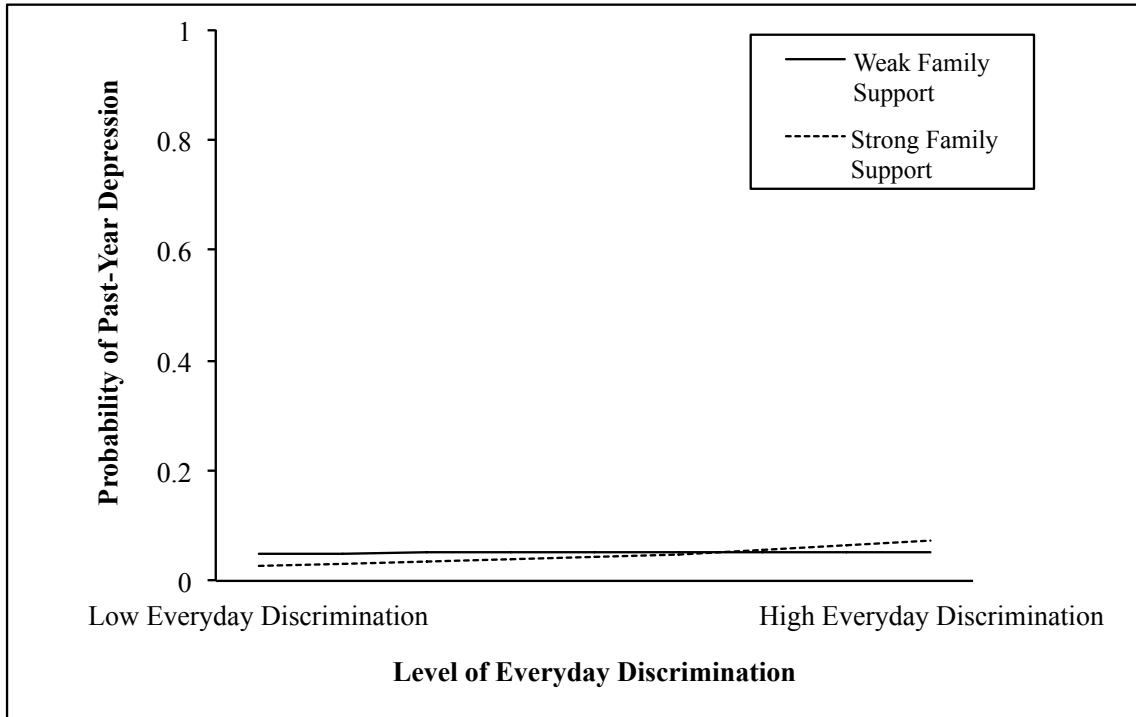
Figure 5. Graph displaying moderation of relationship between everyday discrimination and likelihood of past-year depression by family support for foreign-born Latinos.

Discussion

The aim of the study was to investigate risk and protective factors of depression, including the direct effect of perceived ethnic discrimination on past year depression among Latinos from the NLAAS. Ethnic identity and family support affected the relationship between perceived ethnic discrimination and depression in Latinos in the U.S. as a function of nativity status. Past year depression did not differ between U.S.-born and foreign-born Latinos (9% and 8%, respectively). However, foreign-born Latinos who resided in the U.S. for 20 years or more were at increased risk of past year depression. Perceived ethnic discrimination had a direct effect on past year depression for U.S.-born Latinos, but not for foreign-born Latinos. Family support emerged as a protective factor against depression for U.S.-born and foreign-born Latinos, although it only mediated the relationship between perceived ethnic discrimination and depression for U.S.-born Latinos. For U.S.-born Latinos, perceived ethnic discrimination was related to decreased family support, which in turn was related to decreased risk of past year depression. For foreign-born Latinos, family support moderated the relationship between everyday discrimination and past year depression. Ethnic identity was neither a significant predictor of depression, nor did it mediate the association between perceived ethnic discrimination and depression for either Latino subsample. Similarly, no moderation effect of ethnic identity on depression was evident.

Depression in Latinos

Consistent with the existing literature (N. Breslau, Schultz, & Peterson, 1995; Piccinelli & Wilkinson, 2000), women were at greater risk of depression than men regardless of nativity. These sex differences transcend ethnicity and nationality. Various

hypotheses have been proposed to explain what might account for sex differences in risk

of depression, including stressful live events (e.g., victimization, chronic stress related to

social status), coping styles, and treatment seeking (Nolen-Hoeksema, 1987, 2001). In

addition to these hypotheses, it is also possible that distress is likely to manifest itself

differently among men and that men are not necessarily at decreased risk of

psychopathology, as suggested by higher rates of substance use among men (Rote &

Brown, 2013)

   Also consistent with previous NLAAS findings (Alegria, Shrouth, et al., 2007),

there was not a significant difference in past year depression between U.S.-born and

foreign-born Latinos. This finding does not support previous epidemiologic research

indicating that U.S.-born Latinos are more likely to endorse depression than foreign-born

Latinos (Burnam et al., 1987; Vega et al., 1998). An increased risk of depression among

U.S.-born Latinos has also been supported by previous NLAAS studies (Alegria,

Chatterji, et al., 2008). However, it is important to note that the majority of the studies

that found differences based on nativity used lifetime prevalence of depression as an

outcome variable as opposed to incidence (i.e., past year depression). It is possible that as

the effects of stressors accumulate over time, individuals are at greater risk of

experiencing symptoms of depression and meet full criteria for a diagnosis of depression.

   An additional consideration is the failure to make a distinction between

psychiatric disorder and symptomotology. Symptom severity checklists may not be valid

and reliable measures of community prevalence of psychiatric disorders (Vega &

Rumbaut, 1991). Symptom checklists (e.g., Center for Epidemiologic Studies-Depression

Scale) measure symptom severity and duration and they do not "mimic the unique

symptom configurations of discrete psychiatric disorders" (Vega & Rumbaut, 1991; p.

358). Interestingly, studies finding higher rates of psychopathology among Latinos have

used symptom checklists to measure psychiatric morbidity, whereas studies finding

disparities in prevalence of psychopathology have typically used psychiatric interviews

designed for case ascertainment of discrete psychiatric disorders (Shrouth et al., 1992).

Symptom endorsement and severity is greater among Latinos (Vega & Rumbaut, 1991)

but this is not indicative of greater psychopathology. Symptom scales tend to be sensitive

to environmental stressors, including perceived discrimination, low socioeconomic status,

medical problems, and acculturation (Vega et al., 2004); thus reflecting current levels of

distress and not psychopathology. Moreover, the degree to which Latino respondents

experience psychological problems may not be sufficiently disruptive to warrant a formal

psychiatric diagnosis (Shrouth et al., 1992). The NLAAS, unlike previous studies, used

DSM-IV criteria to assess presence of past year depression. Therefore, it is likely that

rates of past year depression in the NLAAS are more representative than those observed

in other epidemiologic studies.

For foreign-born Latinos, residing in the U.S. for longer than 20 years was

associated with increased depression, further contributing to the existing literature that

suggests that length of stay in the U.S. has adverse effects on mental health (Alegria,

Mulvaney-Day, et al., 2007; Vega et al., 2004). The acculturation hypothesis can provide

an explanation of these findings. According to this hypothesis as individuals become

more acculturated to the host culture, they lose protective factors inherent in the Latino

culture and their risk for psychiatric disorders increases. Latinos who immigrate at a later

age, on the other hand, are able to hold unto cultural values and behaviors deeply

ingrained during upbringing in their native country. These values and beliefs are likely to buffer against psychiatric morbidity.

Perceived Ethnic Discrimination and Depression

Ethnic discrimination is highest among U.S.-born Latinos (41%) as compared to foreign-born Latinos (32%) (Pew Hispanic Center, 2009). Inconsistent with these and other findings (Torres & Vallejo, 2015), the present study did not find a significant difference in experience of perceived ethnic discrimination between U.S.-born and foreign-born Latinos. Previous studies have also found that differences exist between U.S.-born and foreign-born Latinos. In fact, studies have suggested that even within foreign-born Latinos there are differences in reports of ethnic discrimination. In a study investigating the role of ethnic discrimination and acculturative stress in physical health, ethnic discrimination was found to be more problematic for highly acculturated immigrant Latinos relative to their U.S.-born counterparts and their less acculturated foreign-born counterparts (Finch et al., 2000). Such inconsistent findings suggest that ethnic discrimination is a much more complex construct that varies as a function of various sociodemographic factors. It is possible that a difference did not emerge in perceived ethnic discrimination in the present study as U.S.-born and foreign-born Latinos were treated as homogenous groups.

Despite the absence of an observed difference in experience of perceived ethnic discrimination, a direct effect of perceived ethnic discrimination on past year depression emerged for U.S.-born Latinos after adjusting for sociodemographic factors. Perceived ethnic discrimination was associated with an 18% (family dynamics) to 22% (family support) increase in odds of past year depression. Although perceived ethnic

discrimination was also associated with increased risk of depression among foreign-born Latinos, this relationship was not significant.

The existing literature has suggested that ethnic discrimination has a direct effect on mental health for Latinos (e.g., Ai et al., 2014; Flores et al., 2008; Todorova, Falcon, Lincoln, & Price, 2010), although research investigating differential effects of discrimination on depression between U.S.-born and immigrant Latinos is lacking. In a study using a large ethnically diverse community sample, self-reported ethnic discrimination was found to have negative effect on mental health status among immigrants, including Latino immigrants (Gee et al., 2006). However, this relationship was moderated by length of residence in the U.S. The relationship between discrimination and mental health was stronger for immigrants with longer periods of residence in the U.S. Similarly, Steffen & Bowden (2006) found that ethnic discrimination was associated with higher levels of depressive symptomatology in a sample of Latino immigrants. More recently, Torres & Vallejo (2015) investigated the link between ethnic discrimination and depression among U.S.-born and foreign-born Latinos and found that for both Latino subsamples, ethnic discrimination significantly predicted depression symptoms.

The present findings suggest that perceived ethnic discrimination has detrimental effects on mental health for U.S.-born Latinos, but raises questions about why a similar relationship is not observed in foreign-born Latinos. Stress resulting from subtle unfair treatment (i.e., perceived discrimination) has been shown to accumulate over time and to have detrimental effects on mental health (Flores et al., 2008). Chronicity of discrimination and consequent stress can help explain the present findings. Although

U.S.-born Latinos did not report more perceived ethnic discrimination than foreign-born Latinos did, it is possible that the effect of stress due to discrimination has accumulated from a young age. It is possible that such stress can lead to an increased risk of depression for U.S.-born Latinos relative to foreign-born Latinos, who have only perceived ethnic discrimination within an American context since their arrival to the U.S. Moreover, the frustration and deprivation U.S.-born Latinos experience despite American citizenship can further contribute to adverse effects of stress related to discrimination. According to the deprivation hypothesis, a discrepancy between current social status and an ideal status contributes to frustration and higher rates of psychopathology (Shrouth et al., 1992). Alternatively, foreign-born Latinos may experience ethnic discrimination as a stressor that comes with living in the U.S. A recent report from the Pew Hispanic Center (Taylor, Lopez, Martinez, & Velasco, 2012) noted that regardless of nationality, Latinos report that life is better in the U.S. than in their native country. In fact, a majority of Latinos indicated that they would immigrate to the U.S. again. Perhaps as a result of such resolve, the adverse effect of perceived ethnic discrimination is mitigated among foreign-born Latinos.

An additional consideration is measurement of the construct of perceived ethnic discrimination. The present study used a three-item scale that assessed frequency of being disliked by others, of being treated unfairly, and of having seen friends treated unfairly because of race, ethnicity, and/or nationality. As noted above, this scale was used instead of the longer Everyday Discrimination Scale (Williams et al., 1997) because items specifically asked about discrimination based on race/ethnicity whereas the Everyday Discrimination Scale does not ask about attribution until the conclusion of the

questionnaire. As such, respondents were not primed to consider ethnic discrimination necessarily, bur rather, considered other forms of discrimination as well (e.g., sexism, ageism). However, the perceived ethnic discrimination scale might have been limited in scope, as it did not adequately capture various discriminatory behaviors. Thus, further analyses were conducted to further understand the role of discrimination on risk of depression.

Consistent with previous NLAAS studies (Perez, Fortuna, & Alegria, 2008), everyday discrimination was highest among U.S.-born Latinos relative to foreign-born Latinos. Everyday discrimination had a direct effect on past year depression for U.S.-born Latinos. This same direct effect only reached marginal significance for foreign-born Latinos. Interestingly, everyday discrimination was associated with only 4% to 7% across both Latinos subsamples. Nonetheless, these findings suggest that everyday discrimination has detrimental effects on mental health for both U.S.-born and foreign-born Latinos.

In a study investigating multiple domains of discrimination and self-rated health, Stuber et al (2003) found that discrimination due to race and other attributes was associated with mental health. The authors went on to suggest that experiencing non-racial/ethnic discrimination (e.g., gender, religion, age) in addition to racial/ethnic discrimination has the potential of having more deleterious effects on mental health. Participants who reported experiencing other forms of discrimination beyond racial/ethnic discrimination were more likely to endorse poor mental health (Stuber et al., 2003). It has also been suggested that by limiting respondents to experiences attributed race/ethnicity might interfere with respondents' willingness to share experiences that

seem ambiguous (i.e., uncertain whether experience is attributable to race/ethnicity) (Williams & Mohammed, 2009). Because the Everyday Discrimination Scale does not require that respondents specify the main reason for discrimination, it is possible that respondents in the present study were not only reporting experiences based on a single attribute. Experiences with discrimination beyond that based on race/ethnicity might be associated with increased risk for past year depression, even among foreign-born Latinos.

Family Support as Mediator of the Relationship Between Family Support and Depression

Members of disenfranchised ethnically diverse communities, including Latinos, are likely to build strong family support networks as a means of coping with poverty and acculturative stressors, such as discrimination (Almeida, Molnar, Kawachi, & Subramanian, 2009). However, the present study found that U.S.-born Latinos reported weaker family support than their foreign-born counterparts. Although this difference was centered at the mean of the Likert-type scale and may not be clinically significant, the finding supports previous findings suggesting that family support, an aspect of *familismo* decreases, as a function of time spent in the U.S. (Almeida et al., 2009; Gil, Wagner, & Vega, 2003). Given this decreased emphasis on strong family bonds and loyalty, U.S.-born Latinos might not rely on their families to the same extent as foreign-born Latinos and might account for the weaker family reported by U.S.-born Latinos compared to foreign-born Latinos.

Family support had a direct effect on depression for both U.S.-born and foreign-born Latinos. A large body of evidence provides support for the relationship between perceived family support and lower levels of psychological distress among Latinos

(Almeida et al., 2011; Rivera, 2007). As hypothesized, family support partially mediated the relationship between perceived ethnic and everyday discrimination and past year depression for U.S.-born Latinos, but not for foreign-born Latinos. Although more frequent experiences with ethnic and everyday discrimination accounted for lower family support, family support, was associated with decreased risk of depression. After controlling for family support the effect of ethnic and everyday discrimination decreased in magnitude, although it remained significant, suggesting partial mediation through family support. In summary, family support served as a buffer by reducing the effect of discrimination on risk of depression. This is consistent with empirical research demonstrating the protective role of family support (Almeida et al., 2011; Fortuna, Perez, Canino, Sribney, & Alegria, 2007; Hovey, 2000; Mulvaney-Day et al., 2007; Rivera, 2007). Family support has been associated with a 70% reduction in depression (Almeida et al., 2011) and a 70% reduction in lifetime suicide attempt (Fortuna et al., 2007). Mulvaney-Day, Alegria, & Sribney (2007) found that family support was protective and positively associated with self-rated mental health regardless of socioeconomic status or language status among NLAAS Latinos.

Although family support has been found to be protective against discrimination, research demonstrating that it mediates the relationship between discrimination and mental health is limited. The present study suggests that discrimination negatively influences family support, which contradicts research suggesting that ethnically diverse individuals are more likely to seek help from family support in response to discrimination (Carter & Forsyth, 2010). There is empirical evidence in support of differences in the extent to which family and friend support are protective against stressors and

psychological distress (Almeida et al., 2011; Rodriguez, Mira, Morris, & Cardoza, 2003). U.S.-born Latinos may rely less on family support relative to less acculturated and foreign-born Latinos who may perceive family support to be the primary source of support (Almeida et al., 2009). It is possible that U.S.-born Latinos might not perceive that other family members understand, as their experience with discrimination might be different and perhaps occurs with less frequency. This might especially be the case for those who experience intergenerational cultural conflict due to acculturation gaps.

For foreign-born Latinos, family support was found to moderate the relationship between everyday discrimination and depression in an unexpected direction. High family support was associated with decreased risk of depression, but only when everyday discrimination was low. As experiences of everyday discrimination increased, high family support was associated with an increased risk of depression, surpassing risk among those who reported low family support. This finding contradicts previous research that suggests that high levels of family support are protective for foreign-born Mexicans (Almeida et al., 2011). In another study, discrimination was found to be "relatively benign" for a predominantly foreign-born Mexican-origin respondents perceived higher levels of support, but was harmful among those who did not perceive significant support (Finch & Vega, 2003). Given the extensive literature providing support for the protective nature of family support among foreign-born Latinos, it is unlikely that the cause of increased risk of depression is reliance on family itself. Instead, it is possible that foreign-born Latinos with close-knit families view frequent experiences with discrimination as a threat to their family; thus contributing to increased psychological distress and increased risk of depression.

Increased acculturation might also provide an explanation for the present findings. Prolonged exposure to the U.S. and its mainstream culture is positively associated with acculturation and an erosion of protective factors against psychological distress and psychopathology, such as traditional Latino values, including *familismo* (Gil et al., 2003). As foreign-born Latinos become more acculturated, they are likely to experience increased discrimination, even more so than their U.S.-born and less acculturated foreign-born Latino counterparts (Finch et al., 2000). The relationship between family support and discrimination may then approximate that of U.S.-born Latinos, for which family support may contribute by augmenting the adverse effects of discrimination. Foreign-born Latinos who have resided in the U.S. for a significant amount of time might be particularly susceptible to the potential adverse effects of family relative to their recent arrival counterparts, as interactions with family tend to increase with time (Vega et al., 1991); thus increasing risk of depression among those experiencing greater frequency of discrimination.

Further investigating satisfaction of family support might provide a deeper understanding of discrepant findings of the role of family support. Perceived quality of support has been positively associated with quality of life (Ribas & Lam, 2010). Hovey (2000) reported that the perception of ineffective family support was associated with increased risk of depression. Canino et al (2008) unexpectedly found that among Latinas, substance use disorders were more prevalent among those who reported greater family support. The authors suggested the importance of differentiating between instrumental and emotional support. Family support in the present study specifically assessed frequency of emotional support. The present study did not account for perceived quality

and effectiveness of family support or for instrumental support, which refers to perception that one can rely on others for concrete/tangible assistance (e.g., money, car rides).

Ethnic Identity as Mediator of the relationship Between Discrimination and Depression

Foreign-born Latinos endorsed greater ethnic identity than U.S.-born Latinos. However, this difference was centered at the mean of the Likert-type scale and does not appear to be clinically significant. Neither a direct effect of ethnic identity on depression nor a protective effect of ethnic identity was observed. Additionally, ethnic identity was not found to moderate the relationship between discrimination (ethnic and perceived) and depression. These findings are at odds with the existing literature suggesting that ethnic identity is associated with psychological well-being (e.g., Wright & Littleford, 2002). In a study using the NLAAS Latino sample, Ai et al (2014) found a direct positive effect of ethnic identity on subjectively evaluated mental health after having accounted for sociocultural factors, including perceived discrimination. Additionally, greater assimilation to mainstream White culture and subsequent decreased ethnic identity has also been associated with poorer mental health outcomes (Gamst et al., 2002).

It has been hypothesized that ethnic identity (i.e., secure and shared identification with ethnic group) is protective against stressors related to being a person of color, such as ethnic discrimination (Phinney & Ong, 2007), which in turns contributes to mental health. Perez et al (2008) found that stronger ethnic identity was associated with lower perceived discrimination among NLAAS Latinos, suggesting that ethnic identity plays a protective role. More recently, Brittian et al (2014) replicated previous findings on the

mediating role of ethnic identity on ethnic discrimination and psychological well-being (Cronin et al., 2012). The authors found that ethnic discrimination was positively associated with ethnic identity in a sample of college students. Perceptions of unfair treatment and of society holding negative views about Latinos contributed to higher levels of ethnic identity, which in turn, was associated with a reduction in depressive symptoms. This phenomenon in which ethnic identity is reinforced in response to experiences of racial/ethnic discrimination has been termed rejection-identification (Branscombe et al., 1999).

Although the protective role of ethnic identity has empirical support, there is a body of literature that contradicts this notion and suggests that ethnic identity augments the adverse effect of risk factors, including discrimination, on mental health. Alamilla, Kim, and Lam (2010) investigated the effect of discrimination and minority status stressors on mental health functioning in a Latino sample. The authors found that ethnic identity augmented the effect of ethnic discrimination and psychological distress. In an experimental study, McCoy & Major (2003) found that the extent to which ethnic identity is protective against discrimination depends on level of ethnic identity prior to the experience of discrimination. Latino-American participants were randomly assigned to read an article describing severe and pervasive discrimination against Latinos in the U.S. Participants then completed a series of dependent measures assessing the extent to which they felt personally threatened by discrimination, ethnic identity, and depression. For participants who reported strong ethnic identity, reading about pervasive discrimination against Latinos was associated with greater depressed affect. The authors suggested that discrimination against the ingroup is likely perceived as a threat to the self, which in turn,

influences self-evaluation and contributes to negative affect. Alternatively, it has also been found that weak ethnic identity can be protective against the adverse effects of discrimination, as such experiences might not be perceived as threats to the self (Major, Kaiser, O'Brien, & McCoy, 2007).

Findings about the extent to which ethnic identity is protective against psychological distress have been inconsistent. Such discrepancy in findings raises concerns about our conceptualization of ethnic identity, a multifaceted construct that consists of various dimensions Phinney and Ong (2007) define ethnic identity as "a sense of peoplehood within a group, a culture, and a particular setting" and caution against the perception that ethnic identity is simply knowledge and understanding of one's ethnic group.

Given the complexity of the construct, no single measure is likely to fully capture all aspects of ethnic identity. Additionally, ethnic identity measures do not typically account for culture-specific factors (Fischer & Moradi, 2001), which further limits our understanding of ethnic identity as it relates to a specific ethnocultural group. In light of limitations, measuring multiple dimensions is ideal (Phinney & Ong, 2007). In a study highlighting the importance of investigating multiple dimensions of ethnic identity, Torres and Ong (2010) found that ethnic identity commitment (a sense of belonging or attachment) was protective following a discriminatory event, as it influenced intensity and recovery from daily discrimination. However, ethnic exploration (searching and increasing knowledge about one's ethnic group) exacerbated the effect of daily discrimination. By acknowledging multiple components of identity, the complex relationship between ethnic identity and mental health is better understood. The ethnic

identity measure in the present study was limited in that it did not account for the complexity and multidimensionality of ethnic identity. Therefore, it is possible that the effect of ethnic identity was not sufficiently captured.

An additional consideration is the role of ethnic identification, as this can influence endorsement of ethnic identity. According to the Pew Hispanic Center (Taylor et al., 2012), 51% of Latinos identity by their family's country of origin, 24% prefer to use pan-ethnic labels (Hispanic and/or Latino), and 21% prefer to identify as "American". U.S.-born Latinos are also more likely to endorse a sense of affinity with other Americans and the U.S. than are foreign-born Latinos (66% and 34%, respectively). Foreign-born immigrants are more likely to identify nationally, with only approximately 25% identifying as Latino or Hispanic (Arcia, Skinner, Bailey, & Correa, 2001). Moreover, Latino heterogeneity is a concept that is familiar to many Latinos, with 69% reporting that Latinos in the U.S. comprise many different cultures and only 29% agreeing with the statement that Latinos share a common culture.

Clinical and Public Health Implications

The findings in this study have significant clinical and public health implications. Discrimination, along with other acculturative and sociopolitical stressors, contributes to Latino health disparities (Williams & Mohammed, 2009) by way of increased psychological distress. Brondolo et al (2011) found that depression mediated the relationship between race-based threat and general health, accounting for almost 100% of this relationship among Latinos. These findings highlight the importance of developing culturally appropriate treatments designed to address coping with ethnic discrimination to ameliorate its long-term effects on mental and physical health. However, focusing on

factors that have previously been found to buffer against effects of discrimination (e.g.,

ethnic identity and family support) might not be sufficient. Although family support

partially mediated the relationship between ethnic discrimination and depression in the

present study, its contribution was minimal. More importantly, strengthening family

support among foreign-born individuals who are already endorsing significant

experiences with ethnic discrimination might be iatrogenic, as suggested by the

moderation of this relationship by family support. Thus, it is important to consider

alternative approaches to coping with ethnic discrimination (e.g., problem-solving

strategies, increasing agency).

      Culturally appropriate interventions to coping with ethnic discrimination and

other social contextual factors are promising (e.g., Noh & Kaspar, 2003). One such

treatment is behavioral activation, which focuses on identifying contextual factors (e.g.,

discrimination, prejudice, un/underemployment, financial strain) that contribute to

depression and effecting change by way of addressing (i.e., modifying) behaviors rather

than cognitions (Santiago-Rivera et al., 2008). Behavioral activation has been

successfully adapted to address depression in Latinos (Kanter, Santiago-Rivera, Rusch,

Busch, & West, 2010; Kanter et al., 2015). Its relevance to Latinos lies on its emphasis

on "contextualizing client problems in terms of environmental factors [e.g.,

discrimination]" and addressing these with behavior change consistent with Latino values

and beliefs (Santiago-Rivera et al., 2008).

      Although such interventions are promising, they are insufficient as they only

address a symptom of a larger societal issue. Furthermore, such interventions place an

unwarranted burden on recipients of discrimination rather perpetrators of discrimination.

A more proactive approach to addressing discrimination at a macrolevel and its effects is necessary. Further research is required to determine the extent to which such interventions are effective in reducing the detrimental effects of discrimination. "The point is not to medicalize social problems; rather it is to understand and address how social inequity harms health" (Krieger et al., 2011, p. 1712).

Strengths and Limitations

There are some limitations to the methodological approach taken in the present study that must be considered. For one, although the Latino sample in the NLAAS is among the largest and most representative of the Latino population in the U.S., within-group comparisons are limited. Given the complexity of the statistical approach and limited endorsement of past year depression, disaggregating the total Latino sample into subgroups based on nationality was not practical. Nonetheless, the total Latino sample was disaggregated by nativity status to further our understanding of Latino heterogeneity. Another important consideration related to the sample is the extent to which the political climate at the time of collection influenced respondents' experiences with discrimination. Exclusionary immigration policies and anti-immigrant sentiment represent forms of racism/discrimination at the structural level and are likely to produce experiences of everyday discrimination at the individual level (Viruell-Fuentes et al., 2012).

Due to the limited endorsement of past year depression, power to observe effects of ethnic discrimination for the foreign-born Latino sample may have been insufficient. Additionally, although the data included indication of whether the respondent believed discrimination was based on race, ethnicity, accent, and immigration status, or other reasons (e.g., sex, age, weight), it was not possible to conduct further exploratory

analyses investigating the differential effects of perceived reasons for everyday

discrimination. Related to measurement, given the survey's goal of capturing the effect of

multiple sociocultural and sociodemographic factors, some scales were not formally

normed or validated and others were not included in their entirety (e.g., family cultural

conflict scale adapted from the Family/Culture Stress subscale of the Hispanic Stress

Inventory). Finally, the cross-sectional design of the study is a limitation, as causality

cannot be assessed and only assumed. It is possible that individuals who experience

psychological distress may be more susceptible and more likely to perceive

discrimination relative to those healthy individuals.

Despite these limitations, there are several strengths that must be acknowledged.

As noted earlier, the NLAAS is among the most ambitious Latino mental health surveys.

Prior surveys failed to capture epidemiological data from Spanish-speaking Latinos,

limiting generalizability of findings. Additionally, the present study included a

multidimensional approach to understanding risk for depression. Alegria and colleagues

(2006) stress the importance of approaching mental health research from a

multidimensional integrative approach in which the interplay between sociocultural

factors is taken into account. Addressing multiple aspects of the Latino experience and

exploring their role in risk for depression can further our understanding of Latino mental

health.

Conclusion

Both ethnic identity and family support were found to conditionally affect the

relationship between perceived ethnic discrimination and depression in Latinos in the

U.S. Perceived ethnic discrimination was associated with an increased risk of depression

for U.S.-born Latinos, but not for foreign-born Latinos. Family support partially mediated the relationship between ethnic discrimination and depression, but only for U.S.-born Latinos. For foreign-born Latinos, family support was moderated the relationship between perceived ethnic discrimination and depression.

These findings further highlight the importance of accounting for Latino heterogeneity. Theoretically, protective social and cultural factors are expected to have a greater effect for foreign-born Latinos relative to U.S.-born Latinos, as it is presumed that the protective qualities of these factors wane with increased acculturation (e.g., Gil et al., 2003). Findings indicating the absence of differential mediating effects of ethnic identity and family support despite previous findings (e.g., Brittian et al., 2014) suggests that Latino heterogeneity goes beyond nativity. The findings in this study suggest that the effect of perceived ethnic discrimination on mental health, as well as the role of protective factors of ethnic identity and family support in this relationship, is complex and can vary as a function of various sociodemographic and sociocultural factors.

Future Directions

Future directions include the inclusion of additional variables that can further our understanding of risk for depression among Latinos. The role of language may be of particular interest in light of findings suggesting that language is associated with psychological well-being. Bilingualism is associated with better self-rated physical and mental health among foreign-born Latinos (Schachter, Kimbro, & Gorman, 2012). Additionally, it would be invaluable to gain a better understanding of the impact of residential segregation and ethnic enclaves on the relationship between other sociocultural factors (e.g., acculturation, social support) and depression. Relatedly, it

would be of interest to explore variation in the effect of discrimination on risk of

depression as a function of place (e.g., neighborhood, city). In light of recent migratory

patterns (i.e., increased migration to Southern states), it would also behoove Latino

mental health researchers to explore factors that can differentially impact Latinos' mental

health across these geographic regions, such as anti-immigrant sentiment in a given

region (e.g., states with strict immigration policies). Regional and census tract data are

available in the NLAAS, which provides the opportunity to analyze these complex

relationships to further elucidate Latino mental health.

       The nuances and complexities that surround Latino mental health require more

elegant and complex approaches to analyzing the interplay of various sociocultural and

sociopolitical factors that contribute to increased risk for psychopathology (Alegria et al.,

2006).

       Specific to the effect of discrimination on mental health, exploring additional

forms of discrimination (e.g., immigration status, skin color, accent) and sources of

discrimination (i.e., race/ethnicity of individual discriminating against respondent) is

necessary. For instance, discrimination based on skin color has been found to contribute

to economic disparities (Hersch, 2011), which itself contributes to health disparities.

Understanding of how awareness of such discriminatory practices, which are often

overlooked, affects mental health could contribute to development of intervention

programs at institutional levels. An additional consideration is the role of intersectionality

(e.g., gay Latino male, lesbian African American female) on mental health.

Intersectionality theory "shifts focus away from individual-level conceptualizations of

culture….to structural examinations that take into account the power dimensions of race,

class, gender, and immigrant status hierarchies, and how these shape health inequities"

(Viruell-Fuentes et al., 2012, p. 2100). By investigating intersectionality we can gain a

deeper understanding of whether discrimination based on multiple minority memberships

have a more deleterious effect on mental health, as such discrimination would be

analogous to the concept of 'double jeopardy'.

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