ABSTRACT

Title of Dissertation: THE INFLUENCE OF PRE-MIGRATION FACTORS AND POST-MIGRATION CLIMATE OF THE RECEIVING COMMUNITY ON THE PSYCHOLOGICAL DISTRESS OF LATINO IMMIGRANTS

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Over forty million foreign-born residents currently live in the United States. Latinos make up the largest population of immigrants living in the U.S. Previous research suggests that Latino immigrants often experience pre-migration stressors, such as traumatic experiences, political upheaval, and unplanned migration. These stressors may have a negative impact on immigrants' post-migration mental health. Research also suggests that the post-migration climate of the receiving community may inform the connection between pre-migration experiences and post-migration mental health.

The current study examined the relationship between Latino immigrants' reasons for migration, migration planning, and pre-migration experience of political and/or interpersonal violence, and post-migration symptoms of psychological distress. In addition to examining the effect of these pre-migration factors, the current study also examined the community "climate" experienced by Latino immigrants post-migration by

assessing the influence of three post-migration factors: 1) community support and engagement, 2) discrimination, and 3) employment. The study was a secondary analysis of data collected for the National Latino and Asian American Study, which focused on the mental health and service utilization of Latinos and Asian Americans. Participants included 1,629 Latino immigrants from across the United States.

Results indicated that pre-migration experience of political and/or interpersonal trauma, post-migration experience of discrimination, and female sex were positively associated with psychological distress. Post-migration employment was negatively associated with psychological distress. In addition, discrimination modified the association between unplanned migration and psychological distress; the relationship between unplanned migration and psychological distress decreased for participants who reported more discrimination. Furthermore, employment modified the association between political and/or interpersonal trauma and psychological distress; the connection between trauma and psychological distress increased among those who reported having less employment. Recommendations for further research were presented. Policy and clinical practice implications were discussed, particularly given the current climate of high anti-immigrant sentiment and hostility in the U.S.

THE INFLUENCE OF PRE-MIGRATION FACTORS AND POST-MIGRATION CLIMATE OF THE RECEIVING COMMUNITY ON THE PSYCHOLOGICAL DISTRESS OF LATINO IMMIGRANTS

By

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Dedication

This dissertation is dedicated to my grandmother, Virginia Hilda Obregón Belloso.

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Chapter 1: Introduction

Statement of the Problem

Over forty million foreign-born residents currently live in the United States (U.S. Census, 2014). In addition, it is estimated that by 2060, the foreign-born population in the U.S. will reach 78 million, accounting for 18.8% of the total U.S. population (U.S. Census, 2014a). Immigrant families are diverse in their immigration background; some come to the United States as authorized immigrants, some are refugees, and some are undocumented. Reasons for immigration to the United States also vary among individuals; some are driven to immigrate as a result of the political instability in their home country, others have had to seek relief from natural disasters, and others have been motivated by economic and educational aspirations. In addition, some immigrants have survived traumatic experiences in their home countries and may have been forced to flee to protect themselves and their family members. The immigration experience can have a profound and lasting impact on the lives of immigrants and their families. As the immigrant population continues to grow, and immigrant families become a significant part of the U.S. population, their health will have an impact on the future and health of this country. Therefore, it is important to devote attention to the immigration experiences that contribute to the mental health of immigrants.

Latinos, the focus of this study, make up the largest population of immigrants living in the U.S. – in fact, between 2000 and 2011 Latinos accounted for 47% of the increase in the population of foreign-born individuals in the United States (Motel & Patten, 2013). The rapid rate of growth of Latino immigration has been met with hostility and anger on the part of some U.S. citizens, making this a contentious and very important

political issue (Zuniga, 2002). In addition, varying U.S. policies toward different Latin American countries have had disparate effects on individuals emigrating from those countries. For example, Guatemala, El Salvador and Nicaragua experienced civil wars throughout the last half of the 20th century (Chacon, 2011). Many individuals affected by these conflicts immigrated to the United States in search of stability (Coutin, 2011). However, the U.S. response to these conflicts differed by country, and political asylum was offered to some groups but not others, making the immigration experiences of these individuals very different.

Researchers agree that migration is a stressful, "non-normative" life event for Latinos, which forces individuals to readapt on several levels (Garcia et al., 2002). Latino immigrants typically experience a great deal of stress stemming from separation from family members and broken bonds with friends, leaving them with reduced psychological and physical resources (Ibañez et al., 2015). Many immigrants also experience discrimination, language difficulties, unstable and undesirable working conditions, new cultural expectations, feelings of not belonging in the mainstream society, and anxiety over life in an unfamiliar environment (Bekteshi & van Hook, 2015; Hovey & Magaña, 2002; Letiecq et al., 2014; Vega et al., 1985).

As a result, studies have found a variety of negative mental health outcomes associated with the experience of immigration, including decreased mental health. Coffman and Norton (2010) analyzed data collected from 99 recent Latino immigrants in a large Southeastern city. Their findings indicated depression was a significant problem for this group, as 26% of participants reported symptoms of depression. In addition, depression symptoms were positively correlated with the experience and stress of

immigration, as measured by the Demands of Immigration scale (DI; Aroian, Norris, Tran, & Schappler-Morris, 1998). Acculturative stress, or the stress that comes with adjusting to a new country (Williams & Berry, 1991), seems to underlie many of the negative health outcomes experienced by immigrants once they are in the U.S. For example, a study of Central American immigrants (n=78) explored the effect of acculturative stress, which was measured using the Social, Attitudinal, Familial, and Environmental Acculturative Stress (SAFE) scale (Mena, Padilla, & Maldonado, 1987), with items such as, "*people think I am unsociable when in fact I have trouble communicating in English*," and, "*it bothers me that family members I am close to do not understand my new values.*" Acculturative stress was significantly correlated with depression. In addition, acculturative stress, depression, and ineffective social support were positively correlated with level of suicidal ideation (Hovey, 2000). Studies have also examined the impact of immigration on anxiety levels. Hovey and Magaña (2002) conducted a study to understand the prevalence of symptoms of anxiety disorders among Mexican migrant farmworkers in the Midwest. Results suggested the populations had a high level of anxiety as a whole and that acculturative stress (as measured by the SAFE scale, described above) was associated with level of anxiety.

However, other studies have not shown negative mental health effects for some Latino immigrants. In fact, some research indicates recent Latino immigrants experience better mental health than their U.S-born counterparts. Alegría et al. (2008) examined data from the National Latino and Asian American Study and the National Comorbidity Survey Replication, to determine the prevalence of mental illness among immigrant and non-immigrant Latinos. Latinos who were born in the U.S. reported higher rates of

psychiatric disorders than Latinos who were foreign-born. Dey and Lucas (2006) explored the health-related characteristics of U.S.- and foreign-born Latino, White, Black, and Asian adults using data from the National Health Interview Surveys; foreign-born individuals in their sample were less likely to have a high school diploma and more likely to be poor. In addition, foreign-born Latinos were least likely to have a usual source of care or health insurance. Nonetheless, immigrant Black and Latino adults experienced less psychological distress than their U.S.-born counterparts. These findings are contradictory to what one might expect, as we also know immigrants often face risk factors, such as low SES, limited English proficiency, and discrimination -- factors that have been associated with decreased mental health in other studies (Coffman & Norton, 2010; Hiott et al., 2006).

Researchers have proposed the existence of an "immigrant paradox," given findings that suggest having been born in a foreign country can function as a protective factor for the health of recent immigrants (Markides & Coreil, 1986). It appears that despite the difficulties experienced in migration and acculturation, many recent immigrants are able to flourish in the United States, and may even experience better physical and mental health outcomes than some of the U.S.-born population (Castro, 2013). Thus, despite a body of research that points to the negative impact of the immigration experience, other research suggests immigrants in the United States may, in some instances, be in similar or better health than U.S. natives.

A recent study of Asian immigrants may suggest a strategy for making sense of these conflicting findings for Latino immigrants. Gong, Xu, Fujishiro, and Takeuchi (2011) explored the life course perspective principles of human agency and timing, and

studied how these principles affect the mental health outcomes of Asian immigrants. Results indicated that planning and reasons for migration were significant predictors of mental health. That is, those who migrated for clear life-improving reasons were less psychologically distressed than those who migrated with less clear reasons. Additionally, having a good plan for migration was associated with decreased levels of psychological stress and the likelihood of experiencing anxiety disorders. This study suggests the context in which an individual migrates to another country is important, and highlights the importance of understanding the pre-migration contextual factors of both reasons and planning for other immigrant populations.

One recent study examining the context of migration "planning" for Latino immigrants was Torres and Wallace's (2013) examination of the impact of pre-migration circumstances (i.e., participant report of "having to" migrate and unplanned/planned migration) on post-migration psychological and physical health. Results suggested that "having to" migrate was associated with worse psychological health for Puerto Rican and Cuban women, compared to Mexican women who reported "wanting to" migrate. In addition, unplanned migration was significantly associated with fair or poor, as opposed to good, physical health for women. This study provided support for the need to further examine pre-migration experiences (i.e., planning and reasons for migration) of Latino immigrants. The focus of this study was specifically on the planning process that takes place when immigrants decide to leave their home country. Additional insight could be gained by exploring migration planning, along with the specific reasons that lead immigrants to leave their home country, just as was done in the Gong et al. (2011) study

for Asian immigrants. It is important to understand the reasons why individuals and families decide to immigrate, and how that decision affects their mental health.

In addition to reasons for migration and planning for immigration, a third contextual factor which may help make sense of the mixed mental health findings for Latino immigrants, is the experience of pre-migration trauma. A handful of studies find that some immigrants experience traumatic events and violence in their country of origin; in fact, these traumatic events often lead individuals to escape their country of origin in search of safer living conditions. (Coutin, 2011; DeSouza, 2010). Because stressful and traumatic experiences faced by immigrants pre-migration may have long-term consequences, it is important to conduct additional research to better understand the role of these experiences in later adjustment in a new country.

Within the clinical literature there is also recognition that many Latino immigrants endure stressful, often traumatic, experiences in their home countries before coming to the United States (Guarnaccia et al., 2005), but this topic has received little empirical attention. In addition to experiences of political violence and war, many Latin Americans have endured interpersonal violence, such as physical and sexual violence (Tummala-Narra, 2014). This history of violence can affect the mental health of individuals, making them more susceptible to struggles with PTSD, anxiety, and depression (Asner-Self & Marotta, 2005).

Research suggests that individuals who experience war and political violence are more likely to experience symptoms of depression and other forms of psychological distress (Hobfoll, Hall, & Canetti, 2012; Steel et al., 2009). Given the political instability in Latin America in recent decades (i.e., civil war, military dictatorship, guerrilla

warfare), it is important to study this particular form of trauma. In addition, research suggests that interpersonal trauma has particularly damaging consequences on the mental health of individuals (Archambeau et al., 2010; Hammen, 2005; Iverson et al., 2013). Experiences of interpersonal violence, such as physical or sexual violence, usually lead to higher rates of psychological distress than non-interpersonal events, such as car accidents or natural disasters (Forbes et al., 2012). Fowler, Allen, Oldham, & Frueh (2013) studied the link between trauma and depression symptoms in a sample of 705 clinical participants. Interpersonal trauma (such as abuse and assault) was correlated with depression symptoms, while non-interpersonal trauma (such as natural disasters or accidents) was not associated with depression symptoms. Furthermore, the experience of political trauma is often not isolated. Researchers find that political trauma is often experienced with other forms of interpersonal trauma (Fortuna, Porche, & Alegría, 2008; Kessler, 2000), and that even witnessing violence can have lasting impacts on mental health (Weingarten, 2003; 2004). Thus, past research suggests the need to study both political and interpersonal traumatic experiences, as both seem to have lasting effects on the mental health of individuals.

The current study used a cross-sectional design and analysis of secondary data to examine the immigration experiences of Latino immigrants. The study explored the association between retrospective reports of pre-migration experiences and mental health outcomes for immigrant adults. More specifically, this study examined the relationship between Latino immigrants' 1) reasons for migration (life-improving and political upheaval reasons), 2) planning for migration, 3) pre-migration experience of political and/or interpersonal violence, and 4) post-migration symptoms of psychological distress.

In addition to examining the effect of these pre-migration factors, the current study also examined factors in the host country that might moderate the impact of these earlier experiences. While researchers have studied the impact of acculturation stress on the mental health of immigrants living in the U.S., Torres and Wallace (2013) found that researchers often overlook the "diverse social, political, and economic climates in receiving communities," (pg.1619). Further, the impact of these climates on the mental health of immigrants cannot be fully explained by measures of acculturation. They refer to these factors collectively as "immigration-related stress," as they encompass a broader set of characteristics of the community into which one immigrates, not only characteristics associated with the stress of adapting to a new culture. Thus, this study also addressed a gap in research by exploring the receiving community "climate" experienced by Latino immigrants post-migration. The goal in studying the climate of the receiving community was to make sense of the connection between pre-migration experiences and post-migration psychological distress.

To better understand the climate of the receiving community, the influence of three post-migration factors was explored: 1) community support and engagement, 2) discrimination, and 3) employment (Definitions for selected terms can be found at the end of this chapter). Community support and engagement refers to the extent to which individuals feel they can rely on those in their neighborhood and surrounding community. Researchers have found that social support and social networks are extremely important for immigrants as they adjust to a new country (Hovey & Magaña, 2002). The ability to rely not only on family and friends, but also the people in one's surrounding

neighborhood, could have a powerful impact on one's ability to adjust to a new country and on her/his mental health.

Discrimination is also an indicator of the climate of the receiving community, as it conveys negative beliefs and attitudes those in the host country may have about immigrants. Furthermore, the experience of discrimination has been associated with decreases in mental health for immigrants (Tran et al., 2010).

Finally, employment is also an indicator of the climate in the receiving community, as the ability to work is critical for immigrants' survival, and unemployment can be a significant stressor (Padilla et al., 1988). The ability to procure work could help immigrants become more established in their new country, and help them feel welcome in their new community (Lopez et al, 2012).

This study addressed several gaps in the literature. First, research on Latino immigrants' pre-migration experiences was still very limited. Only a couple of studies had explored reasons for migration and planning for migration among Latino immigrants. In addition, these experiences had been researched and found significant for some Asian immigrants, suggesting the need for further exploration with other immigrant groups. Furthermore, previous research yielded conflicting findings regarding the mental health of Latino immigrants, suggesting a need to study additional immigration-related factors. Finally, as suggested by Torres and Wallace (2013), the climate of the receiving community was an understudied area and required exploration.

To better understand how pre-migration stressors experienced by immigrant adults were associated with post-migration psychological distress, and how the climate of the receiving community buffered this relationship, the Stress Process Model (Pearlin,

Menaghan, Lieberman, & Mullan, 1981) was used. This model suggests that stress experiences can best be understood by exploring sources of stress, factors that buffer that stress, and the consequences that result from stress and buffering. In other words, the impact of a stressful experience can be buffered by a number of factors, such as social supports and resources. In the current study, some pre-migration experiences (political upheaval reasons for migration, unplanned migration, and experiences of interpersonal or political trauma) were regarded as stressors, while symptoms of psychological distress were understood as the outcomes. In addition, the post-migration climate of the receiving community (community support and engagement, low discrimination, and employment) was explored as a buffer. The Stress Process Model concepts are depicted in the conceptual model for the current study, found at the end of this chapter.

In sum, the goals of this study of Latino immigrants were:

1) To examine the relationship between life-improving and political upheaval reasons for migration and post-migration psychological distress.
2) To examine the relationship between planning for migration and post-migration psychological distress.
3) To examine the relationship between pre-migration experience of political and/or interpersonal trauma and post-migration psychological distress.
4) To explore whether the relationship between life-improving reasons for immigration and post-migration psychological distress was moderated by factors associated with the climate of the receiving-community, specifically community support and engagement, discrimination, and employment.

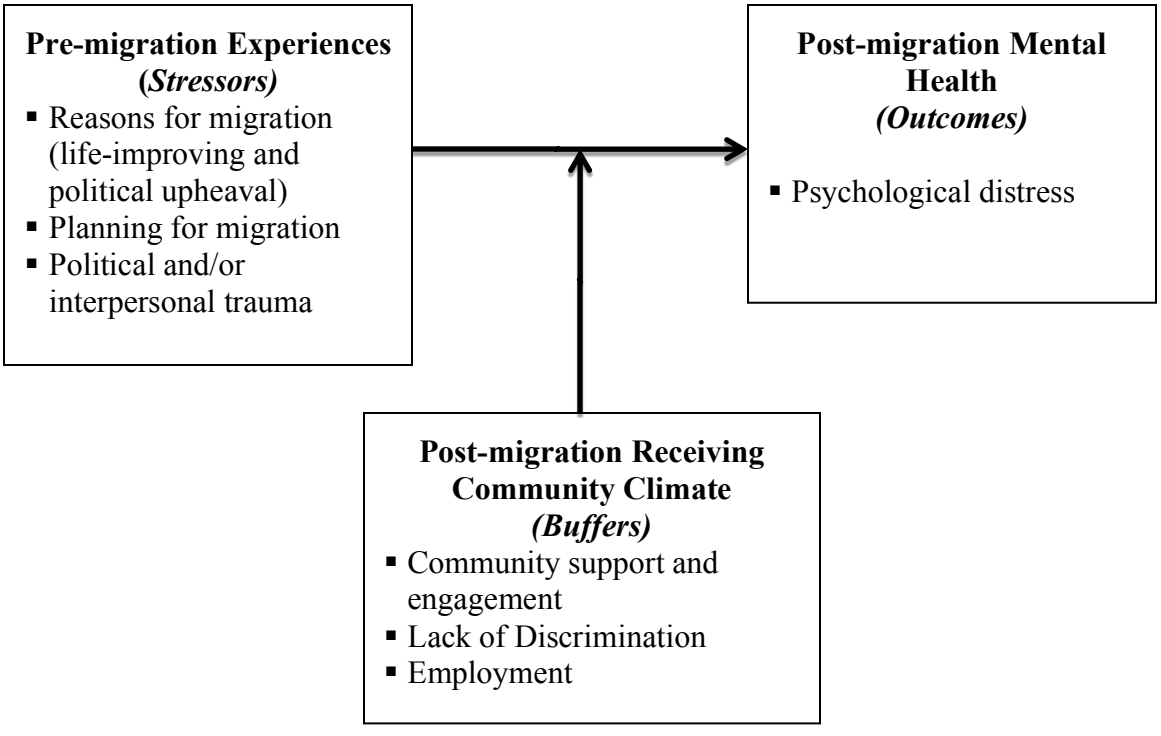
5) To explore whether the relationship between political upheaval reasons for immigration and post-migration psychological distress was moderated by factors associated with the climate of the receiving-community, specifically community support and engagement, discrimination, and employment.
6) To explore whether the relationship between planning for migration and post-migration psychological distress was moderated by factors associated with the climate of the receiving-community, specifically community support and engagement, discrimination, and employment.
7) To explore whether the relationship between pre-migration experience of political and/or interpersonal trauma and post-migration psychological distress was moderated by factors associated with the climate of the receiving-community, specifically community support and engagement, discrimination, and employment.

This study involved secondary analysis of data collected for the 2002-2003 National Latino and Asian American Study (NLAAS; Alegría et al., 2004). The NLAAS (N=4,649) is a nationally representative survey designed to assess the prevalence of mental disorders and mental health care use among Latino and Asian American individuals in the United States. The NLAAS is one of the few nationally representative datasets to include a substantial sample of Latino immigrants. Furthermore, the NLAAS is the only national study to date with a focus on the mental health of Latinos. Since the focus of the current study was on the mental health of Latino immigrants, this was an ideal dataset for analysis. While the data were collected over a decade ago, the analyses and findings of this study are still relevant today. Some of the details regarding the lives

of Latino immigrants may be different today. However, many of the conditions, the discussions, and the rhetoric surrounding Latino immigration have remained unchanged. Furthermore, a focus on the conditions in the receiving community is more important and needed than ever, given the negative discussions that persist about Latinos and immigrants in general.

The response rate among Latinos in the NLAAS was 77.6%. Participants were 18 years or older, and were interviewed in Spanish and English. A total of 2,554 Latino individuals were interviewed, and were divided into 4 ethnic subgroups: Mexican (n=868), Puerto Rican (n=495), Cuban (n=577), and Other Latino (n=614; which included participants from the Dominican Republic, Colombia, El Salvador, Ecuador, Guatemala, Honduras, Peru, and Nicaragua). Of these Latino participants, 1,629 (63.8%) indicated they had been born outside of the U.S. Participants were not asked about their legal status. Thus, it was not possible to determine what percentage of participants immigrated and were living in the U.S. with or without legal documentation.

Conceptual Model for the Current Study



Definition of Terms

- *Mental Health:* In this study, operationalized as self-reported psychological distress, which is defined as "a state of emotional suffering characterized by symptoms of depression and anxiety sometimes accompanied by somatic symptoms" (Drapeau, Marchand, & Beaulieu-Prevost, 2012, p. 123).

- *Discrimination*: Self-reported experience of unfair treatment as a result of one's ethnic/racial or cultural background.

- *Community Support and Engagement*: Operationalized as self-reported neighborhood cohesiveness (i.e., the degree to which people in one's neighborhood get along and can rely on each other).

- *Political and/or Interpersonal Trauma*: Self-reported experience as a victim or witness of traumatic events as a result of war, political instability, or interpersonal violence (i.e., sexual assault, intimate partner violence, physical abuse).

Chapter 2: Literature Review

Introduction

The research literature on the immigration experience of Latino immigrants suggests that it is a stressful and difficult process (Garcia et al., 2002; Hovey & Magaña, 2002; Vega et al., 1985). Prior to immigrating, individuals may experience traumatic events in their home country due to war and other conflicts. They may be victims of torture or other types of violence. In addition, Latino immigrants face several stressors once they have arrived in the United States, including language barriers, racism and discrimination, inability to procure employment, underemployment, and loss of social support and cultural identity. Furthermore, immigrants must learn to adapt to a new culture with different values, beliefs, gender roles, religious practices, and family structure. Chung, Bemak, Ortiz, and Sandoval-Perez (2008) find that "underlying many of these stressors is the challenge of coping with the unique demands that are linked to the highly individualistic, competitive culture that characterizes the dominant cultural group in the United States" (pg. 311). This culture may be at odds with the culture of many Latino immigrants who come from more collectivist societies.

A significant body of research finds that, perhaps due to the stress of immigration, Latino immigrants are at increased risk for mental health problems (Familiar et al., 2011). Despite these findings, other research suggests that Latino immigrants may actually be in better mental and physical health than U.S.-born Latinos. These conflicting findings were explored in this literature review. In addition, potential pre- and post-migration factors associated with these conflicting findings were reviewed. Specifically, the pre-migration experiences of immigrants, including reasons for migration, planning for migration, and

exposure to political and/or interpersonal trauma, were reviewed, as were the post-migration experiences of community support and engagement, discrimination, and employment. While the vast majority of the research presented in this literature review was about Latino immigrants, surprisingly, in some cases the variables of interest (e.g. reasons for migration, planning for migration) have not been studied in Latino populations. Therefore, some of the research reviewed here referenced non-Latino immigrant research, as it was helpful and instructive to the current study.

Additionally, the research in this literature review focused on mental health as an outcome. In this study, mental health was operationalized through a measure of psychological distress. Psychological distress has been widely used as a measure of mental health. It has been defined as, "a state of emotional suffering characterized by symptoms of depression and anxiety sometimes accompanied by somatic symptoms" (Drapeau, Marchand, & Beaulieu-Prevost, 2012, p. 123). Measures of psychological distress often include questions about symptoms of depression and anxiety (Mirowsky & Ross, 1989). Furthermore, researchers have suggested that focusing mental health research on measures that focus solely on depression or anxiety may ignore the experiences of individuals suffering from general emotional distress – a range of experiences that are painful and take a toll on individuals, but do not meet criteria for clinical depression or anxiety (Mirowsky & Ross, 2002). Therefore, in this literature review, research regarding depression, anxiety, as well as the overarching concept of psychological distress was reviewed.

The Mental Health of Latino Immigrants: Conflicting Findings

Researchers have found that Latino immigrants experience difficulties adjusting to a new country, and oftentimes these experiences lead to poor mental health outcomes. Black, Markides, and Miller (1998) studied the prevalence of depressive symptoms in a sample of 2,823 elderly Mexican American participants. The sample was part of the Hispanic Established Populations for the Epidemiologic Study of the Elderly (EPESE), which involves a series of surveys conducted throughout the Unites States with the goal of learning more about the physical and mental health of older adults. The Hispanic EPESE was conducted in 1993-1994 in Texas, Colorado, New Mexico, Arizona, and California, with participants who self-identified as Mexican-American and had been born in Mexico or the U.S. Results indicated that immigrant women in general, and recent immigrants (including men that had recently migrated) were at greater risk for symptoms of depression than participants of Mexican descent that were born in the U.S.

Hiott, Grzywacz, Arcury, and Quandt (2006) conducted a study to determine factors affecting immigrant Mexican individuals' mental health. Interviews were conducted with 150 Mexican immigrants who had been in the United States for less than five years. The mean age of the sample was 29.6 (SD = 8.1 years), and they had a wide range of educational levels. Forty percent of participants reported having a level of anxiety and depression that could impair their functioning. In addition, social marginalization (the feeling of being excluded because of one's ethnic background) was associated with higher levels of anxiety and depression for men. Separation from family was associated with higher levels of anxiety and depression among women. Perreira and Ornelas (2011) studied the role of the immigration experience in the development of

depressive symptoms among a group of 281 Latino parents in North Carolina. The participants were caregivers of youth participating in the Latino Adolescent Migration, Health, and Adaptation Project (LAMHA). The majority of participants were mothers who had emigrated from Mexico. Results indicated several factors that were strongly associated with the development of depressive symptoms among Latino immigrants; these factors included high poverty levels pre-migration, stressful experiences during migration, and discrimination and racial problems in their settlement neighborhood post-migration.

Breslau et al. (2011) explored the risk for depression and anxiety among Mexican immigrants. They compared a group of 554 Mexican immigrants living in the United States to a group of 2,519 non-immigrants living in Mexico. The non-immigrant participants living in Mexico were family members of people who have migrated to the U.S., but had themselves remained in Mexico. This was done to control for pre-migration family level factors that might skew the results. Data analyzed in this study were collected as part of epidemiological surveys of psychiatric disorders collected in Mexico and the U.S. between 2001 and 2003. Results indicated that immigrants in the U.S. had significantly higher risk for depression and anxiety than non-immigrants living in Mexico, providing support for other findings that suggest that migration has an adverse effect on immigrants' health.

Letiecq, Grzywacz, Gray, and Eudave (2014) studied the mental health of Mexican migrant men in the Rocky Mountain West (primarily Montana). In-person interviewer-assisted surveys were conducted with 134 migrant men between 2009 and 2011. Researchers found that 46% of participants reported experiencing depressive

symptoms meeting the criteria for clinical concern. Single men were significantly more likely to report depressive symptoms than married men. Predictors of depression in this group included family separation, having to send remittances to Mexico, fearfulness (including fear of being deported, of ICE, and of economic difficulties), concerns about police confrontation, poor treatment received by non-Latinos, and lack of social support.

While several studies have established the negative impact of the immigration process on the mental health of Latino immigrants, other literature points to a different phenomenon. Researchers have found that in some cases, Latino immigrants appear to be better off physically and mentally than Latinos born in the United States (Alegría et al., 2008; Dey & Lucas, 2006). This finding is referred to as the "immigrant paradox" (Markides & Coreil, 1986).

Alegría et al. (2008) were interested in understanding this immigrant paradox, which has been greatly discussed in the literature in recent years. Data from the National Latino and Asian American Study (NLAAS) and the National Comorbidity Survey Replication (NCS-R) were combined to estimate the rates of lifetime psychiatric disorders in a sample of Latino immigrants. The sample included 4,222 non-Latino White participants from the NCS-R and 2,554 Latino participants from the NLAAS. Results indicated that Latinos had lower risk for psychiatric disorders than non-Latino White participants. In addition, Latino immigrants had lower rates of psychiatric disorders than Latinos who had been born in the U.S. A more in-depth analysis was conducted, looking at the study sample by country of origin and nativity. This analysis indicated only partial support for the immigrant paradox, as not all groups experienced mental health problems as would be expected. The immigrant paradox remained consistent for Mexican

individuals, as Mexican immigrants reported significantly lower prevalence of anxiety and depressive disorders than U.S.-born individuals of Mexican descent. For Cuban and other Latino individuals, when compared to their U.S.-born counterparts, the paradox only remained constant for substance disorders. There was no support for the immigrant paradox among Puerto Rican participants.

Ojeda, Patterson, and Strathdee (2008) explored the association between immigration-related factors and the substance use behaviors of immigrant groups. Data from 29,926 Latino and White participants of the 2002 National Survey on Drug Use and Health were used. Risk of substance use and self-reported lifetime substance use were measured. Immigrant participants were less likely to use substances, specifically cigarettes, marijuana, LSD, and cocaine, than White participants who had been born in the United States. Immigrant Latinos were less likely to use substances than Latinos who had been born in the U.S. In addition, Latino immigrants were less likely to use cigarettes, LSD, and marijuana than White (non-Latino) immigrants. The researchers suggest that being foreign born and Latino appear to be protective factors against substance use.

Cook, Alegría, Lin, and Guo (2009) have found that a higher risk for psychiatric disorders among Latino immigrants is associated with increased time in the United States. In their study, which was a secondary analysis of data collected for the National Latino and Asian American Survey (NLAAS), Latino immigrants who had been in the United States for 10 years or less had a significantly lower rate of depressive disorder than Latinos who were born in the U.S. Additionally, no significant differences were found between U.S.-born Latinos and Latino immigrants who has been in the U.S. for

more than 11 years. However, differences in rate of psychiatric disorder between U.S.-born and immigrant Latinos disappeared after controlling for the covariates of gender, age, marital status, citizenship, employment status, years of education, parents' years of education, English-language proficiency, and health insurance, with one exception. Latinos who had been in the U.S. for 21 or more years, were more likely to report an anxiety disorder, compared to U.S.-born Latinos. Thus, it seems that for Latino immigrants, the risk of developing mental health disorders increased with time spent in the U.S.

The conflicting findings regarding Latino immigrants' mental health and their migration experiences need to be further explored. Findings suggest that Latino immigrants are at risk for mental health problems, while also suggesting that they are better off than their U.S.-born counterparts. Public health researchers have attempted to make sense of the conflicting findings by focusing on "the process of cultural adaptation, as this also involves the adoption of certain unhealthy behaviors with greater duration of residency within the United States" (Castro, 2013, p.1541). Interestingly, the mental health literature points to three pre-migration factors that may help understand these conflicting findings regarding Latino immigrants' mental health. These factors—reasons for migration, planning for migration, and traumatic experiences pre-migration—will be discussed next.

Pre-Migration Factors That May Help Explain Conflicting Findings

While the impacts of many factors have been studied in an effort to better understand the relationship between immigration and mental health, three pre-migration factors seem worthy of additional attention for Latino immigrants: reasons for migration,

planning for migration, and experiences of political or interpersonal violence. These factors will be explored in more detail.

Reasons for migration and planning for migration. The reasons one chooses to migrate and the amount of planning that goes into the migration are different factors; however, they have typically been studied together. Thus, they will be reviewed together since the literature sources for the two variables have a high degree of overlap. They will, however, be treated as separate variables in the current study, as they have been in most of the literature reviewed here.

There is some clinical research to suggest that the planning and decision-making process that occurs before migration is associated with the psychological functioning of Latino immigrants. Grzywacz, Quandt, Early, Tapia, Graham, and Arcury (2006) propose that immigrants experience incompatible expectations as a result of the decision to migrate. For example, some immigrants may feel compelled to immigrate to the United States in order to provide better opportunities for their families; however, migrating to the U.S. may force them to leave family members behind and, in some sense, neglect some of their family duties. The researchers conducted a study to understand how those competing tensions (referred to as "family-related ambivalence") affect the mental health of immigrants. Participants were 60 male migrant workers in North Carolina who were 18 or older. The majority of participants had the equivalent of a high school education or less (90%), and 95% of them were from Mexico. All men had children -- about half had one or two, while the rest had up to six children. Psychological distress was measured using the anxiety subscale of the Personality Assessment Inventory (PAI; Morey, 1991), the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), and the

Migrant Farmworker Stress Inventory (MFWSI; Magaña & Hovey, 2003). Alcohol dependence was also assessed, using the CAGE, which is a short instrument used in clinical settings to identify alcohol abuse and dependence (Cherpitel, 1999). Three indicators of family-related ambivalence were created: marital ambivalence, which referred to ambivalence about leaving one's wife; parental ambivalence, which referred to ambivalence about leaving one's children; and filial ambivalence, which referred to ambivalence about leaving one's parents. Results indicate that most participants experienced family-related ambivalence, with 75% experiencing marital and parental ambivalence, 66% experiencing filial ambivalence, and 58% experiencing all three forms of ambivalence in their decision to immigrate. Each type of ambivalence was associated with higher levels of anxiety, but not with depression or alcohol dependence.

Though not focused on Latino immigrants, a study by Ryan, Leavey, Golden, Blizard, and King (2006) might be instructive of our understanding of the importance of the decision to migrate. They investigated the influence of immigration preparation on depression in a sample of Irish individuals who had migrated to London. More specifically, they wanted to determine whether, for this group, the experience of depression was association with not having the opportunity to plan their migration well. A sample of 306 Irish-born individuals completed an interview that included a measure of depressive symptoms, the Beck Depression Inventory (BDI; Beck & Steer, 1984). A measure of preparation for migration was created, in order to determine how well participants had been able to plan their migration to London when leaving their home in Ireland. Poorly planned migration was associated with the experience of depressive symptoms. Furthermore, results indicated that experiences of social support and ability to

procure employment post-migration were protective factors against depression, especially for men.

Gong et al. (2011) were interested in understanding how human agency and timing (principles of the life course perspective) affect the mental health outcomes of Asian immigrants. Data collected for the National Latino and Asian American Study (NLAAS) were analyzed. The sample consisted of 1,639 respondents who were part of the Asian immigrant subsample. Results indicated that planning and reasons for migration were significant predictors of mental health. That is, those who migrated for clear life-improving reasons were less psychologically distressed than those who migrated without clear goals. In addition, respondents who migrated with multiple strong reasons were less likely than those without clear reasons to be diagnosed with depressive disorders. Additionally, having a good plan for migration was associated with decreased levels of psychological stress and the likelihood of experiencing anxiety disorders. Finally, well-planned migration was associated with lower acculturative stress, and having multiple strong reasons for migration served as a buffer of the negative effect of acculturative stress on mental health.

Torres and Wallace (2013) examined the impact of pre-migration circumstances on the psychological and physical health of Latino immigrants post-migration. They used data from the National Latino and Asian American Study (NLAAS), and included the sample of 1,630 Latino immigrants used in the current study. Measures of migration circumstances included questions about whether respondents "had to" or "wanted to" migrate, whether the migration was carefully or somewhat planned, or not planned at all (a measure used in the current study), as well as questions about immigration-related

stressors (e.g. whether respondents felt guilty about leaving family and friends, whether they experienced difficulties due to their limited English-language abilities). Results indicated that for both men and women, immigration-related stress was significantly associated with psychological distress, but not with self-rated physical health. For Cuban and Puerto Rican women, having to migrate was associated with increased psychological distress.

The literature on the reasons for migration and planning for migration is still very limited, as evidenced by the handful of studies reviewed here. Of these studies, only one included a sample of Latino immigrants. Current findings suggest that the reasons why individuals immigrate are important, and may have differential impacts on the mental health of immigrants. In addition, it appears that experiences pre-migration, particularly how well planned the migration is, has an impact on the mental health of individuals. Reasons for migration and preparation for migration are two areas of immigration research that need to be further explored, as the few studies that have been conducted suggest that these may be important in understanding the immigration experience.

Traumatic experiences pre-migration. Another factor that deserves further study is the experience of trauma pre-migration. One reason for this is that researchers have found that many Latino immigrants experience political violence and other forms of trauma in their home countries (Asner-Self & Marotta, 2005). These experiences may continue to have an enduring impact on the mental health of immigrants, even after their arrival in a new country. Using data collected for the National Latino and Asian American study (NLAAS; These data were also used in the current study), Fortuna and colleagues (2008) found that 11% of immigrant Latinos reported exposure to political

violence, and 76% reported having experienced other traumas (such as personal loss, personal assault, and witnessing violence toward others). Seventy-eight percent of participants who had experienced political violence reported that it had been before they immigrated to the U.S. In addition, participants who had been exposed to political violence were significantly more likely than those who had not been exposed to political violence to report that they had left their country because they had to, rather than because they wanted to. However, experience of mental health disorders was not significantly different for those who had been exposed to political violence, compared to those who had not.

Eisenman, Gelberg, Liu, and Shapiro (2003) explored the prevalence of exposure to political violence and experiences of war among Latin Americans, as many Latin American immigrants in their home countries have experienced these types of violence. The research team also explored the relationship between exposure to political violence pre-migration and current mental health. The sample was comprised of 638 adults who were recruited through community-based clinics in Los Angeles. A 9-item inventory was created that was specifically tailored for a Latino population, and which asked participants about their experience of political violence events prior to immigrating to the U.S. In addition, participants completed measures, which evaluated health-related quality of life, mood, anxiety, alcohol disorder symptoms, and post-traumatic stress disorder. Results indicated that 54% of participants had experienced political violence. Of the participants who had experienced political violence, 36% experienced symptoms of depression, 18% experienced symptoms of PTSD. Comparable rates for those who did not experience political violence were 20% and 8%, respectively.

Rousseau and Drapeau (2004) studied the association between pre-migration exposure to political violence and emotional distress in a sample of 1,871 recent immigrants to Quebec. They also looked at differences by immigration status (i.e., refugee, independent, and sponsored immigrants). Results indicated that 60% of refugees, 48% of independent immigrants (i.e., people immigrating without sponsorship), and 42% of sponsored immigrants reported exposure to political violence in their homeland. Latin American immigrants reported the highest level of family persecution (42%), but there was no significant association between traumatic exposure and emotional distress for this group. The researchers noted that immigrants who are not officially recognized as refugees can also experience pre-migration political violence, as evidence by the results of this study.

Wong and Miles (2014) used data from the New Immigrant Survey to study the prevalence of depression in a sample of immigrants who had recently obtained legal permanent residence in the United States. Results indicated that respondents who were female, younger, had been in the United States for a longer period of time, and had been exposed to political violence in their home country, were more likely to meet the criteria for depression. Even after adjusting for the effect of refugee status, exposure to political violence was significantly associated with depression.

The literature on pre-migration trauma highlights the fact that not only do a large number of Latin American immigrants experience political violence and trauma in their home countries, but that these experiences are related to symptoms of mental health disorders after migration to the United States.

Additionally, research suggests that interpersonal trauma is especially damaging to the mental health of individuals (e.g., Forbes et al., 2012; Fowler et al., 2013; Rasmussen et al., 2007). Humphreys and Lee (2009) explored the effect of exposure to interpersonal violence in a diverse community of 346 European-American, Mexican/Central-American, and African-American women living in San Francisco. Interpersonal violence exposure was measured using a number of questions that asked participants about experience of physical abuse, sexual abuse, and sexual harassment. Results indicated that exposure to interpersonal violence was associated with depressive symptoms, and cumulative exposure to interpersonal violence (higher number of exposures to the 3 different forms of interpersonal violence measured) was significantly correlated with frequency of depressive symptoms.

Cuevas, Sabina, and Bell (2012) used data from the Sexual Assault Among Latinas (SALAS) study to explore the effects of interpersonal violence on the mental health of Latinas. Approximately 70% of the sample was born outside of the U.S.—the majority of participants were born in Mexico. Results indicated that the number of victimization experiences was the strongest predictor of each of the outcome measures of psychological distress (anxiety, depression, anger, and dissociation). Despite the wealth of research evidence suggesting that interpersonal violence is particularly damaging to the mental health of individuals, it should be noted that the majority of studies exploring this topic have been conducted with non-Latino and non-immigrant populations, or have not directly studied the effect that these experiences have on the mental health of Latino immigrants. Thus, the effect of pre-migration interpersonal trauma on the mental health of Latino immigrants living in the U.S. is still an understudied area.

Previous research has also suggested that individuals who experience one form of trauma are likely to experience other forms of trauma (Kessler, 2000). This is particularly true for individuals living in less developed countries, in which political instability often lead to armed conflicts, torture, assault, intimidation, and other forms of violence (Corradi, Fagen, and Garreton, 1992; Kessler, 2000). Fortuna and colleagues (2008) suggest that "exposure to political violence is not monolithic. For example, an individual may not have directly witnessed or been victim to violence but have lost a loved one due to political circumstances (e.g. "desaparecidos") or experienced other traumatic experiences like sexual abuse which contribute to their cumulative lifetime traumatic stress" (pg. 4). Previous research also suggests that traumatic experiences can be "passed" down intergenerationally (Weingarten, 2004). Furthermore, the effects of trauma can be felt by even those that are just witnesses to violence, and not necessarily direct victims. This is particularly true in areas of the world, or during time periods, with high levels of political violence (Weingarten, 2003). These findings are particularly informative to the current study, given the history of political instability in Latin America. In addition, the literature indicating that political trauma often goes hand-in-hand with other forms of interpersonal trauma suggests that political and other forms of interpersonal trauma should be studied together.

Post-Migration Factors That May Influence Latino Immigrants' Mental Health

A handful of recent studies have highlighted the need to examine post-migration factors in order to understand the mental health outcomes of Latino immigrants. Chu, Keller, and Rasmussen (2012) found that immigrants and refugees who experienced

traumatic events in their home countries were more likely to suffer from high rates of anxiety disorders, such as PTSD. Furthermore, they found post-migration factors played a role in the relationship between pre-migration exposure to traumatic events and post-migration mental health. They examined risk factors for PTSD among a sample of 875 health clinic clients. These individuals were immigrants to the U.S. and had suffered political violence in their home countries. The majority of participants were originally from Africa (59%), and 30% were originally from Asia. Results indicated that reporting more pre-migration experiences of violence and the experience of post-migration factors such as legal instability and financial difficulty were significantly associated with higher PTSD symptoms. Furthermore, post-migration variables explained significantly more variance in PTSD outcomes than pre-migration variables (an increase from 16% variance explained to 20% variance explained).

While most Latin American immigrants are not considered refugees, many of them have experienced wars and violence in their home countries, and may have suffered trauma similar to that experienced by refugees, thus, these findings are of great relevance. Porter and Haslam (2005) conducted a meta-analysis of studies focused on the refugee experience, including those who had been displaced or were asylum seekers. The analysis included 56 studies that compared the experiences of refugees and non-refugees and included measures of psychopathology. Results indicated that across all studies and psychopathology measures, refugees had moderately poorer outcomes than non-refugees. In addition, life conditions after leaving their home country moderated their mental health outcomes. That is, refugees who experienced restricted economic opportunities, and those who were older and more educated had worse outcomes than younger, less educated

refugees. Investigators also found that females who had higher pre-migration socioeconomic status had worse outcomes than females with lower socioeconomic status.

The literature also points to several contextual post-migration factors that may have an impact on the psychological mental health of Latino immigrants, and which may help explain the conflicting findings regarding immigrant mental health. These contextual factors characterize the climate of the receiving community and may play a role in the relationship between pre-migration context and post-migration mental health. Torres and Wallace (2013) stress the importance of studying the context of the communities that Latinos live in post-migration, as the attitudes and actions in these communities can become sources of stress for Latino immigrants, and have an impact on their mental health. The authors assert that the "stressors related to the conditions of migration include a set of social and structural inequities that immigrants may experience upon arriving and settling in the United States… these stressors relate to the diverse social, political, and economic climates in receiving communities" (p. 1641). While many factors have been studied in the relationship between immigration and mental health, three post-migration factors consistently appear as important factors in the literature, and may provide a picture of the receiving community climate when studied together: community social support and engagement, experiences of discrimination, and experiences related to employment. These factors will be explored in more detail below.

Community social support and engagement. Puyat (2013) studied the association between mental health and social support in a sample of Canadian residents using a cross-sectional research design. Differences between recent immigrant, long-term immigrant, and non-immigrant participants were also examined. Data from the 2009-

2010 Canadian Community Health Survey (CCHS), which included a nationally representative sample, were used. Mental health was assessed using a dichotomized measure that asked respondents if they experienced mood or anxiety disorders in the past 12 months. Social support was assessed using a 20-item social support scale that was part of the medical outcomes study (Sherbourne & Stewart, 1991), and scores were divided into low, moderate, and high categories based on the distribution of scores. Immigration status was divided into three categories. Canadian-born respondents were categorized as non-immigrant, while long-term immigrants were individuals who had been in the country for more than 10 years, and recent immigrants were individuals who had been in the country for less than 10 years. Researchers controlled for variables such as sex, age, education, marital status, perceived stress, and self-rated health. Results indicated that respondents with low levels of social support reported significantly higher levels of mental disorders, as compared to individuals with moderate levels of social support. This association appeared strongest among those who had recently immigrated. Respondents who reported high levels of social support had a significantly lower likelihood of reporting mental disorders than those with moderate levels of social support. This association was found to be strongest among long-term immigrants. The results of this study suggest that the negative effects of low social support may be experienced most strongly by individuals who are recent immigrants, while the positive benefits of high social support may be experienced most strongly by long-term immigrants. One important finding to note is that in spite of the link between support and mental health for recent immigrants, they had the lowest proportion of mood disorders among all groups, further contributing to the "immigrant paradox." It is also important to note that the cross-

sectional nature of the study design does not allow for a causal direction to be determined.

Schweitzer, Melville, Steel, and Lacherez (2006) studied the relationship between pre-migration trauma, post-migration experiences and social support on the mental health of 63 Sudanese refugees living in Australia. Participants completed a questionnaire that asked about traumatic experiences and a mental health checklist that included depression, anxiety, and somatization scales. They also completed the Post-Migration Living Difficulties (PMLD) checklist, which asked about post-migration stressful experiences in the areas of discrimination, immigration difficulties, communication, employment, acculturation difficulties, worry about family back home, and access to health and welfare services. Trauma was assessed using the Harvard Trauma Questionnaire (HTQ; Mollica, Caspi-Yavin, Bollini, Truong, Tor, & Lavelle, 1992). The HTQ is composed of two sections; one section produces a list of traumatic events experienced or witnessed, and the other section produces a post-traumatic stress symptom score. Analyses revealed that all participants had experienced at least one of the 16 forms of trauma measured by the HTQ, and 54% of the sample had experienced at least 5 or more forms of trauma. A significant, positive correlation was found between pre-migration trauma and post-traumatic stress (as measured by the HTQ). In addition, post-migration difficulties with employment were associated with increased symptoms of anxiety, depression, and somatization. Social support from family and other members of the Sudanese community was significantly and negatively associated with somatization, PTSD, and anxiety symptoms. The results of this study point to the importance that post-migration experiences play in the mental health of immigrants, particularly for those who have

experienced trauma. The results also provide support for the exploration of these factors further, especially in other countries (such as the U.S.), and with broader immigrant groups, as this study focused solely on refugees.

Discrimination. Leong, Park, and Kalibatseva (2013) sought to understand risk and protective factors for the mental health of Asian and Latino immigrants. Using data from the National Latino and Asian American Study (NLAAS; Part of the sample used in the current study), they found that the use of social networks served as a protective factor against the prevalence of substance use disorders for Latino immigrants; thus, those who were less engaged in social networks were more likely to be diagnosed with a substance use disorder. They also found that immigrant Latino and Asian individuals reported significantly lower rates of discrimination than Latino and Asian participants who were born in the United States. However, discrimination emerged as a risk factor for anxiety, depressive, and substance use disorders among all Latino immigrants. Thus, higher levels of discrimination were associated with higher prevalence of psychological disorders for Latinos.

Using data from the National Latino and Asian American Study (NLAAS; These data were also used in the current study), Cook et al. (2009) studied the probability of developing a psychiatric disorder. The sample consisted of U.S-born and immigrant groups with varying amounts of time in the United States. Time in the U.S. was divided into three categories: 0-10 years, 11-20, and 21 or more years. In addition, they explored several factors through which time in the U.S. might be related to mental health. These six factors included discrimination; family cultural conflict; ethnic identity; dissatisfaction with economic opportunities; perceived social status; and perceived

neighborhood safety. Results indicated that discrimination and family conflict were found to be significant predictors in the relationship between time in the United States and risk for psychiatric, depressive, and anxiety disorders.

Tran, Lee, and Burgess (2010) examined the associations between racial/ethnic minority status, discrimination, and substance use in a sample of African, Latino, and Southeast Asian immigrants. The study had a total sample of 1,387 individuals who had been part of a larger public health study. A total of 406 Latino immigrants participated in the study. The analysis included measures of discrimination and substance use behaviors (number of cigarettes smoked per day, smoking status, number of past-month drinking days, number of past-month binge drinking days, and engagement in past-month binge drinking). Results indicated that 30% of the full sample perceived discrimination in the past year, and that was significantly related to cigarette smoking, number of past-month drinking days, and engagement in recent binge drinking. For the Latino participants, perceived discrimination was significantly related to number of past-month drinking days and past-month binge drinking. While substance use is not a factor examined in the current study, these results are informative as they provide a broader context for the association between discrimination and mental health.

Viruell-Fuentes (2007) explored factors associated with the health of immigrants. Of particular interest to Viruell-Fuentes were structural and contextual factors, as opposed to the typical focus on individual factors in studies of immigrant health. She suggests that some explain the immigrant paradox by pointing to cultural factors, such as the formation of social networks and health behaviors that are common among Latino immigrants. In addition, acculturation is often mentioned as a factor, and that can lead

researchers to ignore the context that surrounds immigration, including political and economic factors. Viruell-Fuentes suggest that culture should be understood in the context of structural factors that influence the adaptation of immigrants. In an effort to explore socio-cultural explanations for the perceived health advantage of immigrants, the author analyzed narratives of forty first- and second-generation Mexican immigrant women in Detroit. First generation referred to women who had been born and raised in Mexico, and immigrated to the U.S. as adults. Second generation referred to women who had been born in the U.S., or immigrated before the age of 12. The analyses revealed that second generation women experienced more instances in which they felt a sense of stigmatized difference and "otherness" than first generation women. "Otherness" is described as a process whereby an individual is regarded as "differentially in lower categories of a hierarchical system by both individual actors and institutions" (p. 1525). In addition, "the person or group being 'othered,' experiences this as a process of marginalization, disempowerment, and social exclusion" (Grove & Zwi, 2006). In addition, the analyses suggest that the community and neighborhood in which an individual settles is important. The first generation women who were interviewed talked about living in a community that was mostly Mexican, and a place where they could continue their cultural traditions, and speak their own language. It was during their somewhat limited experiences outside of this community that they experienced "othering" and messages of discrimination and stigmatization. In contrast, second generation women described their experiences living in less homogenous communities, and their increased awareness of discrimination and stigmatization throughout their lives. The findings suggest discrimination and the process of "othering" as potential pathways

through which immigrants' health declines as they become integrated into and adapt to U.S. culture. While this study refers to physical health, and the focus of the present study is on mental health, these findings may still be informative as they provide insight into powerful experiences and social processes that may also impact the mental health of immigrants.

Overall, the results of the studies reviewed here suggest that experiencing low levels of discrimination is a potentially important pathway through which Latino immigrants are protected from developing mental health problems as they become adjusted to living in the United States.

Employment. Research with general populations (i.e., not specific to immigrant individuals) has found a strong connection between the lack of employment and decreased mental health. Pharr, Moonie, and Bungum (2012) examined the relationship between employment status and several health-related factors, including, perceived mental and physical health, access to health care, and health risk behaviors. The authors analyzed data from the 2009 Nevada Behavioral Risk Factor Surveillance System (BRFSS), which included a sample of 3,840 adults. Comparisons were made between participants who were employed, those who were out of the labor force by choice, and those who were unemployed. Results indicated that participants who were unemployed had the worst health outcomes of all three groups. They had significantly worse mental health, were over two times more likely to delay health care due to cost, and were also over four times less likely to have access to health care. Overall, participants who were out of the labor force by choice did not differ significantly from those who were employed.

Friedland and Price (2003) explored the relationship between employment status (i.e., unemployed, underemployed, overemployed, and adequately employed) and physical and psychological health. The effect of employment status on physical health was assessed using a longitudinal design and controlling for prior levels of physical and psychological health. The sample consisted of 1,429 participants. Unemployed referred to participants who did not have a job and were currently looking for one; overemployed referred to those who worked more than 45 hours per week and reported that they wanted to work less hours. Underemployed was defined and measured according to underemployment type: hours-based underemployment (i.e., working less hours than desired), income-based underemployment (i.e., not earning a livable wage, even if working full time), skills-based underemployment (i.e., not being able to put their skills and training to use), and status-based underemployment (i.e., having a job of lower societal status than they expected to acquire based on their educational attainment). Physical health was assessed using measures of subjective health, functional health, and chronic disease. Psychological health was assessed using measures of life satisfaction, depressive symptoms, positive self-concept, and job satisfaction. Respondents who were income- and status-underemployed reported lower positive self-concept and more symptoms of depression than respondents who were adequately employed. Unemployment was associated with lower levels of physical health and psychological health across all indicators. Unemployed respondents indicated lower levels of positive self-concept and life satisfaction, and more symptoms of depression.

Not surprisingly, the link between lack of employment and decreased mental health has also been found in refugees and immigrants, in the limited studies that have

explored these variables (employment and mental health) with refugee and immigrant populations. Vinokurov, Birman, and Trickett (2000) studied the relationship between work status, demographic variables (such as education level, age of arrival in the country, gender, and length of time in the country), acculturation, and psychological adaptation (including alienation and life satisfaction) in a sample of 206 refugees from the former Soviet Union. Participants were living in the Washington, DC area or the Brighton Beach neighborhood of New York. They were between 25 and 64 years of age, and had been in the U.S. for an average of 3.7 years. Almost 70% of participants were employed, and of those, 57% were working in a professional field different from their professional field in the Soviet Union. The researchers found that participants who were employed in the same field as in their home country reported the highest income, level of acculturation, comfort speaking English, and life satisfaction. Participants who were unemployed reported the lowest levels of these variables.

Patiño and Kirchner (2009) explored sources of stress and risk factors associated with psychopathology in a sample of 210 Latin American immigrants to Barcelona, Spain. Most of the participants had immigrated to Spain for financial reasons, and had been there for an average of 24.8 months. Sixty percent of the participants were living undocumented in Barcelona. Psychopathology was measured using the Spanish adaptation of the SCL-90-R (Derogatis, 1977), which measures symptoms on the following nine scales: Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. Results indicated that employment was the most significant stressor for the participants.

Kennedy and McDonald (2006) studied the association between unemployment and mental health among a group of immigrants in Australia. The researchers were interested in understanding how the stress associated with adjustment to a new country was related to the mental health of immigrants. Data from the Longitudinal Survey of Immigrants to Australia (LSIA) were used in the analysis; these included a sample of 5,192 immigrants and their spouses, and were collected for the first wave of the survey in 1994. Additional waves were collected in 1995 and 1997. A 12-item measure, the General Health Questionnaire (GHQ; Goldberg, 1972), was used to assess mental health. Results indicated that unemployment was significantly associated with poor mental health. In addition, due to the longitudinal design of the study, additional analyses suggested that the association between these two variables runs from labor force status (unemployment or not) to mental health, rather than the other way around.

Padilla, Cervantes, Maldonado, and Garcia (1988) conducted a qualitative study of the psychosocial stressors experienced by 62 Mexican and Central American immigrants in the U.S. Through semi-structured interviews they found that major stressors for this group were obtaining employment and other financial difficulties, language barriers, and problems adapting to the American lifestyle. Padilla et al. also found that through the use of a social support network participants were able to seek and obtain a job, find a place to live, and overcome language barriers.

Overall, the findings described above highlight the association between the ability to procure employment and immigrants' mental health, particularly as they adjust to living in a new country. Given that most of the research reviewed was cross-sectional, it is difficult to understand causal relationships that could only be determined through a

longitudinal design. Nevertheless, it seems that the ability to find employment post-migration can be regarded as an indicator of the climate of the receiving community and tell us more about the attitudes exhibited toward immigrants. A community that is more receptive and open toward immigrants is more likely to be one in which immigrants are able to procure employment, and feel that their economic growth is not limited by their status as immigrants. The ability to procure adequate employment, along with indicators of community support and engagement, and lack of discrimination, together can provide a better picture of the climate in the receiving communities that Latino immigrants come to be a part of in the United States.

The current study addressed gaps in the literature regarding the pre-migration experiences of Latino immigrants. Only a handful of studies existed on the reasons for migration or on planning for migration, and of these studies, only one focused on Latinos. In addition, the current study was an attempt to disentangle the conflicting findings regarding Latino immigrants' mental health. Furthermore, as suggested by Torres and Wallace (2013), previous research has not focused much attention on the post-migration climate of the receiving community. The current study addressed this gap by focusing on the climate of the receiving community, with the understanding that the pre-migration context was important to understand.

Theory

The theoretical model that will guide this study is the Stress Process Model (Pearlin, Menaghan, Lieberman, & Mullan, 1981). Pearlin and colleagues (1981) suggest that the social stress process can be understood in three parts: the sources of stress (i.e., life events and chronic stressors), resources available (i.e., social resources, coping, and

personal resources) to manage stress, and the manifestations or consequences (in the original study, this referred to depressive symptoms) of stress (Aneshensel, 2015; Pearlin et al., 1981). Pearlin et al. (1981) asserted that sources of stress could include both discrete events, as well as chronic, ongoing problems. The impact stressors have on psychological health vary greatly across individuals and social groups; this is due in part to the resources available, and the individual's use of these resources. Resources could include social resources (e.g., social support), individual coping strategies, and personal resources (e.g., mastery, self-esteem). It is also suggested in the model that mediation and moderation are the processes by which these concepts relate to each other. Pearlin and colleagues (1981) suggested that stressors could directly diminish positive resources (e.g., self-esteem), which could then damage mental health (in a mediating function). However, they also posited that buffers could lessen the impact of stressors (in a moderating function). The Stress process model has been used to understand different stress conditions, including the stress associated with taking care of Alzheimer's disease and AIDS patients (Pearlin, Mullan, Semple, and Skaff, 1990; Pearlin, Aneshensel, and LeBlanc, 1997).

Given this framework, several factors, such as the immigration decision-making process, ability to plan for migration, and traumatic experiences, would be understood as social stressors in the lives of immigrants. Immigrants face the stress of having to make the decision to leave their country, friends, and family for a variety of different reasons (i.e. reasons for migration); for example, they must decide whether staying in their home country or migrating to the United States will result in better economic, educational, and/or safer life conditions for themselves and their family. Alternatively, many

immigrants experience the stress of not having the ability to plan their migration (i.e. unplanned migration)—this is often due to the dangerous conditions in their home countries that may require them to flee without much time to plan or prepare. Finally, many immigrants experience political violence and interpersonal trauma in their home countries, which serve as additional sources of stress.

As suggested by the Stress Process Model, the post-migration context and climate in the receiving community can provide the social and coping resources that may help immigrants deal with the stressors associated with immigration. Finding a community in the United States where an immigrant feels welcome and supported, employment opportunities are available, and experiences of discrimination are low can help diminish the effects of previous stress.

Noh and Avison (1996) used the Stress Process Model to explore how life stressors and coping resources influenced the psychological functioning of Korean immigrants in Canada. They used data from a longitudinal study of 600 participants and found stressors associated with the immigration experience were related to psychological distress, but that social and psychological resources served as buffers in the relationship between stressors and subsequent mental health – thus providing support for the model among immigrant individuals.

The Stress Process Model developed by Pearlin et al. (1981) provided a strong theoretical support for this study. The model constructs were applied to the experience of migration as a stressful occurrence. In addition, both pre-migration and post-migration factors were conceptualized as factors that contributed to immigrants' experience of these stressors, and ultimately, to their psychological distress.

Using Pearlin's Stress Process Model as a guiding theory, the purpose of this study was to explore the association between several pre-migration factors (life-improving reasons for migration and political upheaval reasons for migration, degree of planning for migration, and experience of political and/or interpersonal trauma) and the mental health (i.e., psychological distress) of Latino immigrants. The current study also explored the moderating effect of the climate of the receiving community (community support and engagement, lack of discrimination, and employment) on the relationship between pre-migration factors and post-migration mental health.

Hypotheses

The hypotheses that were tested in this study are the following:

- Hypothesis 1. Immigrating for life-improving reasons will be associated with better post-migration mental health outcomes (i.e., less psychological distress).
- Hypothesis 2. Immigrating for political upheaval reasons will be associated with worse post-migration mental health outcomes (i.e., more psychological distress).
- Hypothesis 3. Having a better-planned migration will be associated with better post-migration mental health outcomes (i.e., less psychological distress).
- Hypothesis 4. Experiencing more pre-migration political and/or interpersonal trauma will be associated with worse post-migration mental health outcomes (i.e., higher psychological distress).
- Hypothesis 5. The relationship between reasons for migration (i.e., life-improving and political upheaval reasons) and post-migration mental health (i.e., psychological distress) will be moderated by factors associated with the climate of

the receiving-community, specifically community support and engagement, discrimination, and employment.

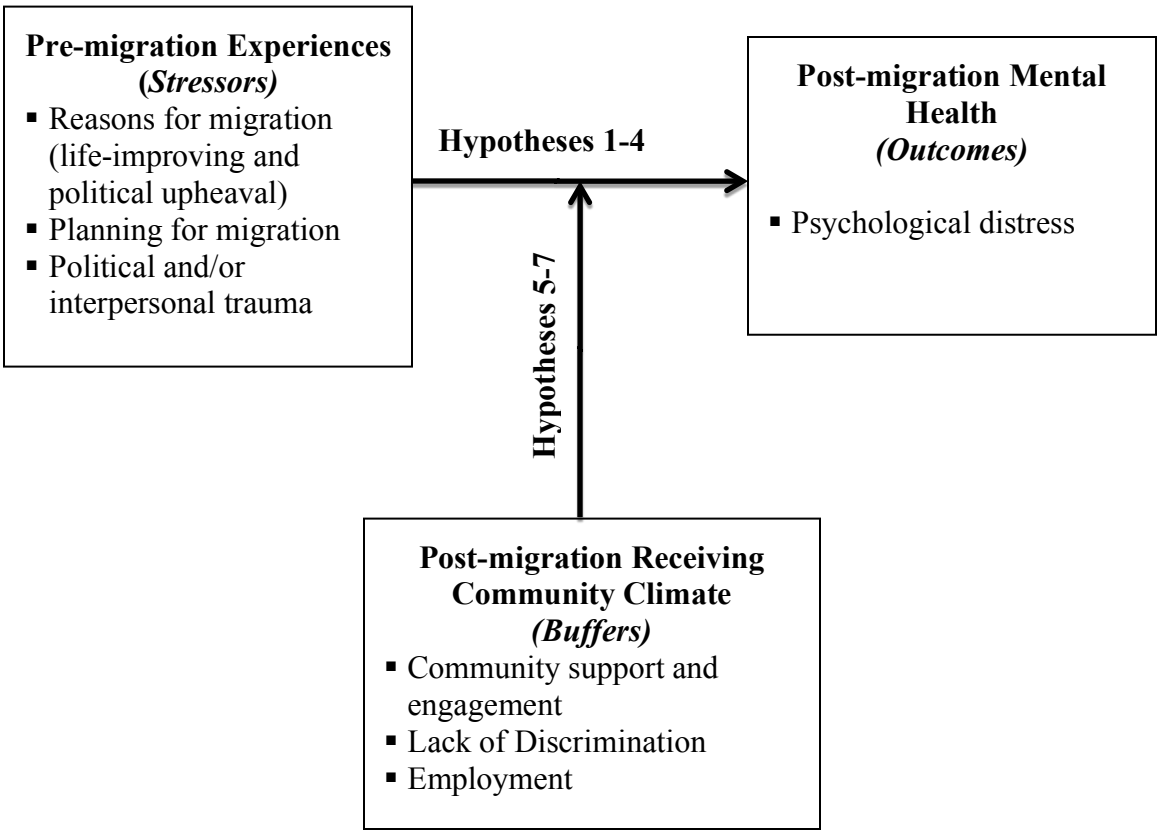
  - Hypothesis 5a. Greater community support and engagement will decrease the association between life-improving reasons for migration and psychological distress.
  - Hypothesis 5b. Greater community support and engagement will decrease the association between political upheaval reasons for migration and psychological distress.
  - Hypothesis 5c. Lower discrimination will decrease the association between life-improving reasons for migration and psychological distress.
  - Hypothesis 5d. Lower discrimination will decrease the association between political upheaval reasons for migration and psychological distress.
  - Hypothesis 5e. Higher employment will decrease the association between life-improving reasons for migration and psychological distress.
  - Hypothesis 5f. Higher employment will decrease the association between political upheaval reasons for migration and psychological distress.

- Hypothesis 6. The relationship between planning for migration and post-migration mental health (i.e., psychological distress) will be moderated by factors associated with the climate of the receiving-community, specifically community support and engagement, lack of discrimination, and employment.
  - Hypothesis 6a. Greater community support and engagement will decrease the association between unplanned migration and psychological distress.

  - Hypothesis 6b. Lower discrimination will decrease the association between unplanned migration and psychological distress.
  - Hypothesis 6c. Higher employment will decrease the association between unplanned migration and psychological distress.

- Hypothesis 7. The relationship between pre-migration experience of political and/or interpersonal trauma and post-migration mental health (i.e., psychological distress) will be moderated by factors associated with the climate of the receiving-community, specifically community support and engagement, lack of discrimination, and employment.
  - Hypothesis 7a. Greater community support and engagement will decrease the association between pre-migration experience of political and/or interpersonal trauma and psychological distress.
  - Hypothesis 7b. Lower discrimination will decrease the association between pre-migration experience of political and/or interpersonal trauma and psychological distress.
  - Hypothesis 7c. Higher employment will decrease the association between pre-migration experience of political and/or interpersonal trauma and psychological distress.

Conceptual Model with Study Hypotheses



Chapter 3: Methods

Data

Data collected as part of the 2002-2003 National Latino and Asian American Study (NLAAS; Alegría et al., 2004) were used in this study. For the NLAAS, a nationally representative survey was designed and implemented to assess the prevalence of mental disorders and mental health care use among Latino and Asian American individuals in the United States. The study was a joint collaboration between four institutions (the University of Michigan, Harvard University, Cambridge Health Alliance, and the University of Washington) and was funded by the National Institute of Mental Health (NIMH). The NLAAS is part of the Collaborative Psychiatric Epidemiology Surveys (CPES; Alegría et al., 2007), which include two other nationally representative studies of mental health: the National Comorbidity Survey Replication (NCS-R; Alegría et al., 2007), and the National Study of American Life (NSAL; Jackson et al., 2007).

Sample

In order to participate in the NLAAS, individuals had to be 18 years or older, of Latino or Asian descent, and living in the United States but not institutionalized (i.e. living in prisons, nursing homes, and long-term care facilities). Members of the military living in civilian housing could participate, but members of the military living on military bases were excluded due to security restrictions. Participants were interviewed in their preferred language; English, Spanish, Chinese, Vietnamese, or Tagalog. A complex four-step sampling procedure was followed to recruit participants for the study. The sampling procedure involved first looking at U.S. metropolitan areas and counties, then dividing

these areas into neighborhood segments, followed by looking at housing units within these neighborhoods, and finally, randomly selecting adults within housing units. An interviewer completed a short screening interview with an adult in each housing unit to determine if one or more adults in the household met the criteria for participation. The interviewer then created a roster of eligible adults in the household and randomly selected one of these adults to participate in the study (Heeringa, Wagner, Torres, Duan, Adams, & Berglund, 2004).

The sample was based on a stratified probability design that involved two groups: the NLAAS Core sample and the NLAAS High Density (HD) supplemental sample. The Core sample was designed to be nationally representative of all populations in the U.S. including Latinos and Asians. The HD supplement involved oversampling in geographic areas that had a concentration of Latino and Asian national origin groups that was greater than 5%. The HD supplement was incorporated because obtaining a full sample of Latinos and Asians through the Core sampling procedures would have been lengthy and cost prohibitive, as many of the geographic areas in the Core sample had low concentrations of Latinos and Asians. Respondents who lived in a HD sampling area had two chances of being selected to participate – one through the Core sampling and another through the HD supplemental sampling. Thus, the design requires weighting corrections to account for the multiple probabilities of being selected through the different sampling components. A total of 27,026 housing units were screened for eligible participants, and 4,649 interviews were completed with eligible participants. The investigators designated four groups of interest for Latinos: Mexican, Puerto Rican, Cuban, and other Latino. (Heeringa et al., 2004).

A total of 2,554 Latino individuals were interviewed, and were divided into four nationality subgroups: Mexican, Puerto Rican, Cuban, and Other Latino (which included participants from the Dominican Republic, Colombia, El Salvador, Ecuador, Guatemala, Honduras, Peru, and Nicaragua). The response rate among Latinos in the survey was 77.6%; of these Latino participants, 1,629 (63.8%) indicated they had been born outside of the U.S.

Demographic information for the sample can be found in Table 1. The sample included about 56% female and 44% male participants. About a third were Cuban (31%), another third were Mexican (30%), about 13% were Puerto Rican, and about a quarter were from another Latino nationality. The majority of participants reported having lived in the U.S. for 20 years or more (44%), while 25% had been in the U.S. for 11-20 years, 15% had been in the U.S. for 5-10 years, and 15% had been in the U.S. for less than 5 years. The majority of participants were married or cohabiting (67%) and 11 years of education or less (46%). About 85% of participants had a household income below $75,000, the majority were employed (59%), and the majority were not U.S. citizens (54%). The majority of participants immigrated to the U.S. as adults, between the ages of 18 and 34 (45%), while 23% immigrated as children under 12 years, 13% immigrated as teenagers between 13 and 17 years, and 19% immigrated as adults 35 years of age or older.

Table 1
Demographic Characteristics of Study Sample (n=1629)

	n	%
Sex		
Male	723	44.38
Female	906	55.62
Nationality		
Cuban	501	30.76
Puerto Rican	217	13.32
Mexican	487	29.90
Other Latino	424	26.03
Years in the US		
Less than 5 years	250	15.41
5-10 years	245	15.10
11-20 years	411	25.34
20+ years	716	44.14
Marital Status		
Married/cohabiting	1086	66.67
Divorced/separated/widowed	324	19.89
Never married	219	13.44
Education Level		
0-11 years	745	45.73
12 years	362	22.22
13-15 years	297	18.23
Greater than or equal to 16 years	225	13.81
Household Income		
$0-14,999	501	30.80
$15,000-29,999	384	23.60
$30,000-74,999	495	30.40
$75,000 or more	249	15.30
Citizenship Status		
Refused	6	0.37
Yes	740	45.43
No	883	54.21
Work Status		
Employed	966	59.30
Unemployed	98	6.02
Not in labor force	565	34.68
Age at Immigration		
Less than 12 years	365	22.50
13-17 years	216	13.32
18-34	735	45.31
35+ years	306	18.87

	Mean	SD
Age (years)	43.24	15.84

Procedure

The NLAAS interviews were completed between May 2002 and November 2003. Trained, multilingual interviewers administered the battery of measures contained in the NLAAS. Most of the interviews were conducted in person, but telephone interviews were completed if requested by the respondent (the investigators did not indicate percentage of interviews completed via telephone), if interviews took more than two in-person sessions to complete, or if the cost of traveling to the respondent's home was prohibitive. Appointments were scheduled during times that were convenient for the respondents (Pennell et al., 2004).

The interviews involved a modified version of the World Health Organization World Mental Health Composite International Diagnostic Interview (WHO WMH-CIDI; Kessler &Ustün, 2004), which was designed to generate psychiatric diagnoses based on the WHO International Classification Disease (ICD) criteria. The NLAAS interview contained 39 sections; it was composed of a main diagnostic section for psychiatric disorders, and additional sections that were relevant to the study population. The interview was administered using computer-assisted interviewing (CAI), which involved an interviewer reading survey items out loud to participants. On average, the NLAAS interview took a total of 2.7 hours to administer (Pennell et al., 2004).

The battery of measures and all materials were translated and back-translated in order to assess the content, semantic, and technical equivalence of the items. A multinational bilingual committee reviewed the measures to determine whether they were

culturally relevant for Latinos of different nationalities, and modifications were made to ensure different Latino groups understood the language used during the interview. The researchers found that "the Spanish language varies greatly depending on context, and in some instances a word has different meanings depending upon the country of origin of the respondent" (Alegría et al., 2004, p. 281). Therefore, a list of "non-consensus" words was developed to aid interviewers in administering the survey. This list contained words that could be translated several different ways, depending on the context, as well as the most common translation for each word, categorized by country. The interviewer used the Spanish word from the list that was most commonly used in the respondent's country of origin. Finally, in-depth interviews and focus groups were conducted to test the cultural relevance of NLAAS items among Latino participants. Results of the interviews and focus groups were used to inform changes to the questionnaire. In addition, measures included in the study were tested for internal consistency with different Latino subgroups. (Alegría et al., 2004). As described by Alegría et al., (2004), the Cronbach coefficients indicated high internal consistency for almost all NLAAS scales for almost all Latino subgroups. The only scales that indicated lower consistency were the Neighborhood Safety scale for Cubans (Cronbach's alpha = 0.61) and the Acculturative Distress scale for Puerto Ricans, Cuban and Other Latinos (Cronbach's alpha = 0.59, 0.65, and 0.61, respectively).

Written informed consent was required for participation in the study. All consent materials were translated into all of the languages used in the study. All materials and procedures included in the NLAAS were approved by the International Review Board

Committees of Cambridge Health Alliance, the University of Washington, Harvard University, and the University of Michigan.

Variables

Table 2 lists all study variables, number of items used to measure each construct, and reliability coefficients for each scale used in the current study.

Table 2
Variables, Number of Items, and Alpha Coefficients for Scales

	Number of Items	α
Pre-Migration Experiences (Independent Variables)		
Life Improving Reasons for Migration	4	0.71
Political Upheaval Reasons for Migration	2	0.69
Planning for Migration	1	-
Political and/or Interpersonal Trauma	22	-
Post-Migration Receiving Community Climate (Moderator Variables)		
Community Support and Engagement	4	0.82
Discrimination	9	0.90
Employment	1	-
Post-Migration Mental Health (Dependent Variable)		
Psychological Distress	7	0.90

Independent Variables: Pre-Migration Experiences

Three indicators of pre-migration experiences were used in the study: reasons for migration, planned migration, and political and/or interpersonal trauma.

Reasons for migration. Participants' reasons for migration were assessed in the NLAAS using a 9-item scale that listed several reasons people give for coming to the United States. Participants were asked to rate how important they found each of these reasons, from "very important" (1), to "somewhat important" (2), or "not at all important" (3). These items were adapted from a study of low-income Mexican-

American women in San Diego County, California (Vega, Kolody et al., 1986). Examples of items include: *"To find employment or a job;" "To improve the future of the children in the family;"* and *"Because of the political situation in your country of origin."* An Exploratory Factor Analysis (EFA) was conducted to determine the appropriate grouping of items for the population in this study (see below, under preliminary analyses). Two scale scores were computed for each participant by recoding and summing participants' responses to the items that loaded onto each factor. The responses were recoded as, "not at all important" (0), "somewhat important" (1), and "very important" (2). Factor 1 was labeled Life Improvement reasons (Cronbach's alpha=0.71) and contained a total of 4 items. Summing the responses to these 4 items resulted in a scale score ranging from 0 to 8, with more life improvement reasons for migration resulting in a higher scale value. Factor 2 was labeled Political Upheaval reasons (Cronbach's alpha=0.69) and contained a total of 2 items. Summing the responses to these 2 items resulted in a scale score ranging from 0 to 4, with more political reasons for migration resulting in a higher scale value.

Planning for migration. To determine whether their move to the United States was planned, participants were asked one question: "Was *your move or that of your family to the US*… "Carefully planned" (3); "Somewhat planned" (2); "Poorly planned" (1); "Not planned at all" (0)." This item was also adapted from the survey of Mexican-American women in San Diego County, California (Vega, Kolody et al., 1986). The variable was recoded for a minimum of 0, with higher scores meaning less planned migration. Thus, the recoded categories were, "Carefully planned" (0); "Somewhat planned" (1); "Poorly planned" (2); "Not planned at all" (3). A total item score, ranging

between 0 and 3, was used. The variable was re-coded such that higher scores would indicate higher risk (i.e. unplanned migration, scored as a 3, indicates higher risk), to fit with other variables of interest that were coded similarly (e.g. political and/or interpersonal trauma, psychological distress, and discrimination).

Political and/or interpersonal trauma. Experience of political and/or interpersonal violence was assessed using the World Health Organization-Composite International Diagnostic Interview (WHO-CIDI; Kessler & Ustün, 2004) trauma questionnaire that was incorporated into the Post-Traumatic Stress Disorder section of the NLAAS. The questionnaire contained 29 items about traumatic experiences; for this study, the 22 items that specifically ask about exposure to military or political conflict, or interpersonal violence, were used. Examples of items include, *"Did you ever live as a civilian in a place where there was ongoing terror of civilians for political, ethnic, religious or other reasons?"* "*Were you ever mugged, held up, or threatened with a weapon?"* and "*Did you ever see atrocities or carnage such as mutilated bodies or mass killings?"* Respondents were asked to answer "Yes" (1) or "No" (5) to each question. The responses were re-coded as "Yes" (1) or "No" (0) so that higher scores indicated higher levels of trauma. Participants were asked a follow-up question after answering "Yes" to an item. This follow-up item asked about the age at which the traumatic event was experienced. For the purposes of this study, only events experienced in the participants' home country, prior to migration, were included. This was done by identifying age at migration for each participant and eliminating trauma items that occurred at an age at or after the age of migration.

The variable had a skip pattern that resulted in duplicate versions of each trauma item and required a complex recode for each pair of trauma questions. For each question pair, a participant was coded as "yes" if they answered "yes" to the second pair question, and the age at trauma was earlier than the age at migration. For each question pair, a participant was coded as "no" if they met either of the following criteria:

- They answered, "yes" to the second pair question, but the age at trauma was greater than or equal to the age at migration.
- They answered no to either the first or second pair question.

Finally, a total index score was computed by summing responses to individual items. Values for the trauma index ranged from 0 to 12, with 0 indicating no reported trauma (i.e., the score could have ranged up to 22, since there were 22 items, but no participant answered yes to more than 12 items).

Dependent Variable: Mental Health

Psychological distress. Mental health was assessed using the Kessler Psychological Distress Scale (Kessler et al., 2002). NLAAS participants were administered this 10-item scale as a measurement of psychological distress experienced in the previous 30 days. Three of the items related to symptom severity and were only asked if the participant reported experiencing the symptoms described in the preceding item. This resulted in a large percentage of missing responses for these three items (i.e., 50-71% missing responses); thus, these items were dropped, as has been done in similar studies using this variable (Chung & Epstein, 2014; Torres & Wallace, 2013). The resulting scale included a total of 7 items (Cronbach's alpha=0.90). Examples of items include, "*During the last 30 days, about how often did… 1) you feel depressed, 2) you*

feel restless or fidgety, and *3) you feel so nervous that nothing could calm you down."* Participants were asked to rate the frequency with which they experienced each symptom, on a scale ranging from "all of the time" (1) to "none of the time" (5). The responses were reverse-coded so that higher scores indicated higher levels of distress, with a minimum of 0. Thus, the recoded categories were, "none of the time" (0), "a little of the time" (1), "some of the time" (2), "most of the time" (3), and "all of the time" (4). A total scale score, ranging between 0 and 28, was computed by summing responses to individual items.

Moderator Variables: Post-Migration Receiving Community Climate

Community support and engagement. Support in the receiving community was measured using the Social Cohesion scale of the NLAAS. Social cohesion has been regarded as the extent to which a group of people are connected and share feelings of trust, reciprocity, and support (Hong, Zhang, & Walton, 2014). Jenson (1998) first described a socially cohesive community as one in which all groups "have a sense of belonging, inclusion, participation, recognition and legitimacy" (pg. 15). For this reason, social cohesion has been researched, conceptualized, and operationalized as an indicator of support and engagement in communities across the world, including those with immigrant populations (Spoonley, Peace, Butcher, & O'Neill, 2005).

The four-item scale used in the NLAAS (Cronbach's alpha= 0.82) assessed the cohesiveness of the participant's neighborhood and the likelihood the participant could rely on others. The scale was composed of items from three sources: the Social Cohesion and Trust subscale (Sampson, Raudenbush, & Earls, 1997), the Multi-Site Study of Service Use, Need, Outcomes and Costs in Child and Adolescent Populations

(UNOCCAP) questionnaire (NIMH, 1994), and the National Longitudinal Study of Adolescent Health, (Add Health; Bearman, Jones, & Udry, 1997). Items included: *"People in this neighborhood can be trusted," "People in this neighborhood generally get along with each other," "I have neighbors who would help me if I had an emergency,"* and *"People in my neighborhood look out for each other.*" Participants were asked to rate their level of agreement with each statement on a scale ranging from "very true" (1) to "not at all true" (4). The responses were reverse-coded so that higher scores indicated higher levels of social cohesion. Responses were also recoded so that scores for each item ranged from 0 to 3, with 0 indicating "not at all true" and 3 indicating "very true." A total scale score, ranging between 0 and 12, was be computed by summing responses to individual items.

Discrimination. Discrimination was assessed in the NLAAS using a 9-item scale (Cronbach's alpha = 0.90) that measured experiences of unfair treatment in day-to-day life. These items were originally developed for the Detroit Area Study (DAS; Jackson & Williams, 1995; Williams, Yu et al., 1997). Examples of items include, "*You are treated with less respect than other people," "You receive poorer service than other people at restaurants or stores,"* and *"People act as if they are afraid of you."* Responses ranged from "almost every day" (1) to "never" (6). Although the hypotheses regarding discrimination refer to lower discrimination as a buffer, the responses were reverse-coded so that higher scores indicated higher levels of discrimination. This was done so that higher discrimination could be understood intuitively to indicate higher risk. Responses were also recoded so that scores for each item ranged from 0 to 5, with 0 indicating

"never" and 5 indicating "almost every day." A total scale score, ranging between 0 and 45, was computed by summing responses to individual items.

Employment. Employment opportunities available in the receiving community were assessed using a measure of employment in the last 12 months, using one item that asked participants to provide an answer in number of weeks (assuming 52 weeks in a year): "*How many weeks did you work either for pay or profit, whether part-time or full-time, including time spent on paid vacation, paid sick leave, paid maternity leave, or other paid leave?* " The total number of weeks, between 0 and 52 was used as a score for this variable.

Controls

Age. Participant age was assessed by asking, *"How old are you?"* This question was asked during the household unit screening. Participants provided a numeric response that corresponded to their age. Participant ages for the Latino sample ranged between 18 and 97.

Sex. Participant gender was assessed through an interviewer query. Interviewers completing the household unit screening were asked to indicate whether the sex of the participant was male or female.

Time in the U.S. Participant time in the United States was assessed by asking one question, "How old were you when you first came to this country?" Participants provided a numeric response. These original numeric responses were reorganized into a 5-category variable. The five categories are "U.S. Born" (0), "Less than 5 years" (1), "5-10 years" (2), "11-20 years" (3), and "20+ years" (4). This variable was categorized using dummy coding, with group 1 (0-5 years) as the reference group. Group 2 was 5-10 years, group 3

was 11 to 20 years, and group 4 was 20+ years. These were the only four categories observed in the data, as all participants in the current study were immigrants to the U.S. and did not choose the "U.S. Born" response option.

Preliminary Analyses

Exploratory Factor Analysis. An Exploratory Factor Analysis (EFA) was conducted with the Reasons for Migration Variable in order to determine the appropriate item grouping for this variable. Horn's Parallel Analysis (HPA) was used to determine how many factors to retain. The rule of thumb is that when a factor's eigenvalue exceeds the HPA eigenvalue for that factor, the factor is important to retain (Ledesma & Valero-Mora, 2007). Figure 1 displays eigenvalues for the EFA and the HPA.

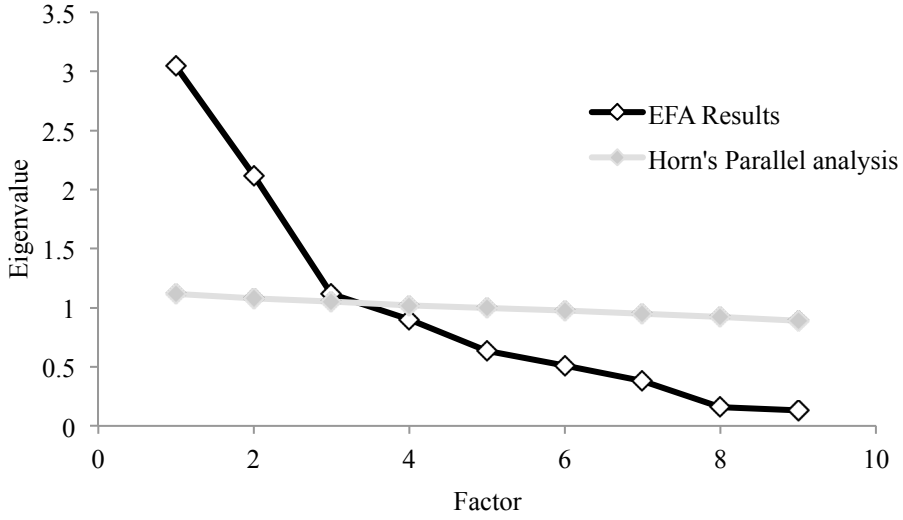


Figure 1. Scree plot with overlaid Horn's parallel analysis eigenvalue cutoffs

The scree plot indicates that factors 1 and 2 clearly exceed the HPA cutoff, while the third factor falls almost exactly on the HPA cutoff, suggesting that either a two-factor or a three-factor solution could be chosen. The two-factor solution and the three-factor solution both fit the data well (Two-factor solution: RMSEA = .050, RMSEA 90% CI =

[.040, .060], CFI = .954, SRMR = .072; Three-factor solution: RMSEA = .025, RMSEA 90% CI = [.010, .040], CFI = .993, SRMR = .029). However, the two-factor solution was chosen over the three-factor solution because two clear factors emerged with a simple structure and very low correlations. On the other hand, while the three-factor solution had a decent simple structure, it did have some violation (i.e., variables that strongly loaded on multiple factors, as well as significant correlations between factors).

The factor loading patterns for the two-factor solution are displayed in Table 3. Items that loaded strongly on factor 1 (i.e., 0.50 or better) included reasons such as, "*to find employment or a job*," "*to improve the future of the children in the family*," "*to improve your life or that of your family and look for better opportunities*," and, "*to seek better educational opportunities*." Thus, factor 1 was labeled as life-improving reasons for migration. Items that loaded strongly on factor 2 (i.e., 0.50 or better) included reasons such as, "*because of the political situation in your country of origin,*" and "*you or your family were persecuted for political reasons*." Thus, factor 2 was labeled as political upheaval reasons for migration. Three items did not load strongly on either factor, and therefore, were not used in the analyses; these items were, "*to join other family members," "to seek medical attention,"* and, *"because of marital and family problems."*

Table 3. Factor Loading Patterns.

	F1	F2
Job	.660	.154
Join Family	.269	.182
Improve child future	.781	.063
Better Oppor.	.995	.038
Political Sit.	.173	.784
Pol. Persecution	-.119	.978
Med. Attn.	.240	.450
Better Ed.	.567	.233
Marital/Fam. Prob	.067	.337

Chapter 4: Results

Descriptive statistics were run on all study variables, including mean, standard deviation, and range. In addition, several analyses were conducted to test the study hypotheses. Hierarchical multiple regression was used to test hypotheses 1-4 regarding the relationship between pre-migration experiences and post-migration psychological distress and to test hypotheses 5-7 regarding the moderating influence of the climate of the receiving community (community support and engagement, lack of discrimination, employment) on the relationship between pre-migration experiences (life-improving and political upheaval reasons for migration, planning for migration, and political and/or interpersonal trauma) on psychological distress. Hierarchical multiple regression involved running the regression model in five sequential steps and the additional variance explained at each step was tabulated, with the fifth step reducing the number of terms down to the best fit model (i.e. explained the greatest amount of variance in the least amount of terms). The five steps include: 1) control variables, 2) control variables and independent variables, 3) control variables, independent variables, and moderator variables, 4) control variables, independent variables, moderator variables, and independent-by-moderator interaction variables, and 5) backward selection to reduce the model to the best fit.

Descriptive Statistics for Study Variables

Psychometric properties for the scales measuring all variables are presented in Table 4. On average, participants experienced low levels of pre-migration trauma, discrimination, and psychological distress. Participants were also employed for most of the year, reported moderately high planning for migration, and moderate to high

community support and engagement. The average score on life-improving reasons for migration was moderate to high, and low for political upheaval reasons for migration.

Table 4
Descriptive Statistics of Study Variables

	Mean	*SD*	Range
Pre-Migration Experiences (Independent Variables)			
Life-Improving Reasons for Migration	6.29	2.03	0-8
Political Upheaval Reasons for Migration	1.27	1.48	0-4
Planning for Migration	2.31	1.22	0-3
Political and/or Interpersonal Trauma	0.90	1.5	0-12
Post-Migration Receiving Community Climate (Moderator Variables)			
Community Support and Engagement	8.17	2.93	0-12
Discrimination	5.06	6.44	0-45
Employment	35.39	22.76	0-52
Post-Migration Mental Health (Dependent Variable)			
Psychological Distress	3.47	5.03	0-28

Model Diagnostics

Several tests were run to determine whether the assumptions for multiple regression were met (e.g., homoscedasticity, normality). Taylor Series Linearization was used to appropriately estimate the standard errors of regression coefficients, taking into account the effect of stratified and/or cluster sampling used to collect data for this large, nationally representative study. Additionally, sampling weights were incorporated into the analysis to ensure that regression coefficient estimates were broadly generalizable.

Responses for the outcome variable, psychological distress, were non-normally distributed. They ranged from 0-28, and had a mean of 3.47 (SD=5.03), a median of 1.00 and a mode of 0.00. Figure 2 displays the frequency of responses for this variable, which indicates a heavily right-skewed distribution, meaning that many participants did not have high levels of psychological distress.

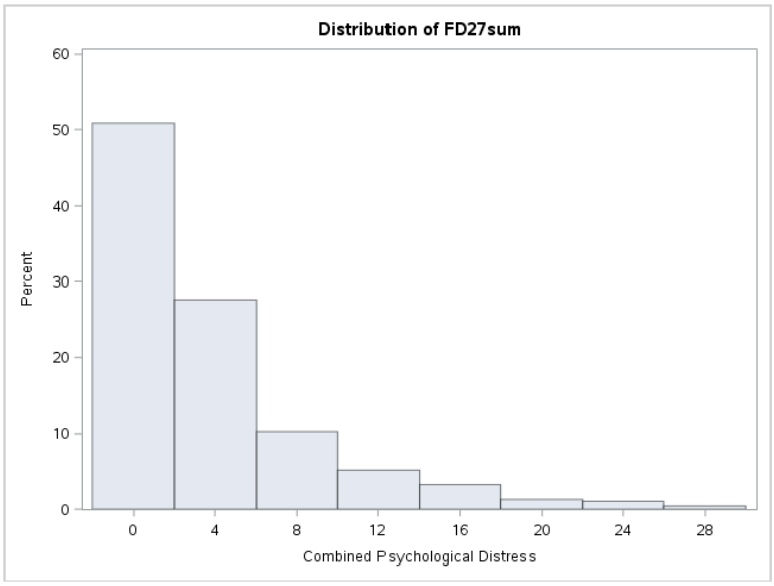


Figure 2. Frequency plot for psychological distress

The extreme skew of this variable suggested that a multivariate step-based variable transformation would be necessary for modeling. In order to test whether additional assumptions of linear regression were violated, preliminary hierarchical steps with backward selection were generated using the raw psychological distress scores. The steps were built in the following order:

- Preliminary step 1: The control variables (age, gender, time in the U.S.) were entered,

- Preliminary step 2: The independent variables (life improving reasons for migration, political upheaval reasons for migration, planning for migration, and political and/or interpersonal trauma) were added.
- Preliminary step 3: The possible moderator variables (community support and engagement, discrimination, and employment) were added.
- Preliminary step 4: The two-way interaction terms were added for the possible moderator variables and the three independent variables.
- Preliminary step 5: Backward selection reduced step 4 to the following: Planning for migration, political and/or interpersonal trauma, gender, discrimination, employment, planning for migration x discrimination, and political and/or interpersonal trauma x employment.

The fit diagnostics for the model indicated that it violated key assumptions for linear regression. Figure 3 depicts the violations to assumptions. The residual histogram indicated that the residuals were highly skewed. In addition, the residual-quantile plot indicated a clearly non-linear relationship. Additionally, the leverage plot indicated that there were large asymmetric leverages (ranging from about -2.5 to 5). As a result, the psychological distress variable required transformation.

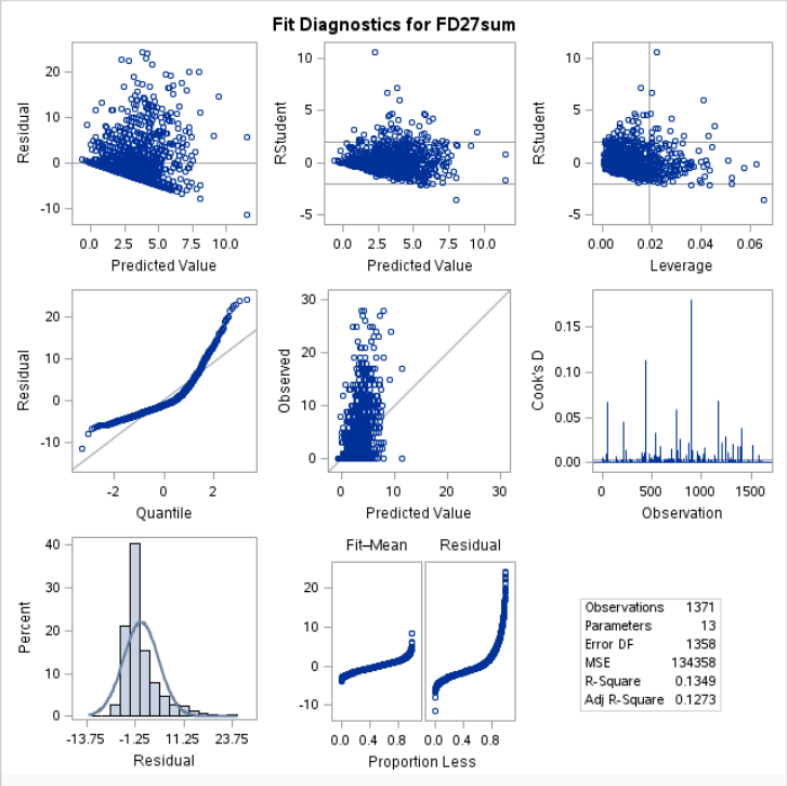


Figure 3. Model fit diagnostics using raw psychological distress variable

A Box-Cox transformation was used to transform step 4 (i.e., the full model) in order to satisfy linear regression assumptions. This transformation was ideal due to the extremely skewed nature of the outcome variable. The transformation equation was defined as:

$$f(x) = [(x + c)^{\lambda} - 1] / \lambda$$

The values for c and lambda were selected to most effectively correct the problems with the model diagnostics (i.e., to achieve normality of the residuals). The estimated best-fit values were $\lambda = 0.20$ and $c = 0.85$.

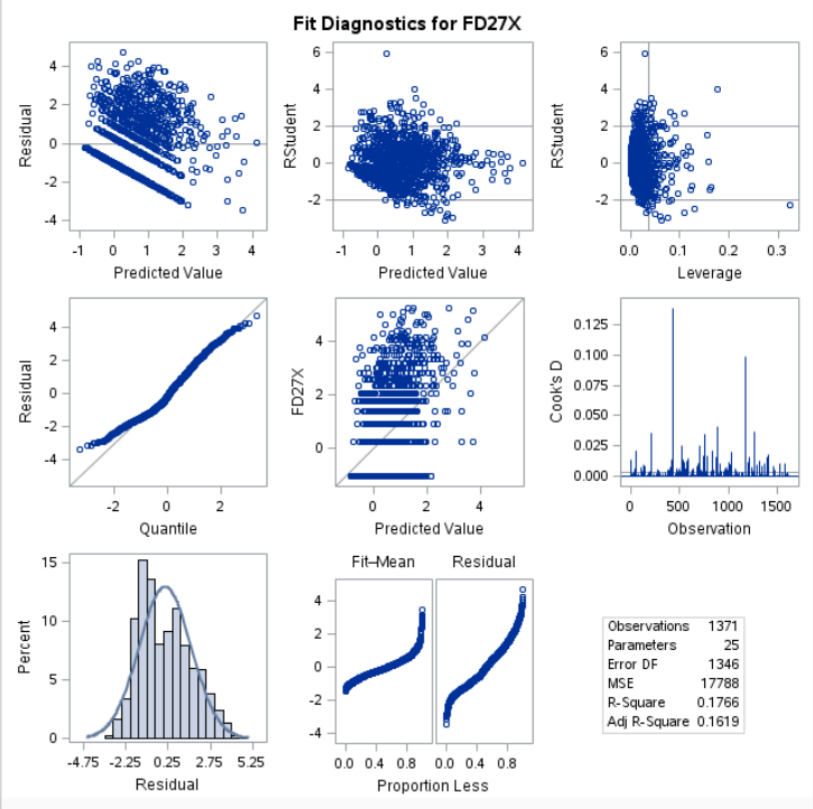
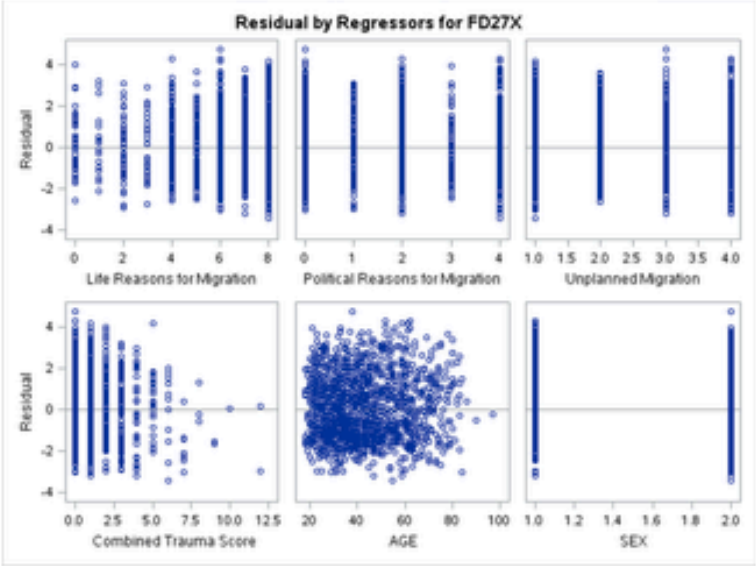


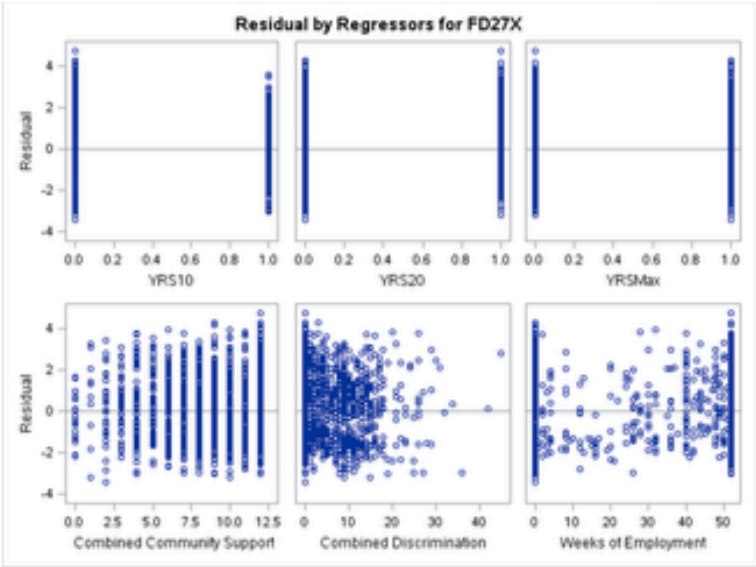
Figure 4. Model fit diagnostics using transformed psychological distress variable

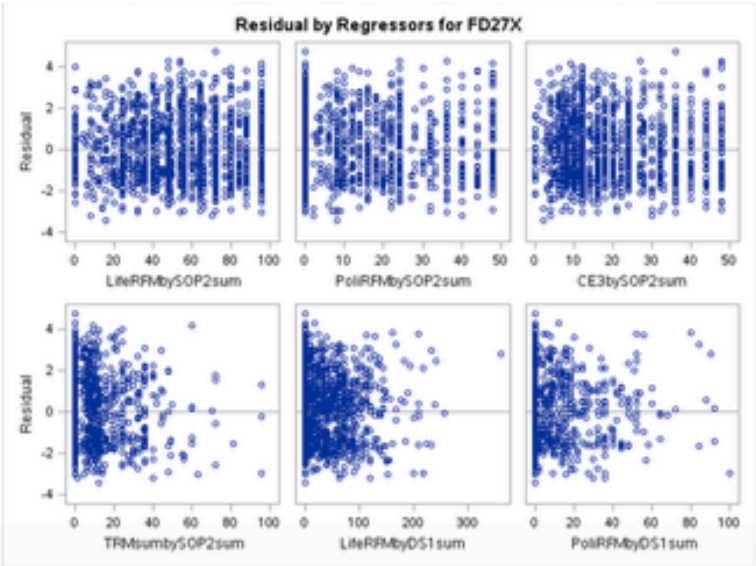
Figure 4 depicts the diagnostics for the model using the transformed psychological distress variable. The leverage and Cook's D plots indicated that there was not much undue influence of outliers. In addition, the residual-quantile plot indicated that normality was not substantially violated; even though there was some slight deviation in slope toward the bottom of the residual-quantile plot for the lowest quantile, it was not substantial enough to warrant different modeling. The leverage plot indicated symmetric leverages (ranging from about -3 to 3). Additionally, the residual plot indicated that the residuals were roughly normally distributed, with only slight deviation from normal.

A closer look at the residuals indicated that skewness (0.41) and kurtosis (-0.58) were both under 1. In addition, the mean (0.06) and median (-0.14), were within half a standard deviation. This indicated that the normality assumption was met. Plotting of the

residuals of the predictor variables was used to assess whether the homoscedasticity assumption was met. Figure 5 depicts the plots for residual by regressor. The even height of all residuals across all predictors indicated homoscedasticity. Additionally, the predictor-specific plots (labeled as interactions) show that there is no deviation from linearity for each term.


Residual by Regressors for FD27X
Residual
Life Reasons for Migration
Political Reasons for Migration
Unplanned Migration
Combined Trauma Score
AGE
SEX


Residual by Regressors for FD27X
Residual
YRS10
YRS20
YRSMax
Combined Community Support
Combined Discrimination
Weeks of Employment


Residual by Regressors for FD27X
Residual
LifeRFMbySOP2sum
PoliRFMbySOP2sum
CE3bySOP2sum
TRMsumbySOP2sum
LifeRFMbyDS1sum
PoliRFMbyDS1sum

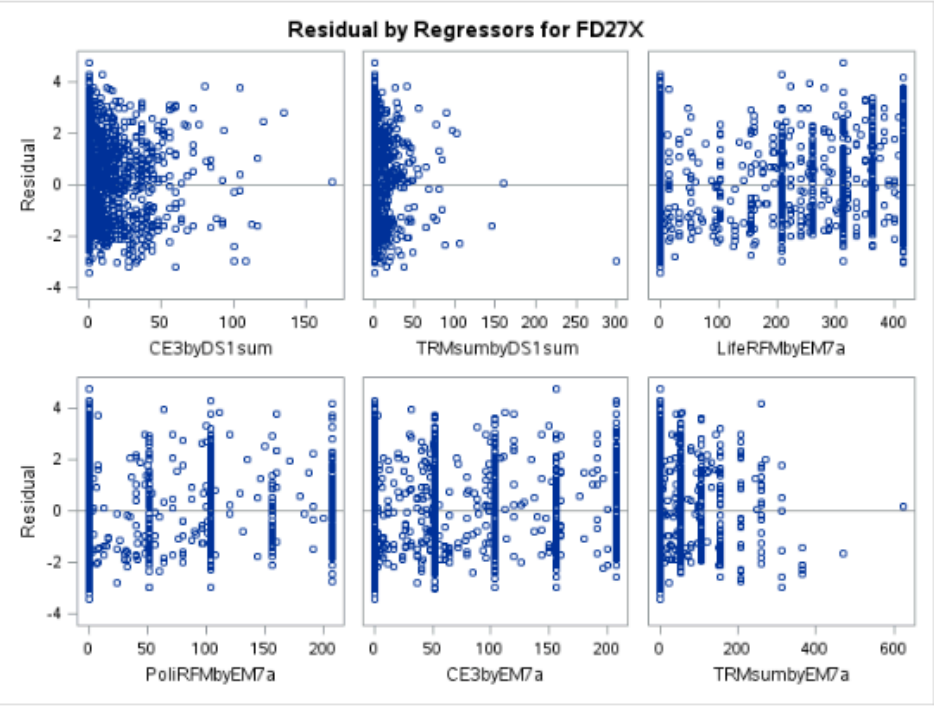


Figure 5. Residual by regressor plots

Finally, Variance Inflation Factors (VIFs) were calculated for all variables in order to determine whether multicollinearity existed. While a VIF of 10 is generally considered acceptable, a VIF of 2.5 is a more conservative higher bound for VIFs (Allison, 2012). All variables had a VIF of well under this conservative bound, indicating that no multicollinearity existed. VIFs for the independent variables ranged from 1.04 to 1.08, and for the moderator variables they ranged from 1.05 to 1.25. The VIFs for the control variables ranged from 1.16 to 1.60. The results of these diagnostic tests indicated that step 4 using the transformed variable did not violate any key assumptions of linear regression.

Findings

Bivariate Relationships. The relationship between variables was explored. Correlations between all study variables are presented in table 5.

Table 5

Correlation Matrix for Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. Life Improving Reasons	-		-	-	-	-	-	-	-	-	-	-
2. Political Reasons	-0.02	-	-	-	-	-	-	-	-	-	-	-
3. Planning for Migration	-0.13**	-0.07*	-	-	-	-	-	-	-	-	-	-
4. Political and/or Interpersonal Trauma	-0.07	0.23**	0.05	-	-	-	-	-	-	-	-	-
5. Community Support	0.00	0.15**	-0.09*	-0.04	-	-	-	-	-	-	-	-
6. Discrimination	0.05	-0.07	0.07	0.03	-0.15**	-	-	-	-	-	-	-
7. Employment	0.01	-0.05	-0.01	-0.05	-0.05	0.10**	-	-	-	-	-	-
8. Psychological Distress	0.07	0.07*	0.03	0.15**	-0.04	0.21**	-0.27**	-	-	-	-	-
9. Age	-0.09**	0.27**	-0.02	0.12**	0.20**	-0.24**	-0.32**	0.12**	-	-	-	-
10. Sex	-0.04	-0.08*	-0.02	-0.10**	0.02	-0.09**	-0.27**	0.16**	0.05	-	-	-
11. 5-10 Years in the US	0.03	0.01	-0.06	0.05	-0.03	0.01	0.07	-0.04	-0.17**	-0.06	-	-
12. 11-20 Years in the US	0.03	-0.14*	0.06	-0.01	-0.04	0.05	0.05	-0.01	-0.24**	-0.002	-0.24**	-
13. 20+ Years in the US	-0.05	0.12*	-0.002	-0.06	0.15**	-0.07	-0.13	0.06	0.52**	0.01	-0.37**	-0.52**

*p<.01, **p<.001

Hierarchical Multiple Regression. This study generated seven hypotheses. A hierarchical regression with five steps was run to test these hypotheses. Step 2 was used to test hypotheses 1-4. Hypotheses 1-4 assessed the extent to which pre-migration experiences (i.e. life-improving reasons for migration, political upheaval reasons for migration, planning for migration, and political and/or interpersonal trauma) were associated with psychological distress. Step 4 was a test of hypotheses 5-7. Hypotheses 5-7 assessed the moderating effect of the climate of the receiving community (i.e., community support and engagement, lack of discrimination, and employment) on the relationship between pre-migration experiences and psychological distress. In step 5, backward selection procedures were used to reduce the fourth step to a more parsimonious one.

In step 1, the control variables (age, gender, time in the U.S.) were entered. In step 2, the independent variables (life-improving reasons for migration, political upheaval reasons for migration, planning for migration, and political and/or interpersonal trauma) were added. In step 3, the possible moderator variables (community support and engagement, lack of discrimination, and employment) were added. In step 4, the two-way interaction terms were added for the possible moderator variables and the three independent variables. In step 5, backward selection reduced step 4 to the following: Planning for migration, political and/or interpersonal trauma, gender, discrimination, employment, planning for migration x discrimination, and political and/or interpersonal trauma x employment. The results of the analyses used to test each hypothesis are presented below.

Hypothesis 1. Immigrating for life-improving reasons will be associated with better post-migration mental health outcomes (i.e., less psychological distress). Step 2

was used to test hypothesis 1. Results indicated that life-improving reasons for migration were not significantly associated with psychological distress, B=0.02, t(1572) = 0.87, p=0.38. Thus, hypothesis 1 was not supported.

Hypothesis 2. Immigrating for political upheaval reasons will be associated with worse post-migration mental health outcomes (i.e., more psychological distress). Step 2 was used to test hypothesis 2. Results indicated that political upheaval reasons for migration were not significantly associated with psychological distress, B=0.04, t(1572) = 1.04, p=0.30. Thus, hypothesis 2 was not supported.

Hypothesis 3. Having a better-planned migration will be associated with better post-migration mental health outcomes (i.e., less psychological distress). Step 2 was used to test hypothesis 3. Results indicated that planning for migration was not significantly associated with psychological distress, B=0.04, t(1572) = 0.96, p=0.34. Thus, hypothesis 3 was not supported.

Hypothesis 4. Experiencing more pre-migration political and/or interpersonal trauma will be associated with worse post-migration mental health outcomes (i.e., higher psychological distress). Step 2 was used to test hypothesis 4. Results indicated that political and/or interpersonal trauma was significantly and positively associated with psychological distress, B=0.22, t(1572) = 5.68, p<0.001, such that reporting more traumatic events prior to migrating was associated with more reported psychological distress. Thus, hypothesis 4 was supported.

Hypothesis 5. The relationship between reasons for migration (i.e., life-improving and political upheaval reasons) and post-migration mental health (i.e. psychological distress) will be moderated by factors associated with the climate of the receiving

community, specifically community support and engagement, lack of discrimination, and employment.

To test hypotheses 5-7 regarding the moderating effect of the climate of the receiving community on the relationship between pre-migration experiences and post-migration mental health, the climate of the receiving community variables had to be entered into the model. The moderating variables were entered at step 3 (as can be seen in table 6), although no study hypotheses were tested with this step. The three variables were community support and engagement, discrimination, and employment. The interaction terms for each of the climate of the receiving community variables by each of the pre-migration experiences were entered into step 4.

- *Hypothesis 5a. Greater community support and engagement will decrease the association between life-improving reasons for migration and psychological distress.*

Step 4 was used to test hypothesis 5a. There were no significant interaction effects between community support and engagement and life-improving reasons for migration, B=0.01, t(1370) = 0.77, p=0.44. Thus, hypothesis 5a was not supported.

- *Hypothesis 5b. Greater community support and engagement will decrease the association between political upheaval reasons for migration and psychological distress.*

Step 4 was used to test hypothesis 5b. There were no significant interaction effects between community support and engagement and political upheaval reasons for migration, B=-0.02, t(1370) = -1.34, p=0.18. Thus, hypothesis 5b was not supported.

- *Hypothesis 5c. Lower discrimination will decrease the association between life-improving reasons for migration and psychological distress.*

Step 4 was used to test hypothesis 5c. There were no significant interaction effects between discrimination and life-improving reasons for migration, B=-0.01, t(1370) = -1.70, p=0.09. Thus, hypothesis 5c was not supported.

- *Hypothesis 5d. Lower discrimination will decrease the association between political upheaval reasons for migration and psychological distress.*

Step 4 was used to test hypothesis 5d. There were no significant interaction effects between discrimination and political upheaval reasons for migration, B=-0.002, t(1370) = -0.19, p=0.85. Thus, hypothesis 5d was not supported.

- *Hypothesis 5e. Higher employment will decrease the association between life-improving reasons for migration and psychological distress.*

Step 4 was used to test hypothesis 5e. There were no significant interaction effects between employment and life improving reasons for migration, B=-0.002, t(1370) = -1.62, p=0.11. Thus, hypothesis 5e was not supported.

- *Hypothesis 5f. Higher employment will decrease the association between political upheaval reasons for migration and psychological distress.*

Step 4 was used to test hypothesis 5f. There were no significant interaction effects between employment and political upheaval reasons for migration, B=-0.002, t(1370) = -1.33, p=0.18. Thus, hypothesis 5f was not supported.

Hypothesis 6. The relationship between planning for migration and post-migration mental health (i.e., psychological distress) will be moderated by factors

associated with the climate of the receiving-community, specifically community support and engagement, lack of discrimination, and employment.

- *Hypothesis 6a. Greater community support and engagement will decrease the association between unplanned migration and psychological distress.*

Step 4 was used to test hypothesis 6a. There were no significant interaction effects between community support and engagement and unplanned migration, B=0.003, t(1370) = 0.24, p=0.81. Thus, hypothesis 6a was not supported.

- *Hypothesis 6b. Lower discrimination will decrease the association between unplanned migration and psychological distress.*

Step 4 was used to test hypothesis 6b. The interaction between discrimination and planning for migration was significant, B =-0.02, t(1370) = -2.53, p<0.05, suggesting that discrimination modified the association between unplanned migration and psychological distress. The negative beta coefficient indicates the relationship between the independent variable and the dependent variable increases as the value of the moderator decreases, or vice versa. Thus, association between unplanned migration and psychological distress increased for participants who reported less discrimination. In other words, among participants reporting more discrimination, unplanned migration was less positively associated with psychological distress. Although there was a significant interaction between discrimination and planning for migration, hypothesis 6b was not supported because the relationship was in the opposite direction of what was hypothesized. A plot of the interaction is presented in Figure 6.

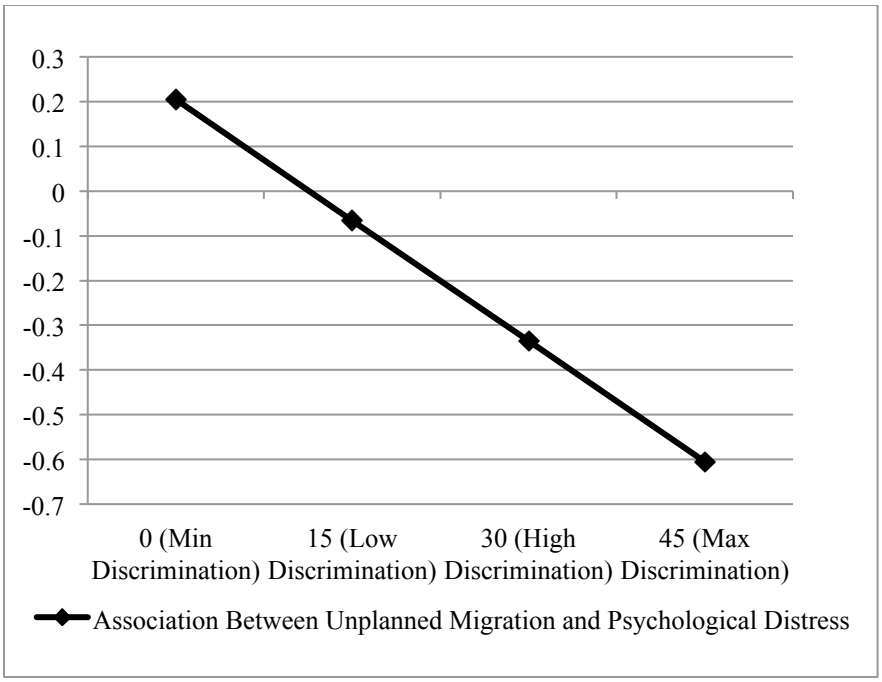


Figure 6. Association between unplanned migration and psychological distress (As moderated by discrimination)

- *Hypothesis 6c. Higher employment will decrease the association between unplanned migration and psychological distress.*

Step 4 was used to test hypothesis 6c. There were no significant interaction effects between employment and unplanned migration, B=-0.003, $t(1370) = -1.68$, p=0.09. Thus, hypothesis 6a was not supported.

Hypothesis 7. The relationship between pre-migration experience of political and/or interpersonal trauma and post-migration mental health (i.e., psychological distress) will be moderated by factors associated with the climate of the receiving-community, specifically community support and engagement, lack of discrimination, and employment.

- *Hypothesis 7a. Greater community support and engagement will decrease the association between pre-migration experience of political and/or interpersonal trauma and psychological distress.*

Step 4 was used to test hypothesis 7a. There were no significant interaction effects between community support and engagement and political and/or interpersonal trauma, B=-0.01, t(1370) = -0.77, p=0.44. Thus, hypothesis 7a was not supported.

- *Hypothesis 7b. Lower discrimination will decrease the association between pre-migration experience of political and/or interpersonal trauma and psychological distress.*

Step 4 was used to test hypothesis 7b. There were no significant interaction effects between discrimination and political and/or interpersonal trauma, B=-0.01, t(1370) = -1.43, p=0.15. Thus, hypothesis 7b was not supported.

- *Hypothesis 7c. Higher employment will decrease the association between pre-migration experience of political and/or interpersonal trauma and psychological distress.*

Step 4 was used to test hypothesis 7c. There were no significant interaction effects between employment and political and/or interpersonal trauma, B=-0.003, t(1370) = -1.52, p=0.13. Thus, hypothesis 7c was not supported.

After entering the steps required to test the study hypotheses, a subsequent step was entered. In this fifth step, a common technique used to find the best fit for a regression model was employed. This technique involves the use of backward selection procedures to determine the most efficient model. In this step, extraneous variables are removed, and sometimes associations that previously appeared marginal become significant. Results indicated that step 5 explained the variability in psychological distress nearly as comprehensively as step 4, while being far more parsimonious; adjusted R^2 = 0.15, F(7, 1461) = 25.46, $p < .0001$. In this reduced model, there were independent main

effects for political and/or inter personal trauma, B=0.34, t(1461) = 4.87, p<0.001 and the independent main effects of unplanned migration were just barely non-significant, B=0.10, t(1461) = 1.85, p=0.06. There were also independent main effects for sex, B=0.54, t(1461) = 4.99, p<0.001, discrimination, B=0.11, t(1461) = 5.19, p<0.001, and employment, B=-0.01, t(1461) = -2.85, p<0.01. However, these effects were not part of the hypotheses for this study.

Results of step 5 also indicated the interaction between employment and political and/or interpersonal trauma was significant, B=-0.003, t(1461) = -2.13, p<0.05, an association that was previously not found to be significant. The results suggest that employment modified the association between political and/or interpersonal trauma and psychological distress. The negative beta coefficient indicates the connection between trauma and psychological distress decreased among participants reporting having been employed for more time in the past year. In other words, among longer-employed participants, trauma was less positively associated with psychological distress.

Subgroup Analyses

A power analysis was conducted to determine whether subgroup analysis by country of origin would be possible. Analysis was conducted in G Power to determine the power of the final model at a lower sample size. At even a 50% reduction in sample size, the power of detecting the interaction effects was reduced to 46%. Given that the subgroups of interest represented between 13 and 31% of the sample, there was not any reasonable power to detect subgroup differences.

Table 6
Receiving Community Climate as Moderator Between Pre-Migration Experiences and Psychological Distress

Step		1	2	3	4	5
		B (Unstandardized Beta)				
Controls						
	Age	0.01	0.001	0.003	0.004	
	Sex	0.61***	0.65***	0.57***	0.57***	0.54***
	Years in the US					
	<5 Years	ref	ref	ref	ref	
	5-10 Years	0.02	0.06	0.16	0.20	
	11-20 Years	-0.14	-0.07	0.07	0.09	
	20+ Years	-0.14	0.05	0.11	0.10	
Pre-Migration Experiences (Independent Variables)						
	Life Improving Reasons for Migration		0.02	0.02	0.08	
	Political Upheaval Reasons for Migration		0.04	0.00	0.26	
	Planning for Migration		0.04	-0.005	0.20	0.10
	Political and/or Interpersonal Trauma		0.22***	0.21**	0.44**	0.34***
Post-Migration Receiving Community Climate (Moderator Variables)						
	Community Support and Engagement			0.001	-0.02	
	Discrimination			0.06***	0.17***	0.11***
	Employment			-0.01***	0.01	-0.01**
Interactions						
Community Support and Engagement						
	X life improving reasons				0.01	
	X political reasons				-0.02	
	X planning				0.003	
	X trauma				-0.01	

Table 6 (*Continued)*

Step	1	2	3	4	5
	B (Unstandardized Beta)				
Discrimination					
X life improving reasons				-0.01	
X political reasons				-0.001	
X planning				-0.02*	-0.02*
X trauma				-0.01	
Employment					
X life improving reasons				-0.002	
X political reasons				-0.002	
X planning				-0.003	
X trauma				-0.003	-0.004*
Model *F*	8.03***	9.01***	12.61***	9.37***	25.46***
adj. R^2	0.04	0.07	0.14	0.16	0.15

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

Chapter 5: Discussion

Introduction

The goal of this study was to examine the relationship between psychological distress and pre-migration experiences (i.e. life-improving and political upheaval reasons for migration, planning for migration, and experience of pre-migration political and/or interpersonal trauma). Another goal was to explore whether the relationship between pre-migration experiences and post-migration psychological distress was moderated by factors associated with the climate of the receiving-community, specifically community support and engagement, lack of discrimination, and employment.

This study addressed several gaps in the literature. There was a need for more research about pre-migration experiences of Latino immigrants, particularly reasons for migration and planning for migration. These experiences had been researched to a small degree with Asian immigrants, but not with Latino immigrants. Given the conflicting findings regarding the mental health of Latino immigrants, looking at pre-migration experiences was intended as a way of capturing information about these important experiences and possibly helping to understand what might contribute to outcomes for Latino immigrants in the U.S.

In addition, Torres and Wallace (2013) suggested that to understand the mental health of Latino immigrants, researchers should explore the community "climate" experienced by immigrants post-migration. The post-migration community climate is something that had been studied to a limited degree, but additional work needed to be done to understand the factors that make up that community climate. Thus, the current

study sought to shed light on factors that make up the post-migration community climate, and might contribute to Latino immigrants' mental health.

This research was also grounded in theory. To better understand how pre-migration stressors experienced by immigrant adults may impact their mental health post-migration, and how the climate of the receiving community in the U.S. can buffer this relationship, the Stress Process Model (Pearlin, Menaghan, Lieberman, & Mullan, 1981) was used.

Summary of Findings

Impact of Pre-Migration Experiences. A goal of this study was to determine if pre-migration experiences (i.e., life-improving and political upheaval reasons for migration, planning for migration, and experiences of political and/or interpersonal trauma) were associated with post-migration psychological distress. Findings indicated that only the experience of pre-migration political and/or interpersonal trauma was significantly associated with post-migration psychological distress. The research on pre-migration experiences of trauma is still limited, as studies often focus on lifetime experience of traumatic events, rather than pre-migration trauma. However, the findings of the current study are supported by a few previous studies. These studies suggest that some Latino immigrants experience political and/or interpersonal trauma in their home countries, and those traumatic experiences are associated with worse mental health once they arrive in the U.S. (Eisenman et al., 2013; Fortuna et al., 2003). These previous studies have largely focused on clinical samples (Kaltman, Green, Mete, Shara, & Miranda, 2010), populations that may have been at increased risk for worse mental health, regardless of migration history. The current study focused on a non-clinical

sample of nationally representative participants, thus extending the findings amongst a larger population. In addition, participants in the current study experienced relatively low rates of pre-migration trauma (M = 0.90, SD=1.50). However, it seems that even when immigrants experience low rates of pre-migration trauma, these traumatic experiences are still highly associated with their mental health. Although it is not possible to infer cause in this relationship, it is possible that traumatic pre-migration experiences may result in worse mental health for Latino immigrants. On the other hand, it is also possible that those who are more currently distressed (for any number of reasons) may be remembering more pre-migration traumatic experiences. Although difficult to implement, a longitudinal study of immigrants from pre- to post-migration would help us understand this relationship better.

Interestingly, while pre-migration experiences of political and/or interpersonal trauma were significantly associated with psychological distress, number of years in the U.S. was not significant. This finding suggests that pre-migration trauma may impact immigrants' mental health, regardless of how many years they have been living in the U.S. In an attempt to understand the "immigrant paradox" researchers have suggested that immigrants' emotional and physical health outcomes are tied to length of time in the U.S. (Castro, 2013; Markides & Coreil, 1986). The results of this study suggest that the association between trauma and mental health is not affected by the amount of time a person has lived in the U.S., whether they have recently arrived, or lived here for over 20 years.

A more surprising finding from this study was the lack of significance for both reasons for migration (both life-improving and political upheaval reasons) and planning

for migration. Though very limited, and conducted mainly with non-Latino samples, previous research on reasons for migration indicated that why one immigrated was tied to how well one was doing psychologically in the U.S. In addition, previous research suggested that the more planning immigrants put into their migration, the better their mental health once here (Gong et al., 2006; Ryan et al., 2006). It is possible that these factors were not associated with psychological distress for Latino immigrants for a couple of reasons. First, the bivariate correlation analysis showed that both life-improving, $r(1371)=0.067$, $p<0.05$, and political upheaval reasons for migration, $r(1371)=0.074$, $p<0.01$, were significantly associated with psychological distress. These associations became non-significant in the multiple regression analysis, with the addition of control variables. The sex variable was the only control variable that was significant in the regression analysis. Thus, it appears that both reasons for migration are significantly associated with psychological distress, but that effect disappears depending on one's sex. This finding makes sense, given that previous studies on reasons for migration did not control for sex in their analyses (Gong et al., 2006; Ryan et al., 2006). Further discussion regarding the association between sex and psychological distress follows in the "additional findings" section of this chapter.

Alternatively, perhaps the desire to improve their lives and that of their families was highly prevalent and ever-present for Latino immigrants. Therefore, there might not have been enough variation in this variable for significant findings once controls were taken into account. While it must be acknowledged there was enough variation for a significant bivariate correlation, this impact of limited variation is at least partially supported by the data. Life-improving reasons for migration scores ranged between zero

and eight, with a mean on the high end of this range (*M*=6.29, *SD*=2.03), and about 55% of participants with a score of eight. Thus, the lack of significance in the association between planning for migration and psychological distress may have been due to a measurement problem. Additional discussion regarding this issue can be found in the "study limitations" section of this chapter.

Impact of Climate of the Receiving Community. Another goal of this study was to determine if the post-migration climate of the receiving community (i.e., community support and engagement, lack of discrimination, and employment) was a moderator in the association between pre-migration experiences (i.e., life-improving and political upheaval reasons for migration, planning for migration, and experiences of political and/or interpersonal trauma) and post-migration psychological distress. First, there was an independent main effect for discrimination, indicating that more discrimination was associated with more psychological distress. This finding supports previous literature regarding the association between discrimination and mental health (Ayón, Marsiglia, & Bermudez-Parsai, 2010). Sawyer, Major, Casad, Townsend, & Berry Mendes (2012) conducted a study of the physical and psychological impacts of prejudice and discrimination. Their results indicated that Latinas who anticipate prejudice experience increased psychological distress and cardiovascular stress. Negi (2013) conducted a mixed-methods study of the connection between discrimination and psychological distress in a sample of Latino Day Laborers. Quantitative results of their study indicated that participants who reported higher levels of discrimination were more likely to report higher psychological distress. These results were extended through "member checking" focus groups that helped contextualize the findings with the lived experience of

participants. Qualitative results indicated that participants experienced several forms of discrimination on a daily basis. These experiences took a toll on their mental health and made it difficult to improve their social and economic standing.

Findings also indicated that discrimination had a significant moderating influence on the relationship between planning for migration and psychological distress. Somewhat surprisingly, the association between unplanned migration and psychological distress increased for participants who reported less discrimination. This finding appears to be in the opposite direction of what was hypothesized, as it was expected that the association between unplanned migration and psychological distress would decrease among participants reporting less experience of discrimination. Figure 7 depicts the resulting interaction effects between variables. The table illustrates that when one experiences low discrimination, a positive association exists between unplanned migration and psychological distress (this interaction is also depicted in figure 6, which can be found in the previous chapter). Thus, at low levels of discrimination immigrants who were unable to plan their migration are experiencing more post-migration distress, while those who were able to plan more carefully are experiencing less post-migration psychological distress. At first this relationship seems difficult to understand and counterintuitive for those experiencing high discrimination. However, upon further consideration there is one very reasonable explanation. For those who carefully planned their migration, there may have been higher expectations that things would go well once arriving in the U.S. If they then experience high levels of discrimination, they may feel frustration that even after carefully planning their migration, their life in the U.S. is not as expected; in other words, not the land of opportunity they envisioned. Thus, their psychological distress is

increased. Likewise, those who did little to plan their migration (perhaps because they felt they had no choice but to migrate) may have had lower expectations, anticipating a more difficult adjustment in the U.S. and an expectation that life in the U.S. would be difficult. Thus, they are not as distressed, even when experiencing high levels of discrimination. This association may hold particularly true for immigrants fleeing chaotic living conditions and political violence, as being able to leave those conditions behind can be a significant source of relief. For this group, the experience of discrimination may not feel as damaging or significant when compared to life-threatening situations at home. Truly understanding the meaning of this relationship and detangling these findings may take additional work.

	Unplanned	**Carefully Planned**
Low Discrimination	More Distressed	Less Distressed
High Discrimination	Less Distressed	More Distressed

Figure 7. Interaction effects for study variables

It should also be noted that in this study the mean score on the measure of discrimination was 5.06 (*SD*=6.44), with a possible scale range of 0-45. This indicates that most participants reported a relatively low level of discrimination. Perhaps there was not enough of a range of discrimination experienced to truly understand the experiences of those reporting low levels of discrimination as compared to those reporting high levels of discrimination. Of course, the fact that most participants reported relatively lower levels of discrimination is a positive finding, and preferable to the alternative – we would

not want to find that participants experienced high levels of discrimination just for the sake of research. Furthermore, perhaps this finding suggests that low levels of discrimination, do not function as a buffer in the lives of Latino immigrants in the U.S. but high levels are particularly problematic for those who planned and perhaps had higher expectations for their new life.

Although the connection between mental health and discrimination is supported by previous research, there is still a dearth of literature regarding the impact of planning for migration on mental health. As described above, there was a significant interaction between discrimination and planning for migration. However, on its own, planning for migration was not significantly associated with psychological distress. These findings are difficult to interpret and highlight the need for more studies to provide additional insight and clarification. It is also possible that the way planning for migration was operationalized contributed to these puzzling findings. Potential measurement problems regarding this variable are further considered in the "study limitations" section.

In step 4 of the multiple regression analysis, the full model was entered containing all control, independent, and moderating variables, as well as the interaction terms. A final step 5 was run using backward selection procedures to find the best fit and eliminate irrelevant variables. This final step revealed an additional significant interaction between employment and political and/or interpersonal trauma, which had not been significant in step 4. This finding suggested that employment had a significant moderating influence on the relationship between experience of political and/or interpersonal trauma and psychological distress. The association between trauma and psychological distress decreased among participants reporting having been employed for longer. Thus, while the

experience of pre-migration political and/or interpersonal trauma was positively associated with post-migration psychological distress, it appears that being able to find reliable, longer-term employment in the U.S. helps to buffer immigrants from the negative psychological consequences of trauma.

As previously discussed in the literature review, research on the association between employment and mental health is still limited among Latino immigrants. A few studies have examined that connection among immigrant populations, but their focus has been on immigrants outside of the U.S. For example, Robert, Martinez, Garcia, Benavides, and Ronda (2014) conducted a longitudinal study of immigrants (of Colombian, Ecuadorian, Moroccan, and Romanian descent) residing in Spain. Their findings indicated an increased risk for poor mental health among workers who lost their job over the course of the study (between 2008 and 2011). Using the same sample of immigrants residing in Spain, Ronda, Briones-Vozmediano, Galon, Garcia, Benavides, and Agudelo-Suarez (2015) conducted a qualitative study about the impact of economic crisis in Spain. Participants reported deterioration in their mental health (i.e., increased stress, depression, and difficulty sleeping). They attributed these negative consequences to the economic crisis, and particularly to the experience of unemployment that resulted from the crisis.

In U.S. immigrant samples, studies exploring the impact of employment difficulties have been limited. A few studies have explored this association with non-Latino immigrant groups. For example, de Castro, Rue, and Takeuchi (2010) analyzed data collected for the NLAAS, the same dataset used in the current study. Their results indicated that Asian immigrants who experienced employment frustrations (i.e., difficulty

procuring work because of one's Asian background) reported significantly lower levels of self-reported mental health. Thus, the research literature seems to support a link between negative mental health outcomes and unemployment. The current study extended those findings by suggesting that employment may also function as a protective factor in the lives of Latino immigrants, particularly those who have experienced trauma in their country of origin.

Overall, the results of this study indicated that several factors associated with the climate of the receiving community are important in understanding the psychological adjustment of Latino immigrants. Only one of the factors that contributed to the climate, community support and engagement, did not yield significant results. This is surprising in light of a large body of research on the positive buffering effects of social support. Additional work is needed to better understand why community support did not play a significant role as part of the climate of the receiving community for this group of immigrants. In this study, community support and engagement was operationalized as social cohesion in the participant's neighborhood. Additional sources of support were not taken into account, such as support from family members and friends in the country of origin. To better understand the influence of post-migration community support, future research could also control for the influence of support from family and friends in the country of origin.

Furthermore, the measure of social support used in this study also did not distinguish between supports in the U.S. in general, and support specifically from the Latino community in the U.S. It would be interesting to further tease out community support and engagement in order to understand the nuances that contribute to Latino

immigrants' mental health. Future research could compare the effect of community support and engagement in communities with high concentrations of Latino immigrants to communities without Latino immigrants.

Finally, a consideration of demographic information for this sample could help further our understanding of the findings. About 30% of the sample was Cuban, and another 30% was Mexican. While Cuban and Mexican immigrants may have very different experiences in the United States, they share the experience of having large concentrations of fellow immigrants living in several communities across the U.S. Large numbers of Cuban immigrants live in Southern Florida and large numbers of Mexican immigrants live in Southern California, Texas, and Illinois, creating networks of support for Latino immigrants. While the specific location for participants in this study is unknown, it is possible that location might have influenced participants' responses. Those living in communities such as Southern Florida or Southern California may have experienced greater community support, or lower discrimination than those living in communities without large number of immigrants or Latinos in general. Future research could take into account participant location and consider how it may impact the experiences of Latino immigrants within and outside of these communities.

Additional Findings. Although not the focus of the study, the regression analysis did reveal another interesting and potentially important finding. Being female was significantly associated with psychological distress. This finding is consistent with previous studies that have found women are at increased risk for psychological distress, depression, and decreased mental health in general (Hiott et al., 2006; Jaggers & MacNeil, 2015; Mohr et al., 2003; Nolen-Hoeksema, 2001). Among immigrant

populations, increased risk for psychological distress among women has been associated with a variety of factors, including unemployment or underemployment, less social support from those living in the home country, and lower income (Gonzalez-Castro, 2011; Ritsner, Ponizovsky, Nechamkin, and Modai, 2001). For example, Aroian (2008) compared gender differences in the experience of psychological distress among a sample of Latin American immigrants in Spain. Results indicated that women reported more psychological distress than men. In addition, experience of psychological distress for women in the sample was associated with not being employed full time, feelings of loss for their homeland, unfamiliarity in a new country, and language difficulties.

Although it is possible that women experience more psychological distress than men, another potential explanation for this finding may have to do with differences in reporting. It is possible that men may not feel comfortable disclosing feelings related to stress, depression, and anxiety, perhaps because of societal conventions and pressures. It may be more socially acceptable for women to disclose internalizing feelings, while men may be expected to engage in externalizing behaviors. Furthermore, the data collection methods employed in the original study may have contributed to these differences in reporting. Participants were interviewed by data collectors in person or via telephone; thus, men may not have felt as comfortable disclosing feelings of distress to a stranger. Had the data been collected through anonymous surveys, men might have felt more comfortable disclosing any feelings of distress.

Implications for Theory

As previously stated, Pearlin's Stress Process Model (1981) was used to guide this study. The model suggested the impact of a stressful experience (i.e., pre-migration

experiences) on mental health outcomes (i.e., psychological distress) could be buffered by a number of factors, such as social supports and resources (post-migration climate of the receiving community). The results of this study provided some support for the theory's propositions; that is, some of the stressors and some of the buffers tested in this study were found to be significant. Specifically, the experience of pre-migration political and/or interpersonal trauma (stressor) was associated with post-migration experience of psychological distress (outcome), and this relationship was moderated by the ability to find employment in the U.S. (buffer).

On its own, unplanned migration (stressor) was not found to be significantly associated with post-migration experience of psychological distress (outcome). However, when exploring the influence of unplanned migration in conjunction with experience of discrimination (buffer), a significant relationship emerged. To understand discrimination as a buffer, we must understand the effect of experiencing low discrimination. The results of this study indicated that among those experiencing less discrimination, the relationship between unplanned migration and psychological distress was stronger. Thus, this relationship did not provide support for the Pearlin Stress Process Model (1981), as lower discrimination did not buffer the relationship between the pre-migration stressors and the post-migration outcomes. However, as previously discussed, it is possible that the relatively low level of discrimination reported by participants in this study did not allow for a true comparison between high and low discrimination.

Reasons for migration and community support and engagement did not yield any significant results, and thus, did not provide any support for the theory. Perhaps the way

in which these variables were operationalized and measured contributed to the non-significant findings. This is discussed further in the study limitations, below.

Study Limitations

One of the limitations of this study was that it was cross-sectional, and not longitudinal. A longitudinal study on the immigration experiences of Latino immigrants would help answer questions about causality and the order in which experiences and outcomes took place. The current study attempted to address some of these issues by limiting traumatic experiences to only those that took place pre-migration, as well as limiting the measure of mental health to one that assessed psychological distress in the last 30 days (post-migration). Employment was also limited to only the last year (post-migration). However, despite these attempts, without a longitudinal research design, it is not possible to draw conclusions regarding causal relationships between the factors studied. In addition, this was a retrospective study, in which participants were asked to remember and report on specific information about their immigration experience. Given that the majority of participants had been living in the U.S. for 20 years or more at the time of the study, there was an increased risk for recall bias. The risk for recall bias was also higher among participants who immigrated as children and may not have been involved in the pre-migration decision-making process, or remembered these experiences inaccurately. Thus, conducting a longitudinal study following participants from pre-migration in their home countries, through the immigration experience, and into their lives post-migration in the U.S. would be ideal. However, for many reasons this type of study would be difficult to implement, given the issues surrounding legality and access to participants.

Another limitation of this study was that it was not feasible to perform sub-group analysis by country of origin. Preliminary power calculations indicated that there would not be enough power to detect sub-group differences. While Latinos share many cultural characteristics, there are small differences among groups that may be attributable to region or country of origin. It would have been interesting and informative to understand how associations between pre-migration experiences and post-migration community context differ among Latinos of different nationalities. In future research, country of origin could also be regarded as a potential confounding variable, and analyses could control for the effects of migrating from different Latin American countries.

It would have also been interesting to understand the differences in experience between undocumented and documented Latinos. It is possible that undocumented immigrants might experience higher levels of psychological distress, and that the climate of the receiving community would be different for each group. Latinos who migrated legally might experience a more positive climate, including more employment opportunities and more community support, than undocumented immigrants. In addition, negative pre-migration experiences might have been more prevalent for undocumented immigrants, while those experiencing political upheaval may have had more government support for immigrating legally. These differences in experience could not be explored in the present study, as the original study did not ask participants about their legal status. Not asking about legal status is a culturally sensitive technique in research with immigrant populations. This strategy is often employed in order to avoid distress among participants who may not have legal documentation. Participants may not be comfortable sharing such personal and sensitive information with researchers, as it puts them at risk

for deportation and separation from loved ones. While this interview strategy is therefore understandable, it does limit researchers' ability to answer some important questions.

A final limitation of the study might have been in regard to measurement. In particular, reasons for migration was a difficult variable to operationalize. Without much previous literature on the topic, factor loadings yielded through an exploratory factor analysis (EFA) were used to guide the groupings for the variable. Based on these results, participants received scores for two types of reasons: life-improving reasons and political upheaval reasons for migration. However, Cronbach's alpha indicated that internal consistency for these indexes was 0.69 and 0.71, respectively. These alpha coefficients are on the low end of what is considered acceptable. The lower alpha coefficients may indicate that the items did not hold together as well, and may not have all measured the same concept. The results of hypotheses regarding reasons for migration were not significant, and this may have been a contributing factor. In addition, planning for migration was measured using one question that asked how planned participants' migration had been (from *not planned at all* to *carefully planned*). The use of a one-item measure is appealing for several reasons. It is fast, convenient, and places less demands on respondents, particularly when administering an already lengthy survey. In addition, one-item global measures, such as measures of overall health, have a history of working well in population surveys (Bowling, 2005). On the other hand, measurement and psychometric theories suggest that the use of multiple items to measure a concept produces more reliable, valid results (Bowling, 2005). In the case of planning for migration, "carefully planned" is a subjective term, and therefore, multiple items may be needed to fully capture the concept. Perhaps understanding the experience of planning for

migration requires asking more questions regarding factors such as, length of planning time; number of discussions and with whom; financial preparations; and family support in the home and host countries, among others. Thus, it is possible that planning for migration might have been better operationalized using a multiple item scale, rather than a single item one.

Recommendations for Future Research, Policy, and Practice

Future research could build on the findings of this study and improve our understanding of the impact of the immigration experience on Latino immigrants. First, a recommendation for future research is to further explore the climate of the receiving community. It would be useful to consider additional variables that may be indicative of the climate of the receiving community. In particular, operationalizing community support and engagement in a different way may yield additional findings. Researchers could capture additional details of the communities in which Latino immigrants settle, and try to understand what kinds of supports Latino immigrants receive in these communities. For example, are communities with high percentages of Latinos (both immigrant and U.S. born) more supportive to Latino immigrants? What kind of supports do these communities provide (i.e., financial support, emotional support), and what effect does this have?

Another avenue for future research is to expand the current quantitative findings by conducting qualitative studies of the experiences of Latino immigrants. Conducting focus groups and interviews with Latino immigrants may help to make sense of some of the findings of this study. For example, it may help better understand the association between discrimination, unplanned migration, and psychological distress, as this

relationship was not in the expected direction. A qualitative study may also shed light on the nuances that surround community support and engagement. Past research has suggested that community support may serve as a protective factor for Latino immigrants, but in the current study, no significant associations were found. Interviews with Latino immigrants could help researchers start to tease out the components and meaning of community support, to better understand what role it plays in the lived experiences of this group.

A final research recommendation is to conduct more nationally representative studies of Latino immigrants. The data used in this study were collected over 12 years ago for the National Latino and Asian American Study (NLAAS). Unfortunately, since the NLAAS, only one other nationally representative study of Latino immigrants has been conducted, the New Immigrant Survey (NIS). The NIS was collected in 2003, and although a follow-up interview was conducted in 2007, those data are not yet available for analysis. Developing additional efforts to collect data on Latino immigrants would provide with important updated information on the experiences of Latinos today. While many of the experiences that Latino immigrants face in 2016 are similar to those experienced in 2001, it is possible that new data collection would reveal important differences. Since the collection of the NLAAS data in 2001, immigration to the U.S. from Central America has only increased, especially as conditions in many Central American countries have deteriorated. In addition, the current climate and discussion surrounding immigration in the U.S. has changed, as immigration reform laws have been considered, and the upcoming presidential election has polarized voters on the issue.

The results of this study may also inform policy. The findings suggest that the ability to gain employment and remain employed for a longer time serves as a buffer to psychological distress for those who experienced trauma in their countries of origin. It is important for the U.S. to consider passing comprehensive immigration reform laws that would help protect immigrants, allowing them an opportunity to procure employment legally. This would provide relief to millions of immigrant families who are already in the U.S., and help strengthen and grow the economy (White House, 2013).

Comprehensive immigration reform may also help improve attitudes and beliefs regarding Latino immigrants. Currently, several states have attempted to "crack down" on immigrants by passing legislation that encourages discrimination against Latinos and helps fuel anti-immigrant sentiment (Ayón, 2015). Congress should consider establishing policies that support Latino immigrant families and discourage discrimination on the basis of appearance.

The results of this study also have several implications for clinical practice. First, clinicians could make an effort to better understand discrimination experienced by Latino immigrant clients, as discrimination was significantly associated with psychological distress. Even though participants in this study experienced relatively low levels of discrimination (M=5.06, SD= 6.44), it was significantly associated with psychological distress on its own and as a moderator in the relationship with unplanned migration. Thus, it seems to be an important factor in the lives of Latino immigrants. While immigrant clients may seek treatment for other associated conditions, clinicians may want to explore discrimination as a contextual factor to better understand their struggles. In addition, unplanned migration seems to play a role in the post-migration mental health

of Latino immigrants, at least in conjunction with experiences of discrimination. This finding suggests that this topic should be explored with Latino immigrant clients in therapy. It may also be important for family therapy training programs to encourage future clinicians to spend time focusing on this topic. Family therapy students could benefit from training programs that focus their training on meeting the complex needs of Latino immigrant families.

Clinicians may find it fruitful to spend time exploring additional pre- and post-migration experiences with their clients. When working with clients that have experienced trauma in their home countries, it may be important for clinicians to explore other difficulties they are experiencing in the U.S., particularly related to procuring and maintaining employment. While the focus of the clinical work may be on processing these pre-migration traumatic experiences, the results of this study suggest that exploring their current social and employment context is also important.

Finally, an additional finding in this study was that female sex was significantly associated with psychological distress. This finding suggests that Latinas may need additional support in processing experiences related to their immigration to the U.S., and their adjustment to this country. Thus, clinicians working with Latina immigrants may want to focus some of their work on understanding and processing these immigration experiences.

Conclusion

In conclusion, the research described in this study provides preliminary understanding of the complex immigration experiences of Latino immigrants. The significant associations described in this study provide support for conducting additional

research on both pre-migration and post-migration experiences of Latino immigrants. In addition, longitudinal methods would allow the research community to understand more about the causal relationships between factors associated with Latino immigrants' mental health. It is also important to continue doing research on Latino immigrants and their families, especially in light of continued debate about immigration reform and policy changes. It is highly unlikely that immigration to the U.S. will cease, or even slow down in the coming years. Difficult conditions in many parts of the world will continue to propel individuals and families to immigrate to the U.S. in search of better lives and more opportunities. Thus, it should be a goal of our country to support the mental health of immigrant families as they arrive, so that they can thrive as they adjust to new living conditions in the U.S.

Appendix A: Reasons for Migration and Planning for Migration

Reasons for Migration

I am going to read a list of reasons that people give for coming to the United States. After I read each reason, please tell me how important that reason was for you or your family to come to the United States (VERY IMPORTANT, SOMEWHAT IMPORTANT, NOT AT ALL IMPORTANT).

Life-improving Reasons
To find employment or a job.
To improve the future of the children in the family.
To improve your life or that of your family and look for better opportunities.
To seek better educational opportunities.

Political Upheaval Reasons
Because of the political situation in your country of origin.
You or your family were persecuted for political reasons.

Planning for Migration

Was your move or that of your family to the U.S.:

- Carefully Planned
- Somewhat Planned
- Poorly Planned
- Not Planned At All

Appendix B: Political and/or Interpersonal Trauma

1. First, did you ever participate in combat, either as a member of a military, or as a member of an organized non-military group?

2. Did you ever serve as a peacekeeper or relief worker in a war zone or in a place where there was ongoing terror of people because of political, ethnic, religious or other conflicts?

3. Were you ever an unarmed civilian in a place where there was a war, revolution, military coup or invasion?

4. Did you ever live as a civilian in a place where there was ongoing terror of civilians for political, ethnic, religious or other reasons?

5. Were you ever a refugee – that is, did you ever flee from your home to a foreign country or place to escape danger or persecution?

6. Were you ever kidnapped or held captive?

7. Were you ever exposed to a toxic chemical or substance that could cause you serious harm?

8. Were you ever in a man-made disaster, like a fire started by a cigarette, or a bomb explosion?

9. As a child, were you ever badly beaten up by your parents or the people who raised you?

10. Were you ever badly beaten up by a spouse or romantic partner?

11. Were you ever badly beaten up by anyone else?

12. Were you ever mugged, held up, or threatened with a weapon?

13. The next two questions are about sexual assault. The first is about rape. We define this as someone either having sexual intercourse with you or penetrating your body with a finger or object when you did not want them to, either by threatening you or using force, or when you were so young that you didn't know what was happening. Did this ever happen to you?

14. Other than rape, were you ever sexually assaulted, where someone touched you inappropriately, or when you did not want them to?

15. Has someone ever stalked you – that is, followed you or kept track of your activities in a way that made you feel you were in serious danger?

16. Did anyone very close to you ever have an extremely traumatic experience, like being kidnapped, tortured or raped?

17. When you were a child, did you ever witness serious physical fights at home, like when your father beat up your mother?

18. Did you ever see someone being badly injured or killed, or unexpectedly see a dead body?

19. Did you ever do something that accidentally led to the serious injury or death of another person?

20. Did you ever on purpose either seriously injure, torture, or kill another person?

21. Did you ever see atrocities or carnage such as mutilated bodies or mass killings?

22. Did you ever experience any other extremely traumatic or life-threatening event that I haven't asked about yet?

Appendix C: Psychological Distress

During the last 30 days, about how often did…

(ALL OF THE TIME, MOST OF THE TIME, SOME OF THE TIME, A LITTLE OF THE TIME, NONE OF THE TIME)

1. … you feel depressed?
2. …you feel hopeless?
3. …you feel restless or fidgety?
4. …you feel tired out for no good reason?
5. …you feel that everything was an effort?
6. …you feel worthless?
7. …you feel nervous?

Appendix D: Community Support and Engagement

How true is each of the following statements about your neighborhood – very true, somewhat true, not very true, or not at all true?

1. People in this neighborhood can be trusted.
2. People in this neighborhood generally get along with each other.
3. I have neighbors who would help me if I had an emergency
4. People in my neighborhood look out for each other.

Appendix E: Discrimination

In your day-to-day life how often have any of the following things happened to you? (Would you say almost everyday, at least once a week, a few times a month, a few times a year, less than once a year?)

1. You are treated with less courtesy than other people.
2. You are treated with less respect than other people.
3. You receive poorer service than other people at restaurants or stores.
4. People act as if they think you are not smart.
5. People act as if they are afraid of you.
6. People act as if they think you are dishonest.
7. People act as if you are not as good as they are.
8. You are called names or insulted.
9. You are threatened or harassed.

Appendix F: Employment

In the past 12 months, how many weeks did you spend in each of the following work situations? (There are 52 weeks in a year.)

1. First, how many weeks did you work either for pay or profit, whether part-time or full-time, including time spent on paid vacation, paid sick leave, paid maternity leave, or other paid leave?

_____NUMBER OF WEEKS

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