Summer 8-1-2023

BEYOND STRESSORS: IDENTIFYING PROTECTIVE CULTURAL FACTORS AND COPING STRATEGIES FOR MENTAL HEALTH SYMPTOMS AMONG AGING LATINO/HISPANIC IMMIGRANTS

Juan M. Pena
University of New Mexico

Juan Peña

Candidate

Psychology

Department

This dissertation is approved, and it is acceptable in quality and form for publication:

Approved by the Dissertation Committee:

Steven Verney, Ph.D., Chairperson

Gabriel Sanchez, Ph.D.

Kamilla Venner, Ph.D.

Jessica Goodkind, Ph.D.

Luz Garcini, Ph.D., MPH

BEYOND STRESSORS: IDENTIFYING PROTECTIVE CULTURAL FACTORS AND COPING STRATEGIES FOR MENTAL HEALTH SYMPTOMS AMONG AGING LATINO/HISPANIC IMMIGRANTS

by
Juan Manuel Peña

B.A. Psychology
B.A. Spanish
San Diego State University, 2016
M.S. Psychology
The University of New Mexico, 2018

DISSERTATION

Submitted in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy

Psychology

The University of New Mexico
Albuquerque, New Mexico

August, 2023

DEDICATION

Yo dedico esta disertación y doctorado a mi familia, especialmente a mis padres, Miguel Peña y Guadalupe Peña, a mi hermano y hermosas sobrinas, Ariana y Alessia. Gracias por su infinito apoyo, alegría, y por siempre creer en mi durante nuestros tiempos más difíciles. Como me ha dicho mi mamá, este doctorado es un recordatorio a nuestra familia que mientras hay vida, hay esperanza. También dedico este doctorado en memoria a mi abuelo, Julio Peña. Finalmente, yo dedico este proyecto a todas las familias inmigrantes, que están trabajando para darles a su familia las oportunidades que ellos no tuvieron.

I dedicate this dissertation and Ph.D. to my family, especially my parents, Miguel Peña, and Guadalupe Peña, my brother, and beautiful nieces, Ariana and Alessia. Thank you for your infinite support, happiness, and for always believing in me during our most difficult times. As my mom has told me, this Ph.D. is a reminder to our family that as long as there is life, there is hope. I also dedicate this Ph.D. in memory of my grandfather, Julio Peña. Finally, I dedicate this project to all the immigrant families who are working to provide their family with opportunities they did not have.

ACKNOWLEDGEMENTS

During development and writing of this dissertation, Juan Peña was supported by the National Science Foundation Graduate Research Fellowship, Grant No. DGE – 1418062. Any opinion, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation. This research was supported by a grant through the American Psychological Foundation and the Benjamin Franklin Haught memorial scholarship through the UNM department of Psychology. I'd like to acknowledge the University of New Mexico's Center for Social Policy for the opportunities and support that I've received since the start of my Ph.D. program and the Center for Participatory Health for connecting me with the most inspiring colleagues and mentors that I've learned from. This project would not have been possible without the support and guidance of my dissertation committee.

BEYOND STRESSORS: IDENTIFYING PROTECTIVE CULTURAL FACTORS AND COPING STRATEGIES FOR MENTAL HEALTH SYMPTOMS AMONG AGING LATINO/HISPANIC IMMIGRANTS

by

Juan Manuel Peña

B.A. Psychology, San Diego State University, 2016

B.A. Spanish, San Diego State University, 2016

M.S. Psychology, The University of New Mexico, 2018

Ph.D. Psychology, The University of New Mexico, 2023

ABSTRACT

Within the next decade, Latino immigrants will constitute the largest middle-aged and older immigrant group living in the U.S. This cross-sectional study investigated traumatic stressors, acculturative stress and perceived structural injustices and their associations with mental health symptoms. This study also examined the linkages between cultural factors, social support, and coping strategies and mental health outcomes. Eighty Latino/Hispanic immigrants who were 45 years of age or older completed a series of questionnaires and optional open-ended questions. A greater exposure to traumatic events, higher acculturative stress, and perceived injustices were associated with greater psychological distress and symptoms of anxiety, depression, and posttraumatic stress disorder (PTSD). Higher levels of *familismo* were found to be linked with lower symptoms of psychological distress and PTSD symptoms. Qualitative data supports the connection between stressors and mental health and the potential for community support to foster resilience and empowerment. These findings suggest values related to *familismo*

and God may be important protective factors for researchers, clinicians, and policy makers to consider in the development of effective and culturally appropriate interventions.
Keywords: Social determinants of mental health; Latinos; Hispanics; immigrants; trauma; acculturative stress; perceived structural injustices; protective factors; cultural factors.

TABLE OF CONTENTS

LIST OF TABLES ..... **ix**
INTRODUCTION 1
Projected Population of U.S. Latinos and Immigrants 1
Health Disparities among Latinos 1
Health disparities in COVID-19 among Latinos 4
Theoretical Frameworks 6
Stressors and Latino/Hispanic Immigrant Health 8
Trauma or traumatic events 8
Pre-migration trauma among Latino immigrants. 10
Trauma during migration among Latino immigrants. 10
Post migration trauma among Latino immigrants. 11
Trauma during detention and deportation among Latino immigrants. 12
Trauma, physical and mental health among Latino immigrants 14
Acculturation and acculturative stress among Latino immigrants 15
Acculturative stress and Latino physical and mental health 16
Structural injustices among Latino immigrants 17
Structural injustices and Latino physical and mental health. 17
Protective factors and Latino immigrant health 18
Aims and hypotheses 21
Method 22
Participants and Recruitment 22
Data Collection and Measures 22
Traumatic events 24
Acculturative stress 24
Perceived injustices 25
Cultural factors 25
Coping strategies 25
Family and community support 26
Physical and mental health measures 26
Qualitative data collection 28
Data analyses 28
Quantitative analyses 28

Qualitative descriptive analysis 29
Results 30
Exposure to traumatic events 32
Perceived injustices 33
Intercorrelations 34
Regression models 36
Open-ended responses 38
Premigration stressors 38
Postmigration stressors 39
Perceived impact of policies and immigration laws 39
Coping with stress and stressors 40
Discussion 46
Exposure to traumatic events and mental health 47
Acculturative stress and mental health 48
Perceived injustices and mental health 49
Social and cultural factors 50
Coping strategies 52
Limitations 53
Conclusion 54
References 56

LIST OF TABLES

TABLE 1. SOCIAL AND DEMOGRAPHIC VARIABLES 31

TABLE 2. PREVALENCE OF LIFETIME EXPOSURE TO TRAUMATIC EVENTS 32

TABLE 3. PREVALENCE OF LIFETIME EXPOSURE TO INJUSTICES 33

TABLE 4. INTERCORRELATIONS FOR AGE, IMMIGRATION VARIABLES, LVS, CULTURAL FACTORS, AND SUPPORT SCALES 34

TABLE 5. INTERCORRELATIONS FOR ACCULTURATIVE STRESS, STRESS FROM INJUSTICES, AND MENTAL HEALTH OUTCOMES 35

TABLE 6. MULTIPLE REGRESSION PREDICTING PSYCHOLOGICAL DISTRESS 36

TABLE 7. MULTIPLE REGRESSION PREDICTING DEPRESSION SYMPTOMS 36

TABLE 8. MULTIPLE REGRESSION PREDICTING ANXIETY SYMPTOMS 37

TABLE 9. MULTIPLE REGRESSION PREDICTING PTSD SYMPTOMS 38

TABLE 10. SELECTED TEXTS AND QUOTES FROM TRANSCRIPTS OF OPEN-ENDED RESPONSES 40

INTRODUCTION

Projected Population of U.S. Latinos and Immigrants

Recent estimates suggest that there are approximately 60 million Latinos/Hispanics[1] living in the United States (U.S.) of which one-third are foreign-born (Noe-Bustamante & Flores, 2019). Approximately 7 million Latino immigrants are 50 years of age or older and nearly half of all Latino immigrants have been living in the U.S. for more than 20 years (Noe-Bustamante & Flores, 2019). The next decade is an important point in aging in the U.S. due to the exponential upsurge in the aging foreign-born population of which Latinos comprise the majority. In the next decade or by 2030, nearly 25% of the total population aged 45 to 64 will be foreign-born and this will remain relatively consistent until 2060 (Colby & Ortman, 2015). Similarly, by 2030 the immigrant population aged 65 years and older will increase from 8 to 12 million and more than double to 25 million by 2060 (Colby & Ortman, 2015). The anticipated growth of the aging immigrant population warrants greater attention and research that can inform interventions and address physical and mental health disparities.

Health Disparities among Latinos

Health disparities or health inequalities can be defined as unnecessary and avoidable health differences that are unjust and adversely impacted by social, economic and environmental disadvantages (Braveman, 2006, 2014). In the case of Latinos, health disparities in morbidity and mortality rates are influenced by the social determinants of health (Vega et al., 2009). The social determinants of health (SDOH) refers to the "conditions in the environments in which people live, learn, work, play, worship, and age that affect health, functioning and quality of life outcomes and risks" (U.S. Department of Health and Human Services, 2020). Health disparities

[1] Throughout this dissertation, I use the term Latinx and Latinos to refer to individuals with origins from Latin America, the Caribbean and Spain, especially from Spanish-speaking countries, including Mexico, Central and South America, Cuba, Puerto Rico, and the Dominican Republic. In some instances, I use the term Hispanics when referring to the Hispanic health paradox or Latinos, Latinxs, and Hispanics interchangeably when using the terminology, the authors used. When appropriate, I refer to individuals based on their specific countries of origin.

arise from issues in fundamental areas that unequally expose certain groups (e.g., Latinos, Blacks, Indigenous) to factors detrimental to their health, including economic instability, lower quality education, neighborhoods with less resources, stressful social conditions, and worse access to and utilization of health care systems (Marmot, 2005, 2007)

Despite social disadvantages such as, lower income and education levels, when compared to Non-Hispanic Whites (NHWs), the overall life-expectancy and mortality rates of Latinos across various health indicators are comparable or even superior (Markides & Coreil, 1986; Markides & Rote, 2015). This observation of a health advantage is known as the Hispanic Health Paradox and is partly explained by migration and return-migration and sociocultural factors (Markides & Coreil, 1986; Markides & Rote, 2015). This health advantage has found to be more prominent among recent Hispanic immigrants and tends to decline within 10-20 years after arriving to the U.S. or the country of destination (Cantu et al., 2013; Markides & Rote, 2015). The diminished health has been attributed to greater exposure to stress and other lifecourse dynamics. Therefore, to derive a more accurate depiction of the current health of Latinos, research needs consider the influence of social, cultural, and political factors on different health indicators across the lifespan of Latinos.

Age-adjusted rates of U.S. mortality per 100,000 population are commonly used to highlight health disparities in death rates among Latinos (Vega et al., 2009). In 2017, Latinos faced disparities in mortality rates from diabetes, chronic liver disease and cirrhosis and homicide. Specifically, 25.5 deaths among all Latinos per 100,000 population were from diabetes as compared to 21.5 per 100,000 in the general population; 14.3 deaths among Latinos were from chronic liver disease and cirrhosis compared to 10.9 in the general population; and 5.2 were from homicide compared to 2.9 in NHWs (National Center for Health Statistics, 2019). Other

prominent disparities in mortality rates among Latinos include liver, stomach, and uterine cancer. In 2017, 9.3 deaths among all Latinos per 100,000 were from liver cancer compared to 6.6 in the general population; 5 from stomach cancer compared to 3.1; and 2.6 to uterine cancer compared to 2.3 (American Cancer Society, 2020).

There are noticeable disparities between aging Latinos and NHWs. Latinos that were between 55-64 years had greater death rates per 100,000 population than NHWs in chronic liver disease and cirrhosis, diabetes, cerebrovascular diseases, nephritis, essential hypertension, viral hepatitis, human immunodeficiency virus, and homicide (National Center for Health Statistics, 2019). Most of these disparities extend to Latinos 65 years of age and older, with comparable rates of cerebrovascular disease at 65-74 years and 75-84 years between Latinos and NHWs (National Center for Health Statistics, 2019).

Latinos are a heterogenous group with distinct origins from more than 20 Spanish-speaking countries, and variations in sociodemographic and physical characteristics. When Latino subgroup differences in mortality rates are assessed for by sex, nativity and origin, studies find that most foreign-born Latino subgroups have a lower mortality risk than NHWs that are 65 years of age or older (Fenelon, Chinn, & Anderson, 2017). However, when compared to NHWs, foreign-born Latino men aged 25-64 from Mexico, Puerto Rico and Cuba did not show a mortality advantage (Fenelon et al., 2017). Similarly, when examining differences in health morbidity, foreign-born Mexican women and island-born Puerto Rican women live longer with health conditions than NHW women (M. A. Garcia et al., 2018). When compared to NHWs, U.S. and foreign-born Latinos of Mexican origin and island born Puerto Rican men and women aged 50 years and older exhibited higher prevalence rates of diabetes; and foreign-born Mexican women had a higher prevalence of hypertension than NHW women aged 50 years and older (C.

Garcia et al., 2018). These results highlight the importance of examining subgroup differences in health outcomes among Latinos by sex, nativity, country of origin, and across age groups.

Middle aged and older Latinos experience high rates of disability and mortality from health conditions, including cardiovascular disease (CVD), hypertension, back pain, diabetes and cancer (McGrath et al., 2019). Aging Latinos may also be at greater risk for mental health disorders and comorbid physical and mental health problems. Latinos that were 60 years or older were found to have a higher 12-month prevalence of any depressive disorder than NHWs, 8% vs 3%, respectively (Jimenez et al., 2010). Similarly, when compared to U.S. born Latinos, Latino immigrants had higher lifetime rates of dysthymia and general anxiety disorder (GAD) (Jimenez et al., 2010). Furthermore, nearly one in four Latinos aged 65 years or older had a comorbid mental and physical health need, which was more than double the need of NHWs (Jimenez et al., 2017).

Older Latinos face disparities in access and utilization of mental health services. When compared to older NHWs, older Latinos are less likely to initiate mental health treatment and more likely to have fewer mental health care visits (Jimenez et al., 2013). Moreover, when compared to NHWs, Latinos, especially immigrants are more likely to delay health care, be uninsured, and receive worse quality physical and mental health care (Alegría et al., 2002, 2006; Buchmueller et al., 2016; Bustamante et al., 2019). With the anticipated growth of the aging Latino populations, it is critical to increase access and utilization of evidenced based and culturally appropriate mental health services among aging Latino immigrants.

Health disparities in COVID-19 among Latinos

The global pandemic of coronavirus disease 2019 (COVID-19) has led to severe health complications and deaths worldwide, especially in the U.S. According to the Center for Disease and Control (CDC), people with underlying medical conditions, including but not limited to

cancer, chronic kidney disease, heart conditions, obesity, type 2 diabetes, asthma, hypertension, liver disease and immunocompromised state may be at an increased risk for severe illness from COVID-19 (CDC, 2022a). Older age, especially among those that are 50 years of age or older is a risk factor for hospitalization and death from COVID (CDC, 2022a). Ethnic and racial minority groups, including Indigenous, Blacks and Latinos continue to be disproportionately affected by COVID-19. As of November 8, 2022, when compared to NHWs, Latinos were nearly twice as likely to have and be hospitalized from COVID, and nearly twice as likely to die from COVID (CDC, 2022). Given the incomplete race/ethnicity data available on cases, hospitalization, and deaths, it is expected that these disparities are higher than currently known.

Researchers have highlighted that the social and structural determinants of health are underlying contributors of health disparities in COVID among Latinos, Blacks, and Indigenous communities and include racism, discrimination, socioeconomic disadvantages, access and utilization of quality health care (Webb Hooper et al., 2020). Although most counties nationwide have a Latino population less than the U.S. average or 17.8%, Latinos comprise a significant proportion of COVID-19 diagnoses and deaths (Rodriguez-Diaz et al., 2020). In counties where the percentage of Latinos was at least the national average, researchers found that Latinos living in counties in the West accounted for approximately 75% of cases and deaths. Additionally, more than 60% of cases and deaths in Northeast counties were among Latinos, and 32% of cases and 23% of deaths in the Midwest were among Latinos (Rodriguez-Diaz et al., 2020). Counties with greater proportion of Latinos, less unemployment rates, less social distancing, and a greater proportion of monolingual Spanish speakers were associated with higher rates of COVID-19 (Rodriguez-Diaz et al., 2020). COVID-19 deaths were associated with a greater proportion of

Latinos in the Midwest, crowded living conditions and higher air pollution (Rodriguez-Diaz et al., 2020).

The unusually high COVID-19 death rates that Latinos, Indigenous and Black populations have experienced is likely to result in an overall decline in life expectancy, especially among those of lower-income (Andrasfay & Goldman, 2020; Curtice & Choo, 2020; Power et al., 2020). The disproportionate mortality rates among aging Latinos may reduce the Hispanic mortality advantage often found across health outcomes (Sáenz & Garcia, 2021, p. 20) These disparities are a result of the SDOH, including neighborhood and housing, employment and working conditions and health care access that place Latinos at greater risk of exposure and death from COVID-19 (Rodriguez-Diaz et al., 2020). Furthermore, to address the health disparities in COVID-19 among Latinos, further attention needs to be placed on structural factors, such as inclusionary policies and laws (e.g., health care access, employment benefits, affordable housing options) for all Latinos irrespective of documentation status.

Theoretical Frameworks

This research study is guided by three theoretical frameworks: the Hispanic and immigrant health paradox; the social determinants of mental health framework (SDOMH); and conservation of resources theory. The Hispanic and immigrant health epidemiologic paradox refers to the "advantage" in life expectancy and health outcomes observed among Hispanics, especially immigrants despite the social and economic disadvantages they face (Markides & Coreil, 1986; Markides & Rote, 2015). The health advantage observed among Hispanic immigrants declines with longer time spent living in the U.S., with observed deterioration in health occurring after 10-20 years living in the U.S. (Markides & Rote, 2015)

The SDOMH is a social determinants of health framework that highlights that an individual's social, economic, and environmental situations affects their mental health across the

lifespan (Allen et al., 2014). People who have fewer resources and/or are from disadvantaged groups are likely to experience greater exposure to stressors and accumulative stress, which then affects their physical and mental health (Alegría et al., 2018; Allen et al., 2014). Moreover, researchers have emphasized the importance of identifying the impact of upstream and downstream social determinants on health outcomes (Braveman et al., 2011). Downstream determinants are proximal factors that are closely related to health outcomes, but are largely influenced by upstream factors (Braveman et al., 2011). Upstream determinants refer to the fundamental causes that lead to health outcomes through downstream factors (Braveman et al., 2011). For example, some downstream factors that may influence the health of Latino immigrants are access to health care, diet and exercise, stressful neighborhoods, and discriminatory workplaces. Whereas, more upstream factors may be exclusionary health, immigration, and housing policies and laws that restrict economic and social opportunities and resources (Braveman et al., 2011).

Conservation of Resources (COR) theory is an integrative stress theory that considers contextual factors and the internal psychological processes equally as important in understanding responses to stress (Hobfoll, 1989, 2001). COR theory posits that outcomes from stress are a result of threat of loss or actual loss of material and psychosocial resources (Hobfoll, 1989). For Latino immigrants, migrating to the U.S. may be associated with losses from their economic, familial, psychosocial, and cultural resources. Loss of resources may be greater among Latino immigrants that are unable to go back to their country of origin because they are undocumented or have experienced a life-threatening event, which can then lead to worse physical and mental health outcomes. Within the context of traumatic experiences, COR theory suggests that stressful experiences before or after an individual's traumatic experiences that lead to resource loss are

associated with posttraumatic stress disorder (PTSD) symptoms and worse mental health outcomes (Hobfoll et al., 2020). Furthermore, COR theory posits that the extent to which people are able to sustain their resources will influence their mental health and daily functioning (Hobfoll et al., 2020).

Stressors and Latino/Hispanic Immigrant Health

Stressors are environmental events or situations that are unpleasant, perceived to be demanding and may induce stress which then alters one's psychological and physical health (Cohen et al., 2007). The salience, chronicity, and accumulation of stressors are important to consider when evaluating their effect on health outcomes (Bloch et al., 2004; Thoits, 2010). The relationship between stressors and health is exhaustive and includes but is not limited to an increased risk for cardiovascular diseases (CVD), poorer self-rated health, depression, anxiety, and other psychiatric disorders (Lantz et al., 2005; Thoits, 2010). Although stressors can also be traumatic, this study distinguishes traumatic stressors from other stressors by using DSM-5's definition and conceptualization of trauma. Furthermore, this study focuses on three types of stressors relevant to Latino immigrants: traumatic, acculturative, and perceived structural injustices.

Trauma or traumatic events

The American Psychiatric Association's (APA) Diagnostic and Statistical Manual-5 (DSM-5) defines trauma[2] as "exposure to actual or threatened death, serious injury or sexual violence in at least one of the following ways: 1) directly experiencing the event, 2) witnessing it occur to others, 3) learning it occurred to a close family member or friend, or 4) experiencing repeated or extreme exposure to aversive details of the traumatic events" (APA, 2013, p. 271). Distinct from other psychological disorders, PTSD requires the occurrence of at least one

[2] Throughout this dissertation trauma and traumatic events are used interchangeably.

indirect or direct exposure of a traumatic event, which may elicit an array of symptoms, categorized in the DSM-5 into four symptom clusters (criterion B, C, D, and E): intrusion, avoidance, negative alterations in cognitions and mood, and alterations in arousal and reactivity (APA, 2013). Additionally, for a diagnosis or to suggest that one meets criteria for PTSD, symptoms must persist for more than one month, cause significant social or occupational impairment and not be due to medication, substance use or other illness (APA, 2013).

Common measures used to assess for exposure to trauma and PTSD symptoms are the World Mental Health Survey Initiative Version of the World Health Organization Composite International Diagnostic Interview (WMH-CIDI), (Kessler & Üstün, 2004); the Harvard trauma questionnaire (HTQ) (Mollica, 2004); and the life events checklist (LEC) (F. Weathers et al., 2013). The WMH survey assesses 29 trauma types in a yes or no format. Participants that endorse the event are asked about lifetime occurrences and age at first occurrences. Trauma categories include war-related, physical violence, intimate partner or sexual violence, accidents, unexpected or traumatic death of a loved one, traumas that happened to other people, and a question about other traumatic events that have not been asked about (Kessler et al., 2017). The WMH-CIDI assesses PTSD symptoms and criteria by inquiring about the participant's self-reported worst trauma (Kessler & Üstün, 2004). The HTQ is widely used for immigrants and refugees worldwide and consists of four parts: 1) a list of 46 traumatic experiences, including one question on other traumas not asked about; 2) a description of the most severe traumatic events experienced; 3) head injuries; 4) and symptoms of PTSD (Mollica, 2004). The LEC-5 is a 17-item checklist of traumatic events that asks participants to indicate if the event happened to them, if they witnessed it, learned about it, were exposed to it as part of their job, not sure, or it does not apply to them (F. Weathers et al., 2013).

Pre-migration trauma among Latino immigrants. Latino immigrants are a heterogeneous group with distinct migration and traumatic experiences. Migration can be conceptualized into five phases: pre-departure, travel, interception, destination, and return (Zimmerman et al., 2011). Immigrants may be susceptible to experiencing traumatic events and other stressors in each of these phases. The pre-departure phase is the time prior to leaving their country of origin. A national study among Latino immigrants estimated that 11% of Latino immigrants living in the U.S. report a history of political violence, with 78% occurring before migration (Fortuna et al., 2008). In regard to prevalence rates before migration, 13% experienced natural disasters, 12% witnessed death or saw a dead body and 7% had experienced parental physical abuse (Sangalang et al., 2019). War and political violence, death threats towards family or themselves, murder of family members, extortion, and domestic violence are also common traumatic events among Latino immigrants (Cervantes et al., 1989; Cleaveland & Frankenfeld, 2020; Fortuna et al., 2008; Keller et al., 2017). Latino asylum seekers and refugees may also experience higher rates of trauma, including physical or sexual assaults, kidnapping, torture, and witnessing a murder (Cheney et al., 2017; M. Lusk et al., 2013; M. W. Lusk et al., 2017)

Trauma during migration among Latino immigrants. In the travel phase, individuals are in transit to their country of destination and are at risk of interception or detainment, especially if they are undocumented. Depending on the method of transit (e.g., boat, walking, plane), migrants may be exposed to violence, extortion, and extreme temperatures (Zimmerman et al., 2011). During the travel or migration phase, Latino immigrants may experience or witness extortion, abuse, abandonment, kidnappings from *coyotes* or human smugglers (Cleaveland & Frankenfeld, 2020; Kaltman et al., 2011; Vogt, 2013). For immigrants that ride a freight train or *La Bestia,* the migration journey poses life-threatening risks, including loss of limbs and deadly falls (Vogt,

2013). Experiencing or witnessing violence and murder from drug cartels and organized criminals are also risks during migration (Vogt, 2013). Extreme temperatures, thirst and dehydration have been reported among Latino immigrants crossing the desert in transit to the U.S. (DeLuca et al., 2008). Human rights violations from U.S. migration agents, Mexican local police and military are salient among immigrants from Mexico and Central America and victimization can vary by port of entry (Infante et al., 2012). Latino immigrants from Spanish-speaking countries that cross multiple countries prior to arriving to the U.S. are at greater risks of experiencing trauma. For instance, prior to arriving to the U.S., Cuban refugees reported experiencing consecutive assaults, robberies and incarceration (Paat & Green, 2017).

Post migration trauma among Latino immigrants. The destination phase or arrival to the intended country places Latino immigrants at further risk of traumatization. Salient traumatic events include physical, sexual and emotional abuse, and domestic violence, especially among those that are undocumented (Garcini et al., 2016). A national representative sample of Latino immigrants found that 12% experienced subsequent trauma after migration (Fortuna et al., 2008). In regard to specific traumatic experiences, 13% experienced a life-threatening auto accident, 12% were robbed or threatened with a weapon, and 6% experienced a natural disaster (Sangalang et al., 2019). Latina immigrant women, especially those that are undocumented are vulnerable to victimization, including domestic violence, physical, sexual and emotional abuse (Kaltman et al., 2011). Estimates suggest that 28% of Latina women report experiencing at least one incident of victimization in the U.S. and that reported victimization varies by immigration status (Sabina et al., 2013). Within the immigrant group, when compared to women with nonpermanent legal status, Latina women with permanent legal status reported higher rates of victimization (Sabina et al., 2013). Underreporting of victimization among Latina women,

especially if they are undocumented is possible given fear of deportation, shame, and guilt experienced (Sabina et al., 2013).

Trauma during detention and deportation among Latino immigrants. The interception phase primarily applies to refugees, asylum seekers and undocumented immigrants and are characterized by a period of detention (Zimmerman et al., 2011). Given the lack of oversight in immigration detention centers or refugee camps, during the interception phase individuals are at risk of human's right violations, unsafe and unsanitary conditions, and inadequate medical care (Zimmerman et al., 2011). Empirical research on trauma experienced during detention among Latino immigrants remains scant because of legal constraints and systematic barriers. However, reports have surfaced that document the inhumane treatment, unsanitary and unsafe conditions that immigrants are detained in (Secor, Altman, & Cullen, 2019; Wong, 2019). Insufficient food and water, inadequate hygiene, limited access to medical and mental health care services, underreporting of suicide attempts, physical and sexual abuse, labor exploitation, and prolonged detention are common conditions and experiences of detained immigrants (Secor et al., 2019; Wong, 2019). Furthermore, immigration detention, especially prolonged detention exacerbates symptoms of anxiety, depression and PTSD in adults and children (von Werthern et al., 2018).

The return phase can be conceptualized when individuals voluntarily or involuntarily through deportation go back to their country of birth to remain temporarily or permanently (Zimmerman et al., 2011). Each method of return may be associated with distinct health risks, including exposure to trauma and other stressors. For example, deportees are a vulnerable group that may further experience worse mental health from physical, emotional and sexual abuse, exposure and drug use, extortion and violence from drug and human traffickers (Davies et al., 2011; Pinedo et al., 2014, 2018). Moreover, the deportation process may be traumatic to the

individual and lead to greater PTSD symptoms, including negative cognitions about the self and the world, and blaming oneself for the traumatic event (Negy et al., 2014; Peña et al., 2017). A study among Mexican deportees found that 91% had experienced imprisonment, including during the immigration process, 52% had their property destroyed, and 51% had been physically assaulted at some point in their life (Peña et al., 2017). For immigrants, especially those who have been threatened, returning to their country of birth can be deadly and encompass torture, extortion, and kidnappings (Slack, 2019).

Lifetime history of exposure to trauma is common among Latino immigrants living in the U.S. A national study with Latino immigrants found that at least 88% reported experiencing at least one type of trauma before or during migration (Fortuna et al., 2008). In a sample of three community based primary clinics, 54% of Latino immigrants had experienced political violence (Eisenman et al., 2003). Similarly, 83% of undocumented Mexican immigrants, reported a history of traumatic events and nearly one-third reported experiencing six or more events. The same study finds that 48% had experienced material deprivation, 35% experienced sexual humiliation, 22% had a family member injured due to physical violence, and 19% experienced domestic violence (Garcini et al., 2017). Another study with Central American immigrants seeking legal assistance in the U.S. found that 87% had a history of trauma (Keller et al., 2017). In a primary care setting, 72% of immigrants from Central America had a history of trauma (Holman et al., 2000). Across Community Health Centers, being physically attacked (33%), sexually abused (19%), witnessing a death or serious injury (18%), and political violence (15%) were the events most endorsed by Latino immigrants (Eisenman et al., 2008).

Prevalence rates and estimates of specific traumatic events experienced by Latino immigrants have varied across studies. Variations in sociodemographic factors (e.g., age,

race/ethnicity, indigeneity, gender, sex, nativity, immigration status), sample size, and assessments of traumatic events are limitations that require additional research with Latino immigrants. Furthermore, the paucity of studies focusing on trauma experienced among aging Latino immigrants, especially across the phases of migration limits our understanding on their relationship to mental and physical health across the lifespan.

Trauma, physical and mental health among Latino immigrants. The type of traumatic events that Latino immigrants experience and the phase of migration that they occur in are linked with mental health. Experiencing pre and post-migration trauma were associated with greater psychological distress in Latino refugees (Sangalang et al., 2019). Immigrants from Central America especially those that migrated for reasons of war or political unrest had the highest rates of PTSD (Cervantes et al., 1989). Similarly, Latino immigrants, predominantly from Mexico, El Salvador, and Guatemala that experienced political violence had a greater likelihood of having any mental health disorder and higher symptoms of PTSD and depression (Eisenman et al., 2003). Exposure to war violence and natural disasters were strong predictors of PTSD symptom severity among Latino immigrants (Michultka et al., 1998; Pantin et al., 2003).

Undocumented Mexican immigrants that reported a history of domestic violence, being physically injured and witnessing violence to others had higher clinical levels of psychological distress (Garcini et al., 2017). A higher frequency of trauma and victimization is also associated with a greater likelihood of having a mental health disorder, including depression, anxiety, and PTSD among Latino immigrants (Alegría et al., 2019; Cuevas et al., 2012; Fortuna et al., 2019; Kaltman et al., 2010; Sumner et al., 2012). Lifetime exposure to traumatic events is associated with a seven-fold increase in experiencing suicidal ideation (SI), and SI increased the odds of depression and PTSD symptoms (Fortuna et al., 2016).

Acculturation and acculturative stress among Latino immigrants

Migration to a new country immerses an individual and their family into that country's culture, where they are forced to adapt and integrate to the host countries' customs and demands (Bourhis et al., 1997). In the U.S., acculturation has been used to describe the process of cultural and psychological change that immigrants and their children undergo as a result of coming into contact with mainstream or American society (Berry, 2005). The concept of acculturative stress refers to a specific type of stress that involve stressors from acculturation and can influence physical, psychological and social outcomes (Berry et al., 1987).

In this project, acculturative stress is defined as the distress experienced by immigrants' evaluation of specific events or life circumstances in adapting to a new country (Arbona et al., 2010; Cervantes et al., 2019). Inability to speak and comprehend English, financial hardships, lack of resources (e.g., not having access to health care, food and housing insecurity, jobs), separation from family members and friends, and learning a new culture are commonly reported stressors that contribute to acculturative stress (Arbona et al., 2010). Loss of social status, intergenerational and familial conflict, changing gender roles, discrimination, absence of social support, separation from family and fear of deportation are also salient among Latino immigrants (Caplan, 2007). The extent to which migration is voluntary (e.g., refugees, permanent residents) can influence the association between acculturative stress and mental health (Berry et al., 1987).

Common assessments used to assess for acculturation and acculturative stress among Latinos are the short acculturation scale for Hispanics (SASH) (Sabogal et al., 1987) and the Hispanic stress inventory (HSI) (Cervantes et al., 1991, 2016). The SASH is a 12-item self-report acculturation scale with three latent factors: language use, media, and ethnic social relations. For the language and media questions, response options are based on a five-point Likert type scale that ranges from only Spanish to only English responses (Sabogal et al., 1987). Similarly, in the

ethnic social relations questions, responses are based on a five-point Likert type scale that ranges from only Hispanic to only people that are not Hispanic (Sabogal et al., 1987).The HSI has two versions and consists of two types of questionnaires: one for U.S. born and another for foreign-born. The HSI for U.S. born has seven factors and 53 questions. Whereas, for the immigrant version, there are 10 latent factors and 90 questions (Cervantes et al., 2016). In each version, respondents are asked if they have experienced each stressor using a yes/no format and for each item endorsed, participants rate the stress on a 5-point Likert scale, where 0 = not at all worried to 5 = extremely worried (Cervantes et al., 1991, 2016).

Acculturative stress and Latino physical and mental health. Acculturative stress is related to health outcomes in Latino immigrants. For instance, a greater level of acculturative stress is associated with greater symptoms of depression, sleep disturbances, and suicidal ideation in Latino immigrants (Alcántara et al., 2017; Cervantes et al., 2019; Hovey, 2000). In a study among Mexican immigrant farmworkers, acculturative stress was linked with greater symptoms of anxiety and depression (Hovey & Magaña, 2000).

Although the relationship between acculturative stress and physical health are less studied, research suggests that acculturative stress from work/labor market is associated with chronic health conditions among Mexican-origin adults (Finch et al., 2001). Similarly, acculturative stress from legal status is also related with worse self-reported health among Mexican adults (Finch & Vega, 2003). In a national sample of Latino immigrants, acculturative stress was associated with informal help seeking in non-health care sectors (Waldman et al., 2019). The variation of measures of acculturative stress and the use of proxy measures for acculturation such as nativity and language preference are limitations found in the literature. Further research focused on identifying the unique and relative relationships of acculturative

stress with other stress indicators on physical health conditions of aging Latino immigrants is warranted.

Structural injustices among Latino immigrants

Structural injustices are determinants of racial and ethnic health inequities. This study defines structural injustices as "the totality of ways in which societies" create unjust experiences of mistreatment through "mutually reinforcing systems" including but not limited to housing, education, health care, immigration, and criminal justice that "reinforce discriminatory beliefs, values, and distribution of resources" and adversely affects health (Bailey et al., 2017; Krieger, 2020). Common measures of structural injustices consist of individual or explicit self-reports of exposure to discrimination within different contexts such as, work, school, in the courts, while seeking medical care (Krieger, 2020). Other assessments of structural injustices include implicit and explicit state level policy, laws, or practices that contribute to inequities in pay, housing loans, incarceration rates, and food and healthcare access by race and ethnicity, gender, and/or sexual orientation (Krieger, 2020). Although used less frequently, experimental methods with vignettes or controlled situations can also yield greater information on the potential mechanisms of structural factors and health outcomes (Krieger, 2020).

Structural injustices and Latino physical and mental health. Structural factors and injustices have a direct and indirect effect on the health of Latino immigrants and their families. An increase in local immigration enforcement has a negative impact on health care access, health, and the socioeconomic situation of Latino immigrants and their families (Perreira & Pedroza, 2019). Moreover, exclusionary immigration policies and laws contribute to fear of deportation in the Latino immigrant community and are associated with worse physical health and a lower likelihood of using Medicaid services when needed (Vargas, 2015; Vargas et al., 2017). Anti-immigration policies are also associated with worse self-reported mental health and

higher psychological distress among Latinos living in the U.S. (Hatzenbuehler et al., 2017). Other scholars have posited that state level immigration-related policies and policies applicable to immigrants are a form of structural injustice or racism that contribute to stress and impact health outcomes among Latinos by limiting access to social institutions (education, driver's licenses), access to health-related services (health insurance) and material conditions (food and cash assistance, livable wages and employment benefits) (Philbin et al., 2018). However, less is known about the relationship between structural injustices and mental health symptoms among aging Latino immigrants.

Protective factors and Latino immigrant health

The literature on protective factors, resiliency, and coping have grown considerably. Protective or resiliency factors tend to be used interchangeably to refer to cultural and psychosocial factors that facilitate positive adaptation in social functioning and/or health outcomes after experiences of hardship (Masten & Obradović, 2006). Coping behaviors or strategies in response to stress may be characterized as protective if they enable an individual to cope and recover from stress (Steinhardt & Dolbier, 2008). In this study, coping refers to the cognitive and behavioral strategies used to tolerate or reduce internal and external demands of a stressful experience (Folkman & Lazarus, 1980). Problem-focused and emotion-focused strategies are the most common coping strategies assessed. Problem-focused coping strategies refer to cognitive problem-solving and behavioral strategies to manage the stressor. Some examples of problem-focused coping strategies are making a plan of action and standing their ground (Folkman & Lazarus, 1980). Emotion-focused strategies include cognitive and behavioral efforts aimed at reducing emotional distress (Folkman & Lazarus, 1980). Some examples of emotion-focused strategies are focusing on the positive side and cognitive avoidance by forgetting (Folkman & Lazarus, 1980).

Other scholars have focused on active and restraint coping strategies within the category of problem-focused coping. Active coping has been defined as the process of taking active steps to ameliorate the effects of a stressor and includes direct actions and efforts (Carver et al., 1989). Similarly, restraint coping is a strategy where an individual holds back on responding until an opportunity to deal effectively with the stressor (Carver et al., 1989). The most salient coping measures used are the ways of coping checklist (Folkman & Lazarus, 1985), the COPE inventory (Carver et al., 1989) and the brief COPE (Carver, 1997). The ways of coping checklist has 68 items with a binary, yes or no response choice that describes behavioral and cognitive strategies that may be potentially used to cope with a stressor (Folkman & Lazarus, 1980). The brief COPE is a 28-item Likert type-scale, with 14 subscales of coping strategies: acceptance, active coping, behavioral disagreement, denial, using emotional support, using instrumental support, humor, planning, positive reframing, religion, self-distraction, substance use, self-blame, and venting (Carver, 1997). Response options for the COPE questionnaires are based on a 4 point-Likert scale, where 0 = I haven't been doing this at all and 3 = I've been doing this a lot.

Research on protective factors for physical and mental health outcomes among Latino immigrants remains an understudied topic. Common coping strategies among immigrants from Mexico are acceptance, positive reframing, religion, planning, and active coping (Farley et al., 2005). Cultural factors, including faith, religion, social and familial support are often found to be protective factors ameliorating physical and mental health outcomes among Latinos. Religious coping was associated with greater psychological health among Latinos with arthritis (Abraído-Lanza et al., 2005). Similarly, harmonious relationships with family, informal social or community networks, and a belief in God were associated with psychological wellbeing among Latino adults (Hernandez et al., 2016). In a study among Puerto Ricans adults living in the U.S.,

planning, acceptance, humor, and religion were stress coping strategies associated with lower risk of clinical depression (Woo et al., 2020). Older Hispanic immigrants reported frequently using religion, avoidance and acceptance coping strategies to cope with current traumatic stressors (Strug et al., 2009).

Common cultural factors that reduce the negative health impact of stressors among Latinos are *familismo* or family connectedness and support through *personalismo* (importance on interpersonal relationships) and *fatalismo* (acceptance of fate) (Cardoso & Thompson, 2010). Biculturalism or the ability to effectively maneuver within the dominant culture while maintaining connected to the social, cultural and linguistic culture of origin may help reduce the negative mental health impact of acculturative stress and discrimination (Cardoso & Thompson, 2010). Community support networks may also be important in reducing the impact of stress on health outcomes. A study among Mexican Americans aged 65 years or older found that living in neighborhoods with high proportion of Mexican Americans is associated with lower mortality rates and disease prevalence for stroke, cancer, and hip fractures (Eschbach et al., 2004). Similarly, living in a higher share of a Mexican American community moderated the association between poverty and depression in older Mexican Americans (Ostir et al., 2003).

Health behaviors such as exercise, physical activities and diet can influence health outcomes among Latinos. Although when compared to NHWs, Latinos are less likely to smoke and drink moderate or high levels of alcohol, they are also less likely to engage in exercise, which may contribute to negative health outcomes (Abraído-Lanza et al., 2005). Dietary changes in meat, fruits, vegetables, and junk food consumption may also influence the health of Latino immigrants across time (Akresh, 2007). Another study found that higher scores on a metric that accounted for behavioral (healthy diet, non-smoking, and physical activity) and biomarker

(blood pressure, body mass index, total cholesterol, and fasting blood glucose) cardiovascular health indicators were related to better neurocognitive performance among middle-aged and older Latinos (González et al., 2016).

Cultural factors, social support, health behaviors and a combination of problem and emotion-focused coping strategies may be important protective factors that can ameliorate the impact of variants of stressors and stress on the physical and mental health of aging Latino immigrants. However, most of the studies currently available on aging Latino immigrants seldomly assess distinct types of stressors and stress in conjunction with protective factors. Therefore, less is known about the protective mechanisms of mental health outcomes among the growing aging Latino immigrant population. This study aims to identify potential protective factors among aging Latino immigrants by implementing a mixed methods approach to collect quantitative and qualitative data with surveys and open-ended questions.

Aims and hypotheses

The aims of this study are fourfold: The first aim is to examine correlates of cultural factors, social and community support, and coping strategies. The second aim is to assess the relationship between social and cultural risk factors (exposure to trauma, acculturative stress, perceived structural injustices), and mental health (psychological distress, depression, anxiety, PTSD symptoms). I hypothesize that greater exposure to traumatic events, acculturative stress, and perceived structural injustices and stress indicators will be positively related to mental health symptom severity. The third aim of this study is to identify social and cultural factors and coping strategies that may be linked with higher or lower mental health symptoms among aging Latino immigrants. I hypothesize that higher scores in cultural factors (cultural pride, familism, respect, religion) social and community support would be linked with less distress or lower symptom

scores. The final aim of this study is to qualitatively investigate pre and post migration stressors, perceived methods of support and coping strategies among aging Latino immigrants.

Method

Participants and Recruitment

A total of 96 participants expressed interest in the study. Seven did not meet eligibility criteria for the study because of the age requirement of at least 45 years of age or foreign-born status and nine did not have time to complete the survey or were no longer interested. The final sample consisted of 80 foreign-born Latinos/Hispanics that were 45 years of age or older who resided in the U.S. and consented in the language of their choice (Spanish or English). All participants completed the survey in Spanish. Purposive sampling was used to recruit aging Latino immigrants via multiple recruitments methods including posting flyers at community organizations and local grocery stores. Other recruitment methods included distributing flyers via email through listservs that work with the Latino/Hispanic community and giving brief informative presentations at community organization meetings. Participants that completed the study received a $30 gift card. The institutional review board of the University of New Mexico approved this study.

Data Collection and Measures

Surveys and optional open-ended questions were available in English and Spanish and could be completed through a personalized link sent to participants, over the phone or through zoom via Esurvey/Opinio which allows for remote data collection of survey questionnaires. Eight research assistants were trained in the administration of surveys and open-ended questions. All research assistants were undergrad and postbaccalaureate students that were first or second-generation immigrants with family origins from a Spanish speaking country, were bilingual in English and Spanish with personal and professional experiences working with the

Latino/Hispanic community. To minimize the likelihood of error, a checklist for pre and post surveys were made with explicit steps. In case participants expressed suicidal ideation or were distressed from responding to the survey questions, a participant distress protocol was in place, which included contacting an advanced pre-doctoral student or a licensed clinical mental health professional for a risk assessment and to ensure they had sufficient resources to cope. The average time of completing the surveys was 75 minutes.

All measures that were unavailable in Spanish or if certain versions from translated measures were deemed not appropriate (e.g., lack linguistic, semantic and content equivalence) by members of the bilingual research team, established methodology was used in the recommended adaptation of self-report measures (Beaton et al., 2000, p. 20). This included having two people translate the questions into Spanish, synthesize and resolve any discrepancies, have two other people back-translate it into English, review the documents and reach a consensus on discrepancies and produce a pre-final version that can be tested (Beaton et al., 2000).

Social and demographic questions for this study included age, gender, country of birth, sexual orientation, education completed, bilingualism, marital and parental status, work status, most recent annual income, voter registration status, ZIP code, the current state that they reside and the state where they have lived the longest, native language, and languages they speak fluently. Immigration questions included age of arrival and years living in the U.S. Other questionnaires inquired about exposure to traumatic events, acculturative stress, perceived structural injustices, cultural factors, social support, coping strategies, and information about their physical and mental health.

Traumatic events

An adapted version of the traumatic events subscale of the HTQ and individual items from the WMH survey were used to assess for exposure to traumatic events. The adapted version of the HTQ consists of 25 items and responses to all items are dichotomous, yes or no (Garcini et al., 2017). For each traumatic event endorsed, participants were asked when the event occurred and could select all that applied (i.e., pre-migration, during migration, while living in the U.S., and/or during detention/deportation) (Garcini et al., 2017; Peña et al., 2017). Four additional questions are from the trauma module of the WHO-CIDI and assesses the following: if they ever had a life-threatening health condition, if they were/are a refugee, experienced harsh physical discipline as a child, been through a natural disaster, or experienced another traumatic or life-threatening event that has not been asked about (Kessler & Üstün, 2004). The total score was computed by adding all traumatic events experienced. For this study, Cronbach's alpha for the 29 items was .822.

Acculturative stress

The abbreviated version of the HSI for immigrants was used to assess for acculturative stress. The abbreviated version of the HSI is a 25-item measures in which participants indicate whether they have experienced a stressor within the past 3 months and if so, they rate the degree of stressfulness on a 5-point Likert type scale from 1= not at all stressful to 5 = extremely stressful (Cavazos-Rehg et al., 2006). The HSI consists of two subscales, extrafamilial and intrafamilial stress. An individual composite scored was computed for the number of stressors, and scores on two subscales, and a total acculturative stress. For this study, Cronbach's alpha for extrafamilial and intrafamilial stressors were .868 and .836, respectively. Cronbach's alpha for the full scale was .864.

Perceived injustices

An adapted version of the major experiences of discrimination (Williams et al., 2008) was used to assess for perceived structural injustices across education, work, housing, medical care, law enforcement, and court systems. For each experience that participants endorsed, they were asked 1) their perceived main reason for which their experience occurred (e.g., ancestry or national origin, gender, race, age); 2) the last time it occurred; 3) the number of times it occurred during their lifetime; 4) the country; and 5) the degree of stressfulness from 1 = not at all stressful to 5 = extremely stressful. An individual composite score was computed for the number of stressors, and a total stress from perceived structural injustices. For this study Cronbach's alpha for the individual items and stress indicators were .83 and .846, respectively.

Cultural factors

To assess for potential cultural protective factors, the cultural pride subscale from the Latino/a Values Scale (LVS; (Kim et al., 2009) was used in combination with the familism support, respect, and religion subscales of the Mexican American Cultural Value subscales (MACVS; (Knight et al., 2010). The LVS cultural pride items are rated on a 4-point Likert scale, where 1 = strongly disagree to 4 = strongly agree (Kim et al., 2009).Cronbach's alpha for the LVS was .879. In the MACVS subscales, participants are asked the extent to which they believe each statement, with the response choices ranging from 1 = not at all to 5 = completely (Knight et al., 2010). An individual composite score was computed for each subscale of the LVS and MACVS by adding their respective items. Cronbach's alpha for the MACVS subscales were .851 for familism, .828 for respect, and .925 for religion.

Coping strategies

The brief cope was used to examine the influence of coping strategies on mental health symptoms. The brief cope consists of 28-items that represent 14 potential coping strategies to deal with stressors. Respondents indicate the extent to which they have been doing this from 0 =

I didn't do this at all to 3 = I did this a lot (Carver, 1997).The brief cope has been previously translated into Spanish and used with Latino immigrants (Perczek et al., 2000). An individual composite score was computed for each subscale of the brief cope. Cronbach's alpha for the brief cope subscales were .638 for active coping, .477 for planning, .662 for positive reframing, .603 for acceptance, .617 for humor, .616 for religion, .711 for emotional support, .883 for instrumental support, .338 for self-distraction, .646 for denial, .437 for venting, .958 for substance use, .446 for behavioral disengagement, and .779 for self-blame.

Family and community support

An adapted version of the family and ethnic community subscales was used from the Multi-Sector Social Support Inventory Scale (MSSSI; Layne et al., 2009) to measure perceived social support from family and ethnic community throughout the past month. Each of the scales included the same 11 items related to subjective attachment (e.g., I feel like I fit in and belong with the members of the Latino community) and perceived support from family members (e.g., I can count on members of my family if I need help). Response choices for the family support scale and community support scale ranged from 0 = never to 4= almost always. Higher scores reflect greater perceived social support. Cronbach's alpha for the family support scale was .794. Similarly, the community support scale is an 11-item scale that assesses for support from the Latino community with the same response choices as the family support scale. Cronbach's alpha for the community support scale was .893. An individual composite score was computed for the family and community support scale by adding all 11 items. Both scales have been used previously with a community-sample of Latino immigrants (Vasquez Guzman et al., 2020).

Physical and mental health measures

The Spanish version of the 2020 National Health Interview Survey (NHIS) questionnaire were used to assess for health conditions, and where they go when they need health services

(CDC, 2020). These self-report questions ask if a doctor or other health professional has told them that they have the following health conditions: arthritis, hypertension, high cholesterol, asthma, cancer, and diabetes. Some additional related questions asked about mental health care access and utilization.

The brief symptom inventory-18 (BSI-18) was used to assess for psychological distress. The BSI has symptom patterns along three dimensions depression, anxiety, and somatization (Derogatis, 2001). The BSI also has global severity index (GSI) to provide an overall assessment of psychological distress within the past week based on a summed score of each item. Each item is rated on a 5- point Likert scale from 0 = not at all to 4 = extremely (Derogatis, 2001). Cronbach's alpha for the GSI was .925, .891 for depression, .838 for anxiety, and .710 for the somatization subscales.

To assess for PTSD, depression and anxiety symptoms, the PCL-5, PHQ-9, and GAD-7 were used. The PCL-5 is a 20-item Likert scale, where respondents are asked how much they have been bothered by PTSD symptoms in the past month on the same 5-point Likert scale as the BSI-18 (F. W. Weathers et al., 2013). A total score was computed by summing up all the items. Cronbach's alpha for the PCL-5 was .971.

The PHQ-9 is a self-report nine item questionnaire that assesses for symptoms of depression within the past two weeks via a 4 point Likert scale, where 0 = not at all to 3 = nearly every day (Kroenke et al., 2001). Similarly, the GAD-7 is a self-report seven item questionnaire that assesses for symptom of anxiety within the past week with the same response choices as the PHQ-9 (Spitzer et al., 2006). A total score was computed by adding up all the items. Each of these measures has well established psychometric properties and have been used previously with

Latino immigrants (Alegría et al., 2019; Cervantes et al., 2016). Cronbach's alpha for the PHQ-9 and GAD-7 were .813 and .873, respectively.

Qualitative data collection

A qualitative descriptive design was the most appropriate for this study given the use of optional open-ended questions administered at the end of the survey. At the end of the survey, participants had the option to complete open-ended questions on stressors and coping strategies, and the COVID-19 pandemic. Eighteen participants completing the survey over the phone or through Zoom opted to complete the open-ended questions and consented to being audio recorded. Participants completed the following seven open-ended questions: 1) Sometimes immigrants experience stressful experiences across the migration process and in their life. What was your most stressful experience(s) before migrating to the U.S., during migration, and after migration? How have those experiences impacted your physical and mental health? 2) How have immigration policies and laws affected you and your families' lives (past and present)? 3) What has helped you deal with those stressful experiences? 4) How has COVID-19 impacted your life? How has it affected your mental health? 5) We know that Latinos are one of the ethnic groups with the highest COVID-19 cases, hospitalizations, and deaths. Why do you think there are health disparities in COVID-19 among Latinos? 6) What type of help and support do you think can help reduce health disparities in COVID-19 among Latinos? 7) What are some concerns that you had or have about getting vaccinated for COVID-19? What may help you or other Latinos that are 45 years of age or older get vaccinated for COVID-19? For this study, we focus on the first three questions.

Data analyses

Quantitative analyses

Descriptive statistics and frequencies were performed on all study variables. All analyses were performed using SPSS and alpha was set at .05. For hypotheses one, I performed Pearson

correlations to examine the relationship between social and demographic variables and cultural factors (cultural pride, familism, respect, religion), family and community support, and coping strategies. To examine the link between indicators of stress and mental health, for hypotheses two, I performed Pearson correlations for the following continuous variables: a composite score on stress from perceived structural injustices and acculturative stress, and mental health outcomes (i.e., total scores of the BSI-18, PHQ-9, GAD-7, and PCL-5). To examine the relationship between stressors and mental health outcomes, I performed Spearman's rho correlations for the count variables, total perceived structural injustices, and total number of traumatic events.

For hypothesis three, I performed correlations and multiple regressions. First, I performed Pearson correlations on the cultural factors, family, and community support, and coping strategies for mental health outcomes. Next, intercorrelations were examined and cultural factors and coping strategies that were significantly correlated with mental health symptoms were further explored and added through linear regressions. I performed a series of linear regressions and regressed the mental health measures (BSI-18, PHQ-9, GAD-7, and PCL-5) with cultural factors and coping strategies, total number of traumatic events experienced, acculturative stress, and stress from perceived structural injustices, and included the covariates, age, gender, and years living in the U.S.

Qualitative descriptive analysis

This study used a qualitative descriptive design to capture the shared and differing experiences and understanding on stressors and health from the perspective of middle-aged and older Latino/Hispanic immigrants. Qualitative content analysis was used to generate a coding framework that corresponded to the data (Neergaard et al., 2009; Sandelowski, 2000). Analytic strategies used for data from open-ended questions included 1) coding transcripts of individual

interviews, 2) organizing the data to highlight comparable phrases, patterns, and themes, 3) detecting commonalities and differences among the data, 4) deciding on generalizations that are supported by the data, and 5) examining them in comparison to current knowledge (Miles & Huberman, 1994; Neergaard et al., 2009).

Five bilingual members of the research team transcribed the recordings from the interview questions. Typed transcripts from audio recordings of interviews were reviewed for accuracy by another member of the research team. To supplement and contextualize results from quantitative data, I extracted selective quotes, especially related to the link of stressors and coping strategies on the physical and mental health of aging Latino immigrants. Qualitative data were displayed visually through matrices with defined rows and columns and included relevant texts and quotes (Miles & Huberman, 1994). Selective data from transcripts were broken down into smaller units to derive code names representative of the content and study aims (i.e., individual pre- and post-migration stressors, structural factors and coping with stress). Subsequent levels of coding were also generated to capture similarities and differences. For example, subcategories of individual pre-migration stressors included family separation, violence, or trauma, and education and economic. Subcategories for post-migration stressors were traumatic injustices and discrimination from documentation status, loss of family and culture. The impact of immigration policies and laws can be categorized to fear or concerns with deportation and family separation and ongoing changes in the immigration system. Subcategories of coping and managing stress were values related to their faith in God, community empowerment and support, and other values and strengths.

Results

On average, participants were 54 years of age (SD = 7) and ranged in age from 45 to 77 years. About half of participants identified as men (51%), most were from Mexico (88%),

identified as heterosexual or straight (99%), and lived in California (55%) or New Mexico (40%). The average age of arrival to the U.S. was 24 years of age and the average time that participants have been living in the U.S. was 29 years. Table 1 provides a detailed description of social and demographic variables by gender.

Table 1. Social and demographic variables

Variables	**Total (% of total)**	**Male %**	**Female %**
	N = 80	N = 41	N = 39
State of residence *			
California	55%	78%	31%
New Mexico	40%	15%	67%
Texas	4%	5%	3%
Illinois	1%	2%	0%
Education level **			
Less than middle school	44%	59%	28%
Finished middle school	20%	24%	15%
Completed high school/GED	14%	10%	18%
Completed some college	15%	5%	26%
Finished university or higher	7.5%	2%	13%
Age (M, SD)	54 (7)	54 (7)	53 (7)
Country of birth			
Mexico	87.5%	88%	87%
Guatemala	5%	7%	2.5%
El Salvador	2.5%	2.5%	2.5%
Argentina	1%	0%	2.5%
Bolivia	1%	0%	2.5%
Chile	1%	2.5%	0%
Ecuador	1%	0%	2.5%
Age of arrival to U.S. (M, SD)	24 (10)	21 (6)	27 (13) *
Years living in the U.S. (M, SD)	29 (10)	32 (8) **	26 (12)
Sexual Orientation			
Heterosexual	99%	100%	97.5%
Lesbian	1%	0%	2.5%
Income (USD)			
Less than $20,000	16.5%	15%	18%
$20,000 to $39,999	27%	22%	32%
$40,000 to $59,999	35%	37%	34%
$60,000 to $79,999	11%	15%	8%
More than $80,000	10%	12%	8%
Health insurance	70%	73%	67%
No health insurance	30%	27%	33%
Language comfortable speaking			
Only Spanish	55%	63%	46%
English and Spanish	45%	37%	54%

Note. Given rounding, values may not add up to 100% or their respective total percentages.
* $p < .05$, ** $p < .01$, *** $p \leq .001$

Exposure to traumatic events

Most participants (86%) reported experiencing at least one traumatic event. On average, participants reported experiencing five traumatic events. The most prevalent traumatic event experienced were exposure to shootings (34%) extortion or robbery (30%), were being physically disciplined as a child (34%) and being in a natural disaster (32.5%). Table 2 provides the prevalence of exposure to traumatic events in this study.

Table 2. Prevalence of lifetime exposure to traumatic events

Traumatic event	**Total (% of total)**	**Male**	**Female**
Any trauma	86%	90%	82%
Total traumatic events (M, SD)	5 (4)	5 (3)	5 (5)
Material deprivation			
Lack of shelter	11%	10%	13%
Lack of food/water	24%	20%	28%
Ill health without medical care	24%	20%	28%
Destruction of property	16%	15%	18%
War-like conditions			
Exposure to combat-like events	5%	7.5%	2.5%
Exposure to shootings	34%	34%	33%
Forced evacuation in danger	5%	5%	5%
Bodily injury			
Physical assault	21%	17%	26%
Rape	16%	5%	28% **
Sexual humiliation	18%	5%	31% **
Torture	2.5%	2.5%	2.5%
Confinement/extortion			
Detained for immigration reasons	14%	22% *	5%
Detained for other reasons	28%	49% ***	5%
Forced to hide	12.5%	12%	13%
Kidnapped	0%	0%	0%
Forced separation from family	18%	15%	21%
Enforced isolation due to danger	26%	20%	33%
Present during house search	11%	7%	15%
Extortion/robbery	30%	27%	33%
Injury to loved ones			
Murder/death of loved ones	17.5%	12%	23%
Disappearance/kidnapping of loved one	17.5%	17%	18%
Physical injury to family due to violence	15%	12.5%	18%
Witnessing violence to others			
Witnessing a killing/murder	14%	17%	10%
Witnessing rape/sexual abuse	11.5%	7%	16%

Domestic violence	13%	0%	26% ***
Deportation	20%	24%	16%
Natural disaster	32.5%	37%	28%
Refugee status	2.5%	2.5%	2.5%
Life-threatening health condition	24%	27%	21%
Physically disciplined as a child	34%	37%	31%
Note. Given rounding, values may not add up to 100% or their respective total percentages. * $p < .05$, ** $p < .01$, *** $p \leq .001$			

Perceived injustices

Seventy percent of participants reported experiencing at least one injustice throughout their life (M = 2, SD = 3). The most common injustice experienced was being fired from their job (36%), unjustly detained, or mistreated by police (21%), receiving worse services from a plumber or mechanic (20%), unjustly detained, or interrogated about their legal status (19%), and unjustly treated by a doctor or health professional (19%). Table 3 shows the percentage of participants that reported experiencing specific injustices.

Table 3. Prevalence of lifetime exposure to injustices

Experiences of injustice	**Total (%)**	**Male**	**Female**
Any injustice	70%	73%	67%
Total injustices (M, SD)	2 (3)	2 (3)	3 (3)
Unjustly fired	36%	41.5%	31%
Unjustly not hired for a job	15%	17%	13%
Unjustly not promoted at work	15%	12%	18%
Unjustly detained, questioned, threatened, or mistreated by police	21%	24%	18%
Unjustly discouraged by educator or school counselor	12.5%	5%	21% *
Unjustly prevented to move to a neighborhood by rental owner	10%	5%	15%
Moved to a neighborhood where neighbors made it difficult for them	11%	10%	13%
Unjustly denied a bank loan	17.5%	17%	18%
Received worse services from a plumber or mechanic	20%	22%	18%
Unjustly detained or interrogated about legal status	19%	17%	21%
Unjustly denied medical services or received worse services	12.5%	10%	15%
Unjustly treated by a doctor or health professional	19%	15%	23%
Unjustly treated at the DMV	15%	12%	18%
Unjustly treated when looking for assistance from government programs	18%	10%	26%
Unjustly treated at a hearing	5%	7.5%	2.5%

Note. Given rounding, values may not add up to 100% or their respective total percentages. DMV = department of motor vehicles
* $p < .05$, ** $p < .01$, *** $p \leq .001$

Intercorrelations

Pearson correlations were performed to assess the relationship between age and immigration variables, cultural factors, family and community support, and coping strategies. As seen in table 4, age was positively correlated with *familismo,* r = .266, $p < .05$. Regarding coping strategies, coping through religion was positively correlated with age of arrival to the U.S., r = .241, $p < .05$.

Table 4. Intercorrelations for age, immigration variables, LVS, cultural factors, and support scales

Measure	1	2	3	4	5	6	7	8	9
1. Age	-								
2. Age of arrival to U.S.	.302**	-							
3. Years living in U.S.	.319	-.751***	-						
4. LVS	.062	.184	-.148	-					
5. Familismo	.266*	.152	.018	.442***	-				
6. Respeto	.132	.026	.076	.305**	.547***	-			
7. Religion	.118	.003	.040	.358***	.597***	.447***	-		
8. Family support	.089	.073	.041	.091	.076	-.114	.047	-	
9. Community support	.077	.133	-.055	.135	.191	.091	.109	.379***	-

Note. LVS = Latino/a Values Scale. * $p < .05$, ** $p < .01$, *** $p \leq .001$

Spearman's rho correlation was used to assess the relationship between total traumatic events experienced and mental health outcomes. There was a significant positive correlation between the total number of traumatic events experienced and all mental health outcomes. Specifically, traumatic events were positively correlated with overall psychological distress r_s =.230, $p < .05$, depression symptoms, r_s =.264, $p < .05$, anxiety symptoms r_s =.314, $p < .01$, and PTSD symptoms r_s =.383, $p < .001$. Pearson's correlation was used to assess the relationship between acculturative stress (i.e., intrafamilial and extrafamilial stress), stress from injustices, and mental health outcomes. Intrafamilial and extrafamilial stress were also positively correlated with all mental health outcomes, $p < .001$ for psychological distress r = .403, r = .364, depression symptoms, r = .411, r = .382, anxiety symptoms, r = .484, r = .415, and PTSD symptoms, r =

.406, r = .382. As seen in table 5, stress from injustices were also positively associated with psychological distress, r = .285, p <.05, depression symptoms, r = .221, p <.05, anxiety symptoms, r = .313, p <.01, and PTSD symptoms, r = .324, p <.01.

Table 5. Intercorrelations for acculturative stress, stress from injustices, and mental health outcomes

Measure	1	2	3	4	5	6	7
1. Intrafamilial stress	-						
2. Extrafamilial stress	.318**	-					
3. Stress from injustices	.438***	.555***	-				
4. BSI-18	.403***	.364***	.285*	-			
5. PHQ-9	.411***	.382***	.221*	.800***	-		
6. GAD-7	.484***	.415***	.313**	.740***	.795***	-	
7. PCL-5	.406***	.382***	.324**	.803***	.558***	.649***	-

Note. BSI-18 = Brief symptom inventory-18, PHQ-9 = Patient Health Questionnaire 9, GAD-7 = General Anxiety Disorder 7, PCL-5 = PTSD Symptom Checklist 5. * p < .05, ** p < .01, *** p ≤.001

Pearson's correlations were used to examine the relationship between cultural factors, support systems, coping strategies, and mental health outcomes. There was a significant negative correlation between *familismo* and psychological distress, r = -.343, p <.01, and *familismo* and PTSD symptoms, r = -.357, p <.01. Total family support was also negatively correlated with psychological distress r = -.225, p <.05 and depression r = -.236, p <.05. Regarding coping, psychological distress was positively correlated with denial, r = .313, p <.01, venting, r = .283, p <.05, and self-blame, r = .351, p <.01. Depression symptoms were positively correlated with self-distraction coping r = .261, p <.05, denial coping, r = .388, p <.001, venting, r = .269, p <.05, behavioral disengagement, r = .242, p <.032 and self-blame, r = .264, p <.05. Anxiety symptoms were positively correlated with self-distraction, r = .236, p <.05, denial, r = .316, p <.01, and self-blame, r = .317, p <.01. There was a positive correlation between PTSD symptoms and religious coping, r = .283, p <.05, denial, r = .311, p <.01, venting, r = .290, p <.05 and self-blame, r = .324, p <.01.

Regression models

Four multiple regression models were performed to identify relative contribution of factors linked with mental health outcomes based on exposure to trauma, acculturative stress and stress from injustices, cultural factors, and coping strategies. In the first regression, psychological distress was regressed on covariates (age, gender, years living in the U.S.), *familismo,* family support, total traumatic events experienced, acculturative stress, stress from injustices, denial, venting, and self-blame coping. These variables were significantly linked with psychological distress, F (12,62) = 5.09, $p < .001$, $R^2 = .496$. Gender, $\beta = -.287$, $p = .009$, and *familismo,* $\beta = -.224$, $p = .045$ were statistically significant.

Table 6. Multiple regression predicting psychological distress

Variable	*B*	SE	*β*	95% CI for *B*	Sr
Gender **	-5.61	2.07	-.287	-9.75, -.147	.03
Age	.180	.164	.125	-.148, .508	.01
Years living in U.S.	.030	.104	.032	-.178, .237	.00
Familismo *	-.640	.313	-.224	-1.26, -.015	.03
Family support	-.250	.139	-.173	-.529, .029	.02
Total trauma	.413	.279	.184	-.145, .971	.02
Stress from injustices	-.090	.132	-.093	-.354, .175	.00
Extrafamilial stress	.222	.126	.214	-.029, .474	.02
Intrafamilial stress	.155	.155	.127	-.155, .464	.01
Denial	1.57	1.17	.151	-.771, 3.92	.01
Venting	-.155	1.37	-.013	-.290, 2.59	.00
Self-blame	1.90	1.08	.181	-.281, 4.06	.02
R^2	.496				
F Value	5.09				

Note. Sr = semi partial correlation. * $p < .05$, ** $p < .01$.

In the second regression, depression symptoms were regressed on the same covariates, stressors and indicators of stress, self-distraction, denial, venting, behavioral disengagement, and self-blame coping. These variables were significantly associated with depression symptoms, F (13, 62) = 3.38, $p < .001$, $R^2 = .415$. Intrafamilial stress, $\beta = .295$, $p = .040$ was statistically significant.

Table 7. Multiple regression predicting depression symptoms

Variable	*B*	SE	*β*	95% CI for *B*	Sr

Gender	-1.64	1.01	-.191	-3.67, .378	.02
Age	.027	.076	.043	-.125, .179	.00
Years living in U.S.	.012	.049	.029	-.087, .110	.00
Family support	-.117	.069	-.182	-.254, .020	.03
Total trauma	.077	.139	.079	-.201, .355	.00
Stress from injustices	-.091	.091	-.180	-.272, .091	.01
Extrafamilial stress	.114	.063	.243	-.012, .241	.03
Intrafamilial stress *	.160	.076	.295	.008, .311	.04
Self-distract	.285	.577	.055	-.869, 1.43	.00
Denial	1.07	.602	.235	-.124, 2.28	.03
Venting	.503	.662	.092	-.820, 1.82	.00
Behavioral disengagement	-.282	.714	-.050	-1.71, 1.14	.01
Self-blame	.187	.497	.041	-.808, 1.18	.01
R^2	.415				
F Value	3.38				
Note. Sr = semi partial correlation. * p <.05					

In the third regression, anxiety symptoms were regressed on the same covariates, stressors and indicators of stress, self-distraction coping, denial, and self-blame. These variables significantly predicted anxiety symptoms, F (10, 68) = 6.74, p <.001, R^2 = .498. Years living in the U.S., β = -.261, p = .014, intrafamilial stress, β = .399, p = .001 and denial coping, β = .251, p = .020 were statistically significant.

Table 8. Multiple regression predicting anxiety symptoms

Variable	*B*	SE	*β*	95% CI for *B*	Sr
Gender	-1.38	.890	-.158	-3.16, .387	.02
Age	.045	.066	.069	-.086, .176	.00
Years living in U.S. *	-.111	.044	-.261	-.199, -.023	.05
Total trauma	.105	.126	.104	-.147, .357	.01
Stress from injustices	-.060	.075	-.116	-.209, .089	.00
Extrafamilial stress	.078	.053	.162	-.028, .184	.02
Intrafamilial stress **	.218	.063	.399	.091, .344	.09
Self-distraction	.148	.528	.027	-.905, 1.20	.00
Denial *	1.17	.492	.251	.191, 2.15	.04
Self-blame	.495	.442	.106	-.387, 1.376	.01
R^2	.498				
F Value	6.74				
Note. Sr = semi partial correlation.* p <.05, **p <.01.					

In the fourth regression, PTSD symptoms were regressed on the same covariates, stressors, and indicators of stress, *familismo*, religious coping, denial, venting, and self-blame coping. These variables significantly predicted PTSD symptoms F (10, 68) = 6.95, p <.001, R^2 = .574. As seen in table 8, Gender, β = -.214, p = .035, *familismo,* β = .267, p = .011, total trauma

β = .313, p = .008 and denial coping β = .220, p = .032 were statistically significant. Table 8 shows the standardized coefficients and the unique proportion of variance for each independent variable.

Table 9. Multiple regression predicting PTSD symptoms

Variable	*B*	SE	*β*	95% CI for *B*	Sr
Gender *	-7.01	3.25	-.214	-13.51, -.51	.03
Age	.384	.269	.160	-.154, .923	.01
Years living in U.S.	-.256	.161	-.165	.118, -.578	.02
Familismo *	-1.27	.487	-.267	-2.250, -.305	.05
Total trauma **	1.17	.429	.313	.321, 2.036	.05
Stress from injustices	-.214	.209	-.133	-1.025, .309	.01
Extrafamilial stress	.337	.195	.194	-.053, .727	.02
Intrafamilial stress	.296	.243	.146	-.190, .783	.01
Religious coping	-.154	1.89	-.009	-3.93, 3.62	.00
Denial *	3.83	1.74	.220	.341, 7.33	.03
Venting	-.167	2.32	-.008	-4.80, 4.46	.00
Self-blame	2.85	1.67	.163	-.491, 6.19	.02
R^2	.574				
F Value	6.95				

Note. Sr = semi partial correlation. * p <.05, ** p <.01.

Open-ended responses

Premigration stressors

Qualitative content analysis identified three subcategories from the selective quotes on pre-migration stressors, family separation, violence, and economic and education-related stressors. A 53-year old women from Mexico shared the difficulty and emotional toll from not seeing family members from extended periods of time. Another woman from Mexico recalled her experience and distress from seeing and hearing about the violence toward the father of her children while being pregnant. She shared "the father of my daughters…was detained by the police, they beat him horribly, cut him all over and they took him to jail". Limited education and economic opportunities were also commonly reported among participants. A 56 year-old woman from Mexico explained that "the economic situation and being the oldest in the family…and the need to have the responsibility to take care of the family, and the limited work opportunities in Mexico, especially for women" were the most stressful pre-migration stressors. Other stressors

reported included limited access to jobs in their country of birth, seeing someone get killed and experiencing sexual abuse.

Postmigration stressors

Subcategories for postmigration stressors were traumatic injustices and discrimination from documentation status. A 53-year-old woman from Mexico described the impact on her mental health after agents from the drug enforcement agency entered mistakenly to her home and were physically aggressive toward her daughters. As a result of this experience, when she's around police officers she stated, "I get more nervous and feel desperate and my heart beats fast". Loss of family members without being able to return to their country was also a shared postmigration stressor. One woman stated "it is very difficult being in the U.S. and having your family in Mexico. My brother and mother passed away and during that time, I could not go to Mexico, and that was a lot emotionally". Transnational family losses and family separation are common experiences that affect the physical and mental health of Latinos, especially those that are undocumented and are unable to return to their country of birth (Galvan et al., 2022). Other common postmigration stressors described were loss of cultural activities, not knowing how to speak English when they arrived and needing to learn, and not knowing anyone in the U.S.

Perceived impact of policies and immigration laws

Separation or loss of social networks from deportation, generational impact or transmission of distress, and life changing benefits can be seen as subcategories of impacts and effects from immigration-related policies and laws. Several women from Mexico described the expected cumulative impact at a familial level from fear of deportation and being deported. For instance, one woman shared an experience of racism that a family member endured: "we have the experience of having a family member deported…ICE did not detain him, a security guard at the airport did…They detained him because he had music playing in Spanish and he had a

Mexican flag." The emotional impact of deportation of family members and friends can also be seen in the following example: "Friends and family members were deported because they did not have papers, even though they worked and paid taxes. This affects us because it makes you feel sad from the family and friend separation." One woman shared how her own fear of deportation has also affected the fear and anxiety of her children toward police officers. Constant stress from the uncertainties of immigration, ongoing changes, including rising cost of services, and limited information were also mentioned. Several participants mentioned that they were able to benefit from obtaining legal documents through immigration-related programs or the lengthy traditional immigration process. A woman from Bolivia shared her own story of benefitting from a program that allowed her to obtain a resident visa and identified it as life changing.

Coping with stress and stressors

Many respondents identified faith in God as an important core value to help them manage stress. Community resources and engagement were also mentioned among several respondents. As described in the following example, it is possible that community involvement can help people feel empowered to making lasting community changes: "there are three organizations…I have always been with them helping them in different forms so those organizations can continue supporting and encouraging them to move forward because we are here for a reason, and we're each playing our part so this country can continue advancing". Another person recognized the importance of community support and shared experiences of immigrants in the healing process. Table 10 shows a list of selected quotes in the respondent's language (i.e., Spanish) and an English translation in brackets by categories and subcategories of transcribed data.

Table 10. Selected texts and quotes from transcripts of open-ended responses

Stressors and Coping	Type and perceived impact including physical and mental health
Pre-migration	**Family separation**: 53 year-old woman (1): *pues dejar mi familia allá como mi mamá y ahora que están mis hijos allá. Ya van siete años que no los miro* [leaving my family over there such as, my mom and now that my children are there. It has been seven years since I last saw them] **Violence**: 54-year old woman (2): *El papá de mis hijas.., lo detuvo la policía, lo golpeo horrible, lo corto por toda la cabeza, y lo llevaron a la cárcel… estaba con mucha sangre y me asuste mucho ahí [the father of my daughters.., was detained by the police, they beat him horribly, cut him all over and they took him to jail]* **Education**: 52-year old woman (3) *yo tenía que agarrar dos camiones para ir a la escuela y yo estaba en el turno en la tarde y salía a las 9 de la noche…en ocasiones el segundo camión no pasaba y yo tenía que caminar doce cuadras para llegar a mi casa…lo mas estresante era que me fuera atacar… o salir cholos* [I had to take two buses to get to school and I got out at 9pm… on ocassions the second bus did not arrive, and I had to walk twelve blocks to get home… the most stressful was being at risk for getting attacked] **Economic:** 56-year old woman (4): *la situación económica y el hecho de ser la mayor en la familia…la responsabilidad de la familia y tener que encargarte de la familia y la poca oportunidad de trabajos en Mexico, especialmente para una mujer* [the economic situation and being the oldest in the family…and the need to have the responsibility to take care of family and the limited work opportunities in Mexico, especially for women]
Post-migration	**Traumatic injustices:** 53 year old woman (1): *lo que paso en el 2005 que la DEA fue a la casa… entró equivocadamente y golpeo a dos de mis niñas o sea como las empujaron, verdad y se golpearon* [what happened in 2005 that the

	DEA went to the house… entered mistakenly and shoved two of my daughters, hurting them] *Me pongo más nerviosa y me desespero y se me acelera mucho el corazón [*I get more nervous and feel desperate and my heart beats fast] **Discrimination:** 56-year old woman (4): *el hecho de estar indocumentada… sentirme que no puedo ser yo, que tengo que estar muy limitada con el miedo y el hecho de hacer discriminada.* [being undocumented and feeling that I can't be myself, that I am very limited with fear and am discriminated. *por el estrés… mi epilepsia ha empeorado…Yo digo que si no había pasado por mi vida con tanto estrés, tal vez mi epilepsia no estuviera como esta* [because of stress…my epilepsy has worsened…I believe that if I hadn't experienced so much stress throughout my life, perhaps my epilepsy wouldn't be like this] **Loss of family and culture:** 53-year old woman (5): *los seres humanos somos adaptables…, pero en cuanto a cuestiones sentimentales y todo eso, es muy difícil porque los Hispanos tenemos en nuestras raíces bien fuertes, tenemos mucho amor a la familia, nos encanta ser unidos* [human beings adapt…, but regarding emotions and everything else, it is very difficult because Hispanics have a lot of love toward their family, we love to be together] 57-year old woman (6) *ay momentos que te da para bajo y te deprimes y te sientes que tu eras la culpable la que no hiciste las cosas bien y te juzgas* [there are time that you get down and depressed and you feel that it is your fault that things didn't work out and you judge yourself]. 51-year old woman (7) *yo sentía mucha tristeza porque la cultura no era la misma…aya yo estuve caminando por los cerros en los caballos, en el arrollo pescando, y fue un cambio pero terrible* [I felt a lot of sadness because the

	culture is not the same…over there I was walking through the hills, fishing in the river, and that was a horrible change] 45-year old woman (8): *sí afecta, es muy dificil estar aqui en Estados Unidos y que este tu familia en Mexico… fallecio mi hermano, mi mama y en ese tiempo… yo no pude ir para Mexico y eso es mucho emocionalmente* [it does affect me, it is very difficult being in the U.S. and having your family in Mexico. My brother and my mother passed away and during that time, I could not go to Mexico.. and that was a lot emotionally]
Policies and immigration laws	**Fear or concerns with deportation and family separation:** 53 year-old woman (1): *No eh podido arreglar yo y eso que he tenido cuatro hijos de aquí… me dijeron que para poder arreglar, me sacan para México y como todavía tengo a las chamacas que están en la escuela, yo sé que todavía me ocupan* [I have been unable to get papers even though I have four children that were born here… they told me that to get papers, I need to spend time in Mexico and since I still have my school-aged daughters, I know they still need me] 53-year old woman (5): *también existen cosas que no son justas para los inmigrantes entonces pues siente uno miedo, habemos personas que hasta nos encerramos, no queremos salir por el miedo que nos vayan a deportar.. hasta los niños aprenden, "hay viene la policía" a cuidarse, a tener miedo* [injustices also exist for immigrants, so I feel that one is fearful, there are some people that we enclose ourselves, we do not want to go outside because we fear getting deported… even the children learn "there comes the police", to take care and be afraid. (5) *nosotros ya tenemos la experiencia que deportaron una persona de mi familia…no lo detuvo el ICE, lo detuvo una persona como guardia de seguridad del aeropuerto… Lo detuvo porque el traía música en español. Traía una bandera de México* [we already have the experience of having a family member

	deported… ICE did not detain him, a security guard at the airport did… They detained him because he had music playing in Spanish and he had a Mexican flag]. 50 year-old woman (9) *amistades y familiares fueron deportados por no tener papeles.. aunque tengan trabajo y pagan sus impuestos. Afecta uno en como causa tristeza en tener que separar la familia y las amistades* [Friends and family members were deported because they did not have papers even though they worked and paid taxes. This affects us because it makes you feel sad from the family and friend separation] 54-year old woman (10) *bueno, siempre decimos mi esposo y yo si Dios quiere y alguno es deportado, el otro se tiene que quedar aquí para sacar adelante la familia y para ver la manera de traer al que ya no está* [my husband and I always say if it is God's Will and one of us is deported, the other has to stay here to help the family move forward and see how they can bring the other person back] **Ongoing changes in the immigration system:** 57-year old woman (6): *yo estaba en el proceso de arreglar papeles con mi ex.. en el 2001… yo perdí todos esos derechos…(al divorciarme) mis hijos son [have] DACA.* [I was in the process of getting papers with my ex husband.. in 2001, I lost all of my rights (by divorcing him)…my children have DACA] 45-year old woman (8): *ahora que paso la ley de Texas, a mi hijo ya había ido a que le tomaran las huellas y todo para el permiso de DACA y obviamente ya esta todo detenido, eso pues me afecto emocionalmente* [now that the law in Texas passed, my son had already gone to get his fingerprints for DACA and not that is stopped, that affects me emotionally] 52-year old man (11): *uno no sabe las leyes de aquí… mucha gente en realidad no le da a uno tanta información por ser inmigrante. Yo me estreso que no quieran ayudar a uno y pues allí es estresante no saber que hacer* [one does not

	know the (immigration) laws here… a lot of people really don't give us enough information for being immigrants. I get stressed that they don't help me and it is stressful not knowing what to do 77-year old woman from Bolivia (12): *Alla salió un programa para niñas que se querían venir jóvenes para trabajar con familias y nos dieron esa oportunidad a 1,500 niñas en toda la nación…cambio la vida de muchos niños y muchas niñas con una visa de residente…eso fue la mejor cosa que me pudo pasar en mi vida.* [Over there, there was a program for young girls that wanted to go to the U.S. to work with families and they gave us that opportunity to 1,500 girls in the whole country…it changed the life of many boys and girls with a resident visa…that was the best that could have happened to me in my life]
Coping	**Values related to God**: 54-year old woman (2) *Le pido mucho a Dios que me ayude, le pido que me de fuerza y valentía para salir adelante, creo que Dios es el que me ha mantenido de pie* [I ask God to help me, and give me strength and courage to move forward, I think God is the one helping me move forward] **Community empowerment:** 57-year old woman (6): *son tres organizaciones que yo he estado muy involucrada con ellos… Yo siempre estoy con ellas ayudando en distintas formas para que sigan esas organizaciones apoyando a la comunidad, alentándola, a seguir adelante porque estamos aquí por algo y estamos dando un granito de arena para que este país sigua avanzando también* [there are three organizations that I have been involved a lot with them… I have always been with them helping them in different forms so those organizations can continue supporting and encouraging them to move forward because we are here for a reason and we're each playing our part so this country can continue advancing

	56-year old woman (4): *Me doy cuenta que no soy la única y es mejor hablarlo, compartirlo con personas que sientas confianza. Es muy común aquí encontrarse amistades…inmigrantes que han pasado más o menos por lo mismo. Nos comprendemos y este platicamos, y eso me ha ayudado* [I realize that I am not the only one dealing (with this) and it is better to talk about it and share it with people you trust. It is common here to find friendships…that are immigrants and have been through similar experiences. We understand each other and talk and this has helped me] **Other values and strengths:** 77-year old woman from Bolivia (12): *yo siempre fui muy fuerte de carácter, porque el quisa de no tener padres, me hacia, no quería fracasar en la vida. Yo quería algo mejor para mis niños si algún día los tenia, y pues (si) yo no estaba bien, ellos no iban a estar bien* [I always had a strong personality, maybe becase I did not have parents, I made myself not want to fail in life. I wanted something better for my children if one day, I were to have them and (if) I wasn't going to be good, they wouldn't be either]
Note. To distinguish participant responses, different numbers were given in parentheses. With the exception of one person, all other participants were from Mexico.	

Discussion

This study focuses on identifying factors that may improve or worsen the mental health of middle-aged and older Latino/Hispanic immigrants living in the U.S. Exposure to traumatic events, acculturative stress, and stress from injustices were correlated with worse mental health outcomes. *Familismo* and family support were social and cultural factors linked with lower psychological distress, symptoms of depression and PTSD. Regarding coping strategies, denial, venting, and self-blame were found to be linked with higher psychological distress, depression, anxiety, and PTSD symptoms. Responses from open-ended questions complement quantitative

findings and provide a more comprehensive understanding of stressors, factors of resilience and the mental health of Latino immigrants.

Exposure to traumatic events and mental health

After controlling for relevant sociodemographic variables, when compared to women, men had lower PTSD symptoms. A greater exposure to traumatic events was linked with higher PTSD symptoms. This is consistent with previous research that found gender differences in PTSD symptoms between Latinx/Hispanic men and women that were recently deported (Peña et al., 2017). The high frequency of trauma found in this study also aligns with other findings among undocumented Mexican immigrants (Garcini et al., 2017). Although this study did not ask about documentation status (i.e., undocumented, permanent resident, naturalized U.S. citizen), proxy measures (e.g., fear of deportation, voting eligibility) and open-ended responses, suggest participants had different documentation statuses and lived in mixed-status families, where at least one member of their family was undocumented. It is possible that the relationship between type of traumatic events experienced, and mental health outcomes varies based on documentation status. Prior research found that when compared to Latina immigrants with permanent legal status, undocumented Latina immigrants that experienced any victimization were less likely to seek formal resources, including medical care (Zadnik et al., 2016). The high percentage of participants that endorsed traumatic events (i.e., extortion/robbery, shootings, sexual victimization, ill health without medical care) that require access to resources highlights a potential opportunity to reduce the negative impact that trauma has on the health of Latinx/Hispanic immigrants. Further research may benefit from examining help seeking behavior and the experiences of middle-aged and older Latinx immigrants. Furthermore, investigating trauma through a life-span approach across different stages of the migration process and

developmental stages can help elucidate and inform prevention interventions for Latinx/Hispanic immigrants across age groups.

Acculturative stress and mental health

This study finds that acculturative stress, especially intrafamilial stress was linked with greater symptoms of depression and anxiety among Latino/Hispanic immigrants. Intrafamilial stress consists of cultural, family, parental, and marital related stressors, and may be influenced by ongoing and delayed changes in the immigration system, especially during the COVID pandemic (Garcini et al., 2020). Moreover, the COVID pandemic may have also exacerbated intrafamilial stress related to family and parental stressors from the economic recession, which has placed an additional burden on working-class families. Common economic stressors among Latino/Hispanic families related to the pandemic are job loss and utilizing their life savings (Vargas & Sanchez, 2020). Economic stressors may be contributing to intrafamilial conflict and directly affecting the mental health of parents, especially if they continue to face economic challenges from inflation compounded by other extrafamilial stressors related to immigration and occupation/work.

Since most participants also had a history of exposure to traumatic events, it is possible that acculturative stress may moderate the relationship between types of trauma and mental health outcomes among some Latino/Hispanic immigrants and an important factor to consider in interventions. Greater attention to the mental health of children and adult sons and daughters of immigrants may also provide necessary information on the need for improving access and utilization of mental health services for Latinx/Hispanic families. The generational and familial impact of immigration-related stressors, which are contributors to acculturative stress was also seen in qualitative data among participants that shared the fear that their children also

experienced from the police or the deportation of family members from racist experiences. Future research will also benefit from identifying factors that can inform the development of interventions that promote resilience and reduce the negative impact of racial historical and intergenerational trauma among families with immigrant members (Fortuna et al., 2022).

Perceived injustices and mental health

When controlling for relevant covariates, acculturative stress, traumatic events, cultural factors and coping strategies, stress from perceived injustices was not associated with mental health outcomes. As suggested by qualitative findings from open-ended questions, it is possible that the type of injustices experienced may provide greater clarity on the relationship between injustices (e.g., health, housing, immigration, criminal justice) and physical and mental health outcomes among Latino/Hispanic immigrants. As seen in table 10, open-ended responses highlighted individual and familial experiences of injustices that can be traumatic and have a detrimental impact on the families as was the case with the woman who reported being erroneously mistaken by the DEA.

This study also provides descriptive information on the most salient experiences of perceived injustices among middle-aged and older Latino/Hispanic immigrants. Injustices related to job/occupation, health care services, law enforcement, immigration and governmental assistance programs were common experiences. Some participants that completed the open-ended questions reported benefitting from immigration policies in their country that allowed them to obtain legal status and granted them permission to work and access resources such as, health care. The potential health benefit of inclusive immigration-related policies, especially at the state is consistent with previous research that identified potential pathways to health outcomes among Latinos (Philbin et al., 2018). Although the impact of immigration policies and

laws were qualitatively examined in this study, individual policies or laws were not and may be important for future research, especially as it pertains to reducing their negative impact on the physical and mental health of Latino/Hispanic immigrants and their families.

Social and cultural factors

Familismo or familism was associated with lower levels psychological distress and PTSD symptoms. *Familismo* as measured in this study consists of attitudinal values related to the extent to which respondents believe they should be close and supportive of family members (Knight et al., 2010). These results are consistent with systematic reviews and meta-analysis that found a significant overall effect size and negative relationship between *familismo* and internalizing symptoms such as depression and anxiety among Latinos/Hispanics (Cahill et al., 2021; Valdivieso-Mora et al., 2016). Findings from this study underscore the potential benefit of *familismo* values on the mental health of a growing and aging Latino/Hispanic immigrant population. Assessing values of *familismo* within clinical contexts (e.g., therapy, case management) may provide opportunities to engage clients in treatment or services, discuss and identify treatment goals among Spanish-speaking middle-aged and older Latino immigrants. Future research should examine how the attitudinal value of *familismo* and other cultural factors may influence utilization and preference of mental health services among Spanish-speaking Latino immigrants. Qualitative research with Latinx people can facilitate our understanding of Latinx cultural values and capture the heterogeneity that exists within Latinx communities (Delgado-Romero et al., 2018).

Interestingly, a family social support scale, which comprised of perceived emotional and material support from family members within the last month and may be comparative to the latent factor of behavioral *familismo* was significantly correlated with lower psychological

distress and symptoms of depression. Prior research found that perceived family support was related to greater use of mental health or substance use-related problems from informal or religious services and better overall psychological health (Campos et al., 2014; Villatoro et al., 2014). Collaborating with faith-based or religious institutions may be an avenue to address the low access and utilization of mental health services among Latino immigrants. Churches can be critical resources and may also provide opportunities to improve mental health literacy and address the ongoing stigma related to mental health (Caplan, 2019; Caplan & Cordero, 2015). Open-ended responses also supported the importance of family and the impact of stressors that disrupt close ties with family members.

Contrary to our hypotheses, no other cultural factors examined in this study were associated with mental health outcomes. This is inconsistent with research that has found a relationship between religion and mental health among Latino adults (Nguyen, 2020). One explanation for the inconsistencies is the differences in the assessments used across studies, which may not adequately capture the multifaceted construct of religion, which encompasses religious activities, including but not limited to attending church, reading religious texts, and praying to God (Nguyen, 2020). This study uses a measure of religion that focuses on attitudinal values pertaining to belief in God. Given the unlikelihood that this measure has been used with older Latino immigrants, performing factor analyses in a larger sample may help identify individual items related to this latent construct. As seen in the qualitative findings from this study, one of the most common ways of coping with stress was related to God and included prayer, attending a spiritual group or church. Qualitative data can continue informing the development and adaptation of culturally appropriate and valid measures and interventions.

A longer length of time in years living in the U.S. was associated with lower symptoms of anxiety among Latino immigrants. Although this study did not assess for mental health disorders, this is partly consistent with research that finds lower risk for mood and anxiety disorders among immigrants from Mexico that arrived to the U.S. at 13 years of age or older (Breslau et al., 2009). Examining age of arrival to the U.S. and years living in the U.S. as moderators for different types of stress and mental health symptoms and disorders among Latinos/Hispanics by disaggregating can provide greater clarity on potential pathways to mental health outcomes (Alegría et al., 2007, 2017). It is possible that greater access to healthcare among participants in this study could contribute to the overall better mental health, especially across time. Access to affordable healthcare services for immigrants and their families can help reduce the negative health impact from persistent stress associated with longer times living in the U.S.

Coping strategies

Findings suggest that coping with stress through denial may be significantly linked with worse anxiety and PTSD symptoms. Others have also found coping with denial was associated with worse mental health functioning among U.S. and foreign-born individuals of Mexican origin (Farley et al., 2005). In this study, denial may be an avoidant coping style linked to cumulative or specific types of life trauma that participants experienced. A relationship between avoidant coping styles such as, denial, substance use and self-blame and higher perceived stress has also been observed (Farley et al., 2005). Evaluating the relationship between coping strategies and types of stress (acculturative and perceived injustices) may be an important area of research with significant implications. Coping strategies that may reduce or exacerbate stress may act as moderators to different physical and mental health outcomes and be potential targets for intervention. The extent to which denial and self-blame can be addressed through cognitive

and behavioral strategies and client-centered approaches among Latino/Hispanic immigrants may also be beneficial in treatment studies.

Limitations

This study has several limitations that can serve as directions for future research. First, this study was cross sectional and causality cannot be inferred. Subsequent research may benefit from a longitudinal study design that uses a life-span approach to capture the impact of stressors and stress on the physical and mental health of Latino/Hispanic immigrants. Taking a life-span approach may help detect social and cultural factors that are protective at different developmental stages and different lengths of U.S. residence. For example, greater access to information and resources related to physiological needs and safety may be more critical for recently arrived Latino/Hispanic immigrants, especially those with a limited social support system in the U.S.

A second limitation is the small sample size, which limits the statistical power to perform further analyses such as, structural equation modeling. Obtaining a larger sample through the development of new projects or combination from multiple studies can elucidate if the latent constructs from these measures are valid across time and among Latinos/Hispanic immigrants from different social, cultural, and demographic backgrounds. Examining the factor structure and measurement invariance of scales completed in Spanish is essential in the development and adaptation of culturally appropriate and valid measures.

Third, most participants were born in Mexico, identified as heterosexual/straight, and resided in California and New Mexico. Latinos/Hispanics are a heterogeneous population and greater attention needs to be placed on recruiting diverse samples across different states, and disaggregating by country of birth, ancestry, sexual orientation, gender identity, (dis)ability,

language, and income. Investigating how individual and structural factors may influence the physical and mental health of Latino/Hispanic immigrants within states may also provide a more nuanced understanding of risk and protective factors. The integration of an index of variables and/or latent construct that captures structural racism or other injustices may serve as a starting point (Adkins-Jackson et al., 2022).

A fourth limitation is the use of qualitative content analysis, which has been mistakenly criticized as being too simple and unscientific (Sandelowski, 2000, 2010). However, given the descriptive nature of the open-ended responses in this study, especially in identifying the types of experiences and events that Latino/Hispanic immigrants experienced pre and post migration, and their methods of coping with stress, a qualitative description was appropriate. Although the open-ended questions were optional, they were aligned closely with the survey questions and several strategies to enhance their rigor were used (Milne & Oberle, 2005). For example, the authenticity and credibility of responses were captured by the overlap between quantitative and qualitative data and ongoing self-reflection and criticality throughout the research, especially research biases and trust from personal and professional experiences. Using other qualitative methodology and conducting mixed-method studies that implement participatory research approaches have the potential to advance health equity with the Latinx community (Delgado-Romero et al., 2018; Hess et al., 2022).

Conclusion

Despite these limitations, this study contributes to the literature by describing and quantifying the relationship between traumatic stressors, acculturative stress and stress from injustices, cultural factors, and coping strategies on the mental health of middle-aged and older Latino/Hispanic immigrants. The inclusion of qualitative data via open-ended questions also strengthens our understanding on how immigration policies and laws may affect their physical

and mental health. Exploring values of *familismo* and targeting coping strategies of denial and self-blame may yield the greatest benefit in mental health outcomes among Latino/Hispanic immigrants that are 45 years of age or older. The use of quantitative and qualitative methods is necessary to advance our understanding on the mechanisms of mental health disparities among Latino/Hispanic immigrants. Furthermore, mixed-method data can reveal cultural knowledge and strengths that promote resilience in the Latino community.

References

Abraído-Lanza, A. F., Chao, M. T., & Flórez, K. R. (2005). Do healthy behaviors decline with greater acculturation?: Implications for the Latino mortality paradox. *Social Science & Medicine*, *61*(6), 1243–1255. https://doi.org/10.1016/j.socscimed.2005.01.016

Adkins-Jackson, P. B., Chantarat, T., Bailey, Z. D., & Ponce, N. A. (2022). Measuring Structural Racism: A Guide for Epidemiologists and Other Health Researchers. *American Journal of Epidemiology*, *191*(4), 539–547. https://doi.org/10.1093/aje/kwab239

Akresh, I. R. (2007). Dietary Assimilation and Health among Hispanic Immigrants to the United States. *Journal of Health and Social Behavior*, *48*(4), 404–417. https://doi.org/10.1177/002214650704800405

Alcántara, C., Patel, S. R., Carnethon, M., Castañeda, S. F., Isasi, C. R., Davis, S., Ramos, A. R., Arredondo, E., Redline, S., Zee, P. C., & Gallo, L. C. (2017). Stress and sleep: Results from the Hispanic Community Health Study/Study of Latinos Sociocultural Ancillary Study. *SSM - Population Health*, *3*, 713–721. https://doi.org/10.1016/j.ssmph.2017.08.004

Alegría, M., Álvarez, K., & DiMarzio, K. (2017). Immigration and Mental Health. *Current Epidemiology Reports*, *4*(2), 145–155. https://doi.org/10.1007/s40471-017-0111-2

Alegría, M., Canino, G., Ríos, R., Vera, M., Calderón, J., Rusch, D., & Ortega, A. N. (2002). Mental Health Care for Latinos: Inequalities in Use of Specialty Mental Health Services Among Latinos, African Americans, and Non-Latino Whites. *Psychiatric Services*, *53*(12), 1547–1555. https://doi.org/10.1176/appi.ps.53.12.1547

Alegría, M., Cao, Z., McGuire, T. G., Ojeda, V. D., Sribney, B., Woo, M., & Takeuchi, D. (2006). Health Insurance Coverage for Vulnerable Populations: Contrasting Asian Americans and

Latinos in the United States. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, *43*(3), 231–254. https://doi.org/10.5034/inquiryjrnl_43.3.231

Alegría, M., Falgas-Bague, I., Collazos, F., Carmona Camacho, R., Lapatin Markle, S., Wang, Y., Baca-García, E., Lê Cook, B., Chavez, L. M., Fortuna, L., Herrera, L., Qureshi, A., Ramos, Z., González, C., Aroca, P., Albarracín García, L., Cellerino, L., Villar, A., Ali, N., … Shrout, P. E. (2019). Evaluation of the Integrated Intervention for Dual Problems and Early Action Among Latino Immigrants With Co-occurring Mental Health and Substance Misuse Symptoms: A Randomized Clinical Trial. *JAMA Network Open*, *2*(1), e186927. https://doi.org/10.1001/jamanetworkopen.2018.6927

Alegría, M., NeMoyer, A., Falgàs Bagué, I., Wang, Y., & Alvarez, K. (2018). Social Determinants of Mental Health: Where We Are and Where We Need to Go. *Current Psychiatry Reports*, *20*(11), 95. https://doi.org/10.1007/s11920-018-0969-9

Alegría, M., Sribney, W., Woo, M., Torres, M., & Guarnaccia, P. (2007). Looking Beyond Nativity: The Relation of Age of Immigration, Length of Residence, and Birth Cohorts to the Risk of Onset of Psychiatric Disorders for Latinos. *Research in Human Development*, *4*(1–2), 19–47. https://doi.org/10.1080/15427600701480980

Allen, J., Balfour, R., Bell, R., & Marmot, M. (2014). Social determinants of mental health. *International Review of Psychiatry*, *26*(4), 392–407. https://doi.org/10.3109/09540261.2014.928270

Andrasfay, T., & Goldman, N. (2020). Impact of COVID-19 on 2020 US life expectancy for the Black and Latino populations. *MedRxiv*. https://medrxiv.org/cgi/content/short/2020.07.12.20148387

Arbona, C., Olvera, N., Rodriguez, N., Hagan, J., Linares, A., & Wiesner, M. (2010). Acculturative Stress Among Documented and Undocumented Latino Immigrants in the United States. *Hispanic Journal of Behavioral Sciences*, *32*(3), 362–384. https://doi.org/10.1177/0739986310373210

Bailey, Z. D., Krieger, N., Agénor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *The Lancet*, *389*(10077), 1453–1463. https://doi.org/10.1016/S0140-6736(17)30569-X

Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures. *Spine*, *25*(24), 3186–3191.

Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, *29*(6), 697–712. https://doi.org/10.1016/j.ijintrel.2005.07.013

Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative Studies of Acculturative Stress. *International Migration Review*, *21*(3), 491–511. https://doi.org/10.1177/019791838702100303

Bloch, G. J., Neeleman, L., & Aleamoni, L. M. (2004). The Salient Stressor Impact Questionnaire (SSIQ): A Measurement of the Intensity and Chronicity of Stress. *Assessment*, *11*(4), 342–360. https://doi.org/10.1177/1073191104268638

Bourhis, R. Y., Moise, L. C., Perreault, S., & Senecal, S. (1997). Towards an Interactive Acculturation Model: A Social Psychological Approach. *International Journal of Psychology*, *32*(6), 369–386. https://doi.org/10.1080/002075997400629

Braveman, P. (2006). *HEALTH DISPARITIES AND HEALTH EQUITY: Concepts and Measurement*. https://doi.org/10.1146/annurev.publhealth.27.021405.102103

Braveman, P. (2014). What are Health Disparities and Health Equity? We Need to Be Clear. *Public Health Reports*, *129*(1_suppl2), 5–8. https://doi.org/10.1177/00333549141291S203

Braveman, P., Egerter, S., & Williams, D. R. (2011). The Social Determinants of Health: Coming of Age. *Annual Review of Public Health*, *32*(1), 381–398. https://doi.org/10.1146/annurev-publhealth-031210-101218

Breslau, J., Borges, G., Hagar, Y., Tancredi, D., & Gilman, S. (2009). Immigration to the USA and risk for mood and anxiety disorders: Variation by origin and age at immigration. *Psychological Medicine*, *39*(7), 1117–1127. https://doi.org/10.1017/S0033291708004698

Buchmueller, T. C., Levinson, Z. M., Levy, H. G., & Wolfe, B. L. (2016). Effect of the Affordable Care Act on Racial and Ethnic Disparities in Health Insurance Coverage. *American Journal of Public Health*, *106*(8), 1416–1421. https://doi.org/10.2105/AJPH.2016.303155

Bustamante, A. V., Chen, J., McKenna, R. M., & Ortega, A. N. (2019). Health Care Access and Utilization Among U.S. Immigrants Before and After the Affordable Care Act. *Journal of Immigrant and Minority Health*, *21*(2), 211–218. https://doi.org/10.1007/s10903-018-0741-6

Cahill, K. M., Updegraff, K. A., Causadias, J. M., & Korous, K. M. (2021). Familism values and adjustment among Hispanic/Latino individuals: A systematic review and meta-analysis. *Psychological Bulletin*, *147*, 947–985. https://doi.org/10.1037/bul0000336

Campos, B., Ullman, J. B., Aguilera, A., & Dunkel Schetter, C. (2014). Familism and psychological health: The intervening role of closeness and social support. *Cultural Diversity and Ethnic Minority Psychology*, *20*, 191–201. https://doi.org/10.1037/a0034094

Cantu, P. A., Hayward, M. D., Hummer, R. A., & Chiu, C.-T. (2013). New Estimates of Racial/Ethnic Differences in Life Expectancy with Chronic Morbidity and Functional Loss: Evidence from the National Health Interview Survey. *Journal of Cross-Cultural Gerontology*, *28*(3), 283–297. https://doi.org/10.1007/s10823-013-9206-5

Caplan, S. (2007). Latinos, Acculturation, and Acculturative Stress: A Dimensional Concept Analysis. *Policy, Politics, & Nursing Practice*, *8*(2), 93–106. https://doi.org/10.1177/1527154407301751

Caplan, S. (2019). Intersection of Cultural and Religious Beliefs About Mental Health: Latinos in the Faith-Based Setting. *Hispanic Health Care International*, *17*(1), 4–10. https://doi.org/10.1177/1540415319828265

Caplan, S., & Cordero, C. (2015). Development of a Faith-Based Mental Health Literacy Program to Improve Treatment Engagement Among Caribbean Latinos in the Northeastern United States of America. *International Quarterly of Community Health Education*, *35*(3), 199–214. https://doi.org/10.1177/0272684X15581347

Cardoso, J. B., & Thompson, S. J. (2010). Common Themes of Resilience among Latino Immigrant Families: A Systematic Review of the Literature. *Families in Society*, *91*(3), 257–265. https://doi.org/10.1606/1044-3894.4003

Carver, C. S. (1997). You want to measure coping but your protocol' too long: Consider the brief cope. *International Journal of Behavioral Medicine*, *4*(1), 92–100. https://doi.org/10.1207/s15327558ijbm0401_6

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, *56*, 267–283. https://doi.org/10.1037/0022-3514.56.2.267

Cavazos-Rehg, P. A., Zayas, L. H., Walker, M. S., & Fisher, E. B. (2006). Evaluating an Abbreviated Version of the Hispanic Stress Inventory for Immigrants. *Hispanic Journal of Behavioral Sciences*, *28*(4), 498–515. https://doi.org/10.1177/0739986306291740

Centers for Disease Control and Prevention (CDC). (2022). COVID-19 Hospitalization and Death by Race/Ethnicity. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html#footnote03

Centers for Disease Control and Prevention (CDC). (2020). National Center for Health Statistics. 2020 National Health Interview Survey. Retrieved from https://www.cdc.gov/nchs/nhis/2020nhis.htm

Cervantes, R. C., de Snyder, V. N. S., & Padilla, A. M. (1989). Posttraumatic Stress in Immigrants From Central America and Mexico. *Psychiatric Services*, *40*(6), 615–619. https://doi.org/10.1176/ps.40.6.615

Cervantes, R. C., Fisher, D. G., Padilla, A. M., & Napper, L. E. (2016). The Hispanic Stress Inventory Version 2: Improving the assessment of acculturation stress. *Psychological Assessment*, *28*, 509–522. https://doi.org/10.1037/pas0000200

Cervantes, R. C., Gattamorta, K. A., & Berger-Cardoso, J. (2019). Examining Difference in Immigration Stress, Acculturation Stress and Mental Health Outcomes in Six Hispanic/Latino Nativity and Regional Groups. *Journal of Immigrant and Minority Health*, *21*(1), 14–20. https://doi.org/10.1007/s10903-018-0714-9

Cervantes, R. C., Padilla, A. M., & Salgado de Snyder, N. (1991). The Hispanic Stress Inventory: A culturally relevant approach to psychosocial assessment. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, *3*, 438–447. https://doi.org/10.1037/1040-3590.3.3.438

Cheney, M. K., Gowin, M. J., Taylor, E. L., Frey, M., Dunnington, J., Alshuwaiyer, G., Huber, J. K., Garcia, M. C., & Wray, G. C. (2017). Living Outside the Gender Box in Mexico: Testimony of Transgender Mexican Asylum Seekers. *American Journal of Public Health*, *107*(10), 1646–1652. https://doi.org/10.2105/AJPH.2017.303961

Cleaveland, C., & Frankenfeld, C. (2020). “They Kill People Over Nothing”: An Exploratory Study of Latina Immigrant Trauma. *Journal of Social Service Research*, *46*(4), 507–523. https://doi.org/10.1080/01488376.2019.1602100

Cohen, M., Arad, S., Lorber, M., & Pollack, S. (2007). Psychological Distress, Life Stressors, and Social Support in New Immigrants With HIV. *Behavioral Medicine*, *33*(2), 45–54. https://doi.org/10.3200/BMED.33.2.45-54

Colby, S., & Ortman, J. (2015, March 3). *Projections of the Size and Composition of the U.S. Population: 2014 to 2060*. Census.Gov. https://www.census.gov/library/publications/2015/demo/p25-1143.html

Cuevas, C. A., Sabina, C., & Bell, K. A. (2012). The Effect of Acculturation and Immigration on the Victimization and Psychological Distress Link in a National Sample of Latino Women. *Journal of Interpersonal Violence*, *27*(8), 1428–1456. https://doi.org/10.1177/0886260511425797

Curtice, K., & Choo, E. (2020). Indigenous populations: Left behind in the COVID-19 response. *The Lancet*, *395*(10239), 1753. https://doi.org/10.1016/S0140-6736(20)31242-3

Davies, A. A., Borland, R. M., Blake, C., & West, H. E. (2011). The Dynamics of Health and Return Migration. *PLOS Medicine*, *8*(6), e1001046. https://doi.org/10.1371/journal.pmed.1001046

Derogatis, L. R. (2001). BSI 18, Brief Symptom Inventory 18: Administration, Scoring, and Procedures manual. NCS Pearson, Incorporated.

Delgado-Romero, E. A., Singh, A. A., & De Los Santos, J. (2018). Cuéntame: The promise of qualitative research with Latinx populations. *Journal of Latina/o Psychology*, *6*, 318–328. https://doi.org/10.1037/lat0000123

DeLuca, L. A., McEwen, M. M., & Keim, S. M. (2008). United States–Mexico Border Crossing: Experiences and Risk Perceptions of Undocumented Male Immigrants. *Journal of Immigrant and Minority Health*, *12*(1), 113. https://doi.org/10.1007/s10903-008-9197-4

Eisenman, D. P., Gelberg, L., Liu, H., & Shapiro, M. F. (2003). Mental Health and Health-Related Quality of Life Among Adult Latino Primary Care Patients Living in the United States With Previous Exposure to Political Violence. *JAMA*, *290*(5), 627–634. https://doi.org/10.1001/jama.290.5.627

Eisenman, D. P., Meredith, L. S., Rhodes, H., Green, B. L., Kaltman, S., Cassells, A., & Tobin, J. N. (2008). PTSD in Latino Patients: Illness Beliefs, Treatment Preferences, and Implications for Care. *Journal of General Internal Medicine*, *23*(9), 1386–1392. https://doi.org/10.1007/s11606-008-0677-y

Eschbach, K., Ostir, G. V., Patel, K. V., Markides, K. S., & Goodwin, J. S. (2004). Neighborhood Context and Mortality Among Older Mexican Americans: Is There a Barrio Advantage? *American Journal of Public Health*, *94*(10), 1807–1812. https://doi.org/10.2105/AJPH.94.10.1807

Farley, T., Galves, A., Dickinson, L. M., & Perez, M. de J. D. (2005). Stress, Coping, and Health: A Comparison of Mexican Immigrants, Mexican-Americans, and Non-Hispanic Whites. *Journal of Immigrant Health*, *7*(3), 213–220. https://doi.org/10.1007/s10903-005-3678-5

Fenelon, A., Chinn, J. J., & Anderson, R. N. (2017). A comprehensive analysis of the mortality experience of hispanic subgroups in the United States: Variation by age, country of origin, and nativity. *SSM - Population Health*, *3*, 245–254. https://doi.org/10.1016/j.ssmph.2017.01.011

Finch, B. K., Hummer, R. A., Kol, B., & Vega, W. A. (2001). The Role of Discrimination and Acculturative Stress in the Physical Health of Mexican-Origin Adults. *Hispanic Journal of Behavioral Sciences*, *23*(4), 399–429. https://doi.org/10.1177/0739986301234004

Finch, B. K., & Vega, W. A. (2003). Acculturation Stress, Social Support, and Self-Rated Health Among Latinos in California. *Journal of Immigrant Health*, *5*(3), 109–117. https://doi.org/10.1023/A:1023987717921

Folkman, S., & Lazarus, R. S. (1980). An Analysis of Coping in a Middle-Aged Community Sample. *Journal of Health and Social Behavior*, *21*(3), 219–239. https://doi.org/10.2307/2136617

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, *48*, 150–170. https://doi.org/10.1037/0022-3514.48.1.150

Fortuna, L. R., Álvarez, K., Ortiz, Z. R., Wang, Y., Alegría, X. M., Cook, B. L., & Alegría, M. (2016). Mental health, migration stressors and suicidal ideation among Latino immigrants in Spain and the United States. *European Psychiatry*, *36*, 15–22. https://doi.org/10.1016/j.eurpsy.2016.03.001

Fortuna, L. R., Noroña, C. R., Porche, M. V., Tillman, C., Patil, P. A., Wang, Y., Markle, S. L., & Alegría, M. (2019). Trauma, immigration, and sexual health among Latina women: Implications for maternal–child well-being and reproductive justice. *Infant Mental Health Journal*, *40*(5), 640–658. https://doi.org/10.1002/imhj.21805

Fortuna, L. R., Porche, M. V., & Alegria, M. (2008). Political violence, psychosocial trauma, and the context of mental health services use among immigrant Latinos in the United States. *Ethnicity & Health*, *13*(5), 435–463. https://doi.org/10.1080/13557850701837286

Fortuna, L. R., Tobón, A. L., Anglero, Y. L., Postlethwaite, A., Porche, M. V., & Rothe, E. M. (2022). Focusing on Racial, Historical and Intergenerational Trauma, and Resilience: A Paradigm to

Better Serving Children and Families. *Child and Adolescent Psychiatric Clinics*, *31*(2), 237–250. https://doi.org/10.1016/j.chc.2021.11.004

Galvan, T., Rusch, D., Domenech Rodríguez, M. M., & Garcini, L. M. (2022). Familias Divididas [divided families]: Transnational family separation and undocumented Latinx immigrant health. *Journal of Family Psychology*, *36*, 513–522. https://doi.org/10.1037/fam0000975

Garcia, C., Garcia, M. A., & Ailshire, J. A. (2018). Sociocultural variability in the Latino population: Age patterns and differences in morbidity among older US adults. *Demographic Research*, *38*, 1605–1618. https://doi.org/10.4054/DemRes.2018.38.52

Garcia, M. A., Garcia, C., Chiu, C.-T., Raji, M., & Markides, K. S. (2018). A Comprehensive Analysis of Morbidity Life Expectancies Among Older Hispanic Subgroups in the United States: Variation by Nativity and Country of Origin. *Innovation in Aging*, *2*(2), igy014. https://doi.org/10.1093/geroni/igy014

Garcini, L. M., Domenech Rodríguez, M. M., Mercado, A., & Paris, M. (2020). A tale of two crises: The compounded effect of COVID-19 and anti-immigration policy in the United States. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*, S230–S232. https://doi.org/10.1037/tra0000775

Garcini, L. M., Murray, K. E., Zhou, A., Klonoff, E. A., Myers, M. G., & Elder, J. P. (2016). Mental Health of Undocumented Immigrant Adults in the United States: A Systematic Review of Methodology and Findings. *Journal of Immigrant & Refugee Studies*, *14*(1), 1–25. https://doi.org/10.1080/15562948.2014.998849

Garcini, L. M., Peña, J. M., Gutierrez, A. P., Fagundes, C. P., Lemus, H., Lindsay, S., & Klonoff, E. A. (2017). “One Scar Too Many:” The Associations Between Traumatic Events and Psychological

Distress Among Undocumented Mexican Immigrants. *Journal of Traumatic Stress*, *30*(5), 453–462. https://doi.org/10.1002/jts.22216

González, H. M., Tarraf, W., Gouskova, N., Rodríguez, C. J., Rundek, T., Grober, E., Pirzada, A., González, P., Lutsey, P. L., Camacho, A., Daviglus, M. L., Wright, C., & Mosley, T. H. (2016). Life's Simple 7's Cardiovascular Health Metrics are Associated with Hispanic/Latino Neurocognitive Function: HCHS/SOL Results. *Journal of Alzheimer's Disease*, *53*(3), 955–965. https://doi.org/10.3233/JAD-151125

Hatzenbuehler, M. L., Prins, S., Flake, M., Philbin, M., Frazer, S., Hagen, D., & Hirsch, J. (2017). Immigration Policies and Mental Health Morbidity among Latinos: A State-Level Analysis. *Social Science & Medicine (1982)*, *174*, 169–178. https://doi.org/10.1016/j.socscimed.2016.11.040

Hernandez, R., Carnethon, M., Penedo, F. J., Martinez, L., Boehm, J., & Schueller, S. M. (2016). Exploring well-being among US Hispanics/Latinos in a church-based institution: A qualitative study. *The Journal of Positive Psychology*, *11*(5), 511–521. https://doi.org/10.1080/17439760.2015.1117132

Hess, J. M., Vasquez Guzman, C. E., Hernandez-Vallant, A., Handal, A. J., Huyser, K., Galvis, M., Medina, D., Casas, N., Chavez, M. J., Carreon Fuentes, A., & Goodkind, J. R. (2022). Innovative participatory bilingual data analysis with Latinx/@ immigrants: Language, power, and transformation. *Cultural Diversity and Ethnic Minority Psychology*, *28*, 389–401. https://doi.org/10.1037/cdp0000481

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, *44*, 513–524. https://doi.org/10.1037/0003-066X.44.3.513

Hobfoll, S. E. (2001). The Influence of Culture, Community, and the Nested-Self in the Stress Process: Advancing Conservation of Resources Theory. *Applied Psychology*, *50*(3), 337–421. https://doi.org/10.1111/1464-0597.00062

Hobfoll, S. E., Gaffey, A. E., & Wagner, L. M. (2020). PTSD and the influence of context: The self as a social mirror. *Journal of Personality*, *88*(1), 76–87. https://doi.org/10.1111/jopy.12439

Holman, E. A., Silver, R. C., & Waitzkin, H. (2000). Traumatic life events in primary care patients: A study in an ethnically diverse sample. *Archives of Family Medicine*, *9*(9), 802–810. https://doi.org/10.1001/archfami.9.9.802

Hovey, J. D. (2000). Acculturative Stress, Depression, and Suicidal Ideation Among Central American Immigrants. *Suicide and Life-Threatening Behavior*, *30*(2), 125–139. https://doi.org/10.1111/j.1943-278X.2000.tb01071.x

Hovey, J. D., & Magaña, C. (2000). Acculturative Stress, Anxiety, and Depression among Mexican Immigrant Farmworkers in the Midwest United States. *Journal of Immigrant Health*, *2*(3), 119–131. https://doi.org/10.1023/A:1009556802759

Infante, C., Idrovo, A. J., Sánchez-Domínguez, M. S., Vinhas, S., & González-Vázquez, T. (2012). Violence Committed Against Migrants in Transit: Experiences on the Northern Mexican Border. *Journal of Immigrant and Minority Health*, *14*(3), 449–459. https://doi.org/10.1007/s10903-011-9489-y

Jimenez, D. E., Alegría, M., Chen, C., Chan, D., & Laderman, M. (2010). Prevalence of Psychiatric Illnesses in Older Ethnic Minority Adults. *Journal of the American Geriatrics Society*, *58*(2), 256–264. https://doi.org/10.1111/j.1532-5415.2009.02685.x

Jimenez, D. E., Cook, B., Bartels, S. J., & Alegría, M. (2013). Disparities in Mental Health Service Use of Racial and Ethnic Minority Elderly Adults. *Journal of the American Geriatrics Society*, *61*(1), 18–25. https://doi.org/10.1111/jgs.12063

Jimenez, D. E., Schmidt, A. C., Kim, G., & Cook, B. L. (2017). Impact of comorbid mental health needs on racial/ethnic disparities in general medical care utilization among older adults. *International Journal of Geriatric Psychiatry*, *32*(8), 909–921. https://doi.org/10.1002/gps.4546

Kaltman, S., Green, B. L., Mete, M., Shara, N., & Miranda, J. (2010). Trauma, depression, and comorbid PTSD/depression in a community sample of Latina immigrants. *Psychological Trauma: Theory, Research, Practice, and Policy*, *2*, 31–39. https://doi.org/10.1037/a0018952

Kaltman, S., Hurtado de Mendoza, A., Gonzales, F. A., Serrano, A., & Guarnaccia, P. J. (2011). Contextualizing the trauma experience of women immigrants from Central America, South America, and Mexico. *Journal of Traumatic Stress*, *24*(6), 635–642. https://doi.org/10.1002/jts.20698

Keller, A., Joscelyne, A., Granski, M., & Rosenfeld, B. (2017). Pre-Migration Trauma Exposure and Mental Health Functioning among Central American Migrants Arriving at the US Border. *PLOS ONE*, *12*(1), e0168692. https://doi.org/10.1371/journal.pone.0168692

Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G., Degenhardt, L., de Girolamo, G., Dinolova, R. V., Ferry, F., Florescu, S., Gureje, O., Haro, J. M., Huang, Y., Karam, E. G., Kawakami, N., Lee, S., Lepine, J.-P., Levinson, D., … Koenen, K. C. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotraumatology*, *8*(sup5), 1353383. https://doi.org/10.1080/20008198.2017.1353383

Kessler, R. C., & Üstün, T. B. (2004). The World Mental Health (WMH) Survey Initiative version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI).

International Journal of Methods in Psychiatric Research, *13*(2), 93–121. https://doi.org/10.1002/mpr.168

Kim, B. S. K., Soliz, A., Orellana, B., & Alamilla, S. G. (2009). Latino/a Values Scale: Development, Reliability, and Validity. *Measurement and Evaluation in Counseling and Development*, *42*(2), 71–91. https://doi.org/10.1177/0748175609336861

Knight, G. P., Gonzales, N. A., Saenz, D. S., Bonds, D. D., Germán, M., Deardorff, J., Roosav, M. W., & Updegraff, K. A. (2010). The Mexican American Cultural Values Scale for Adolescents and Adults. *The Journal of Early Adolescence*, *30*(3), 444–481. https://doi.org/10.1177/0272431609338178

Krieger, N. (2020). Measures of Racism, Sexism, Heterosexism, and Gender Binarism for Health Equity Research: From Structural Injustice to Embodied Harm-An Ecosocial Analysis. *Annual Review of Public Health*, *41*, 37–62. https://doi.org/10.1146/annurev-publhealth-040119-094017

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Lantz, P. M., House, J. S., Mero, R. P., & Williams, D. R. (2005). Stress, Life Events, and Socioeconomic Disparities in Health: Results from the Americans' Changing Lives Study. *Journal of Health and Social Behavior*, *46*(3), 274–288. https://doi.org/10.1177/002214650504600305

Lusk, M., Callister, J. M., & Villalobos, G. (2013). Mental Health Among Mexican Refugees Fleeing Violence and Trauma. *Departmental Papers (SW)*. https://scholarworks.utep.edu/social_papers/5

Lusk, M. W., Chavez-Baray, S., Lusk, M. W., & Chavez-Baray, S. (2017). Mental health and the role of culture and resilience in refugees fleeing violence. *Environment and Social Psychology*, *2*(1). https://doi.org/10.18063/esp.v2.i1.96

Markides, K. S., & Coreil, J. (1986). The health of Hispanics in the southwestern United States: An epidemiologic paradox. *Public Health Reports*, *101*(3), 253–265.

Markides, K. S., & Rote, S. (2015). Immigrant Health Paradox. In *Emerging Trends in the Social and Behavioral Sciences* (pp. 1–15). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781118900772.etrds0174

Marmot, M. (2005). Social determinants of health inequalities. *The Lancet*, *365*(9464), 1099–1104. https://doi.org/10.1016/S0140-6736(05)71146-6

Marmot, M. (2007). Achieving health equity: From root causes to fair outcomes. *The Lancet*, *370*(9593), 1153–1163. https://doi.org/10.1016/S0140-6736(07)61385-3

Masten, A. S., & Obradović, J. (2006). Competence and Resilience in Development. *Annals of the New York Academy of Sciences*, *1094*(1), 13–27. https://doi.org/10.1196/annals.1376.003

Michultka, D., Blanchard, E. B., & Kalous, T. (1998). Responses to civilian war experiences: Predictors of psychological functioning and coping. *Journal of Traumatic Stress*, *11*(3), 571–577. https://doi.org/10.1023/A:1024412931068

Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. SAGE.

Milne, J., & Oberle, K. (2005). Enhancing Rigor in Qualitative Description. *Journal of Wound Ostomy & Continence Nursing*, *32*(6), 413–420.

Mollica, R. F. (2004). *Measuring trauma, measuring torture: Instructions and guidance on the utilization of the Harvard Program in Refugee Trauma's versions of The Hopkins Symptom Checklist-25 (HSCL-25) & the Harvard Trauma Questionnaire (HTQ)*. Harvard Program in Refugee Trauma.

National Center for Health Statistics. Health, United States, 2018. (2019).

National Center for Health Statistics. Mortality Tables. (2019). Retrieved from https://www.cdc.gov/nchs/nvss/mortality_tables.htm#lcod_hr

Neergaard, M. A., Olesen, F., Andersen, R. S., & Sondergaard, J. (2009). Qualitative description – the poor cousin of health research? *BMC Medical Research Methodology*, *9*(1), 52. https://doi.org/10.1186/1471-2288-9-52

Negy, C., Reig-Ferrer, A., Gaborit, M., & Ferguson, C. J. (2014). Psychological Homelessness and Enculturative Stress among US-Deported Salvadorans: A Preliminary Study with a Novel Approach. *Journal of Immigrant and Minority Health*, *16*(6), 1278–1283. https://doi.org/10.1007/s10903-014-0006-y

Nguyen, A. W. (2020). Religion and Mental Health in Racial and Ethnic Minority Populations: A Review of the Literature. *Innovation in Aging*, *4*(5), igaa035. https://doi.org/10.1093/geroni/igaa035

Noe-Bustamante, L., & Flores, A. (2019). Facts on Latinos in the U.S. *Pew Research Center's Hispanic Trends Project*. https://www.pewresearch.org/hispanic/fact-sheet/latinos-in-the-u-s-fact-sheet/

Ostir, G. V., Eschbach, K., Markides, K. S., & Goodwin, J. S. (2003). Neighbourhood composition and depressive symptoms among older Mexican Americans. *Journal of Epidemiology & Community Health*, *57*(12), 987–992. https://doi.org/10.1136/jech.57.12.987

Paat, Y.-F., & Green, R. (2017). Mental health of immigrants and refugees seeking legal services on the US-Mexico border. *Transcultural Psychiatry*, *54*(5–6), 783–805. https://doi.org/10.1177/1363461517746316

Pantin, H. M., Schwartz, S. J., Prado, G., Feaster, D. J., & Szapocznik, J. (2003). Posttraumatic Stress Disorder Symptoms in Hispanic Immigrants After the September 11th Attacks: Severity and

Relationship to Previous Traumatic Exposure. *Hispanic Journal of Behavioral Sciences*, *25*(1), 56–72. https://doi.org/10.1177/0739986303251695

Peña, J. M., Garcini, L. M., Gutierrez, A. P., Ulibarri, M. D., & Klonoff, E. A. (2017). Traumatic Events and Symptoms Among Mexican Deportees in a Border Community. *Journal of Immigrant & Refugee Studies*, *15*(1), 36–52. https://doi.org/10.1080/15562948.2016.1158341

Perczek, R., Carver, C. S., Price, A. A., & Pozo-Kaderman, C. (2000). Coping, Mood, and Aspects of Personality in Spanish Translation and Evidence of Convergence With English Versions. *Journal of Personality Assessment*, *74*(1), 63–87. https://doi.org/10.1207/S15327752JPA740105

Perreira, K. M., & Pedroza, J. M. (2019). POLICIES OF EXCLUSION: IMPLICATIONS FOR THE HEALTH OF IMMIGRANTS AND THEIR CHILDREN. *Annual Review of Public Health*, *40*, 147–166. https://doi.org/10.1146/annurev-publhealth-040218-044115

Philbin, M. M., Flake, M., Hatzenbuehler, M. L., & Hirsch, J. S. (2018). State-level immigration and immigrant-focused policies as drivers of Latino health disparities in the United States. *Social Science & Medicine*, *199*, 29–38. https://doi.org/10.1016/j.socscimed.2017.04.007

Pinedo, M., Burgos, J. L., & Ojeda, V. D. (2014). A critical review of social and structural conditions that influence HIV risk among Mexican deportees. *Microbes and Infection*, *16*(5), 379–390. https://doi.org/10.1016/j.micinf.2014.02.006

Pinedo, M., Burgos, J. L., Zúñiga, M. L., Perez, R., Macera, C. A., & Ojeda, V. D. (2018). Deportation and mental health among migrants who inject drugs along the US–Mexico border. *Global Public Health*, *13*(2), 211–226. https://doi.org/10.1080/17441692.2016.1170183

Power, T., Wilson, D., Best, O., Brockie, T., Bourque Bearskin, L., Millender, E., & Lowe, J. (2020). COVID-19 and Indigenous Peoples: An imperative for action. *Journal of Clinical Nursing*, *29*(15–16), 2737–2741. https://doi.org/10.1111/jocn.15320

Rodriguez-Diaz, C. E., Guilamo-Ramos, V., Mena, L., Hall, E., Honermann, B., Crowley, J. S., Baral, S., Prado, G. J., Marzan-Rodriguez, M., Beyrer, C., Sullivan, P. S., & Millett, G. A. (2020). Risk for COVID-19 infection and death among Latinos in the United States: Examining heterogeneity in transmission dynamics. *Annals of Epidemiology*, *52*, 46-53.e2. https://doi.org/10.1016/j.annepidem.2020.07.007

Sabina, C., Cuevas, C. A., & Schally, J. L. (2013). The effect of immigration and acculturation on victimization among a national sample of Latino women. *Cultural Diversity and Ethnic Minority Psychology*, *19*, 13–26. https://doi.org/10.1037/a0030500

Sabogal, F., Marín, G., Otero-Sabogal, R., Marín, B. V., & Perez-Stable, E. J. (1987). Hispanic Familism and Acculturation: What Changes and What Doesn't? *Hispanic Journal of Behavioral Sciences*, *9*(4), 397–412. https://doi.org/10.1177/07399863870094003

Sáenz, R., & Garcia, M. A. (2021). The Disproportionate Impact of COVID-19 on Older Latino Mortality: The Rapidly Diminishing Latino Paradox. *The Journals of Gerontology: Series B*, *76*(3), e81–e87. https://doi.org/10.1093/geronb/gbaa158

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health*, *23*(4), 334–340. https://doi.org/10.1002/1098-240X(200008)23:4<334::AID-NUR9>3.0.CO;2-G

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health*, *33*(1), 77–84. https://doi.org/10.1002/nur.20362

Sangalang, C. C., Becerra, D., Mitchell, F. M., Lechuga-Peña, S., Lopez, K., & Kim, I. (2019). Trauma, Post-Migration Stress, and Mental Health: A Comparative Analysis of Refugees and Immigrants in the United States. *Journal of Immigrant and Minority Health*, *21*(5), 909–919. https://doi.org/10.1007/s10903-018-0826-2

Secor, D., Altman, H., & Cullen, T. T. (2019). A Better Way: Community-Based Programming As An Alternative To Immigrant Incarceration. *National Immigrant Justice Center. Chicago, IL*. Retrieved from https://immigrantjustice.org/research-items/report-better-way-community-based-programming-alternative-immigrant-incarceration

Slack, J. (2019). *Deported to Death: How Drug Violence Is Changing Migration on the US–Mexico Border*. Univ of California Press.

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Steinhardt, M., & Dolbier, C. (2008). Evaluation of a Resilience Intervention to Enhance Coping Strategies and Protective Factors and Decrease Symptomatology. *Journal of American College Health*, *56*(4), 445–453. https://doi.org/10.3200/JACH.56.44.445-454

Strug, D. L., Mason, S. E., & Auerbach, C. (2009). How Older Hispanic Immigrants in New York City Cope With Current Traumatic Stressors: Practice Implications. *Journal of Gerontological Social Work*, *52*(5), 503–516. https://doi.org/10.1080/01634370902983195

Sumner, L. A., Wong, L., Schetter, C. D., Myers, H. F., & Rodriguez, M. (2012). Predictors of posttraumatic stress disorder symptoms among low-income Latinas during pregnancy and postpartum. *Psychological Trauma: Theory, Research, Practice, and Policy*, *4*, 196–203. https://doi.org/10.1037/a0023538

Thoits, P. A. (2010). Stress and Health: Major Findings and Policy Implications. *Journal of Health and Social Behavior*, *51*(1_suppl), S41–S53. https://doi.org/10.1177/0022146510383499

U.S. Department of Health and Human Services. Social Determinants of Health (2020). Retrieved from https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

Valdivieso-Mora, E., Peet, C. L., Garnier-Villarreal, M., Salazar-Villanea, M., & Johnson, D. K. (2016). A Systematic Review of the Relationship between Familism and Mental Health Outcomes in Latino Population. *Frontiers in Psychology*, *7*. https://www.frontiersin.org/articles/10.3389/fpsyg.2016.01632

Vargas, E. D. (2015). Immigration enforcement and mixed-status families: The effects of risk of deportation on Medicaid use. *Children and Youth Services Review*, *57*, 83–89. https://doi.org/10.1016/j.childyouth.2015.07.009

Vargas, E. D., & Sanchez, G. R. (2020). COVID-19 Is Having a Devastating Impact on the Economic Well-being of Latino Families. *Journal of Economics, Race, and Policy*, *3*(4), 262–269. https://doi.org/10.1007/s41996-020-00071-0

Vargas, E. D., Sanchez, G. R., & Juárez, M. D. (2017). The Impact of Punitive Immigrant Laws on the Health of Latina/o Populations. *Politics & Policy*, *45*(3), 312–337. https://doi.org/10.1111/polp.12203

Vasquez Guzman, C. E., Hess, J. M., Casas, N., Medina, D., Galvis, M., Torres, D. A., Handal, A. J., Carreon-Fuentes, A., Hernandez-Vallant, A., Chavez, M. J., Rodriguez, F., & Goodkind, J. R. (2020). Latinx/@ immigrant inclusion trajectories: Individual agency, structural constraints, and the role of community-based organizations in immigrant mobilities. *American Journal of Orthopsychiatry*, *90*, 772–786. https://doi.org/10.1037/ort0000507

Vega, W. A., Rodriguez, M. A., & Gruskin, E. (2009). Health Disparities in the Latino Population. *Epidemiologic Reviews*, *31*(1), 99–112. https://doi.org/10.1093/epirev/mxp008

Villatoro, A. P., Morales, E. S., & Mays, V. M. (2014). Family culture in mental health help-seeking and utilization in a nationally representative sample of Latinos in the United States: The NLAAS. *American Journal of Orthopsychiatry*, *84*, 353–363. https://doi.org/10.1037/h0099844

Vogt, W. A. (2013). Crossing Mexico: Structural violence and the commodification of undocumented Central American migrants. *American Ethnologist*, *40*(4), 764–780. https://doi.org/10.1111/amet.12053

von Werthern, M., Robjant, K., Chui, Z., Schon, R., Ottisova, L., Mason, C., & Katona, C. (2018). The impact of immigration detention on mental health: A systematic review. *BMC Psychiatry*, *18*(1), 382. https://doi.org/10.1186/s12888-018-1945-y

Waldman, K., Koyanagi, A., Wang, J. S.-H., Ko, J., DeVylder, J., & Oh, H. (2019). Acculturative stress, disability, and health treatment utilization among Asian and Latin American immigrants in the United States. *Social Psychiatry and Psychiatric Epidemiology*, *54*(10), 1275–1284. https://doi.org/10.1007/s00127-019-01691-0

Weathers, F., Blake, D., Schnurr, P., Kaloupek, D., Marx, B., & Keane, T. (2013). The life events checklist for DSM-5 (LEC-5). *Instrument available from the National Center for PTSD*.

Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). The PTSD Checklist for DSM-5 (PCL-5). Retrieved from https://www.ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp

Webb Hooper, M., Nápoles, A. M., & Pérez-Stable, E. J. (2020). COVID-19 and Racial/Ethnic Disparities. *JAMA*, *323*(24), 2466–2467. https://doi.org/10.1001/jama.2020.8598

Williams, D. R., Gonzalez, H. M., Williams, S., Mohammed, S. A., Moomal, H., & Stein, D. J. (2008). Perceived discrimination, race and health in South Africa. *Social Science & Medicine*, *67*(3), 441–452. https://doi.org/10.1016/j.socscimed.2008.03.021

Wong, T. (2019). Seeking Asylum: Part 2. *U.S. Immigration Policy Center (USIPC) at UC San Diego*. Retrieved from https://usipc.ucsd.edu/publications/usipc-seeking-asylum-part-2-final.pdf

Woo, B., Wang, K., & Falcón, L. M. (2020). Unfair treatment, coping strategies, and depression among Puerto Ricans in Boston. *Cultural Diversity and Ethnic Minority Psychology*, *26*, 229–238. https://doi.org/10.1037/cdp0000291

Zadnik, E., Sabina, C., & Cuevas, C. A. (2016). Violence Against Latinas: The Effects of Undocumented Status on Rates of Victimization and Help-Seeking. *Journal of Interpersonal Violence*, *31*(6), 1141–1153. https://doi.org/10.1177/0886260514564062

Zimmerman, C., Kiss, L., & Hossain, M. (2011). Migration and Health: A Framework for 21st Century Policy-Making. *PLOS Medicine*, *8*(5), e1001034. https://doi.org/10.1371/journal.pmed.1001034