

RACIAL STRATIFICATION IN HEALTH AMONG WHITE, BLACK AND OTHER
MEXICANS

A Dissertation

by

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Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

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August 2018

Major Subject: Sociology

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ABSTRACT

I analyzed eight health outcomes among NH Whites, NH Blacks, White Mexicans, Black Mexicans and Other Mexicans taking into consideration acculturation-related and sociodemographic covariates. I developed my hypotheses on the basis of research based on the Latino Paradox and on the literature dealing with racial health disparities using the Latin Americanization thesis as theoretical framework. In the empirical analyses, using Integrated Health Interview Survey Data and binary logistic regression, both White Mexicans and Other Mexicans were reported to have a health advantage consistent with the Latino Paradox but Black Mexicans were not shown to have this advantage. I argued that this instance of health stratification based on a pigmentocracy is consistent with Bonilla-Silva's theory. One of the main contributions of this research is the disaggregation of Mexicans into distinct racial categories in order to determine how race affects their health independently of ethnic status. Mexican ethnoracial groups are not homogeneous in terms of their health outcomes. I concluded from this empirical exercise that not all Mexicans are equally advantaged in terms of health as we have come to expect based on the Latino Paradox literature. Black Mexicans seem to be particularly disadvantaged compared to NH Whites and to a lesser extent vis-à-vis White Mexicans and NH Blacks. Thus, the micro and macro mechanisms of race (and racism) that produce health inequalities are apparently having an effect on this population.

ACKNOWLEDGEMENTS

I would like to thank my committee chair, Dr. Dudley L. Poston, and my committee members, Dr. Verna M. Keith, Dr. Mary Campbell, Dr. Maria Perez-Patron, and Dr. Mark Fossett, for their guidance and support throughout the course of this research. I also would like to acknowledge Dr. Jane Sell, Dr. Wendy Moore and Dr. Sara Grineski.

Thank you Dudley for your unwavering support and encouragement. Verna, thank you for helping me develop my critical skills, fine-tuning my research abilities and providing constant guidance. Mary, thank you for your detail-oriented feedback and encouragement. Jane, thank you for always being there for me, helping me navigate this program and the job market. Sara, thank you for being my academic mentor for almost ten years.

I also would like to thank my dear friends and colleagues Gabe Miller, Dr. Nicole Jones, Dr. Apryl Williams, Vanessa Gonlin, Dr. Ceylan Engin, Dr. Angelica Menchaca, Stephanie Ortiz and Dr. Betty Aldana Marquez. Thank you for being support and inspiration; I could not have done this without you. My gratitude also goes to the Hispanic/Latino Graduate Student Association for being a part of my graduate school family.

Finally, thank you Mario, Mom, Ivette, Andres, Rene, Tiare, Zoe and Brodie for the love and support throughout this journey and always.

CONTRIBUTORS AND FUNDING SOURCES

This work was supervised by a dissertation committee consisting of Dr. Dudley L. Poston, Dr. Verna M. Keith, Dr. Mary Campbell and Dr. Mark Fossett from the Department of Sociology as well as Dr. Maria Perez-Patron from the Department of Epidemiology and Biostatistics. All work for the dissertation was completed independently by the student.

Graduate study was supported by a diversity fellowship from Texas A&M University Office of Graduate and Professional Studies. The research for this dissertation was partially funded by two Summertime for Advancement in Research awards from the College of Liberal Arts at Texas A&M University.

NOMENCLATURE

NH	Non-Hispanic
NHIS	National Health Interview Survey
IHIS	Integrated Health Interview Survey
INEGI	Instituto Nacional de Estadística y Geografía

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CHAPTER I

INTRODUCTION

The study of race based health inequalities in the United States has for the most part focused on the disparities between Whites and non-Whites (Centers for Disease Control and Prevention 2013; Heron et al. 2009; Williams and Collins 2001). Among Latinos/as, especially Mexican Americans, the health literature has emphasized the “Latino Epidemiological Paradox,” the counterintuitive finding that Latinos/as have better or comparable health and mortality outcomes relative to non-Hispanic Whites (hereafter, called NH Whites) despite their significant socioeconomic disadvantages (Acevedo-Garcia and Bates 2008; Franzini et al. 2001; Markides and Coreil 1986; Markides and Eschbach 2005). Latinos/as/as may be of any race yet their experiences, including their health outcomes, have almost always been analyzed assuming racial homogeneity.

The sociological literature argues that racial categorizations are arbitrary and based on ideology, power and stratification (Omi and Winant 1994). However, the racial categories do capture unmeasured biological factors associated with ancestry and geographic origins as well as environmental factors including the psychological, social, physical and chemical environments that individuals are exposed to throughout their life course and also across generations (Williams 2001). These unmeasured biological factors, determined in large part by the current system of racial stratification, have a strong effect on the health outcomes of populations. Therefore I ask in this dissertation whether racial categorizations within the Mexican American population generate disparities among this population. Is there a system of racial stratification in health among Mexicans in the United States? In order to address these questions, I will systematically examine the health outcomes of Mexicans who self-identify racially as White, Black or Other.

Before discussing my dissertation topic in greater detail, it is worthwhile to consider how this line of inquiry developed. In Latin America, the historical racial discourse has revolved around the idea of *mestizaje*, the notion that everyone is a *mestizo*. A *mestizo* is an individual of “mixed” heritage, the byproduct of white, indigenous and black ancestry (Knight 1990; Mallon 1992; Skidmore 1976; Whitten 2004). As I will discuss in detail in the literature review chapter of this dissertation, the *mestizo* ideology deliberately erased the question of race in Latin America by creating a metarace, the *mestizo* (Knight 1990; Telles 2004; Telles 2014; Wade 1993). In recent years, there has developed a renewed interest among scholars in exploring racial identity in Latin American countries (Sue 2013; Telles 2014; Telles and Paschel 2014).

In Mexico, the National Institute of Statistics and Geography (hereafter INEGI, by its Spanish acronym), the Mexican counterpart of the U.S. Census Bureau, counted the Afro descendant population for the very first time in its mid-census survey in 2015 (INEGI 2015). In the same year, the INEGI surveyed individuals in the Mexico City metropolitan area and asked them to self-identify themselves in an eleven-category skin tone gradient (INEGI 2017). The data from this project revealed a clear system of socioeconomic inequality in which Mexicans of darker skin tone tend to occupy the lower echelons of the occupational and economic distributions, while light-skinned Mexicans were shown for the most part to have higher levels of education, more prestigious occupations and therefore, higher incomes (INEGI 2017). This was the first time Mexico collected data on race-related issues and documented racial inequality empirically. This represents a significant shift in the race discourse that has prevailed in Mexico and follows empirical advances undertaken in Brazil (Barber et al. 2018; Telles 2002; Telles 2004; Telles 2014; Valente 2017), Colombia (Wade 1993; Williams Castro 2013), Peru (Golash-Boza 2011; Valdivia Vargas 2014), and in other Latin American countries who have begun to

recognize racial identity and race effects in various outcomes across the life course. It also represents a change in the study of Black Mexicans, an ethnoracial population, which has been studied mostly from an anthropological and historical perspective (Hoffman 2006; Hoffman and Rinaudo 2014; Phillips 2009).

Along the same lines, in the United States, Latinos/as have been treated as one large homogeneous population. Starting in the 1980s, many scholars have called attention to the flaws of employing such panethnic terms such as Hispanic or Latino. Instead, they have called for a greater recognition of the fact that Latinos/as from different countries of origin (and their descendants born in the United States) tend to display different patterns of socioeconomic stratification and integration to the United States (Gimenez 1989). Since socioeconomic status has been shown to be the strongest predictor of health outcomes (Adler 1994), scholars have also argued that lumping together groups with divergent socioeconomic statuses should be avoided when possible in epidemiological and health services research. They have suggested the use of place of birth, country of origin, length of residency in the United States and language proficiency as more relevant substitutes (Yankauer 1987). In subsequent years, health related research in the social sciences moved somewhat towards disaggregating the Latino subpopulations (Abraido-Lanza et al. 1999; Acevedo-Garcia et al. 2007; Hummer et al. 2000). Even though this is clearly an important step forward, the analysis of race dynamics within Latino subgroups are still frequently ignored, especially in health research, despite acknowledging the heterogeneous socioeconomic and health profiles of the Latino subpopulations (Borrell 2005). In recent years, scholars have started to grapple with the definition and meaning of race for specific Latino subgroups. For instance, Dowling (2014)

investigated how Mexican Americans identified racially and what motivates individuals to racially identify one way or another.

Since the disaggregation of Latino subgroups is relatively recent and since the study of race within these groups is in developing stages, few researchers have explored whether race and ethnicity have synchronous or independent effects on life outcomes. Health outcomes are not an exception; there is very limited research pieces that has explored the health outcomes of Afro Latinos/as (or Black Latinos/as; both terms are used interchangeably) (Bediako et al. 2015; Borrell and Dallo 2008; LaVeist-Ramos et al. 2011; Ramos et al., 2003). These pieces have aggregated all Afro Latino subgroups. Research on the health of Black Mexicans is scarce (Saucedo et al. 2008). One reason scholars have understudied health outcomes among Black Mexicans is that they are perceived to share similar health profiles as other Afro Latino groups (e.g. Puerto Ricans) (see Hummer et al. 2007; Turra and Goldman 2007). However, the literature on Latino health documents a clear difference in health outcomes among the different Latino subgroups (Lara et al. 2005). Therefore, there is no clear rationale for neglecting the study of health inequalities within Mexicans of distinct racial backgrounds.

Based on the above rationale, I plan to examine the health outcomes of Mexicans in the U.S., both native and foreign-born, who self-identify racially as White, Black or Other. In order to do so, I plan to bridge three bodies of literature dealing with: 1) race and health, 2) the epidemiological paradox and 3) the Latin Americanization Thesis (Bonilla Silva 2004a, 2004b). The literature on race and health highlights the race-related mechanisms that determine health outcomes (Williams et al. 1994; Williams and Sternthal 2010). The epidemiological paradox literature informs us about the past and present health patterns of the Mexican American population in the United States (Markides and Coreil 1986; Markides and Eschbach 2005).

Finally, the Latin Americanization thesis provides the foundation for building a case for a system of health stratification among Mexican Americans that undermines the myth of Mexican racial homogeneity advanced by the mestizaje ideology (Bonilla-Silva 2004a, 2004b). I will briefly outline these three bodies of literature before discussing my methodology and the overall contributions of this dissertation.

Race and Health

Racial disparities in health emerge via multiple mechanisms. The sociological literature has tended to emphasize the psychosocial stress model to explain health inequalities taking into account the racialized experience and the stressors associated with interpersonal and institutional racism (Dressler et al. 2005). There are three main approaches with the psychosocial stress model. The first approach draws a distinction between institutional and perceived racism. Institutional racism or structural racial inequality results in reduced access to resources that make it possible to achieve a good health status, such as limited employment and educational opportunities and residential segregation. Interpersonal racism treats experiences of discrimination as stressors with deleterious health outcomes (Dressler et al. 2005; Williams and Sternthal 2010). The second approach uses the stress model more broadly and labels stress as a negative affect that will produce poor health outcomes. The third approach applies the stress model to the everyday experiences of racial minorities (Dressler et al. 2005). The psychosocial stress model has been largely employed to explain why NH Blacks have the worst health and mortality profile of all the racial and ethnic groups in the United States. There is growing evidence that, similarly, Black Latinos/as are disadvantaged when compared to White Latinos/as and NH Whites in measures such as self-rated health (Borrell and Dallo 2008) and depressive

symptomatology (Ramos et al., 2003). Also the research literature has documented differences in fertility patterns among White and non-White Latinas (Ayala 2017). However, race and its deleterious impacts on health within the Latino community have for the most part been unacknowledged; the bulk of the literature has been devoted to the Latino epidemiological paradox.

Latino Epidemiological Paradox

Latinos/as in the United States have lower socioeconomic standing than non-Hispanic (NH) Whites. However, they have comparable or more favorable health outcomes, along with similar or lower mortality rates than NH Whites. These counterintuitive findings constitute the Latino Epidemiological Paradox (Franzini et al. 2001). Forty years of empirical research of the paradox suggests that the health profile of Latinos/as is similar to that of NH Whites despite the fact that Latinos/as are closer socioeconomically to NH Blacks (Hummer et al. 2007; Markides and Eschbach 2005). Latinos/as then, have health and mortality advantages despite their low levels of education, high levels of poverty and lack of access to health care (Douglas and Saenz 2008; Saenz 2010; Saenz and Morales 2012). Research findings dealing with this paradox are clearer with regard to the Mexican American population and less consistent with respect to Cubans and Puerto Ricans (Abraido-Lanza et al. 1999; Hummer et al. 2000; Sorlie et al. 1993). The question addressed in this research is whether the health advantage is applicable to Mexicans of all races.

There are three major hypotheses that aim to explain why Latinos/as, and especially, Mexican Americans, have lower mortality rates and better health outcomes than NH Whites. The three hypotheses are 1) migration selectivity (including the healthy immigrant effect and return

migration or salmon bias), 2) protective culture, and 3) statistical artifacts (Abraido-Lanza et al. 1999; Franzini et al. 2001; Markides and Eschbach 2005; Palloni and Arias 2004; Saenz and Morales 2012). These explanations partially explain some of the mortality and health advantages of Mexican-Americans but none explain them fully (Markides and Eschbach 2005). These hypotheses will be further outlined and developed in the next chapter of this dissertation.

There are two main drawbacks in this body of literature. One, a large portion of the empirical research aggregates all Latinos/as despite the clear evidence that Latino subgroups have different health profiles (Abraido-Lanza et al. 1999; Hummer et al. 2000; Sorlie et al. 1993). Second, it tends to focus on ethnicity and mostly assumes racial homogeneity. It does not consider how Latinos/as' experiences vary based on how they self-classify racially and the social processes at play in determining that racial identity (Roth 2016). Thus, it also neglects the fact that based on racial identification, Latinos/as, especially non-whites, are also subjected to the distinct mechanisms of race and racism that affect health outcomes among other minorities. In my dissertation, I aim to build on the Latino paradox scholarship and plan to examine how race plays a significant role in determining health outcomes among Mexicans.

The Latin Americanization Thesis

I will be relying heavily in my dissertation on the Latin Americanization Thesis set forth by Eduardo Bonilla Silva (2004a, 2004b). Briefly, this is a proposed racial stratification system in the United States that is based on the tri-racial strata in place in Latin America. According to Bonilla-Silva (2004a; 2004b), the racial stratum is loosely based on skin tone and income, where groups are distinguished by three categories, namely, 1) "Whites" consisting of traditional Whites (i.e. European groups arriving before the 20th century), contemporary White immigrants,

and assimilated (urban) Native Americans; 2) “Honorary Whites” consisting of Japanese Americans, Korean Americans, Asian Indians, light-skinned Latinos/as, and multiracials; and 3) “Collective Blacks” consisting of Blacks, dark-skinned Latinos/as, Reservation based-Native Americans, Southeast Asians and Filipinos.

Taking into consideration the Latino health advantage and the Latin Americanization Thesis, I plan to argue that Black Mexicans (and other Black ethnoracial groups) deserve their own categorization in Bonilla-Silva’s stratum separate from the Collective Black. I will propose a racial order in which I will categorize monoracial groups and ethnoracial groups under a four-stratum racial order, namely, 1) Whites as “Whites”, 2) White Mexicans as “Honorary Whites”, 3) Black Mexicans as “Ethnic Blacks”, and 4) NH Blacks as “Collective Blacks”. Black Mexicans will be set out as an intermediate category between Honorary Whites and Collective Blacks because I hypothesize that from a health perspective, Black Mexicans’ health outcomes should reflect some of the disadvantages of being Black and some of the advantages of being Latino (other Black immigrants share similar health advantages thus fitting in this category [Dolly et al. 2012; Hamilton and Hummer 2011]). Black Mexicans are also placed in that category because of their dual-minority multiracial identity—a self-identification that challenges the one-drop rule, which historically designated them as only Black (Khanna 2010; Romo 2011; Roth 2005; Waters 1990).

For the purposes of this dissertation, I consider whether the racial health disparities of Black Mexicans and Whites Mexicans are consistent with the modified version of the Latin Americanization Thesis. Building on previous literature, my results could yield additional insights about using theories of race to examine health disparities (Bratter and Gorman 2011; Brown 2016; Warner and Brown 2011). Moreover, the analysis undertaken in this dissertation

will be the first, as far as I know, to examine the extent to which Black Mexicans' health outcomes reflect a health advantage or are consistent with their lower socioeconomic position (e.g., individuals with higher SES have better health outcomes than those with lower SES).

Main Contributions and Methodology

In my dissertation I aim to contribute to the sociological literature in three major ways: 1) I will assess if there are race-based health disparities within the Mexican American population; 2) I will build on the epidemiological paradox literature by highlighting the role of race and its effects on the health outcomes of Mexican Americans in the United States; and 3) I will explore where Mexicans of different racial backgrounds fit in the current system of health stratification using the Latin Americanization Thesis (Bonilla-Silva 2004a, 2004b) as primary theoretical framework.

My dissertation research is especially relevant and important given that the Mexican origin group continues to grow from 13.5 million in 1990 to 31.8 million in 2010 (Ennis, Rios-Vargas, and Albert 2011; U.S. Census Bureau 1990). The increase in the size of this population means that more empirical attention should be placed in the role race mechanisms play in health disparities among Latinos/as. As previously mentioned, prior studies comparing the health outcomes among Black and White Latinos/as (as an aggregate group) have suggested that there are indeed health inequalities among these two groups. I hypothesize that a similar phenomenon occurs within the Mexican American population, the largest of the Latino subgroups. The following research questions will guide this dissertation:

- Is there a system of racial stratification in health among Mexicans in the United States?

- Where do White Mexicans, Black Mexicans and Other Mexicans fit in the health stratification system in the US? How do their health outcomes fare in comparison with NH Whites and NH Blacks?
- Does the Latino epidemiological paradox extend to all Mexican Americans?

In this dissertation I will examine various health outcomes among Mexican Americans who identify racially as White, Black or Other. I will compare their trends and patterns with those of monoracial groups. The data I will use will be drawn from the integrated version of the National Health Interview Survey (NHIS) as presented and developed generated by the Minnesota Population Center. The data I will use is a subsample comprised of White Mexicans, Black Mexicans and Other Mexicans. White Mexicans are individuals who ethnically self-identify as Hispanic or Latino of Mexican origin and also racially self-identify as White. Black Mexicans are individuals who ethnically self-identify as Hispanic or Latino of Mexican descent and racially self-identify as Black. Other Mexicans are respondents who self-identify as Hispanic or Latino of Mexican origin and racially identify as Other. The last category has been included because a growing number of Mexican Americans are choosing to racially identify with this label and outside of the White-Black binary. To illustrate, in the 2010 Census, 37% of Latinos/as identified as “some other race” (Gonzalez-Barrera and Lopez 2015).

Chapter Organization

I will briefly discussed how this work is organized. In the next chapter, I will discuss in more detail the bodies of literature that inform this research, namely, the role of race in determining health outcomes in the United States (Williams et al. 1994; Williams and Sternthal

2010), the Latino epidemiological paradox (Markides and Coreil 1986; Markides and Eschbach 2005) and the Latin Americanization Thesis (Bonilla Silva 2004a; 2004b). I will also provide an overview of the literature on race and racial discourse in Mexico and Latin America. In chapter 3 I will outline the methodology I will use in my research. Here I will explain in further detail the NHIS and its complex sample design, the sample and subsamples, the dependent and independent variables of interest, and the statistical tools I will use to carry out the analyses. Chapter 4 will be devoted to the presentation of the results of the statistical analyses of the various health outcomes. Finally, in chapter 5 I discuss my results vis-à-vis the research questions I have posed and the bodies of literature I have presented.

CHAPTER II

LITERATURE REVIEW

I mentioned in the introductory chapter that my dissertation will bridge three main bodies of literature: the Latino epidemiological paradox (Markides and Coreil 1986; Markides and Eschbach 2005), the role of race in determining health outcomes in the United States (Williams et al. 1994; Williams and Sternthal 2010), and the Latin Americanization Thesis (Bonilla Silva 2004a; 2004b). In this chapter, I will review these literatures in more detail while also discussing Mexican racial discourse.

I will begin this chapter by outlining the history, main empirical findings and explanations of the Latino Epidemiological Paradox. The Paradox has been the main framework used to investigate the health of Latinos/as and Mexican Americans in the U.S. (Markides and Coreil 1986; Markides and Eschbach 2005). Then, I will discuss race and the ways it produces poor health outcomes among certain populations (Williams et al. 1994; Williams and Sternthal 2010). In this section, I will highlight the reasons why race needs to be brought to the forefront of research on Latino/Mexican health. Before discussing the Latin Americanization Thesis as the main theoretical framework of this work (Bonilla Silva 2004a; 2004b), I will briefly discuss the history of Mexican racial discourse and how it has shaped how we study the Mexican experience in the U.S. This is relevant because this work represents a step forward in highlighting how race operates independently to ethnicity to produce poor health outcomes among ethnoracial groups.

The Epidemiological Paradox

Extensive social and epidemiological research has documented the existence of a social gradient in health outcomes since the twelfth century (Adler et al. 1994; Adler and Ostrove 1999;

Goldman et al. 2006). Health improves as socioeconomic status increases. Thus, the poorest individuals in society have always had the heaviest burden of death and disease (Kaplan et al. 1987). However, in the United States the Latino population is an exception to this pattern. Latinos/as are twice as likely to live below the poverty line and four times more likely to not have a high school education relative to NH Whites. Forty two percent of Latinos/as are uninsured compared to fifteen percent of NH Whites. Despite these socioeconomic barriers, Latinos/as have similar or better health and mortality outcomes than NH Whites (McCarthy 2015). This phenomenon is known as the Latino Epidemiological Paradox (also known as the Hispanic Health Paradox).

The first evidence of the Latino paradox was documented in 1974 when Teller and Clyburn found low infant mortality rates among children in Texas. Markides and Coreil in 1986 also found low infant mortality rates among Latino children in the U.S. Southwest. After forty years of empirical evidence of the paradox, we know that the Latino advantage extends beyond those initial findings of low infant mortality to adult mortality, and several health outcomes (Arias 2010; Arias et al. 2015; Borrell and Crawford 2009; Hummer et al. 2000; Markides and Eschbach 2005; Osypuk et al. 2010). Next, I will review the empirical research related to the Latino paradox regarding health and mortality.

The Latino advantage has been found with regard to multiple health outcomes that can be observed through the entire life course. Latino children, especially those whose parents are foreign born, have good birth outcomes despite a low socioeconomic status (Acevedo-Garcia et al. 2007). This is important because poor health at birth has a serious impact on adult health and affects cognitive development, educational attainment and labor market prospects (Johnson and Schoeni 2011). Mexican-American infants have similar low birthweight rates to NH White

infants (Fuentes-Afflick et al. 1999; Singh and Yu 1996). Furthermore, there are also difference within the Mexican origin population. When Mexican mothers are born in the US, their infants have a 16% higher risk of mortality and 38% higher risk of low birthweight (Singh and Yu 1996) which speaks to the greater advantage of foreign-born Mexican mothers. Mexican immigrant mothers also have a 24% lower risk of preterm birth (Cervantes et al. 1999). With regard to childhood health outcomes, children of Hispanic origin have lower asthma prevalence (9%) compared to their NH White counterparts (11%). Within Hispanic subgroups, Mexican origin children have a lower asthma prevalence (6.9%) when compared to non-Mexican children (11.4%). Moreover, foreign-born children have a lower prevalence of asthma diagnosis (5.8%) than U.S.-born children (10.2%) and children of foreign-born mothers had lower prevalence of diagnosed asthma (7.7%) than children born to US-born mothers (14.2%) (Camacho-Rivera et al. 2015).

In terms of objective measures of health among adults, Latinos/as and Mexican Americans (especially the foreign born) have been shown to have similar or lower biological risk profiles and allostatic load scores than NH Whites. Lower risk profiles and low allostatic load scores are important because they are based on biomarkers that measure the “accumulated consequences of repeated, frequent adaptation to stressors throughout the life course” (Peek et al. 2010) and if the risk profile and allostatic load scores are high, that tends to lead to the disruption in the normal functioning of our physiological systems. Crimmins et al. (2007) studied biological risk profiles (blood pressure, metabolic risk and inflammation risk factors) among Latinos/as, NH Whites and NH Blacks 40 years of age and older and found that once they accounted for the low socioeconomic status of the Latino population, there was no difference in biological risk profiles among Latinos/as and NH Whites. Foreign-born Mexicans had a similar biological risk

profile to NH Whites and a lower profile than U.S.-born Mexicans. In a similar study, foreign born Mexicans reported lower allostatic load scores (2.55) in the Texas City Stress and Health Study when compared to U.S.-born Mexicans (3.07), NH Whites (2.87) and NH Blacks (3.21), the last group having the highest scores (Peek et al. 2010). The foreign born also had the lowest scores on three dimensions of the score (cardiovascular, metabolic and inflammatory) besides the overall score when compared to all groups. All Mexicans, including native and foreign-born, had lower scores than NH Whites and NH Blacks in three of the four dimensions of the score (cardiovascular, inflammatory and stress hormone).

Congruent with a low risk profile, Forbang et al. (2014) provide evidence of lower prevalence of coronary artery disease, non-coronary atherosclerosis and peripheral arterial disease among Latinos/as despite having a high-risk cardiovascular disease profile which includes high rates of obesity and diabetes. Similarly, Gardin et al. (2010) suggest that Mexican Americans have lower risk of subclinical cardiovascular disease including a lower prevalence of coronary artery calcium and lower levels left ventricular mass when compared to NH Whites. Other studies have reached similar conclusions. Researchers at the Center for Disease Control used data from the American Community Survey (ACS), the National Vital Statistics System mortality data, the National Longitudinal Mortality Study, the National Health Interview Survey, and the National Health and Nutrition Examination Survey to analyze leading causes of death, disease prevalence, risk factors and use of health services among Latinos/as (Dominguez et al. 2015). They concluded that Latinos/as had a mortality rate 24% lower than NH Whites and lower death rates for most causes of death including cancer and heart disease. Latinos/as also reported a 49% lower prevalence of self-reported cancer, a 35% lower prevalence of self-reported heart disease, a 43% lower prevalence of smoking and similar prevalence of hypercholesterolemia and

hypertension as NH Whites. However, self-reported chronic disease is usually assessed by asking respondents if a health professional has told them they had a disease and 41.5% of Latinos/as lacked health insurance and 15.5% delayed care due to costs (Dominguez et al. 2015). Therefore their health advantage in self-reported medical conditions can be an issue of health care access. In other words, they have not been told they have a condition simply because they do not have the means to see a medical professional.

In regards to health behaviors and mental health, Latinos/as also have been shown to have better outcomes than NH Whites. Yang et al (2009) studied Latinos/as and NH Whites in Nevada and found that they are less likely to be currently smoking, less likely to have asthma, less likely to be disabled, less likely to be exposed to secondhand smoking, less likely to be engaged in intimate partner threat and violence and less likely to be depressed. Latinos/as were more likely to get the flu shot, more likely to get mammograms and Pap smear screenings and more likely to perceive alcohol and marijuana as a health risk. Finally, in terms of mental health Alegria et al. (2008) found that 29.7% of Latinos/as reported any lifetime psychiatric disorder compared to 43.2% of NH Whites. U.S.-born Latinos/as are also at higher risk of mental illness than their immigrant counterparts.

In terms of mortality, Cortes-Bergoderi et al. (2013) conducted a meta-analysis of publications examining the cardiovascular mortality advantage among Latinos/as and found that despite Latinos/as having higher prevalence of cardiovascular risk factors such as high rates of obesity and diabetes, they tend to have a consistent all-cause and cardiovascular mortality advantage when compared to NH Whites. The data in this meta-analysis represented over 22 million Latinos/as in data collected from 1950-2009. Medina-Inojosa et al. (2014) reported similar findings in their review of the paradox in cardiovascular disease and total mortality. Ruiz

et al. (2013) also conducted a longitudinal meta-analysis of fifty eight studies in Latino mortality and found a weighted average effect size of 0.825 OR, or a 17.5% mortality advantage. Arias (2010) found higher survival rates among Latinos/as when compared to NH Whites and NH Blacks. She found that 47.2% of Latinos/as survived to age 85 compared to 38.3% and 27.8% for NH Whites and Blacks, respectively. Iribarren et al. (2009) studied a cohort of 177,750 individuals who attended medical checkups in Oakland and San Francisco between 1964 and 1973. The data were linked to the California Automated Mortality Linkage System; they showed that Latinos/as (53% of them U.S.-Born) experienced lower risks of all-cause mortality, as well as a decreased risk in death by circulatory causes and by malignant neoplasms (cancer). Their findings varied by birthplace, and, interestingly, it was more evident among U.S.-Born Latinos/as. Borrell and Crawford (2009) also investigated all-cause mortality using the National Health Interview Survey linked to the National Death Index and found that Latinos/as had higher death rates in ages 25-44, similar rates in ages 45-64, and lower rates at age 65 and older, than NH Whites. A very interesting finding in this study was that Latinos/as, who racially identify as White, have higher death rates than NH Whites. Using the same data, Lariscy et al. (2015) found that foreign-born Latina women have a mortality advantage of 25 to 33% over NH White women in every five year age group. Foreign-born Latino men have a mortality advantage of 20 to 40% compared to NH White males in every five year age group as well. In their study, mortality did not differ between U.S.-born Latina women and NH White women but it did differ 13 to 25% among U.S.-born Latino males and NH White males. U.S.-born Latino males had lower mortality in ages 75-84 but there were not statistically significant differences in other age groups. Hummer et al. (2000) found lower mortality risks among Latino subgroups (Mexican Americans, Central/South Americans and Other Hispanics) compared to NH Whites. Even though the

paradox applied to several Latino subgroups, the paradox was most striking among Mexican Americans due to a combination of low mortality and high SES disadvantage. Angel et al. (2010) also found a mortality advantage among foreign-born Mexicans who migrated to the United States late in life, even without significant differences in morbidity (chronic illness). The mortality advantage of Latinos/as and particularly of Mexican Americans, has been consistently reported in empirical studies. However, the intensity of the advantage varies by sociodemographic factors including age, gender, nativity, age of arrival to the US and racial identification.

Explanations of the Latino Paradox

As previously mentioned, there are three major hypotheses that have been advanced to explain why Latinos/as, and more specifically Mexican Americans, have similar or better health and lower mortality outcomes than NH Whites despite their socioeconomic challenges. The first hypothesis is migration selectivity which states that migrants are self-selective. They are self-selective in terms of age and health, they are young and in good health. Older individuals and those in poor health are unlikely to put themselves in a position of greater hardship, especially if the migration journey is long and/or dangerous as in the case of unauthorized migration. Therefore, migrants tend to be the healthiest individuals from the communities they leave and bring over the benefit of their exceptional health (Franzini et al. 2001; Markides and Eschbach 2005; Saenz and Morales 2012). Another element of this hypothesis is return migration or the so-called salmon bias. Researchers argue that ill immigrants in older ages return to their places of birth to live their last years and die at home and since they die abroad, they become statistically immortal in U.S. vital statistics (Palloni and Arias 2004). This is known as the salmon bias or

return migration hypothesis. However, Abraido-Lanza et al. (1999) tested this among Cubans, Puerto Ricans and U.S.-Born Latinos/as and found that some of these groups still had a mortality advantage which cannot be explained by return migration because Cubans cannot go back to Cuba due to sociopolitical issues, Puerto Ricans who die on the island still get counted in U.S. vital statistics and U.S.-Born Latinos/as are unlikely to go anywhere because the U.S. is their home country.

The second explanatory hypothesis is protective culture which states that there are certain values and habits in Latino culture that protect individuals from bad health outcomes and higher mortality risk. One of these is close family ties. Latinos/as tend to remain close with their family, both nuclear and extended, through their lifetime, and those extended social networks provide them with social support, especially in difficult times (Abraido-Lanza et al. 1999). Latinos/as are also deemed to have healthier lifestyles including a healthier diet in which they consume more legumes, grains and vegetables, and red meat consumption is low. Physical activity levels are also high among Latinos/as (mostly from physically engaging jobs) and they also report lower levels of smoking, drinking and drug use when compared to other racial and ethnic groups (Saenz and Morales 2012). For instance, Fenelon (2013) argues that some of the mortality advantage of Latinos/as could be traced back to their low levels of smoking which places them at lower risk for several types of cancer as well as cardiovascular disease.

The third hypothesis states that the paradox does not exist. It is known as the statistical artifact. Some researchers argue that the paradox does not exist and that the issue lies with problems in the computation of mortality rates due to age, race and ethnicity misreporting (Saenz and Morales 2012). However, Arias et al. (2010) found that the paradox cannot be explained by an incongruence between ethnic classification in vital registration and population data systems.

These researchers argue that there can be three types of errors in mortality data which comes from two sources, the U.S. Vital Statistics System and passive follow-up studies which match survey samples to death certificates. The three types of errors are ethnic misclassification, record linkage errors, and age misstatement. Arias and colleagues addressed the issue of ethnic misclassification and found that the classification ratio was 1.04 and 1.05 from 1979 to 1998 which means that surveys identified 4-5% more Hispanics than death certificates did. Moreover, the ethnic classification ratio for foreign-born Hispanics was 1.02 and for individuals who lived in areas of high ethnic (Hispanic) concentration, the classification ratio was also 1.02, which means that the concordance between surveys and death certificates was higher for the foreign-born and for those living in ethnically concentrated areas. Overall, ethnic classification in death certificates is good, and mortality estimates based on vital statistics are reliable (Arias et al. 2010).

In summary, the explanations explored by past empirical studies of the paradox, namely, migration selectivity, salmon bias, protective culture and statistical artifact might account for some of the mortality and health advantage of Latinos/as, but none of these explanations fully accounts for it (Markides and Eschbach 2005).

Paradoxes Within the Paradox

Within the Latino paradox, there are three other paradoxical elements. The first one is acculturation and its deleterious effects on Latino health and mortality, the second one is the high levels of morbidity and disability among Latinos/as, and the third and last one is the many benefits of Latino enclaves. The health and mortality advantage of Latinos/as tends to decrease with length of time in the U.S. and with increasing levels of acculturation (Saenz and Morales

2012). Abraido-Lanza et al. (2005) found that higher acculturation levels are associated with higher body mass index and higher levels of alcohol consumption and smoking. Similarly, Kaplan (2004) et al. found that as length of residency in the U.S. increases, so does the likelihood of being obese. Mental health also deteriorates as individuals spend more time in the U.S. and acculturate (Alderete et al. 2000). Researchers argue that with a greater amount of time spent in the U.S., immigrants lose the protective elements of their culture. In other words, their family ties loosen, they change their dietary behavior as well as alcohol and substance use patterns (Alba and Nee 2003; Abraido-Lanza et al. 2005). The second paradoxical element within the paradox is that Latinos/as have high rates of morbidity and disability despite their low mortality and high longevity rates (LaVeist 2005; Markides and Eschbach 2005) as I previously discussed. Latinos/as have high prevalence of obesity and diabetes (Markides and Eschbach 2005). Latinos/as have a 133% higher prevalence of diabetes and a 23% higher prevalence of obesity than NH Whites (Dominguez et al. 2015) which means that they experience chronic illness and disability for a longer part of their lives. Third, Latinos/as tend to live alongside co-ethnics in enclaves. These communities are characterized by high levels of poverty and limited opportunity. However, evidence shows that living alongside other Latinos/as, especially immigrants, results in better health outcomes due in part to increased social support (Eschbach et al. 2005; Eschbach et al. 2004; Patel et al. 2003). Thus, the Latino paradox results from a confluence of complex and competing dynamics.

The literature on the Latino epidemiological paradox is vast and as reviewed, it encompasses a multitude of outcomes, samples and methodologies that have arrived at pretty much the same conclusion, namely, that Latinos/as have a health profile equal to or better than NH Whites. However, two criticisms can be made of this body of work. First, most of the work

on the Latino paradox aggregates all Latinos/as, which is problematic due to the divergent health profiles within this population (Abraido-Lanza et al. 1999; Hummer et al. 2000; Sorlie et al. 1993). Secondly, most of these studies neglect the role of race in determining health outcomes (for exceptions see Borrell and Dallo 2008; Borrell and Crawford 2009; Camacho-Rivera et al. 2015; LaVeist-Ramos 2012; Markides et al. 2007). Race is a fundamental cause of health disparities, and it needs to figure more prominently in the study of Latino health (Williams and Collins 2001). Latinos/as are not a racially homogeneous population and thus not all are subjected to the same race-based mechanisms that determine health and longevity. In the next section of this chapter, I will outline why race is so relevant in dictating health outcomes and how and in what ways race operates to produce poor health.

Racial Inequalities in Health

I have noted previously that socioeconomic status is the strongest predictor of health outcomes (Adler et al. 1993; Adler and Ostrove 1999). Thus, it is considered a fundamental cause of health outcomes. Fundamental cause theory suggests that individuals with higher socioeconomic status are able to use resources such as money, power, knowledge, and other forms of capital in order to avoid health risks (Link and Phelan 1995). In the United States, race is also considered a component of fundamental cause because it shapes the socioeconomic circumstances of individuals through a variety of mechanisms (Williams and Collins 2001). For example, NH Blacks' socioeconomic disadvantage has contributed to their unfavorable health profile (Williams and Collins 1995). As discussed, Latinos/as, more specifically Mexican Americans, are somewhat of an exception to the social gradient of health due to favorable outcomes despite underprivileged social circumstances. However, little is known about how

race-specific mechanisms affect health outcomes among this population, especially among those Mexican Americans who do not identify as White.

The study of health disparities based on race/ethnicity in the United States dates back to W.E.B. DuBois' book *The Philadelphia Negro* published in 1899. DuBois argued that the poor health of Blacks was an indicator of racial inequality. He argued that their poor health was a function of the differences in living conditions and social advancements between racial groups. His view was in direct opposition of the biomedical paradigm that attributed racial differences in health to biological differences between individuals of different racial groups (Williams and Sternthal 2010). Scientific research has confirmed that genetic variation among humans does not aggregate into subgroups that match societal race categories. Thus race is more a social than a biological construct (Cooper et al. 2003; Williams and Sternthal 2010). It is largely documented in the sociological literature that racial categorizations are arbitrary and based on ideology, power and stratification (Omi and Winant 1994; Blauner 1972). Subsequently, racial health disparities tend to be the byproduct of stratification. However, racial categories do capture unmeasured biological factors associated with ancestry, geographic origins and environmental factors, including the psychological, social, physical and chemical environments that individuals are exposed to throughout their life course and also across generations (Williams et al. 2010).

The health disparities among Blacks that DuBois observed in the late 18th century remain to this day despite an overall improvements in health and mortality in the U.S. population. Blacks live fewer years than any other racial and ethnic group (Hayward and Huron 1999). They have a lower life expectancy at birth than NH Whites (73.1 years v. 78.3). Blacks also have higher age-specific mortality rates than the age-specific mortality rates for the general population at every age group until age 75 years. NH Blacks also exhibit a large number of excess deaths

which are the number of deaths observed that exceed the predicted number (Williams et al. 2010). Blacks are also more likely than Whites to experience diseases like hypertension, diabetes, and stroke as well as nonfatal diseases, impairments and almost all forms of disability (Hayward et al. 2000). Overall, NH Blacks experience early onset, greater severity of disease and poor survival (Williams et al. 2010).

The disadvantages of being Black might also extend to Black Latinos/as as documented in the developing literature on Black Latinos/as' health. Early studies of Black Latino health presented mixed evidence regarding differences between the health outcomes of Black Latinos/as and non-Black Latinos/as. Borrell (2009) did not find a significant difference in self-reported hypertension among White and Black Latinos/as using data from the National Health Interview Survey. However, she did find a higher prevalence of diabetes among Black Latinos/as relative to White Latinos/as (2007). In another study, Puerto Ricans with dark skin tones were more likely to have higher systolic blood pressure than their light-skinned counterparts (Costas 1981). LaVeist-Ramos et al. (2012) found that Black Latinos/as had a similar prevalence of diabetes, heart conditions, stroke, levels of physical activity and smoking status when compared to both White Latinos/as and NH Blacks. Black Latinos/as were similar to White Latinos/as in rates of hypertension, obesity, being overweight and current drinking status. Black Latinos/as had a much higher prevalence of asthma in relation to White Latinos/as. Black Latinos/as seem to resemble NH Blacks in terms of health services with similar rates of lack of insurance coverage and the likelihood of visiting a doctor in the last year. They were also less likely than White Latinos/as and NH Blacks to have a usual source of care (LaVeist-Ramos et al. 2011). LaVeist-Ramos' subsample of Black Latinos/as, however, consisted of mostly Puerto Ricans (32.3%) and Central Americans (19.9%), with Mexicans accounting for only 19.3% of this

subsample. Hispanic blacks also have a higher prevalence of poor or fair self-rated health when compared to White Latinos/as, NH Blacks and NH Whites (Borrell and Dallo 2008). Ramos et al. (2003) found higher levels of depressive symptomatology among Black Latina females compared to White Latinas, as well as to NH Blacks and NH Whites. Black Latina females have also displayed different patterns of fertility when compared to White Latinas (Ayala 2017). Similarly, Black Latino mothers gave birth to babies who weighed less and were younger than infants born to either non-Black Latina and NH White women. Low birthweight prevalence among Black Latino mothers was 2% higher than among non-Black mothers while preterm birth and smallness for gestational age was 1% higher (Bediako et al. 2015). As we can see, most studies of Latino health that account for race aggregate all Latino subgroups. As far as I am aware, the research I will undertake in this dissertation will be one of the first of its kind to analyze a Latino subgroup in the United States, Mexicans and Mexican Americans, along racial lines.

In Latin America, studies of the relationship between race and health are also scarce but the few available also document poorer health among those who identify as Black (or non-White) relative to the population that identifies as White. In Brazil, individuals who identified as Black or Brown were more likely to live in residentially segregated neighborhoods and were 26% more likely to have hypertension and 50% more likely to have diabetes than individuals living in more affluent areas after accounting for income and education (Barber et al. 2018). Non-whites (Moreno, Mulatto, Brown and Black) in Brazil also have a higher prevalence or odds of mental disorders compared to Whites. Disorders include depression, depression symptoms, pregnancy-related depression and anxiety (Smolen and Araujo 2017). In a study of ten rural Afro Mexican communities, Saucedo et al (2008) documented a 13.2% prevalence of diabetes and

32.7% of hypertension as well as significant nutritional deficiencies that put this population at the risk of excess weight and obesity. The literature documenting racial inequalities in health in Latin America is relatively new. However, racial inequality has been documented in other settings and for other various outcomes. It is worth mentioning that the majority of the race literature in Latin America focuses on Afro-Latin America, specifically, places such as Brazil or the Spanish-speaking Caribbean (Sue 2013). Some examples of racial inequality in Latin America include Gonzalez-Rivas' (2012) study on salary differentials among Black and non-Black Colombian females. Gradin's (2015) findings present evidence of occupational segregation among Afro Latinos/as in relation to Whites in several Latin American countries, being especially prominent in Ecuador and Brazil and less pronounced in Cuba, Puerto Rico and Costa Rica. Quintero Ramirez (2014) reported the experiences of everyday racism among Black college students in Cali, Colombia. Furthermore, individuals with darker skin tones have a schooling disadvantage in Bolivia, Brazil, Colombia, Dominican Republic, Ecuador, Guatemala, Mexico and Peru (Telles et al. 2015). In Mexico, darker skin tones are also associated with lower levels of education and lower occupational status (INEGI 2017). Skin tone is one of the main characteristics associated with race in Latin America (Gravlee 2005; Guimarães 2012; Sue 2013) and in the United States, it has been used in surveys about racial attitudes and racial discrimination (Gullickson 2005; Keith & Herring 1991; Massey & Sánchez, 2010). In summary, the literature on racial inequalities in Latin America is more developed in some countries than in others (i.e. Brazil) but the inclusion of ethnoracial questions, both self-identification and skin tone scales, in recent surveys and censuses will likely produce a larger body of research on the matter (Angosto Ferrández and Kandolfer 2012). Now that I have reviewed racial health

inequalities in the United States and in Latin America, I will proceed to survey the literature that aims to explain how race and racism operate to produce poor health outcomes.

How Does Race and Racism Produce Poor Health Outcomes?

There are five basic models in the racial disparities literature to explain racial disparities in health. I will discuss the models particularly relevant to my research, namely, the socioeconomic status model and the psychosocial stress model. The socioeconomic status model deals with the fact that racial disparities are confounded with socioeconomic status. Overall, controlling for SES fails to account for the entire magnitude of racial disparities (Dressler et al. 2005). Going back to DuBois' first observation of racial disparities in health, he noted the strong association of race and class. Currently, researchers are interested in examining the joint and independent effects of SES and race. Socioeconomic measures account for a substantial part of racial health disparities (Hayward et al. 2000; Williams and Collins 1995; Hummer 1996). However, race has independent effects on health outcomes. For example, Williams et al. (2010) present data on life expectancy at age 25 for Whites and Blacks by education. The difference in years of life expectancy increases with education and the largest difference is among college graduates, which supports the diminishing returns hypothesis that argues that minorities receive declining health returns with increasing SES. Farmer and Ferraro (2005) also found evidence of this hypothesis in their research showing that Black/White disparities in self-rated health were larger at higher levels of SES; education increases did not reap the same returns for Blacks as it did for Whites. Blacks also report poorer self-rated health compared to Whites at every income level, and higher infant mortality rates at every level of education. Actually, the White-Black gap in infant mortality widens with increased levels of education. African American women with

college degrees have higher infant mortality rates than White women with less than high school education (Din-Dzietham and Hertz-Picciotto 1998). Similarly, high SES Black women have similar or higher rates of low birth weight, hypertension and being overweight than the lowest SES white women (Pamuk et al. 1998). Furthermore, indicators of socioeconomic status are not equivalent across all racial/ethnic groups. Blacks have lower wealth and income than whites at any level of education. Blacks have higher levels of unemployment at all education levels. Wealth and debt also differ significantly across race among those with the same income levels. Therefore using a single measure of SES is unlikely to capture the actual effects of social class across racial groups (Adler and Rehkopf 2008). In summary, race and SES might be related, but they are two distinct forms of stratification that contribute to health disparities (Williams and Collins 1995; Adler and Rehkopf 2008). Both race and SES are fundamental causes which explain the persistence of health disparities based on both forms of stratification. Race and SES allow or prevent individuals from deploying resources such as knowledge, money, power, prestige and beneficial social relationships to avoid health risks and to take protective actions. Phelan and Link argue that racism impacts SES, and SES in turns impacts health, making racism a fundamental cause.

The psychosocial stress model takes into account the race experience and the stressors associated with interpersonal and institutional racism. There are three main approaches within the psychosocial stress model. The first approach draws a distinction between institutional and perceived racism. It is the approach used by social epidemiologists like Williams and Krieger. Institutional racism or structural racial inequality results in the limited access to resources that would make it possible to achieve a good health status such as limited employment and educational opportunities and residential segregation. Interpersonal racism treats experiences of

discrimination as stressors with deleterious health outcomes (Dressler et al. 2005; Williams and Sternthal 2010). The second approach uses the stress model more broadly and labels stress as a negative affect that will produce poor health outcomes. The third approach adapts the stress model to the everyday experiences of racial minorities. An example of this model is the John Henryism hypothesis which is named after a mythic black figure who in the face of many obstacles, refuses to be discouraged in its efforts. This hypothesis speaks to the fact that Black individuals are continuously and actively coping with life stressors with fewer resources (James 1994; Dressler et al. 2005). I will elaborate on the first approach of the psychosocial stress model, and more specifically, the items advanced by social epidemiology, institutional racism in the form of residential segregation and interpersonal racism or everyday discrimination. I am elaborating on these items due to their prominence in the racial disparities literature.

Residential segregation is a landmark of institutional racism. According to Massey and Denton, “residential segregation is the degree to which two or more groups live separately from one another...” (1988, p. 282) or in Williams and Collins’ terms, the physical separation of the races in a residential context (2001). This separation of races was motivated by racial prejudice and the desire to maintain social distance with people of color, most specifically NH Blacks. Residential segregation did not happen accidentally. It is the result of concerted efforts by the government and the real estate and banking industries. Residential segregation has remained at stable levels despite housing discrimination being illegal according to the Civil Rights Act of 1968 due to de facto procedures enacted by banks and the real estate industry (Williams and Collins 2001). It has been argued in the medical sociology literature that residential segregation is a fundamental cause of racial disparities in health, a structural manifestation of racism (Massey and Denton 1993; LaVeist 1989; Williams and Collins 2001). Segregation produces the

concentration of poverty, social disorder, and social isolation and creates a pathogenic environment through multiple pathways (Massey 2004; Schulz et al. 2002; Williams and Collins 2001). The first pathway is that it restricts the attainment of higher socioeconomic status due to limited access to quality education, poor preparation for higher education in conjunction with subpar employment opportunities. Second, concentrated poverty and social disorder make it difficult for residents to have a nutritious diet, exercise and avoid alcohol and tobacco. Krammer and Hogue's (2009) meta-analysis of segregation and health studies concluded that segregation does have a negative effect on health outcomes. Next, concentrated poverty exposes residents to high levels of financial-related stress as well as to other chronic and acute stressors. Segregation tends also to weaken communities and affect interpersonal relationships and trust among neighbors. Segregation also leads to an increased exposure to toxins and pollutants in the air and water sources as well as to poor dwellings due to the political and institutional lack of investment in segregated communities. Finally, segregation has a negative effect on the access to and the quality of health care affecting both morbidity and mortality (Williams and Sternthal 2010).

Individual experiences of discrimination have been documented to be stressors that have adverse effects on physical and mental health. A meta-analysis of racial discrimination effects on health suggests that discrimination is associated with several health indicators including violence, sexual functioning, sleep patterns, hemoglobin A1C, coronary artery calcification, increased levels of abdominal fat, as well as uterine fibroids and breast cancer. It also affects health care utilization, and therapeutic adherence, and it puts individuals at an adverse risk of using substances such as alcohol, tobacco or illegal drugs to cope with stress. The adverse effects of discrimination in health do not occur only in the U.S. Similar effects have been found in New

Zealand, Australia, and South Africa and among immigrant populations in Europe (Williams et al. 2010; Williams and Sternthal 2010).

As I have already discussed, race has significant effects on health outcomes via both micro and macro mechanisms. Why then have we not considered how race operates among Latinos/as and Mexican Americans? I argue that Latinos/as, and in this specific case Mexicans, have been considered a racially homogenous population due to the colorblindness of the mestizo ideology which originated in Mexico and somehow has influenced how we study the Latino experience in the United States. In the next section, I discuss the origins and repercussions of this ideology.

Racial Discourse in Mexico

A Brief Historical Overview of the Mexican indigenous and Black Populations

Before I delve into the issue of racial ideology in Mexico, it is important to provide a brief background of Mexico's history and the sociodemographic characteristics of the groups that constitute its "mixed" population. The origins of Mexico's indigenous (native) populations can be traced back to around 2000 B.C. Therefore, when Hernan Cortes arrived in Tenochtitlan, he found a well-developed civilization, The Aztec Empire. It comprised eighty thousand square miles and a population of 15 million people. Its capital, Tenochtitlan, had a population of 300,000. It is worth noting that the arrival of Cortes was the first time the natives had ever encountered White people, leading them to initially treating Cortes and his group as gods. The Aztecs had significant military power which allowed them to seize most of the contemporary Mexican territory. Despite their power, the conquest was achieved by the Spanish in 1521 by

forming powerful alliances with Aztec enemies as well as the weakening of the Aztecs due to disease and starvation (De Alva 2006).

In spite of the conquest and other subsequent armed conflicts, as well as the overall urbanization of Mexico, the indigenous population continues to be sizeable. In 2015, 21.5% of the Mexican population self-identified as indigenous, roughly 25.7 million Mexicans, while 6.5% of the Mexican populations speaks an indigenous language, approximately 7.4 million people. However, this population has significant socioeconomic deficiencies. Those who speak an indigenous language have on average 6.2 years of formal schooling compared to the national average of 9.1, and 23% do not read or write relative to the 5.5% national average. Fourteen percent of the indigenous peoples do not have flooring in their homes compared to 3.6% of the overall population, and only 38.4% has water pipes relative to the 74.1 national average. They also have reduced access to information and communication technologies in comparison to the rest of the population (INEGI 2015).

The first African slaves were brought to Mexico by Cortes and his companions. Shortly after the conquest, the Spanish began a more intense slave trade in Mexico as labor was highly needed during the colonization process. The Spanish crown issued tens of thousands of licenses to bring slaves to New Spain despite strict restrictions as they only allowed the export of documented Christians. Due to those requirements, the Spanish opted to export slaves illegally, mostly from Green Cape and Guinea (Aguirre Beltran 1944). It is estimated that 200,000 African slaves arrived in Mexico during this time period, although this is likely an undercount because of the illegal slave trade (Aguirre Beltran 1944). African individuals and their Mexican descendants were described in offensive terms in colonial writings and were expected to hide their black features (Aguirre Beltran 1946).

Racial mixing between the Spanish, indigenous and African populations began during the colonial period. In order to control racial mixing, there was a very strict caste system in an effort to maintain the status quo. The caste system was based on race, culture and socioeconomic status and placed a heavy emphasis on skin color. Thus, Spaniards were at the top, followed by mixed-race individuals, then the indigenous, and then Africans at the bottom (Morner 1967). The system was quite complex. For instance, people from African descent were classified as 1) *Negros atezados/retintos*, for individuals with very dark skin tone and 2) *Negros amembrillados*, their skin tone was slightly lighter with a yellow hue. The second category was further divided into two other categories, a) *Cafres de pasa*, who had abundant and very curly hair, and b) *Merinos*, their hair slightly less curly. In the caste system, *mestizo* (from Spaniard male and indigenous female) and *mulato* (from Spaniard female and African male) were the foundation for further classification (Aguirre Beltran 1946). By 1810, at the end of the colonial period and right before the independence war, there were in Mexico 1.1 million Spaniards, 3.7 million indigenous people and 1.3 million “mixed” individuals classified accordingly to the caste system which included those from African descent. After Mexico achieved its independence from Spain in 1821, slavery and the caste system were abolished (Ochoa 1997).

Once Mexico became independent, Black Mexicans were explicitly excluded from the project of the Mexican nation. The racially “mixed population” was slightly larger than the Spanish population and yet, they had no bearing in the construction of the new nation (Mora 1965). To justify their virtual disappearance, Black Mexicans were deemed to be an insignificant part of the population, mostly the descendants of former slaves combined with a few Cuban and American expatriates. Some argued that they were confined to a few small clusters in remote areas (Orvañanos 1889; Correa 1901). However, the neglect of the Afro descendant population

did not only occur in Mexico. It also occurred all throughout Latin America as new nations gained independence from the Spanish and Portuguese crowns. They all engaged in racial amnesia over their African roots (Vincent 1999). Mexico endured another armed conflict from 1910 to 1921, the Mexican Revolution. The revolution began in an effort to overthrow the dictatorship of Porfirio Diaz whose ambitious modernization plans led to increasing social inequality and social unrest.

The Mestizo Ideology

Sue (2013) argues that Mexican national ideology is based on three pillars, mestizaje, nonracism and nonblackness. The first pillar, the *mestizo* ideology, was born in the post-revolutionary period (1920s) and has persisted to today. This ideology was (is) state-sponsored and began due to the need to unify a country that in a century had dealt with two decade long wars, a French invasion, and a three-year French monarchy, as well as two wars with the United States, one in which Mexico lost a substantial part of its territory (Knight 1990; Sue 2013). During the revolution years, Mexican intellectuals began challenging Eurocentric views of white superiority while exalting the notion of a mixed heritage (Basave Benitez 1992; Knight 1990). The Mexican intellectual Jose Vasconcelos argued that the mestizo would achieve global dominance in his text *The Cosmic Race* (1997[1925]). Vasconcelos challenged prevailing scientific race notions at the time that deemed race mixing as inferior. Instead, he proposed, the mestizo represented a superior race both culturally and biologically (Vasconcelos 1997 [1925]; Stern 2003; Sue 2013). His main idea was to create an identity based on the homogenization of ethnicities and the extinction of what he deemed as lower types of humans based on the natural and voluntary mixing of the best traits of all races (Hernandez Cuevas 2004; Vasconcelos

1997[1925]). The cosmic race notion reduced all cultural differences to one main principle, *mestizaje*, a form of romanticized *indigenismo*, in order to ensure the creation of a popular state and secure national unity (Castro Gomez 1996). The ideology went far beyond the Mexican intellectual circle because Vasconcelos was the Minister of Education from 1921 to 1924. Thus, a new educational curriculum that fostered a strong Mexican national identity was deployed in every classroom (Benjamin 2000; Gutierrez 1999). An important component of the curriculum was imposing the Spanish language to all classroom instruction in order to “incorporate” the indigenous population. Vasconcelos’ program did not consider indigenous languages to be worthy of instruction, thus promoting their elimination (Monsiváis 2010).

Mestizaje provides the basis for the second pillar of Mexican national ideology, nonracism (Sue 2013). Since all Mexicans consider themselves of mixed race, they contest there is no place for racism. They especially draw a contrast with the United States where racism has had and continues to have deep societal implications (Knight 1990). As a result of the notion of nonracism, Mexican officials did not collect data on race between 1921 (Tilley 2005) and 2015, when they first collected data on Mexicans of African descent (INEGI 2015). The third pillar of Mexican national ideology is nonblackness, the neglect of the nation’s Black heritage (Sue 2013). From colonial times to independent Mexico, Blacks were relegated to the background of the historical narrative. In the construction of the mestizo national identity, they were “perceived to having been absorbed into the population through the process of race mixing” (Sue 2013:16). In his book, *The Black Population of Mexico*, Aguirre Beltran (1946) argued that the Afro Mexican heritage would bleach out and eventually disappear in the integration process. The racial discourse in Mexico did not make African Mexicans disappear, it just concealed Mexico’s racial heterogeneity (Hernandez Cuevas 2004).

In recent years, the Mexican racial discourse has slightly shifted and there is greater acknowledgement of the racial heterogeneity of the population. Along these lines, Mexico has begun collecting data on race. In the mid-census survey of 2015, it asked respondents if they self-identified as Afro Mexican. The question reads, “according to your culture, history and traditions, would you consider yourself Black, or Afro Mexican or Afro descendant?” (INEGI 2015). Almost 1.4 million Mexicans, roughly 1.2% of the population identified as Black. According to the survey’s data, Black Mexicans have a similar fertility rate as the national population and roughly equal access to health care services. However, they also have slightly lower average schooling. Moreover they have a higher rate of individuals who cannot read nor write (INEGI 2015). More recently, INEGI released data of the Module of Intergenerational Social Mobility which incorporated an 11-point skin tone scale, the same scale used on the Project of Race and Ethnicity in Latin America. Mexicans with lighter skin have higher educational attainment and occupational prestige than darker-skinned individuals (Instituto Nacional de Estadística y Geografía 2017). Skin color is, as previously discussed, one manifestation of race (Sue 2013). INEGI’s data informs us that since colonial times, Mexico has remained a pigmentocracy in which individuals of lighter skin color remain at the top of the social hierarchy and those of darker skin remain at the bottom (Katzew 2004; Flores and Telles 2012; Villarreal 2010). This is especially interesting for two reasons: the national ideology contradicts these findings (Sue 2013), and over 80% of the module respondents self-identified in the middle range categories of skin tone (INEGI 2017). This means that despite their lived experiences being affected by racial discrimination, most of them retain the notion that they are indeed perfectly mixed.

Why is the Mexican racial ideology relevant for my dissertation research? I argue that the study of the Latino and Mexican American experience in the United States has followed the same racially homogeneous pattern. The mestizo ideology has been used as the basis for similar racial projects in Latin America (Tilley 2005) and, I would argue, has similarly permeated how Mexican Americans and other Latinos/as are seen racially in the United States. Latino and Mexican immigrants have contributed to this ideology by bringing their own “identities and conceptualizations of race” (Sue 2013:187; 2011). The racial ideology brought over by immigrants does not easily change after moving to the United States, and moreover, it might be subject to intergenerational transmission (Roth 2012; Telles and Ortiz 2008). Immigrants then are able to alter the racial ideological landscape in the United States (Alba and Nee 2003; Bonilla-Silva 2004; Roth 2012), and in this case, they have been able to largely maintain their views as one large mixed group. However, as acknowledgement and understanding of racial heterogeneity and racial inequality in Mexico and Latin America continue to grow (Roth 2012; Sue 2013; Telles 2014; Villarreal 2010), it is important to study the U.S. Latino and Mexican American populations through an ethnoracial lens rather than just through an ethnicity perspective. This brings me back to one of the main objectives of my dissertation, which is to investigate how race affects health outcomes among the Mexican American population in the U.S.

The Latin Americanization Thesis

Tying the U.S. and Latin American race constructs together, sociologist Eduardo Bonilla Silva (Bonilla-Silva 2004b) has presented the Latin Americanization Thesis whereby the current binary racial structure in the U.S. will mimic the racial continuum in the Americas. The racial

continuum in Latin America is largely based on skin color, and is often referred to as a pigmentocracy. Bonilla-Silva argues that the racial hierarchy in the U.S. will move from the black-white binary to a tri-racial stratum where Whites are at the top, honorary Whites (e.g., lighter-skinned Latinos/as) are in the middle, and Collective Blacks (e.g., NH Blacks and darker-skinned Latinos/as) are at the bottom. In his theory, he argues that skin color will gain relevance in racial dynamics in the U.S. (2004), and his view has substantial support among race scholars (Alba 2009; Alba and Nee 2003; Daniel 2010; Herring 2002; Murguia and Telles 1996; Roth 2012; Sue 2013; Telles and Murguia 1990). Support for his thesis also stems from the fact that differential outcomes based on skin tone have been observed in other racial groups such as NH Blacks (Gullickson 2005; Herring 2002; Hill 2000; Hughes and Hertel 1990; Keith & Herring 1991). Along the same lines, I use this theory because it allows me to draw a distinction between White and Black Mexicans. In other words, if the U.S. is indeed moving towards a pigmentocracy, there should also be differences in the health outcomes among Mexicans who self-identify as White, Black or Other.

Bonilla-Silva's theory has received some criticisms. Sue (2009) argues that there is no consensus on the nature of racial dynamics in Latin America because, as previously mentioned, most of the scholarship on race in Latin America has been produced in Afro-Latin America in Brazil and in the Spanish-speaking Caribbean (Cuba, Dominican Republic and Puerto Rico), but race relations in mestizo Latin America have remained largely understudied (Sue 2009; 2013). Thus, producing a theory based on those dynamics seems premature (Sue 2013). Murguia and Saenz (2002) have also criticized Bonilla-Silva arguing that the U.S. is already a tri-racial system in which individuals are allowed to move from the bottom of the social and economic hierarchy to an intermediate category between White and Black, especially in the case of immigrants.

Finally, other scholars argue that non-Hispanic whites do not consider light-skinned Latinos/as as white based on other identifiers such as surname, language proficiency, and accents, thus seeming ill-fitted to label them as honorary Whites (Cobas et al. 2015; Feagin and Cobas 2015).

I have incorporated the literature on racial health disparities, the epidemiological paradox and the Latin Americanization thesis and offer a modified version of the Latin Americanization thesis (see figure 1). I categorize monoracial and ethnoracial groups in a four-stratum racial order: Whites (Whites), honorary Whites (White Mexicans), ethnic Blacks (Black Mexicans), and collective Blacks (Blacks). I add an intermediate category between honorary Whites and collective Blacks because I expect Black Mexicans to be able to reap some of the health advantages of the Latino epidemiological paradox, but not to the same extent as White Mexicans. I expect White Mexicans to benefit from their near-white status as posited in the Latin Americanization thesis.

In this chapter, I have reviewed the major bodies of literature relevant to the research I will undertake in this dissertation. In the next chapter, I will outline the methodology I will use in my research. I will discuss the data, and the outcome and independent variables, as well as the statistical tools I will employ in carrying out the analyses.

CHAPTER III

HYPOTHESES, METHODS AND DATA

In this chapter, I first review the basic hypotheses I will be testing in my dissertation. Then I discuss the data and the sample. I next focus on a specification of the independent variables and dependent variables. I end the chapter with a discussion of the statistical methods I will employ.

Hypotheses

In this dissertation, I investigate the synchronous effects of race and ethnicity on various health outcomes for Mexican respondents who identify racially as White, Black or Other. Bridging the literature on racial health disparities and the Latino epidemiological paradox and using the Latin Americanization thesis as theoretical framework, my major hypotheses are as follows:

H1: White Mexicans have better health outcomes than Non-Hispanic (NH) Whites.

H2: White Mexicans have better health outcomes than NH Blacks.

H3: Black Mexicans have poorer health outcomes than NH Whites.

H4: Black Mexicans have better health outcomes than NH Blacks.

H5: Black Mexicans have poorer health outcomes than White Mexicans.

H6: Other Mexicans have better health outcomes than NH Whites.

H7: Other Mexicans have better health outcomes than NH Blacks.

Data and Sample

I will use data from the 2000 to the 2016 waves of the National Health Interview Survey (NHIS). The main purpose of the NHIS is to collect data on a broad range of health topics in order to monitor the health trends of the U.S. population. It is a cross-sectional household interview survey administered by the National Center for Health Statistics (NCHS) which is part of the Centers for Control Disease and Prevention (CDC). The survey began in 1957 after the passing of the National Health Survey Act of 1956. The contents of the NHIS are updated every ten to fifteen years. A major revision was field tested in 1996 and implemented in 1997 (Center for Disease Control and Prevention 2017).

The sampling and interviewing for the NHIS are continuous throughout each year. It follows a multistage area probability design that allows for the selection of a representative sample of households and noninstitutionalized group quarters. The sampling plan undergoes revisions every ten years after the decennial census. The current sample design and the one before (from 2006-2015) are very similar, and both consist of a sample of clusters of addresses in a primary sampling unit (PSU). A PSU is either a county, a small group of contiguous counties, or a metropolitan statistical area (MSA). The current household sample design does not oversample any race or ethnic groups. But in the adult sample, Blacks, Latinos/as and Asian Americans over 65 years old have a higher probability of selection. The sample size each year is approximately 35,000 households and 87,500 individuals. The data are collected through interviews conducted by approximately 600 individuals employed and trained by the U.S. Census Bureau and also through computer assisted personal interviewing (Center for Disease Control and Prevention 2017). Waves from 2000 to 2016 are used in order to increase the size of

my subsample of Mexican Americans. The final sample is 1,002,351 adult respondents, and the subsample consists of 146,009 Mexican American adults.

The redesigns of the NHIS include changes in variable names and question wording. In order to provide consistency across years, I specifically use the Integrated Public Use Microdata Series (IPUMS) Health Surveys, formerly known as the Integrated Health Interview Survey (IHIS), a harmonized version of the NHIS prepared by the Minnesota Population Center (Blewett et al. 2016).

Variables of Interest

Outcome Variables

In my dissertation I have eight distinct dependent variables. The first one is asthma, coded 0 for no and 1 for yes. This variable identifies respondents who have been diagnosed with any type of asthma, including smoker's asthma, bronchial asthma, and allergic asthma. The original survey question reads, "Have you ever been told by a doctor or other health professional that you had asthma?"

The second outcome variable identified individuals who have been diagnosed with cancer by a health professional. For the survey purposes, cancer is defined as "diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissue and can spread through the bloodstream and lymphatic system to other parts of the body" (Blewett et al. 2016). Cancer is coded 0 for no and 1 for yes.

The third dependent variable is chronic illness. This is a composite measure that measures if respondents have been diagnosed with any chronic condition including angina, arthritis, asthma, cancer, coronary heart disease, congenital heart disease, diabetes, emphysema,

heart disease, hypertension, kidney disease, liver disease and/or has had a stroke. Respondents are coded as 1 (yes) if they have been diagnosed by a medical professional with any of the aforementioned conditions and 0 if not.

The next dependent variable is distress, also coded 0 for no and 1 for yes. This measure was constructed based on a series of six variables. These six variables ask individuals how often they have felt that everything is an effort, felt hopeless, nervous, restless, sad and/or worthless, during the past 30 days. The attributes for these six variables are none of the time (0), a little of the time (1), some of the time (2), most of the time (3) and all the time (4). These responses can be added as a scale to measure nonspecific psychological distress with scores ranging from 0 to 24. This scale was developed by Ronald C. Kessler and it is known as the Kessler 6 Scale (K6) (Kessler et al. 2002; 2003). According to Kessler, individuals with a score of 13 or greater are likely to be experiencing severe mental illness (Kessler et al. 2003). Therefore, I built the scale and then dichotomized it and coded respondents as 1 if their score was 13 and over. Those with a score of 12 and under received a 0. This variable was dichotomized to differentiate between respondents who are experiencing severe mental illness and those who show milder symptoms of psychological distress.

The next two outcome variables are heart disease and liver disease. They are coded 0 for no and 1 for yes. The heart disease variable identifies respondents who have been diagnosed as having a heart condition or disease such as heart failure, chronic heart condition, rheumatic heart disease, and atrial or mitral valve disease damage. Similarly, the liver disease variable identified respondents who have been diagnosed with any kind of liver disease.

The next dependent variable is self-rated health, a dichotomous variable recoded from its original categories (excellent, very good, good, fair and poor) into two categories, coded 0 for

excellent, very good and good health, and 1 for fair and poor health. This recoding procedure is based on previous studies of self-rated health (Acevedo-Garcia et al. 2010; Idler and Benyamini 1997; Subramanian et al. 2005). Some research argues that Latinos, especially the foreign-born, have higher rates of poor self-rated health due to translation issues in surveys and differences in cultural interpretations of illness (Bzostek et al. 2007; Franzini and Fernandez-Esquer 2004; Shetterly et al. 1996). However, recent research has found that language of interview does not affect the odds of reporting poor or fair health among Mexicans when compared to other Latino subgroups (Santos-Lozada and Martinez 2017).

Lastly, the outcome diabetes identified respondents who have been diagnosed with this illness. It is coded 0 for no and 1 for yes. This outcome has been included due to the high prevalence rates of diabetes in the Mexican American population.

Independent Variables

For the main independent variable of race/ethnicity, I classify individuals into mutually exclusive racial and ethnic groups where the non-Hispanic racial groups are Whites (N= 700,510) and NH Blacks (N= 155,832). Those who “ethnically” identify as Hispanic or Latino of Mexican origin are divided into three racial groups, White Mexicans (N= 137,688), Black Mexicans (N= 1,913), and Other Mexicans (N= 6,408). These five groups are entered into the regression models as dichotomous variables, leaving one of them out as a reference category. Sequential models will first be estimated using NH Whites as reference category. Then, full models with all predictors will be estimated using the other four groups as reference.

Control Variables

Furthermore, I control for nativity and length of residency and classify them in four categories, 1) US born, 2) foreign-born who have been in the US for less than five years, 3) foreign-born who have resided in the US for five to fourteen years and 4) foreign-born who have lived in the US for fifteen years or more. These are entered into the regression models as dichotomous variables using US born as the reference category. The next control variable is language of interview classified as 1) English (reference), 2) Spanish and 3) Bilingual in English and Spanish. Gender (or female) is coded 0 for males and 1 for females. Age is a continuous variable ranging from 18 to 85. Educational attainment is measured using four dummy variables: less than high school, high school, some college, and bachelor's degree and above (reference group). Employment is measured as 0 for unemployed and 1 for employed. Marital status is coded 0 for non-married and 1 for married. Family size is a continuous variable ranging from 1 to 25. I also include in the models a measure of health behavior, current smoking, coded 0 for no and 1 for yes. The last control variable is year of interview.

Statistical Analysis and Software

Owing to the dichotomous nature of each of the eight dependent variables, I will estimate binomial logistic regression models. This procedure predicts the log odds that respondents will be in one of the two categories of the dichotomous dependent variable (Treiman 2009:302). In logistic regression, the coefficients for the independent variables “are analogous to OLS regression coefficients, and the dependent variable is the natural log of the expected odds of being in category 1 of the dependent variable rather than in category 2, conditional on the values

of the independent variables” (Treiman 2009:303). Logistic regression is another case of the general linear model, and it uses maximum likelihood estimation with the main principle being to “maximize the likelihood of observing the sample data” (Treiman 2009:303).

I estimated a set of regression models for each of the eight outcome variables using non-Hispanic whites as reference category of the independent variable of race/ethnicity. I estimate successive models adding one predictor at a time (tables 2, 4, 6, 8, 10, 12 and 14). Then, I estimated full models, with all predictors, alternating the reference group (tables 3, 5, 7, 9, 11, 13 and 15). The results will be discussed in the next chapter.

In terms of software, I used StataIC 15 `logit` and `logistic` commands (StataCorp 2017). The `logistic` command generates outputs providing odds ratios rather than coefficients. The odds ratios or antilogs of the coefficients allow for a more intuitive interpretation. Using odds ratios, a one unit change in the independent variable results in an increase or decrease in the relative odds of the outcome, net of all other variables (Treiman 2009:311). Prior to estimating the models, I used the survey (`svy`) estimation procedures in Stata to account for the multistage probability design of the sample that was used to collect the NHIS data. Regular Stata procedures assume that survey data were collected through a random sampling procedure where every member of the population has an equal chance of being selected. However, in a multistage probability sample, the units and subunits are randomly sampled, hence the observations are clustered. Within-cluster variances tend to be smaller than the variances across the population because subunits tend to be fairly homogeneous in terms of social and demographic characteristics. Any estimations undertaken under the assumption that the data were collected through a random sample tend to produce smaller standard errors. Therefore, I accounted for variance within and between clusters using the survey estimation procedures in Stata (Treiman 2009:207). Then, I

used the post-estimation command `svylogitgof` developed by Archer et al. (2007) to assess model fit.

In this chapter, I outlined the hypotheses I will be testing in this dissertation. I also described the data, sample and statistical procedures I will be employing. In the next chapter, I will present the results of the empirical analyses mentioned above.

CHAPTER IV

RESULTS

I have estimated a series of regression models for each of the eight outcome variables. My major focus is the effect of my principal independent variable (race/ethnicity) on the outcome variables, and I first used non-Hispanic whites as the reference group. For these models, presented in the even numbered tables, I used binary logistic regression to estimate my models, adding one independent variable at a time. Then, I estimated the full models, with all predictors, alternating the reference group; these findings are presented in the odds numbered tables with the exception of Table 1. Table 1 presents the percentage distributions, means and standard deviations of the sample respondents by monoracial and ethnoracial groups across predictors.

All binary logistic regression models were assessed for goodness of fit and there was no evidence of lack of fit in any of the estimations. Before examining the results of the several binomial logistic regression models, I will discuss the percentage distributions of the variables of interest. I present these in Table 1 divided by monoracial and ethnoracial groups. The monoracial groups are Non-Hispanic (NH) Whites (N= 700,510), and Non-Hispanic (NH) NH Blacks (N= 155,832). The ethnoracial groups are White Mexicans (N= 137,688), Black Mexicans (N= 1,913), and Other Mexicans (N= 6,408).

NH Blacks have the highest proportion of individuals with asthma (13.01%), chronic illness (48.81%), diabetes (11.21%) and poor or fair self-rated health (18.08%). NH Whites have the highest proportion of respondents with cancer (9.84%) and heart disease (8.65%). Black Mexicans have the highest proportion of liver disease (2.09%) and Other Mexicans have the highest proportion of individuals with psychological distress (3.56%). The vast majority of NH Whites and Blacks were born in the U.S., 95.23% and 89.14% respectively. Among Mexicans,

Other Mexicans have the highest proportion of immigrants in the less than 5 and 5-14 years of residency in the U.S., 12.36% and 21.85%. White Mexicans have the highest proportion of long term immigrants with 31.08% of respondents in the 15 years and over category. A larger share of Black Mexicans answered the NHIS questionnaire in English, 70.26%, compared to 58.06 to 58.21% for White and Other Mexicans. A quarter of White and Other Mexicans answered the survey in Spanish. NH Blacks and Black Mexicans had the highest proportions of females with 55.24% and 52.84%, respectively. The youngest group is Black Mexicans with a mean age of 35.49 and the oldest is NH Whites with a mean age of 47.98. The Mexican groups' average age is in the mid to late thirties, while NH Whites and Blacks are in their mid to late 40s. Other Mexicans have the highest proportion of individuals with less than a high school education (50.82%), while NH Blacks have the highest proportions of individuals with completed high school and some college (30.93% and 32.64%). NH Whites have the largest percentage of respondents with a bachelor's degree and more (30.32%). Interestingly, among Mexicans, Black Mexicans have the largest percentage of respondents with some college (30.02%) while White Mexicans have the largest share of those with completed college degrees among the Mexican ethn racial groups (8.08%). Black and Other Mexicans have the largest shares of employed respondents, 68.83% and 71.01%. Only 42.29% of the NH Blacks are married compared to 62 to 71% in all the other groups. NH Whites have the smallest families of all groups with an average size of 2.61, while the average family size of the Mexican groups ranges from 3.68 to 4.09. All Mexican groups, but particularly White Mexicans (13.31%), smoke at a lower rate than NH Whites and Blacks.

Asthma

In Table 2, I present the sequential models for asthma. I have exponentiated the logit coefficients and present them in the tables as odds ratios. NH Whites are used as the reference category for the race/ethnicity comparisons. In the baseline model, for both NH Blacks and Black Mexicans the odds of having been diagnosed with asthma are 9% higher, compared to NH Whites (but only statistically significant for NH Blacks); they are 43% lower for White Mexicans and 65% lower for Other Mexicans, compared to NH Whites. In the final model, with all of the predictors, the odds of having asthma are 18% and 35% lower for White Mexicans and for Other Mexicans, respectively. On the other hand the odds of having asthma are 2% higher for NH Blacks and 23% higher for Black Mexicans, respectively, compared to NH Whites. Although these last two effects are not statistically significant, Black Mexicans do not show a health advantage compared to NH Whites with respect to asthma, as do their White Mexican and Other Mexican counterparts.

When White Mexicans are the reference group (see Table 3), other things being equal, the odds of being diagnosed with asthma is 51% higher for Black Mexicans. When the Other Mexicans group is used as the reference group, the odds of asthma are 89% higher for Black Mexicans; these last two effects are statistically significant ($p < 0.05$). Thus, for this particular outcome of asthma, Black Mexicans are significantly disadvantaged compared to White Mexicans and to Other Mexicans.

All foreign born respondents are less likely to have been diagnosed with asthma, compared to U.S. born respondents. The immigrant advantage is greater for those with less than 5 years of U.S. residency and for those who have lived in the U.S. for 5 to 14 years. For these two groups, the odds of being diagnosed with asthma are 66% and 63% lower, respectively,

other things being equal. For those with 15 and more years of residency in the U.S., the odds of having asthma are 43% lower; all of these effects are statistically significant ($p. <0.01$).

Along the same lines, for those who answered the survey in Spanish or in the bilingual version of English/Spanish, their odds of having been diagnosed with asthma are 48% and 40% lower than those who answered the questionnaire in English ($p. <0.01$), *ceteris paribus*. For females, the odds are 33% higher relative to males ($p. <0.01$). In terms of age, every one year increase in age decreases the odds of being diagnosed with asthma by 2% ($p. <0.01$).

Respondents with less than a high school education and those with some college have 9% and 7% higher odds of having been diagnosed with asthma, respectively, in relation to those with a bachelor's degree and more ($p. <0.01$). Those who smoke have 10% higher odds of having been diagnosed with asthma compared to those who do not smoke ($p. <0.01$). Employed and married respondents have respectively 27% and 10% lower odds of this outcome ($p. <0.01$) compared to the unemployed and unmarried. In summary, all the independent variables related to nativity and length of residency, language, schooling as well as other sociodemographic variables behaved in expected ways.

Cancer

The odds of being diagnosed with cancer for NH Blacks, White Mexicans and Other Mexicans are 51%, 48%, and 57% lower, respectively, when compared to NH Whites, other things being equal ($p. <0.01$) (Table 4-5). The odds for Black Mexicans are 28% lower but this effect is not statistically significant. Therefore, Black Mexicans do not appear to have a statistically significant advantage over NH Whites, as all the other groups do.

All foreign born groups and those who answered the survey in Spanish or answered the bilingual version have statistically significant lower odds of having been diagnosed with cancer relative to the U.S. born and to those who answered the survey in English. The odds of cancer are 15% higher for females relative to males, and they increase by 5% with every one year increase of age ($p. <0.01$). The odds of having been diagnosed with cancer are also 22% higher for those who are married compared to the unmarried and 16% higher for smokers in relation to non-smokers ($p. <0.01$). Every one person increase in family size decreases the odds of being diagnosed with cancer by 4% ($p. <0.01$). The odds of cancer are 27% lower for those who are employed compared to the unemployed ($p. <0.01$). One interesting finding in these models is that those with less than high school, high school or some college have odds of cancer that are 29%, 24% and 10% lower than those with a bachelor's degree or above ($p. <0.01$). From the health literature, we know that higher levels of education are predictive of better health outcomes than lower levels of education. For this particular outcome, those with less than a bachelor's degree seem to have a relative advantage over the more educated respondents. Here there could be an issue of under diagnosis because this advantage only shows in the analysis for having received a cancer diagnosis. Since the survey questions ask individuals if they have been diagnosed by a health professional, respondents with lower levels of education, who are more likely to be uninsured or underinsured, might not undergo regular cancer screenings thus reporting lower levels of cancer diagnosis than more educated respondents who are more likely to be insured.

Chronic Illness

In the baseline model for chronic illness (Table 6), all Mexican groups have a statistically significant advantage over NH Whites. Compared to NH Whites, White Mexicans, Black

Mexicans and Other Mexicans all have lower odds of being diagnosed with a chronic illness ($p. <0.01$). Other Mexicans have the largest advantage as their odds are 68% lower than those of NH Whites. Once all predictors have been entered in the model, White Mexicans and Other Mexicans retain a slight advantage over NH Whites; their respective odds of having been diagnosed with a chronic condition are 11% and 18% lower than the odds of the reference group ($p. <0.05$). In the full model, for Black Mexicans the odds of having been diagnosed with a chronic illness are 8% higher relative to NH Whites, albeit this is not statistically significant. Again, Black Mexicans do not share a health advantage with their Mexican counterparts who identify racially as White or Other. For NH Blacks the odds are 26% higher compared to NH Whites ($p. <0.01$).

When using NH Blacks as the reference group (Table 7), all groups except Black Mexicans have statistically significant lower odds of having been diagnosed with a chronic illness. Compared to White Mexicans and Other Mexicans, both NH Whites and Blacks have statistically significant higher odds of having received a chronic illness diagnosis but this disadvantage is greater relative to Other Mexicans. For Black Mexicans, when the reference groups are White Mexicans and Other Mexicans, their odds of having been diagnosed with a chronic illness are 20% and 31% higher, the latter being marginally significant ($p. <0.1$).

The odds of having been diagnosed with a chronic illness are lower for all foreign born individuals in the full model (Table 6) from 58% lower odds for the most recent immigrants to 33% lower odds for long term immigrants, relative to the U.S. born ($p. <0.01$). Similarly, those who answered the survey in the Spanish (.82) or bilingual (.79) versions are less likely to have been diagnosed with a chronic illness compared to those who answered in English ($p. <0.01$). For the employed and married, the odds of a chronic illness are 35% and 4% lower, respectively, in

relation to the unemployed and unmarried (p. <0.01). Every one person increase in family size reduces the odds of having been diagnosed with a chronic illness by 2% (p. <0.01), while every one year increase in age increases the odds of having a chronic illness by 5% (p. <0.01). The odds for this outcome are 7% higher for smokers, relative to non-smokers (p. <0.01). All groups with less than a bachelor's degree also have higher odds of being diagnosed with a chronic illness, compared to those with a bachelor's degree and more, all things equal, and all these effects are statistically significant.

Distress

The odds of meeting the criteria for extreme psychological distress are 12% and 14% lower for NH Blacks and White Mexicans compared to NH Whites, and both of these effects are statistically significant (see Table 8). The odds of distress for Black Mexicans are 16% lower and for Other Mexicans are 22% higher, compared to NH Whites; however these effects are not statistically significant. In reference to NH Blacks and White Mexicans, the odds of distress are 39% and 41% higher for Other Mexicans (p. <0.05) (see Table 9). Other Mexicans seem to be particularly disadvantaged.

The odds of distress are 42% lower for immigrants with less than five years of U.S. residency and 35% lower for those who have lived in the US for 5-14 years compared to the U.S. born (p. <0.01) (Table 8). The odds are 71% lower for the employed in relation to the unemployed, and 23% lower for the married compared to the unmarried, both effects statistically significant. The odds of being distressed are also reduced by 4% with every one person increase in family size and by 1% with every one year increase in age (p. <0.01). For bilingual interviewees (1.23), females (1.37), smokers (2.66), and those with less than a bachelor's degree

(3.29; 2.22; 1.92), the odds of distress are significantly higher ($p. <0.01$) in comparison to English interviewees, males, non-smokers and those with a bachelor's degree or more.

Heart Disease

All the race-ethnic groups have statistically significant lower odds of having been diagnosed with heart disease compared to NH Whites. Black Mexicans have the largest advantage; their odds are 61% lower in the full model, all things equal (see Table 10). When NH Blacks are the reference category (Table 11), the odds of having been diagnosed with heart disease are 22% lower for White Mexicans ($p. <0.01$), 39% lower for Other Mexicans ($p. <0.05$) and 49% lower for Black Mexicans; however, the advantage of Black Mexicans is not statistically significant.

In the full model (Table 10), all immigrants groups have lower odds of having been diagnosed with heart disease in relation to the U.S. born; the advantage is greater for the most recent immigrants ($p. <0.01$). Similarly, for those who answered the survey in Spanish, their odds of heart disease are 21% lower compared to those who answered in English ($p.<0.05$). Females (.95; $p. <0.05$), the employed (.60; $p. <0.01$) and the married (.96; $p. <0.05$) also have also lower odds of having been diagnosed with a heart condition compared to males, the unemployed and the unmarried. The odds of heart disease increase by 3% with every one year increase in age ($p. <0.01$). Compared to those with a bachelor's degree, the odds of heart disease are 13% higher for those with less than high school and 11% higher for those with some college ($p. <0.01$). The odds are 5% higher for smokers compared to non-smokers (all $p. <0.01$).

Liver Disease

Compared to NH Whites, in the full model, all the Mexican ethnoracial groups are significantly more likely to have been diagnosed with liver disease (Table 12). Black Mexicans' odds of having liver disease are 2.16 times as high as the odds for NH Whites. The odds of liver disease are also 41% higher for White Mexicans and 64% higher for other Mexicans, all things equal. Compared to NH Blacks (Table 13), the odds of having liver disease are 84% higher for White Mexicans, 183% higher for Black Mexicans and 115% higher for Other Mexicans ($p < 0.05$). Thus, Black Mexicans and Other Mexicans are considerably more disadvantaged than NH Blacks in respect to liver disease.

The odds of having been diagnosed with liver disease are 39% lower for the foreign born with less than five years of residing in the U.S. and 37% lower for those who are foreign born and have lived in the U.S. for 5 to 14 years ($p < 0.05$) relative to the U.S. born (Table 12). For those who are employed, the odds of liver disease are 55% lower compared to the unemployed ($p < 0.01$). The odds decrease by 6% with every one person increase in family size ($p < 0.05$). For respondents with less than a bachelor's degree, the odds are 21 to 38% higher compared to those with a bachelor's degree or higher. The odds of having been diagnosed with liver disease are also 78% higher for smokers in relation to non-smokers.

Self-Rated Health

The next dependent variable is self-rated health. Here I am estimating models predicting the probability of respondents rating their health as fair or poor. My analyses indicate that all groups have a statistically significant disadvantage, compared to NH Whites in the model with all predictors (Table 14). The odds of being in fair/poor health are 71% higher for NH Blacks,

29% higher for White Mexicans, 42% higher for Black Mexicans and 31% higher for Other Mexicans, all things equal ($p < 0.05$). When the reference group is NH Blacks (Table 15), the odds of White Mexicans and Other Mexicans of having rated their health as fair or poor are 25% and 24% lower ($p < 0.01$). The odds of poor/fair health are 17% lower for Black Mexicans compared to NH Blacks, but this effect is not statistically significant.

The odds of having rated their health as poor or fair are lower for all foreign born groups. Their odds are 64%, 47%, and 10% lower in relation to the U.S. born ($p < 0.05$). The immigrant advantage in self-rated health decreases as length of residency in the U.S. increases. The odds of poor/fair health are 6% lower for females, 71% lower for the employed and 10% lower for the married (.90) relative to males, the unemployed and the unmarried respectively ($p < 0.01$). The odds of having rated their health as fair or poor are 44% higher for those who answered the survey in Spanish compared to those who answered in English ($p < 0.01$) which might denote a translation issue with the question wording documented in previous research (Bzostek et al. 2007; Franzini and Fernandez-Esquer 2004; Shetterly et al. 1996). The odds are also higher for those with less than a high school education (4.11), those with completed high school (2.44) and those with some college (1.97) compared to those with a bachelor's degree or higher ($p < 0.01$). Smokers have odds that are 86% higher compared to non-smokers ($p < 0.01$). The odds increase by 2% with each one year increase in age ($p < 0.01$).

Diabetes

Diabetes is the final dependent variable investigated. All groups are disadvantaged in relation to NH Whites for this outcome (Table 16). In the full model, the odds of being diabetic are 92% higher for NH Blacks, 78% higher for White Mexicans, and 82% higher for Other

Mexicans (p. <0.01). The odds for Black Mexicans are 39% higher but this is marginally to non-significant (p. <0.1). All foreign born groups have lower odds of being diagnosed with diabetes in relation to the U.S. born. However, those who have lived in the United States for 15 years or more have a smaller advantage compared to more recent immigrants. The odds of being diabetic are 21% lower for females, 35% lower for the employed and 5% lower for those who smoke (p. <0.05) compared to their respective reference categories. The odds of diabetes increase by 4% with every one year increase in age (p. <0.01). Those with less than a college degree are disadvantaged in relation to those with a college degree. For instance, the odds are 89% higher for those with less than high school and 58% higher for those with a high school education (p. <0.01). The odds of diabetes are also 10% higher for married individuals compared to the unmarried (p. <0.01). Mexicans have an advantage for this outcome when compared to NH Blacks (Table 17). However, this is only statistically significant for White Mexicans whose odds of being diabetic are 7% lower than NH Blacks (p. <0.05).

In this chapter, I summarized the main findings of the empirical analysis for each of the eight outcomes of interest. In the next chapter, I discuss these findings vis-à-vis the hypotheses presented in chapter 3 considering the literature that I reviewed in chapter 2. In the next chapter, I will also discuss some of the limitations of the research I have undertaken in this dissertation. Finally, I will also present some concluding thoughts about my plans for continuing this research in the future.

CHAPTER V

DISCUSSION AND CONCLUSIONS

In the preceding chapter I reviewed my dissertation findings of the empirical analysis of the effect of race and ethnicity on eight different health outcomes. In this chapter, I will discuss those findings vis-à-vis the hypotheses I proposed in Chapter 3. I will review each research hypothesis and then discuss how the empirical findings do or do not support them. In order to ease the discussion, I have graphed the percentage change in odds ratios for the outcomes comparing groups for each specific hypothesis and I will be referring to these figures (2-8) throughout this chapter. Allow me now to first restate my initial hypotheses; they are as follows:

H1: Other things equal, White Mexicans will have better health outcomes than Non-Hispanic (NH) Whites.

H2: Other things equal, White Mexicans will have better health outcomes than NH Blacks.

H3: Other things equal, Black Mexicans will have poorer health outcomes than NH Whites.

H4: Other things equal, Black Mexicans will have better health outcomes than NH Blacks.

H5: Other things equal, Black Mexicans will have poorer health outcomes than White Mexicans.

H6: Other things equal, Other Mexicans will have better health outcomes than NH Whites.

H7: Other things equal, Other Mexicans will have better health outcomes than NH Blacks.

White Mexicans Will Have Better Health Outcomes than NH Whites

Based on the Latino Epidemiological Paradox (Markides and Coreil 1986; Markides and Eschbach 2005), I hypothesized that White Mexicans would have better health outcomes than NH Whites. This hypothesis was confirmed with respect to five of the eight outcomes analyzed. White Mexicans are significantly less likely to be diagnosed with asthma, cancer, any chronic illness, distress and heart disease (fig. 2). However, for three of the outcomes, White Mexicans appear to have worse outcomes than NH Whites. White Mexicans are more likely to be diagnosed with liver disease, diabetes, and are more likely to self-rate their health as poor or fair.

Previous literature on the Latino Paradox supports my findings with regard to self-rated health, and diabetes. Latinos/as tend to rate their health poorer than non-Hispanic Whites and the disparities are larger for Mexicans and Puerto Ricans (Franzini and Fernandez-Esquer 2004). The disparity can be partially explained by translation issues and different cultural interpretations of what it means to be in good health (Bzostek et al. 2007; Franzini and Fernandez-Esquer 2004; Shetterly et al. 1996). For instance, Markides et al. (1997) argue that older Mexican Americans are more pessimistic about their health than NH Whites and tend to rate their health poorer than it actually is because they tend to have more negative consequences due to illness owing to their low socioeconomic status. In other words, impairment, the cost of health care and other issues related to being in poor health tend to cause a greater burden if economic resources are limited.

It has also been documented that Mexican Americans have high rates of disability due to elevated rates of obesity, diabetes and low-levels of physical activity (Markides et al. 1997;

Rudkin et al. 1997; Wu et al. 2003). Despite their high-risk cardiovascular disease profile, they have lower prevalence of coronary artery disease, non-coronary atherosclerosis and peripheral arterial disease (Forbang et al. 2014). These findings are also supported in my data. I showed that all Mexican ethnoracial groups are less likely to be diagnosed with heart disease.

The high rates of diabetes, obesity, and metabolic syndrome among Mexican Americans also explain the very elevated risk of liver disease observed in my findings. Other risk factors for liver disease in this population include heavy/binge drinking and elevated aminotransferase activity among Mexican American men (Flores et al 2008).

The findings in self-rated health and metabolic diseases like diabetes and liver disease among Latino subgroups (i.e. Mexican Americans) are paradoxical elements within the Latino Paradox. In other words, although still advantaged in mortality and many health outcomes, Mexicans tend to rate their health poorer and have a high risk of metabolic diseases.

White Mexicans Will Have Better Health Outcomes than NH Blacks

Based on both the Latino Paradox and the Latin Americanization Thesis, I hypothesized that White Mexicans would have better health outcomes than NH Blacks due to the intersection of their ethnic and “near-White” statuses. This hypothesis is supported. I showed that NH Blacks only have a health advantage in relation to White Mexicans for cancer and liver disease (figure 3). The White Mexican disadvantage is small and statistically insignificant for cancer, but it is substantial and statistically significant for liver disease.

Black Mexicans Will Have Poorer Health Outcomes than NH Whites

Black Mexicans are more likely than NH Whites to be diagnosed with asthma, chronic illness, liver disease, diabetes and to rate their health as fair or poor (figure 4). The results with respect to liver disease and self-rated health are statistically significant. The disadvantage in liver disease is more pronounced among Black Mexicans than among the other two Mexican ethn racial groups. This result could be explained in part by their double minority status as Black and Mexican. Both NH Blacks and Mexicans share similar risk factors for liver disease (Flores et al 2008). Moreover, a higher exposure to discrimination has been associated with higher levels of alcohol consumption as a coping mechanism. Discrimination can affect health by affecting health behaviors, and alcohol consumption has been positively associated with discrimination (Yen et al. 1999).

Black Mexicans only have a statistically significant advantage over NH Whites with respect to heart disease. For cancer and distress, their advantage is not significant. Thus, this hypothesis is partially supported. In other words, Black Mexicans do not seem to benefit from the advantages suggested by the Latino Paradox to the same extent as White Mexicans do. Moreover, their health outcomes seem to also be influenced by race. That is, their outcomes might be closer to those of NH Blacks than to White Mexicans.

Black Mexicans Will Have Better Health Outcomes than NH Blacks

Black Mexicans were shown to have a health advantage over NH Blacks with regard to chronic illness, distress, heart disease, liver disease, self-rated health, and diabetes (figure 5). However, none of these advantages are statistically significant. Thus, this hypothesis is not supported. Furthermore, Black Mexicans are more likely to be diagnosed with asthma, cancer

and liver disease, the latter effect being statistically significant. In summary, Black Mexicans do not seem to be able to capitalize on their ethnic advantage to achieve a better health status than NH Blacks as White Mexicans do (see hypotheses 1-2).

Black Mexicans Will Have Poorer Health Outcomes than White Mexicans

Black Mexicans compared to White Mexicans are more likely to be diagnosed with asthma, cancer, any chronic illness, liver disease and are more likely to rate their health as fair or poor (figure 6). This effect is statistically significant for asthma. The overall disadvantage in asthma among the Black Mexican population is particularly interesting. Mexican Americans have the lowest rate of asthma among all Latino subgroups (Holguin et al. 2005) despite the fact that 80% of Latinos/as in the U.S. live in communities failing to meet at least one Environmental Protection Agency air-quality standard (Wernette and Nieves 1992). Also, predominantly Latino counties have been shown to have elevated rates of air pollution (English et al. 1998). Why then are Black Mexicans disadvantaged compared to White Mexicans (and also in reference to NH Whites and Blacks, albeit non-significantly)? Again, their status as both Black and Mexican might put them at higher risk of this particular outcome. As Mexicans, they already live in polluted environments and being Black puts them at a higher risk of a myriad of factors that contribute to asthma such as premature birth, passive smoking and substandard housing (Schwartz et al. 1990; Weitzman et al. 1990).

Thus, this hypothesis is only partially supported. Black Mexicans do not share all the “ethnic” benefits of their White Mexican counterparts. Their health outcomes seem to be influenced by the different mechanisms of race that produce poor health – see my earlier discussion in chapter 2.

Other Mexicans Will Have Better Health Outcomes than NH Whites

Based on the Latino Paradox, I expected Other Mexicans to have better health outcomes than NH Whites. This hypothesis has been confirmed (figure 7). I reported that Other Mexicans are significantly less likely to be diagnosed with asthma, cancer, any chronic illness and heart disease. The magnitude of their advantage for these outcomes is greater than that of White Mexicans. Therefore, Other Mexicans do seem to benefit from their ethnic status as I expected based on previous literature. Moreover, Other Mexicans are disadvantaged in relation to NH Whites in almost the same outcomes as White Mexicans, namely, liver disease, self-rated health and diabetes.

Other Mexicans Will Have Better Health Outcomes than NH Blacks

Compared to NH Blacks, Other Mexicans are less likely to be significantly diagnosed with asthma, any chronic illness, heart disease, or to rate their health poorly (figure 8). They also have an insignificant advantage for cancer and diabetes. But Other Mexicans are significantly more likely to meet the criteria for distress and to be diagnosed with liver disease compared to NH Blacks. In summary, Other Mexicans for the most part are more advantaged than disadvantaged compared to NH Blacks.

In this dissertation, I did not entertain a hypothesis with regard to the relationship between Other Mexicans and White and Black Mexicans, mainly as a result of the lack of literature on this comparison. I only hypothesized that Other Mexicans would have an advantage over NH Whites and Blacks as established in the Latino Paradox. However, Other Mexicans are less likely to be diagnosed with asthma, cancer, chronic illness, and heart disease in comparison to White Mexicans, but none of these effects are statistically significant. Other Mexicans are

significantly more likely to meet the criteria for distress. In comparison to Black Mexicans, Other Mexicans are less likely to be diagnosed with asthma, cancer, any chronic illness, liver disease and to rate their health as fair or poor. Only the asthma effect is statistically significant.

The main finding of my dissertation is that the Mexican ethnoracial groups are not homogeneous in terms of their health outcomes. For some outcomes, the differences are very visible and the effects of race/ethnicity go in opposite directions, or the magnitude of the effect is noticeable greater or lower for the three Mexican ethnoracial groups. In other outcomes, the effects are similar in magnitude, but some are significant while others are not. We may infer from this empirical exercise that not all Mexicans are equally advantaged as we have come to expect based on the Latino Paradox literature. Black Mexicans seem to be particularly disadvantaged compared to NH Whites and to a lesser extent vis-à-vis White Mexicans and NH Blacks. Thus, the micro and macro mechanisms of race (and racism) that produce health inequalities are apparently having an effect on this population (Williams et al. 2010). This is particularly noticeable in terms of asthma and liver disease. I also did not expect Black Mexicans to not have a health advantage in relation to NH Blacks. In this case, the intersection of the Black and Mexican identities seems to concatenate risk factors to produce poorer health outcomes. For Black Mexicans, ethnicity does not seem to offer a protective effect. Instead it be confounded with the race effect to create a double layer of disadvantage.

In this dissertation, I used the Latin Americanization Thesis (2004) as a theoretical framework. In particular, I added a fourth category, “Ethnic Black” (i.e., Black Mexicans) (fig. 1) as an intermediate category between “Honorary Whites” and “Collective Blacks.” I argued for this category because from a health perspective, Mexicans often experience a health advantage compared to NH Whites and NH Blacks, and this is especially the expectation of the Latino

Paradox (Markides and Coreil 1986; Markides and Eschbach 2005). However, given the findings presented here, I would now argue that Black Mexicans either belong in or below the Collective Black category because the health advantages of Black Mexicans in comparison to NH Blacks are not significant and they are particularly disadvantaged in certain outcomes. White Mexicans on the other hand, do have an advantage over NH Whites in several outcomes as suggested by the Latino Paradox. Also, according to Bonilla-Silva's Latin Americanization Thesis (2004), in a "pigmentocracy," light-skinned individuals, in this case White Mexicans, are able to benefit from their "near-whiteness" or Honorary White status. In my dissertation analyses, White Mexicans were shown to reap the benefits of their "near-white" status; they are not as disadvantaged as Black Mexicans, and they have a solid advantage over NH Blacks. Thus, White Mexicans are able to profit from their "near-white" status in a society where the race construct is an important determinant of health status.

In this dissertation I also wanted to ascertain whether the paradoxical benefits of the Latino health advantage extend to Black Mexicans and to Other Mexicans (Acevedo-Garcia and Bates 2008; Franzini et al. 2001; Markides and Coreil 1986; Markides and Eschbach 2005). Black Mexicans do not appear share the same advantage compared to NH Whites as do White Mexicans and Other Mexicans. Indeed, they have a slight disadvantage in relation to NH Blacks. Overall, it seems that in determining health outcomes, race trumps ethnicity. This would appear to be the byproduct of a system of health inequalities in which individuals of Black descent continue to be afflicted with excess illness and death. An extensive body of literature suggests that race, or being of Black descent, affects health negatively in myriad ways. These range from perceived discrimination at the micro level (Brondolo et al. 2009) to residential segregation at

the macro level (Williams and Collins 2001). Race continues to be a major predictor of health status due to a wide disparity in risk exposure (Williams et al. 1994).

Differences between the Mexican ethnorracial groups also suggest that we must exercise caution when studying the health outcomes of Latino subgroups residing in the United States. These groups (Mexicans, Cubans, Puerto Ricans, and others) differ in health status, and, moreover, they are not racially homogeneous. Combining the ethnic groups and failing to recognize the role of race will continue to mask health inequalities among these groups. The differences in health outcomes among White Mexicans, Black Mexicans and Other Mexicans speak to the power of the race construct in determining health outcomes independent of ethnic status. Thus, scholars need to do a better job engaging ethnorracial groups in the health disparities discourse (Cuevas et al. 2016).

The acculturative predictors in the model are mostly statistically significant across all outcomes and for all groups. Foreign born individuals with shorter length of U.S. residency and those who speak Spanish or are bilingual are less likely to have poor health outcomes. It appears that acculturative effects still play a large role in Mexican health outcomes, particularly those of Mexican immigrants. Even though numerous studies have been conducted in this area, there is not consensus about what causes this effect. Some scholars argue that social and cultural factors (i.e., familial, food, social support) offer a protective buffer for new immigrants (Hayes-Bautista 2002; Morales et al. 2002). It is presumed that such a protective buffer will diminish with length of residency. Other scholars contend that the better health outcomes may be the result of healthy immigrant selection, whereby healthier persons are more likely to migrate (Franzini and Fernandez-Esquer 2004; Palloni and Morenoff 2001). Alternatively, other scholars have suggested that patterns in health outcomes may arise due to data artifacts such as underreporting

health problems, undercounting of deaths, or inconsistency in Latino identity (Abraído-Lanza et al. 1999; Acevedo-Garcia and Bates 2008; Jasso et al. 2004; Palloni and Morenoff 2001). These issues notwithstanding, the acculturation findings presented here in my dissertation are consistent with previous research (Abraído-Lanza et al. 1999; Acevedo-Garcia and Bates 2008; Franzini and Fernandez-Esquer 2004; Franzini et al. 2001; Palloni and Morenoff 2001).

In terms of socioeconomic status, those with greater educational attainment and the employed are also less likely to report health issues. The only outcome where I found an exception was cancer. For this outcome, those with less than a college education had a lower likelihood of being diagnosed. I argued that this might be an issue of underreporting due to lack of access to health care or being uninsured. Obtaining a cancer diagnosis requires sophisticated medical technology that might be out of reach for those with less education. They in turn might have lower occupational status and be uninsured or underinsured. Therefore, they could well have less access to those technologies, causing them to underreport cancer diagnosis. Marriage and family size also have a protective effect against poor health outcomes.

The data and analyses of this dissertation are not without limitations. First, the data used in the analysis are cross-sectional and causality cannot be inferred. Second, I do not have access to measures of discrimination and can only speculate whether and how the different mechanisms of racial discrimination are operating to influence the outcomes. Third, the small sample size of Black Mexicans in relation to the other groups might restrict the statistical power to detect significant differences among groups. Last, it is worth considering that the total number of Black Mexicans in my analyses might be inflated due to respondents' misunderstanding of race and ethnicity questions (Denton and Massey 1989). However, it is beyond the scope of this dissertation for me to be able to ascertain if that is the case.

Future research among Latino subgroups should continue to explore the role of race in determining health and other outcomes, especially educational attainment and labor market participation. The results presented here suggest that race plays an important role in shaping health outcomes. I would suspect that race also shapes other experiences. It would also be interesting to examine these outcomes using discrimination-related variables to ascertain whether Black Mexicans experience discrimination similarly to NH Blacks and how these experiences shape health. Another important consideration is the study of Other Mexicans' racial identity. Who are they? Why do they racially identify as other?

In this dissertation, I analyzed eight health outcomes among White Mexicans, Black Mexicans and Other Mexicans taking into consideration acculturation-related and sociodemographic covariates. I developed my hypotheses on the basis of research based on the Latino Paradox and on the literatures dealing with racial health disparities. I used as the overall and guiding framework the Latin Americanization thesis (Bonilla-Silva 2004). Both White Mexicans and Other Mexicans were reported to have a health advantage consistent with the Latino Paradox but Black Mexicans were not shown to have this advantage. I argued that this instance of health stratification based on a pigmentocracy is consistent with Bonilla-Silva's theory (Bonilla-Silva 2004; Bonilla-Silva and Embrick 2006). Overall, my main contribution was the disaggregation of Mexicans into distinct racial categories in order to determine how race affects their health independently of ethnic status.

REFERENCES

- Abraido-Lanza, Ana F., Maria T. Chao, and Karen R. Florez. 2005. "Do Healthy Behaviors Decline with Greater Acculturation?: Implications for the Latino Mortality Paradox." *Social Science & Medicine* 61(6):1243-1255.
- Abraído-Lanza, Ana F., Bruce P. Dohrenwend, Daisy S. Ng-Mak, and J. Blake Turner. 1999. "The Latino Mortality Paradox: A Test of the 'Salmon Bias' and Healthy Migrant Hypotheses." *American Journal of Public Health* 89(10):1543-48.
- Acevedo-Garcia, Dolores and Lisa M. Bates. 2008. "Latino Health Paradoxes: Empirical Evidence, Explanations, Future Research, and Implications." Pp. 101-13 in *Latinas/os in the United States: Changing the Face of America*, edited by H. Rodriguez, R. Saenz and C. Menjivar. New York: Springer.
- Acevedo-Garcia, Dolores, Lisa M. Bates, Theresa L. Osypuk, and Nancy McArdle. 2010. "The Effect of Immigrant Generation and Duration on Self-Rated Health among US Adults 2003-2007." *Social Science & Medicine* 71(6):1161-1172.
- Acevedo-Garcia, Dolores, Mah-J. Soobader, and Lisa F. Berkman. 2007. "Low Birthweight among US Hispanic/Latino Subgroups: the Effect of Maternal Foreign-Born Status and Education." *Social Science & Medicine* 65(12):2503-2516.
- Adler, Nancy E., Thomas Boyce, Margaret A. Chesney, Sheldon Cohen, Susan Folkman, Robert L. Kahn, and S. Leonard Syme. 1994. "Socioeconomic Status and Health: the Challenge of the Gradient." *American Psychologist* 49(1):15.
- Adler Nancy E, Thomas Boyce, Margaret A. Chesney, Susan Folkman, and S. Leonard Syme. 1993. "Socioeconomic Inequalities in Health: No Easy Solution". *Journal of the American Medical Association* 269:3140-3145.

- Adler, Nancy and Joan Ostrove. 1999. "Socioeconomic Status and Health: What We Know and What We Don't." *Annals of the New York Academy of Sciences* 896:3–15.
- Aguirre Beltrán, Gonzalo. 1944. "The Slave Trade in Mexico." *Hispanic American Historical Review* 24(3):412-30.
- Aguirre Beltrán, Gonzalo. 1946. *La Población Negra de México: Estudio Etnohistórico*. México: Fondo de Cultura Económica.
- Alba, Richard. 2009. *Blurring the Color Line: The New Chance for a More Integrated America*. Cambridge, MA: Harvard University Press.
- Alba, Richard, and Victor Nee. 2003. *"Remaking the American Mainstream: Assimilation and the Contemporary Immigration"*. Cambridge, MA: Harvard University Press.
- Alderete, Ethel, William Armando Vega, Bohdan Kolody, and Sergio Aguilar-Gaxiola. 2000. "Lifetime Prevalence of and Risk Factors for Psychiatric Disorders among Mexican Migrant Farmworkers in California." *American Journal of Public Health* 90(4):608-614.
- Alegria Margarita, Glorisa Canino, Patrick E. Shrout, Meghan Woo, Naihua Duan, Doryliz Vila, Maria Torres, Chih-nan Chen and Xiao-Li Meng. 2008. "Prevalence of Mental Illnesses in Immigrant and Non-Immigrant U.S. Latino Groups". *American Journal of Psychiatry* 165(3):359-369.
- Angel, Ronald J., Jacqueline L. Angel, Carlos Díaz Venegas, and Claude Bonazzo. 2010. "Shorter Stay, Longer Life: Age at Migration and Mortality among the Older Mexican-Origin Population." *Journal of Aging and Health* 22(7):914-931.
- Angosto Ferrández, Luis Fernando, and Sabine Kandolfer. 2012. *Everlasting Countdowns: Race, Ethnicity and National Censuses in Latin American States*. Newcastle, UK: Cambridge Scholars Publishing.

- Archer, Kellie J., Stanley Lemeshow, and David W. Hosmer. 2007. "Goodness-of-fit Tests for Logistic Regression Models when Data are Collected using a Complex Sampling Design." *Computational Statistics & Data Analysis* 51(9):4450-4464.
- Arias Elizabeth. 2010. *United States Life Tables by Hispanic Origin*. Hyattsville, MD: National Center for Health Statistics.
- Arias, Elizabeth, Karl Eschbach, William S. Schauman, Eric L. Backlund, and Paul D. Sorlie. 2010. "The Hispanic Mortality Advantage and Ethnic Misclassification on US Death Certificates". *American Journal of Public Health* 100:S171-S177.
- Arias Elizabeth, Kenneth D. Kochaneck and Robert Anderson. 2015. *How Does Cause of Death Contribute to the Hispanic Mortality Advantage in the United States?* Hyattsville, MD: National Center for Health Statistics.
- Ayala, María Isabel. 2017. "Intra-Latina Fertility Differentials in the United States." *Women, Gender, and Families of Color* 5(2):129-152.
- Barber, Sharrelle, Ana V. Diez Roux, Letícia Cardoso, Simone Santos, Veronica Toste, Sherman James, Sandhi Barreto, Maria Schmidt, Luana Giatti, and Dora Chor. 2018. "At the Intersection of Place, Race, and Health in Brazil: Residential Segregation and Cardio-Metabolic Risk Factors in the Brazilian Longitudinal Study of Adult Health (ELSA-Brasil)." *Social Science & Medicine* 199:67-76.
- Basave Benítez, Agustín. 1992. *Mexico Mestizo: Análisis del Nacionalismo Mexicano en torno a la Mestizofilia de Andrés Molina Enríquez*. México DF: Fondo de Cultura Económica.
- Bediako, Phylcia T., Rhonda Belue, and Marianne M. Hillemeier. 2015. "A Comparison of

- Birth Outcomes among Black, Hispanic, and Black Hispanic Women.” *Journal of Racial and Ethnic Health Disparities* 2:573–82.
- Benjamin, Thomas. 2000. “Rebuilding the Nation”. Pp. 467-503 in *The Oxford History of Mexico*, edited by M.C. Meyer and W.H. Beezley. Oxford: Oxford University Press.
- Blewett, Lynn A., Julia A. Rivera Drew, Risa Griffin, Miram L. King, and Kari C. W. Williams. 2016. *IPUMS Health Surveys: National Health Interview Survey, Version 6.2*. Minneapolis: University of Minnesota. <http://doi.org/10.18128/D070.V6.2>
- Bonilla-Silva, Eduardo. 2004a. “From Bi-Racial to Tri-Racial: Towards a New System of Racial Stratification in the USA.” *Ethnic and Racial Studies* 27(6):931–50.
- Bonilla-Silva, Eduardo. 2004b. *Racism without Racists: Color-Blind Racism and the Persistence of Racial Inequality in the United States*. Oxford: Rowman & Littlefield Publishers.
- Bonilla-Silva, Eduardo, and David G. Embrick. 2006. "Black, Honorary White, White: The Future of Race in the United States?." Pp. 33-48 in *Mixed Messages: Multiracial Identities in the “Color-Blind” Era*, edited by D.L. Brunnsma. Boulder, CO: Lynne Rienner.
- Borrell, Luisa N. 2005. “Racial Identity among Hispanics: Implications for Health and Well-Being”. *American Journal of Public Health* 95(3):379-381.
- Borrell Luisa N. 2009. “Race, Ethnicity, and Self-Reported Hypertension: Analysis of Data from the National Health Interview Survey, 1997-2005”. *American Journal of Public Health* 99:313-19.
- Borrell, Luisa N., and Florence J. Dallo. 2008. "Self-Rated Health and Race among Hispanic and Non-Hispanic Adults." *Journal of Immigrant and Minority Health* 10(3):229-238.
- Borrell, Luisa N. and Natalie D. Crawford. 2009. “All-Cause Mortality among Hispanics in

- the United States: Exploring Heterogeneity by Nativity Status, Country of Origin, and Race in the National Health Interview Survey-Linked Mortality Files”. *Annals of Epidemiology* 19:336–343.
- Bratter, Jenifer L. and Bridget K. Gorman. 2011. “Does Multiracial Matter? A Study of Racial Disparities in Self-Rated Health.” *Demography* 48(1):127–52.
- Brondolo, Elizabeth, Linda C. Gallo, and Hector F. Myers. 2009. “Race, Racism and Health: Disparities, Mechanisms, and Interventions.” *Journal of Behavioral Medicine* 32(1):1–8.
- Brown, Tyson H. 2016. “Diverging Fortunes: Racial/Ethnic Inequality in Wealth Trajectories in Middle and Late Life.” *Race and Social Problems* 8(1):29–41.
- Bzostek, Sharon, Noreen Goldman, and Anne Pebley. 2007. “Why Do Hispanics in the USA Report Poor Health?” *Social Science and Medicine* 65(5):990–1003.
- Camacho-Rivera, Marlene, Ichiro Kawachi, Gary G. Bennett, and S. V. Subramanian. 2015. “Revisiting the Hispanic Health Paradox: the Relative Contributions of Nativity, Country of Origin, and Race/Ethnicity to Childhood Asthma.” *Journal of Immigrant and Minority Health* 17(3): 826-833.
- Castro Gómez, Santiago. 1996. *Imaginarios Sociales y Estética de lo Bello en el Modernismo Hispanoamericano*. Barcelona: Crítica de la Razón Latinoamericana.
- Centers for Disease Control and Prevention. 2017. *National Health Interview Survey*. National Center for Health Statistics. Retrieved from https://www.cdc.gov/nchs/nhis/about_nhis.htm
- Centers for Disease Control and Prevention. 2013. *CDC Health Disparities and Inequalities Report*. Hyattsville, MD: National Center for Health Statistics.
- Cervantes, Arturo, Louis Keith, and Grace Wyshak. 1999. "Adverse Birth Outcomes among

- Native-Born and Immigrant Women: Replicating National Evidence Regarding Mexicans at the Local Level." *Maternal and Child Health Journal* 3(2):99-109.
- Cobas, José A., Jorge Duany, and Joe R. Feagin. 2015. *How the United States Racializes Latinos: White Hegemony and its Consequences*. NY: Routledge.
- Costas Jr, Raul, Mario R. Garcia-Palmieri, Paul Sorlie, and Ellen Hertzmark. 1981. "Coronary Heart Disease Risk Factors in Men with Light and Dark Skin in Puerto Rico." *American Journal of Public Health* 71(6):614-619.
- Correa, Alberto. 1901. *Geografía de México*. Mexico: Imprenta de Eduardo Dublán.
- Cortes-Bergoderi Mery, Kashish Goel, Mohammad Hassan Murad, Thomas Allison, Virend K Somer, Patricia J. Erwin, Ondrej Sochor and Francisco Lopez-Jimenez. 2013. "Cardiovascular Mortality in Hispanics Compared to non-Hispanic Whites: A Systematic Review and Meta-Analysis of the Hispanic Paradox". *European Journal of Internal Medicine* 24:791-799.
- Crimmins, Eileen M., Jung Ki Kim, Dawn E. Alley, Arun Karlamangla, and Teresa Seeman. 2007. "Hispanic Paradox in Biological Risk Profiles." *American Journal of Public Health* 97(7):1305-1310.
- Cuevas, Adolfo G., Beverly Araujo Dawson, and David R. Williams. 2016. "Race and Skin Color in Latino Health: an Analytic Review." *American Journal of Public Health* 106(12):2131-2136.
- Daniel, G. Reginald. 2010. *More Than Black: Multiracial Identity & New Racial Order*. Philadelphia: Temple University Press.
- de Alva, José Jorge Klor. 2006. *The Broken Spears: The Aztec Account of the Conquest of Mexico*. Boston, MA: Beacon Press.

- Denton, Nancy A., and Douglas S. Massey. 1989 "Racial Identity among Caribbean Hispanics: The Effect of Double Minority Status on Residential Segregation." *American Sociological Review* 54(1):790-808
- Din-Dzietham, Rebecca and Irva Hertz-Picciotto. 1998. "Infant Mortality Differences between Whites and African Americans: the Effect of Maternal Education." *American Journal of Public Health* 99(4): 651–656.
- Dolly John A., A. B. De Castro, Diane P. Martin, Bonnie Duran, and David T. Takeuchi. 2010. "Does an Immigrant Health Paradox Exist among Asian Americans? Associations of Nativity and Occupational Class with Self-Rated Health and Mental Disorders." *Social Science and Medicine* 75(12): 2085-2098.
- Dominguez, Kenneth, Ana Penman-Aguilar, Man-Huei Chang, Ramal Moonesinghe, Ted Castellanos, Alfonso Rodriguez-Lainz, and Richard Schieber. 2015. "Vital Signs: Leading Causes of Death, Prevalence of Diseases and Risk Factors, and Use of Health Services Among Hispanics in the United States—2009–2013." *MMWR. Morbidity and Mortality Weekly Report* 64(17):469-478.
- Douglas, Karen M., and Rogelio Saenz. 2008. "No Phone, No Vehicle, No English and No Citizenship: The Vulnerability of Mexican Immigrants in the United States". Pp. 161-180 in *Race, Human Rights and Inequality* edited by A. Hattery, D.G. Embrick and E. Smith. Lanham, MD: Rowman and Littlefield.
- Dowling, Julie A. 2014. *Mexican Americans and the Question of Race*. Austin, TX: University of Texas Press.
- Dressler, William W., Kathryn S. Oths, and Clarence C. Gravlee. 2005. "Race and Ethnicity

- in Public Health Research: Models to Explain Health Disparities." *Annual Review of Anthropology* 34:231-252.
- English, Paul B., Julie Von Behren, Martha Harnly, and Raymond R. Neutra. 1998. "Childhood Asthma along the United States/Mexico Border: Hospitalizations and Air Quality in Two California Counties." *Revista Panamericana de Salud Pública* 3(6):392-399.
- Eschbach, Karl, Jonathan D. Mahnken, and James S. Goodwin. 2005. "Neighborhood Composition and Incidence of Cancer among Hispanics in the United States." *Cancer* 103(5):1036-1044.
- Eschbach, Karl, Glenn V. Ostir, Kushang V. Patel, Kyriakos S. Markides, and James S. Goodwin. 2004. "Neighborhood Context and Mortality among Older Mexican Americans: Is There a Barrio Advantage?" *American Journal of Public Health* 94(10):1807-12.
- Feagin, Joe R., and Jose A. Cobas. 2015. *Latinos Facing Racism: Discrimination, Resistance, and Endurance*. NY: Routledge.
- Fenelon Andrew. 2013. "Revisiting the Hispanic Mortality Advantage in the United States: The Role of Smoking". *Social Science and Medicine* 82:1-9.
- Flores, Rene and Edward E. Telles. 2012. "Social Stratification in Mexico: Disentangling Color, Ethnicity and Race." *American Sociological Review* 77:486-94.
- Flores, Yvonne N., Hal F. Yee Jr, Mei Leng, José J. Escarce, Roshan Bastani, Jorge Salmerón, and Leo S. Morales. 2008. "Risk Factors for Chronic Liver Disease in Blacks, Mexican Americans, and Whites in the United States: Results from NHANES IV, 1999–2004." *The American Journal of Gastroenterology* 103(9):2231.
- Forbang Nketi, Jan Hughes-Austin, Matthew Allison and Michael Criqui. 2014. "Peripheral

Artery Disease and Non-Coronary Atherosclerosis in Hispanics: Another Paradox?"

Progress in Cardiovascular Diseases 57:237-243.

Franzini, Luisa, and Maria Eugenia Fernandez-Esquer. 2004. "Socioeconomic, Cultural, and Personal Influences on Health Outcomes in Low Income Mexican-Origin Individuals in Texas". *Social Science & Medicine* 59(8):1629–1646.

Franzini, Luisa, John C. Ribble, and Arlene M. Keddie. 2001. "Understanding the Hispanic Paradox". *Ethnicity and Disease* 11(3):496-518.

Fuentes-Afflick, Elena, Nancy A. Hessol, and Eliseo J. Pérez-Stable. 1998. "Maternal Birthplace, Ethnicity, and Low Birth Weight in California." *Archives of Pediatrics & Adolescent Medicine* 152(11):1105-1112.

Gardin, Julius M., Zuhair Allebban, Nathan D. Wong, Sharon K. Sklar, Renee L. Bess, M. Anne Spence, Harrihar A. Pershadsingh, and Robert Detrano. 2010. "Do Differences in Subclinical Cardiovascular Disease in Mexican Americans versus European Americans Help Explain the Hispanic Paradox?" *The American Journal of Cardiology* 105(2):205-209.

Gimenez, Martha E. 1989. "Latino/"Hispanic"—Who Needs a Name? The Case Against a Standardized Terminology." *International Journal of Health Services* 19(3):557-571.

Golash-Boza, Tanya Maria. 2011. *Yo Soy Negro: Blackness in Peru*. Gainesville, FL: University Press of Florida.

Goldman, Noreen, Rachel T. Kimbro, Cassio M. Turra, and Anne R. Pebley. 2006.

"Socioeconomic Gradients in Health for White and Mexican-Origin Populations." *American Journal of Public Health* 96(12):2186–93.

Gonzalez-Barrera, Ana and Mark H. Lopez. 2015. "Is Being Hispanic a Matter of Race, Ethnicity, or Both?" *Pew Research Center*.

- González-Rivas, Nazly. 2012. "Discriminación Salarial: un Análisis entre Mujeres Afrocolombianas y No Afrocolombianas en el Área Metropolitana de Cali." *Revista Latinoamericana de Ciencias Sociales, Niñez y Juventud* 10(1):563-578.
- Gradín, Carlos. 2015. "Chapter 3: Occupational Segregation of Afro-Latinos" Pp. 63-90 in *Inequality, Mobility and Segregation: Essays in Honor of Jacques Silber*, edited by J.A. Bishop and R. Salas. Bingley, UK: Emerald Group Publishing Limited.
- Gravlee, Clarence C. 2005. "Ethnic Classification in Southeastern Puerto Rico: The Cultural Model of "Color"." *Social Forces* 83(3):949-970.
- Guimarães, Antonio Sergio Alfredo. 2012. "The Brazilian System of Racial Classification." *Ethnic and Racial Studies* 35(7):1157-1162.
- Gullickson, Aaron. 2005. "The Significance of Color Declines: A Re-Analysis of Skin Tone Differentials in Post-Civil Rights America." *Social Forces* 84(1):157-180.
- Gutierrez, Natividad. 1999. *Nationalists Myths and Ethnic Identities: Indigenous Intellectuals and the Mexican State*. Lincoln: University of Nebraska Press.
- Hamilton, Tod G., and Robert A. Hummer. 2011. "Immigration and the Health of US Black Adults: Does Country of Origin Matter?" *Social Science and Medicine* 73(10):1551-1560.
- Hayes-Bautista, David. 2002. "The Latino Health Research Agenda for the Twenty-First Century." Pp. 215-235 in *Latinos: Remaking America*, edited by M. Suarez-Orozco and M. Paez. Berkeley: University of California Press.
- Hayward, Mark D., Eileen M. Crimmins, Toni Miles and Yu Yang. 2000. "The Significance of Socioeconomic Status in Explaining the Racial Gap in Chronic Health Conditions." *American Sociological Review* 65:910-930.
- Hayward, Mark D., and Melonie Heron. 1999. "Racial Inequality in Active Life among Adult

- Americans." *Demography* 36:77-91.
- Hernández Cuevas, Marco Polo. 2004. *African Mexicans and the Discourse on Modern Nation*. Lanham, MD: University Press of America.
- Heron, Melonie et al. 2009. "National Vital Statistics Reports Deaths : Final Data for 2009." *National Center for Health Statistics* 57(14):1-136.
- Herring, Cedric. 2002. "Bleaching Out the Color Line?: The Skin Color Continuum and the Tripartite Model of Race." *Race and Society* 5(1):17-31.
- Hill, Mark E. 2000. "Color Differences in the Socioeconomic Status of African American Men: Results of a Longitudinal Study." *Social Forces* 78(4):1437-1460.
- Hoffmann, Odile. 2006. "Negros y Afromestizos en México: Viejas y Nuevas Lecturas de un Mundo Olvidado." *Revista Mexicana de Sociología* 68(1):103-135.
- Hoffmann, Odile, and Christian Rinaudo. 2014. "The Issue of Blackness and Mestizaje in Two Distinct Mexican Contexts: Veracruz and Costa Chica." *Latin American and Caribbean Ethnic Studies* 9(2):138-155.
- Holguin, Fernando, David M. Mannino, Josep Antó, Joshua Mott, Earl S. Ford, W. Gerald Teague, Stephen C. Redd, and Isabelle Romieu. 2005. "Country of Birth as a Risk Factor for Asthma among Mexican Americans." *American Journal of Respiratory and Critical Care Medicine* 171(2): 103-108.
- Hughes, Michael, and Bradley R. Hertel. 1990. "The Significance of Color Remains: A Study of Life Chances, Mate Selection, and Ethnic Consciousness among Black Americans." *Social Forces* 68(4):1105-1120.
- Hummer, Robert A., Daniel A. Powers, Starling G. Pullum, Ginger L. Gossman, and W.

- Parker Frisbie. 2007. "Paradox Found (Again): Infant Mortality among the Mexican-American Population in the United States". *Demography* 44(3):441-457.
- Hummer, Robert A., Richard G. Rogers, Sarit H. Amir, Douglas Forbes, and W. Parker Frisbie. 2000. "Adult Mortality Differentials among Hispanic Subgroups and Non-Hispanic Whites". *Social Science Quarterly* 81:459-476.
- Idler, Ellen L., and Yael Benyamini. 1997. "Self-Rated Health and Mortality: A Review of Twenty-Seven Community Studies." *Journal of Health and Social Behavior* 38(1):21-37.
- Instituto Nacional de Estadística y Geografía. 2015. *Encuesta Intercensal 2015*. Retrieved from <http://www.beta.inegi.org.mx/proyectos/enchogares/especiales/intercensal/>
- Instituto Nacional de Estadística y Geografía. 2017. *Presenta Inegi, Por Vez Primera, Resultados Sobre La Movilidad Social Intergeneracional*. Retrieved from http://www.inegi.org.mx/saladeprensa/boletines/2017/mmsi/mmsi2017_06.pdf
- Iribarren, Carlos, Jeanne A. Darbinian, Bruce H. Fireman, and Esteban González Burchard. 2009. "Birthplace and Mortality among Insured Latinos: The Paradox Revisited". *Ethnicity and Disease* 19:185-191.
- Jasso, Guillermina, Douglas S. Massey, Mark R. Rosenzweig, and James P. Smith. 2004. "Immigrant Health: Selectivity and Acculturation." Pp. 227-266 in *Critical Perspectives on Racial and Ethnic Differences in Health and Late Life* edited by N.B. Anderson, R.A. Bulatao and B. Cohen. National Research Council (US) Panel on Race, Ethnicity, and Health in Later Life. Washington, DC: National Academies Press.
- Kaplan, George A., Mary N. Haan, S. Leonard Syme, Meredith Minkler, and Marilyn Winkleby. 1987. Socioeconomic Status and Health. *American Journal of Preventive Medicine* 3(1):125-129.

- Kaplan, Mark S., Nathalie Huguet, Jason T. Newsom, and Bentson H. McFarland. 2004. "The Association between Length of Residence and Obesity among Hispanic Immigrants." *American Journal of Preventive Medicine* 27(4):323-326.
- Keith, Verna M., and Cedric Herring. 1991. "Skin Tone and Stratification in the Black Community". *American Journal of Sociology* 97(3):760–778.
- Kessler, R.C., Andrews, G., Colpe, L.J., Hiripi, E., Mroczek, D.K., Normand, S.-L.T., Walters, E.E., & Zaslavsky, A. 2002. "Short Screening Scales to Monitor Population Prevalences and Trends in Nonspecific Psychological Distress". *Psychological Medicine* 32(6):959-976.
- Kessler, R.C., Barker, P.R., Colpe, L.J., Epstein, J.F., Gfroerer, J.C., Hiripi, E., Howes, M.J., Normand, S-L.T., Manderscheid, R.W., Walters, E.E., Zaslavsky, A.M. 2003. "Screening for Serious Mental Illness in the General Population". *Archives of General Psychiatry* 60(2):184-189.
- Khanna, Nikki. 2010. "'If You're Half Black, You're Just Black': Reflected Appraisals and the Persistence of the One-Drop Rule." *Sociological Quarterly* 51(1):96–121.
- Knight, Alan. 1990. "Racism, Revolution and Indigenismo: Mexico 1910-1940". Pp. 71-113 in *The Idea of Race in Latin America, 1870-1940*, edited by R. Graham. Austin, TX: University of Texas Press.
- Lara, Marielena, Cristina Gamboa, M. Iya Kahramanian, Leo S. Morales, and David E. Hayes Bautista. 2005. "Acculturation and Latino health in the United States: a Review of the Literature and its Sociopolitical Context." *Annual Review of Public Health* 26:367-397.
- Lariscy Joseph T, Robert A. Hummer and Mark D. Hayward. 2015. "Hispanic Older Adult

- Mortality in the United States: New Estimates and an Assessment of Factors Shaping the Hispanic Paradox." *Demography* 52:1-14.
- LaVeist, Thomas A. 2005. *Minority Populations and Health*. San Francisco, CA: Jossey-Bass.
- LaVeist-Ramos, Alexis Thomas, Jessica Galarraga, Roland Jr. Thorpe, Caryn N. Bell, and Chermeia J. Austin. 2012. "Are Black Hispanics Black or Hispanic? Exploring Disparities at the Intersection of Race and Ethnicity." *Journal of Epidemiology & Community Health* 66(7):e21–e21.
- Link, Bruce G. and Joe Phelan. 1995. "Social Conditions as Fundamental Causes of Disease." *Journal of Health and Social Behavior* 35:80–94.
- Markides, Kyriakos S. and Jeannine Coreil. 1986. "The Health of Hispanics in the Southwestern United States: An Epidemiologic Paradox." *Public Health Reports* 101(3):253–65.
- Markides, Kyriakos S., and Karl Eschbach. 2005. "Aging, Migration and Mortality: Current Status of Research on the Hispanic Paradox". *Journals of Gerontology* 60B:68-75.
- Markides, Kyriakos S., Karl Eschbach, Laura A. Ray, and M. Kristen Peek. 2007. "Census Disability Rates among Older People by Race/Ethnicity and Type of Hispanic Origin." Pp. 26-39 in *The Health of Aging Hispanics* edited by J.L. Angel and K.E. Whitfield. New York: Springer.
- Markides, Kyriakos S., Laura Rudkin, Ronald J. Angel, and David V. Espino. 1997. "Health Status of Hispanic Elderly." Pp. 285-300 in *Racial and Ethnic Differences in the Health of Older Americans*, edited by L.G. Martin and B.J. Soldo. Washington, DC: The National Academies Press.

- Massey, Douglas S., and Nancy A. Denton. 1988. "The Dimensions of Residential Segregation." *Social Forces* 67(2):281-315.
- Massey, Douglas S., and Magaly Sánchez. 2010. *Brokered Boundaries: Immigrant Identity in Anti-Immigrant Times*. NY: Russell Sage Foundation.
- McCarthy, Michael. 2015. "CDC Report Confirms "Hispanic Paradox"." *BMJ: British Medical Journal* 350: h2467.
- Medina-Inojosa Jose, Nathalie Jeana, Mery Cortes-Bergoderib, Francisco Lopez-Jimenez. 2014. "The Hispanic Paradox in Cardiovascular Disease and Total Mortality". *Progress in Cardiovascular Diseases* 57:286-292.
- Minnesota Population Center. 2016. *Integrated Health Interview Series: Version 6.21*.
- Monsiváis, Carlos. 2010. *Historia Mínima. La Cultura Mexicana en el siglo XX*. México DF: El Colegio de México AC.
- Mora, José María Luis. 1965. *México y sus Revoluciones*. Mexico DF: Editorial Porrúa.
- Morales, Leo S., Marielena Lara, Raynard S. Kington, Robert O. Valdez, and José J. Escarce. 2002. "Socioeconomic, Cultural, and Behavioral Factors Affecting Hispanic Health Outcomes." *Journal of Health Care for the Poor and Underserved* 13(4):477–503.
- Morner, Magnus. 1967. *Race Mixture in the History of Latin America*. Boston: Little, Brown and Company.
- Murguía, Edward, and Rogelio Saenz. 2002. "An Analysis of the Latin Americanization of Race in the United States: a Reconnaissance of Color Stratification among Mexicans." *Race and Society* 5(1): 85-101.
- Murguía, Edward, and Edward E. Telles. 1996. "Phenotype and Schooling among Mexican Americans." *Sociology of Education* 69:276-289.

- Ochoa, Álvaro. 1997. *Afrodescendientes sobre Piel Canela*. Zamora, México: El Colegio de Michoacán A.C.
- Omi, Michael and Howard Winant. 1994. *Racial Formation in the United States*. NY: Routledge.
- Orvañanos, Domingo. 1889. *Ensayo de Geografía Médica y Climatológica de la Republica Mexicana*. Oficina Tip de la Secretaria de Fomento.
- Osyuk, Theresa L., Lisa M. Bates, and Dolores Acevedo-Garcia. 2010. "Another Mexican Birthweight Paradox? The Role of Residential Enclaves and Neighborhood Poverty in the Birthweight of Mexican-Origin Infants." *Social Science & Medicine* 70(4):550-560.
- Palloni, Alberto and Jeffrey D. Morenoff. 2001. "Interpreting the Paradoxical in the Hispanic Paradox: Demographic and Epidemiologic Approaches." *Annals of the New York Academy of Sciences* 954(December):140-74.
- Palloni, Alberto, and Elizabeth Arias. 2004. "Paradox Lost: Explaining the Hispanic Adult Mortality Advantage". *Demography* 41(3):385-415.
- Patel, Kushang V., Karl Eschbach, Laura L. Rudkin, M. Kristen Peek, and Kyriakos S. Markides. 2003. "Neighborhood Context and Self-Rated Health in Older Mexican Americans." *Annals of Epidemiology* 13(9):620-628.
- Peek, M. Kristen, Malcolm P. Cutchin, Jennifer J. Salinas, Kristin M. Sheffield, Karl Eschbach, Raymond P. Stowe, and James S. Goodwin. 2010. "Allostatic Load among Non-Hispanic Whites, Non-Hispanic Blacks, and People of Mexican Origin: Effects of Ethnicity, Nativity, and Acculturation." *American Journal of Public Health* 100(5):940-946.
- Phillips, Wendy E. 2009. "Representations of the Black Body in Mexican Visual Art:

- Evidence of an African Historical Presence or a Cultural Myth?" *Journal of Black Studies* 39(5):761-785.
- Quintero Ramírez, Oscar A. 2014. "El Racismo Cotidiano en la Universidad Colombiana desde la Experiencia Viva por los Estudiantes Negros en Bogotá." *Universitas Humanística* 77:71-94.
- Ramos, Blanca, James Jaccard, and Vincent Guilamo-Ramos. 2003. "Dual Ethnicity and Depressive Symptoms: Implications of Being Black and Latino in the United States." *Hispanic Journal of Behavioral Sciences* 25(2):147-173.
- Romo, Rebecca. 2011. "Between Black and Brown: Blaxican (Black-Mexican) Multiracial Identity in California." *Journal of Black Studies* 42(3):402–26.
- Roth, Wendy D. 2005. "The End of the One-Drop Rule? Labeling of Multiracial Children in Black Intermarriages." *Sociological Forum* 20(1):35–67.
- Roth, Wendy. 2012. *Race Migrations: Latinos and the Cultural Transformation of Race*. Stanford, CA: Stanford University Press.
- Roth, Wendy D. 2016. "The Multiple Dimensions of Race." *Ethnic and Racial Studies* 39(8):1310-1338.
- Rudkin, Laura, Kyriakos S. Markides, and David V. Espino. 1997. "Functional Disability in Older Mexican Americans." *Topics in Geriatric Rehabilitation* 12(3):38-46.
- Ruiz John, Patrick Steffen and Timothy Smith. 2013. "Hispanic Mortality Paradox: A Systematic Review and Meta-Analysis of the Longitudinal Literature". *American Journal of Public Health* 103(3):52-60.
- Saenz Rogelio. 2010. "Latinos in the United States 2010". *Population Reference Bureau Bulletin Update*.

- Saenz Rogelio and Trinidad Morales. 2012. "The Latino Paradox". Pp. 47-73 in *The Demography of the Hispanic Population: Selected Essays*, edited by R.R. Verdugo. Charlotte, NC: Information Age Publishing.
- Santos-Lozada, Alexis R. and Matthew J. Martinez. 2017. "How Have You Been? Or ¿Cómo Estás?: Does Language of Interview Influences Self-Rated Health Among Hispanic Subgroups?" *Journal of Immigrant and Minority Health* 1-10.
- Shetterly, Susan M., Judith Baxter, Lynn D. Mason, and Richard F. Hamman. 1996. "Self-Rated Health among Hispanic vs Non-Hispanic White Adults: The San Luis Valley Health and Aging Study." *American Journal of Public Health* 86(12):1798–1801.
- Saucedo, Gabriel, Marlen Garcia, and Florentino Virgen Castro. 2008. "Socio-Economic and Health Conditions of an Afro-Mexican Rural Population in the State of Veracruz, Mexico, 2007/Condiciones Socioeconómicas y de Salud de una Población Afromexicana Rural del Estado de Veracruz, México. 2007." *Callaloo* 31(1):147-162.
- Schwartz, Joel, Diane Gold, Douglas W. Dockery, Scott T. Weiss, and Frank E. Speizer. 1990. "Predictors of Asthma and Persistent Wheeze in a National Sample of Children in the United States." *The American Review of Respiratory Disease* 142(3):555-562.
- Singh, Gopal K., and Stella M. Yu. 1996. "Adverse Pregnancy Outcomes: Differences Between US-and Foreign-Born Women in Major US Racial and Ethnic Groups." *American Journal of Public Health* 86(6):837-843.
- Smolen, Jenny Rose, and Edna Maria de Araújo. 2017. "Race/Skin Color and Mental Health Disorders in Brazil: a Systematic Review of the Literature." *Ciencia & Saude Coletiva* 22(12):4021-4030.
- Sorlie, Paul D., Eric Backlund, Norman J. Johnson, and Eugene Rogot. 1993. "Mortality by

- Hispanic Status in the United States”. *Journal of the American Medical Association* 270(20):2464-2468.
- StataCorp. 2017. “Stata Statistical Software: Release 15.”
- Stern, Alexandra Minna. 2003. “From Mestizophilia to Biotypology: Racialization and Science in Mexico, 1920-1960”. Pp 187-210 in *Race and Nation in Modern Latin America*, edited by N. Appelbaum, A. Macpherson, and K. A. Roseblatt. Chapel Hill: University of North Carolina Press.
- Subramanian, Subu V., Dolores Acevedo-Garcia, and Theresa L. Osypuk. 2005. “Racial Residential Segregation and Geographic Heterogeneity in Black/White Disparity in Poor Self-Rated Health in the US: A Multilevel Statistical Analysis”. *Social Science & Medicine* 60(8):1667-1679.
- Sue, Christina. 2009. “An Assessment of the Latin Americanization Thesis.” *Ethnic and Racial Studies* 32(6):1058–70.
- Sue, Cristina. 2013. *Land of the Cosmic Race: Race Mixture, Racism and Blackness in Mexico*. Oxford: Oxford University Press.
- Teller, Charles H., and Steve Clyburn. 1974. "Trends in Infant Mortality." *Texas Business Review* 48:240-246.
- Telles, Edward E. 2002. “Racial Ambiguity among the Brazilian Population.” *Ethnic and Racial Studies* 25(3):415–41.
- Telles, Edward E. 2004. *Race in Another America: The Significance of Skin Color in Brazil*. Princeton, NJ: Princeton University Press.
- Telles, Edward. 2014. *Pigmentocracies: Ethnicity, Race, and Color in Latin America*. Chapel Hill, NC: University of North Carolina Press.

- Telles, Edward, Rene D. Flores, and Fernando Urrea-Giraldo. 2015. "Pigmentocracies: Educational Inequality, Skin Color and Census Ethnoracial Identification in Eight Latin American Countries." *Research in Social Stratification and Mobility* 40:39-58.
- Telles, Edward E., and Edward Murguía. 1990. "Phenotypic Discrimination and Income differences among Mexican Americans." *Social Science Quarterly* 71(4):682-96.
- Telles, Edward M., and Vilma Ortiz. 2008. *Generations of Exclusion: Mexican-Americans, Assimilation, and Race*. NY: Russell Sage Foundation.
- Telles, Edward, and Tianna Paschel. 2014. "Who is Black, White, or Mixed Race? How Skin Color, Status, and Nation Shape Racial Classification in Latin America." *American Journal of Sociology* 120(3):864-907.
- Tilley, Virginia Q. 2005. "Mestizaje and the 'Ethnicization' of Race in Latin America." Pp. 53-68 in *Race and Nation in the Modern World*, edited by P. Spickard. New York: Routledge.
- Treiman, Donald J. 2009. *Quantitative Data Analysis: Doing Social Research to Test Ideas*. San Francisco, CA: Jossey-Bass, a Wiley Imprint.
- Turra, Cassio M. and Noreen Goldman. 2007. "Socioeconomic Differences in Mortality among U.S. Adults: Insights into the Hispanic Paradox." *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences* 62(3):S184-92.
- U.S. Census Bureau. 1990. 1990 Census of Population, General Population Characteristics. Series 1990, CP-1.
- Valdivia Vargas, Néstor. 2014. "Negra Soy, Color Bonito»: el Papel de la 'Raza' en la Identidad de los Afrodescendientes en el Perú." *Debates en Sociología* 39:73-125.
- Valente, Rubia R. 2017. "The Vicious Circle: Effects of Race and Class on University

- Entrance in Brazil." *Race, Ethnicity and Education* 20(6):851-864.
- Vasconcelos, José. [1925]1997. *The Cosmic Race, La Raza Cosmica*. Baltimore, MD: The John Hopkins University Press.
- Villarreal, Andrés. 2010. "Stratification by Skin Color in Contemporary Mexico." *American Sociological Review* 75(5):652–78.
- Vincent, Ted. 1999. "Racial Amnesia-African Puerto Rico and Mexico." *Konch Magazine Online*.
- Wade, Peter. 1993. *Blackness and Race Mixture: the Dynamics of Racial Identity in Colombia*. Baltimore, MD: Johns Hopkins University Press.
- Warner, David F. and Tyson H. Brown. 2011. "Understanding How Race/Ethnicity and Gender Define Age-Trajectories of Disability: An Intersectionality Approach." *Social Science and Medicine* 72(8):1236–48.
- Waters, Mary. 1990. *Ethnic Options: Choosing Identities in America*. Berkeley, CA: University of California Press.
- Weitzman, Michael, Steven Gortmaker, and Arthur Sobol. 1990. "Racial, Social, and Environmental Risks for Childhood Asthma." *American Journal of Diseases of Children* 144(11): 1189-1194.
- Wernette, Dee R., and Leslie A. Nieves. 1992. "Breathing Polluted Air: Minorities are Disproportionately Exposed." *EPA Journal* 18(1): 16-7.
- Williams, David R. 2001. "Racial Variations in Adult Health Status: Patterns, Paradoxes, and Prospects." Pp. 371-410 in *American Becoming: Racial Trends and Their Consequences*, Vol. II, edited by N. Smeler, W. J. Wilson, and F. Mitchell. Washington, DC: The National Academies Press.

- Williams, David R. and Chiquita Collins. 1995. "US Socioeconomic and Racial Differences in Health : Patterns and Explanations." *Annual Review of Sociology* 21:349–86.
- Williams, David R., and Chiquita Collins. 2001. "Racial Residential Segregation: A Fundamental Cause of Racial Disparities in Health." *Public Health Reports* 116(5):404-416.
- Williams, David R., Risa Lavizzo-Mourey, and Rueben C. Warren. 1994. "The Concept of Race and Health Status in America." *Public Health Reports* 109(1):26–41.
- Williams, David R., Selina A. Mohammed, Jacinta Leavell, and Chiquita Collins. 2010. "Race, Socioeconomic Status, and Health: Complexities, Ongoing Challenges, and Research Opportunities." *Annals of the New York Academy of Sciences* 1186(1): 69-101.
- Williams, David R., and Michelle Sternthal. 2010. "Understanding Racial-Ethnic Disparities in Health: Sociological Contributions." *Journal of Health and Social Behavior* 51(1):S15-S27.
- Williams Castro, Fatimah. 2013. "Afro-Colombians and the Cosmopolitan City: New Negotiations of Race and Space in Bogotá, Colombia." *Latin American Perspectives* 40(2): 105-117.
- Wu, Jasmanda H., Mary N. Haan, Jersey Liang, Debashis Ghosh, Hector M. Gonzalez, and William H. Herman. 2003. "Diabetes as a Predictor of Change in Functional Status among Older Mexican Americans: a Population-Based Cohort Study." *Diabetes Care* 26(2): 314-319.
- Yang Wei, Fares Qeadan and Julie Smith-Gagen. 2009. "The Hispanic Epidemiological Paradox in the Fastest-Growing State in the United States". *Hispanic Health Care International* 7(3):130-140.
- Yankauer, Alfred. 1987. "Hispanic/Latino--What's in a Name?" *American Journal of Public*

Health 77(1):15-17.

Yen, Irene H., David R. Ragland, Birgit A. Greiner, and June M. Fisher. "Workplace Discrimination and Alcohol Consumption: Findings from the San Francisco Muni Health and Safety Study." *Ethnicity and Disease* 9(1):70-80.

APPENDIX A

TABLES

Table 1. Weighted Percentage Distributions and Means of Sample Respondents by Monoracial and Ethnoracial Groups across Dependent and Independent Variables.

	NH Whites	NH Blacks	White Mexicans	Black Mexicans	Other Mexicans
<i>N= 1,002,351 (unweighted)</i>	<i>700,510</i>	<i>155,832</i>	<i>137,688</i>	<i>1,913</i>	<i>6,408</i>
	<i>(69.89%)</i>	<i>(15.55%)</i>	<i>(13.74%)</i>	<i>(0.19%)</i>	<i>(0.64%)</i>
Respondents with Asthma	12.01%	13.01%	7.22%	13.00%	4.61%
Respondents with Cancer	9.84%	3.91%	2.31%	2.50%	1.23%
Respondents with a Chronic Illness	48.36%	48.81%	31.12%	32.61%	23.47%
Respondents with Distress Symptoms	3.06%	3.43%	3.05%	3.18%	3.56%
Respondents with a Heart Condition	8.65%	5.88%	3.15%	1.93%	2.03%
Respondents with Liver Disease	1.38%	1.07%	1.43%	2.09%	1.38%
Respondents with Poor or Fair SRH	11.68%	18.08%	13.53%	12.18%	11.08%
Respondents with Diabetes	7.69%	11.21%	8.87%	6.03%	5.94%
Native Born	95.23%	89.14%	44.81%	51.08%	41.08%
Foreign Born <5 Years of US Residency	0.50%	1.39%	5.66%	3.52%	12.36%
Foreign Born 5-14 Years of Residency	0.99%	3.57%	18.45%	15.59%	21.85%
Foreign Born 15+ Years of Residency	3.27%	5.88%	31.08%	24.80%	24.70%
English Speaker	99.88%	99.93%	58.06%	70.26%	58.21%
Spanish Speaker	0.06%	0.03%	25.56%	18.33%	25.38%
Bilingual	0.06%	0.03%	16.39%	11.41%	16.41%
Percentage of Females	51.71%	55.24%	48.42%	52.84%	49.14%
Mean of Age	47.98	43.41	38.89	35.49	36.30
Schooling: Less than High School	10.45%	18.69%	44.19%	33.59%	50.82%
Schooling: High School	28.25%	30.93%	26.27%	29.16%	24.05%
Schooling: Some College	30.98%	32.64%	21.45%	30.02%	19.50%
Schooling: Bachelor's and More	30.32%	17.74%	8.08%	7.22%	5.62%
Employed	62.83%	60.18%	65.72%	68.83%	71.01%
Married	64.96%	42.29%	64.51%	60.75%	67.80%
Mean of Family Size	2.61	2.81	3.88	3.68	4.09
Respondents who Smoke	21.03%	20.05%	13.31%	13.90%	14.89%

Table 2. Logistic Regression Analysis of Asthma, with the Coefficients Expressed in Odds Ratios, using Non-Hispanic Whites as Reference Category.

Model Asthma 1 (Reference: NH Whites)											
NH Blacks	1.09**	1.14**	1.13**	1.12**	1.08**	1.06**	1.05*	1.03+	1.03+	1.03*	1.02
	(.017)	(.018)	(.018)	(.018)	(.017)	(.017)	(.017)	(.017)	(.017)	(.017)	(.016)
White	.57**	.82**	.93*	.93*	.86**	.83**	.83**	.83**	.83**	.84**	.82**
Mexicans	(.014)	(.024)	(.029)	(.029)	(.026)	(.026)	(.026)	(.026)	(.026)	(.026)	(.025)
Black	1.09	1.42*	1.54*	1.52*	1.36+	1.31+	1.30	1.31	1.31	1.32+	1.23
Mexicans	(.177)	(.236)	(.257)	(.253)	(.227)	(.219)	(.221)	(.221)	(.222)	(.224)	(.210)
Other	.35**	.54**	.59**	.59**	.54**	.52**	.54**	.54**	.54**	.55**	.65**
Mexicans	(.039)	(.062)	(.069)	(.069)	(.063)	(.061)	(.063)	(.063)	(.063)	(.064)	(.076)
<i>Nativity and Length of Residency</i>											
FB <5 Years		.31**	.37**	.38**	.34**	.35**	.33**	.33**	.33**	.34**	.34**
		(.031)	(.038)	(.038)	(.035)	(.035)	(.033)	(.034)	(.034)	(.034)	(.035)
FB 5-14		.34**	.39**	.39**	.37**	.37**	.36**	.37**	.37**	.37**	.37**
Years		(.020)	(.024)	(.024)	(.022)	(.023)	(.023)	(.023)	(.023)	(.023)	(.023)
FB 15+		.51**	.54**	.54**	.57**	.56**	.58**	.58**	.58**	.58**	.57**
Years		(.017)	(.018)	(.019)	(.020)	(.020)	(.020)	(.020)	(.020)	(.020)	(.020)
<i>Language</i>											
Spanish			.53**	.53**	.54**	.50**	.50**	.51**	.51**	.51**	.52**
			(.038)	(.038)	(.038)	(.036)	(.036)	(.037)	(.037)	(.037)	(.037)
Bilingual			.63**	.63**	.63**	.59**	.59**	.60**	.60**	.60**	.60**
			(.047)	(.047)	(.047)	(.044)	(.044)	(.044)	(.044)	(.045)	(.045)
<i>Gender and Age</i>											
Female				1.35**	1.37**	1.37**	1.32**	1.32**	1.32**	1.32**	1.33**
				(.017)	(.017)	(.017)	(.017)	(.017)	(.017)	(.017)	(.017)
Age					.99**	.99**	.98**	.99**	.99**	.99**	.98**
					(.0003)	(.0003)	(.0003)	(.0003)	(.0004)	(.0004)	(.0004)
<i>Schooling</i>											
Less than						1.23**	1.10**	1.08**	1.08**	1.05*	1.09**
HS						(.024)	(.022)	(.021)	(.022)	(.021)	(.022)
High School						.95**	.90**	.89**	.89**	.88**	.90**
						(.016)	(.015)	(.015)	(.015)	(.015)	(.015)
Some						1.13**	1.09**	1.08**	1.08**	1.07**	1.07**
College						(.017)	(.017)	(.016)	(.016)	(.016)	(.017)
<i>Other Control Variables</i>											
Employed							.72*	.73**	.72**	.73**	.73**
							(.010)	(.010)	(.010)	(.010)	(.010)
Married								.89**	.89**	.89**	.90**
								(.010)	(.011)	(.011)	(.011)
Family Size								.99	.99	.99	.99
								(.005)	(.005)	(.005)	(.005)
Smoking										1.09**	1.10**
										(.015)	(.015)
Year											1.02**
											(.001)

Notes: Standard errors in parentheses.
 +p. <0.1; *p. <0.05; **p. <0.01

Table 3. Logistic Regression Analysis of Asthma with the Coefficients Expressed in Odds Ratios using the Different Monoracial and Ethnoracial Groups as Reference Categories.

	Model Asthma 1	Model Asthma 2	Model Asthma 3	Model Asthma 4	Model Asthma 5
	<i>Reference: NH Whites</i>	<i>Reference: NH Blacks</i>	<i>Reference: White Mexicans</i>	<i>Reference: Black Mexicans</i>	<i>Reference: Other Mexicans</i>
NH Whites	--	.97 (.016)	1.22** (.038)	.80 (.137)	1.53**
NH Blacks	1.02 (.016)	--	1.25** (.042)	.82 (.140)	1.56**
White Mexicans	.82** (.025)	.79** (.027)	--	.66* (.112)	1.25+
Black Mexicans	1.23 (.210)	1.20 (.204)	1.51* (.256)	--	1.89*
Other Mexicans	.65** (.076)	.63** (.074)	.79+ (.094)	.52* (.109)	--

Notes: The effects of all other independent variables remain the same as model asthma 1; standard errors in parentheses.
+*p.* <0.1; **p.* <0.05; ***p.* <0.01

Table 4. Logistic Regression Analysis of Cancer with the Coefficients Expressed in Odds Ratios using Non-Hispanic Whites as Reference Category.

Model Cancer 1 (Reference: NH Whites)											
NH Blacks	.37**	.38**	.38**	.38**	.47**	.48**	.48**	.49**	.50**	.50**	.49**
	(.009)	(.009)	(.009)	(.009)	(.011)	(.011)	(.011)	(.012)	(.012)	(.012)	(.012)
White	.21**	.26**	.28**	.29**	.48**	.52**	.51**	.52**	.53**	.53**	.52**
	(.008)	(.011)	(.012)	(.012)	(.020)	(.022)	(.021)	(.022)	(.022)	(.022)	(.022)
Mexicans Black	.23**	.28**	.29**	.29**	.67	.72	.72	.73	.75	.77	.72
	(.071)	(.085)	(.089)	(.088)	(.202)	(.220)	(.218)	(.222)	(.226)	(.232)	(.219)
Other Mexicans	.11**	.16**	.17**	.17**	.33**	.37**	.37**	.37**	.38**	.38**	.43**
	(.022)	(.032)	(.035)	(.034)	(.068)	(.075)	(.075)	(.075)	(.077)	(.079)	(.089)
<i>Nativity and Length of Residency</i>											
FB <5 Years		.13**	.14**	.14**	.35**	.35**	.33**	.32**	.33**	.33**	.33**
		(.025)	(.028)	(.029)	(.073)	(.073)	(.069)	(.069)	(.069)	(.070)	(.071)
FB 5-14 Years		.25**	.24**	.24**	.48**	.46**	.45**	.45**	.46**	.46**	.46**
		(.023)	(.024)	(.024)	(.049)	(.048)	(.047)	(.046)	(.047)	(.047)	(.047)
FB 15+ Years		.97	.99	.99	.75**	.75**	.75**	.75**	.75**	.76**	.75**
		(.970)	(.035)	(.035)	(.027)	(.027)	(.027)	(.027)	(.027)	(.027)	(.027)
<i>Language</i>											
Spanish			.82*	.82*	.72**	.79*	.79*	.79*	.80*	.79*	.79*
			(.074)	(.074)	(.066)	(.073)	(.074)	(.073)	(.074)	(.075)	(.075)
Bilingual			.70*	.71*	.65*	.70*	.70*	.69*	.71*	.70*	.70*
			(.094)	(.094)	(.087)	(.095)	(.095)	(.094)	(.096)	(.095)	(.095)
<i>Gender and Age</i>											
Female				1.25*	1.13**	1.14**	1.11**	1.14**	1.14**	1.15**	1.15**
				(.016)	(.016)	(.016)	(.015)	(.016)	(.016)	(.016)	(.016)
Age					1.05**	1.06**	1.05**	1.05**	1.05**	1.05**	1.05**
					(.0004)	(.0004)	(.0005)	(.0005)	(.0006)	(.0006)	(.0006)
<i>Schooling</i>											
Less than HS						.73**	.69**	.70**	.71**	.69**	.71**
						(.016)	(.015)	(.016)	(.016)	(.015)	(.016)
High School						.78**	.75**	.76**	.76**	.75**	.76**
						(.014)	(.014)	(.014)	(.014)	(.014)	(.014)
Some College						.92**	.90**	.91**	.91**	.90**	.90**
						(.017)	(.017)	(.017)	(.017)	(.017)	(.017)
<i>Other Control Variables</i>											
Employed							.74**	.73**	.73**	.73**	.73**
							(.013)	(.013)	(.013)	(.013)	(.013)
Married								1.16**	1.20**	1.21**	1.22**
								(.016)	(.019)	(.019)	(.019)
Family Size									.96**	.96**	.96**
									(.007)	(.007)	(.007)
Smoking										1.16**	1.16**
										(.021)	(.022)
Year											1.01**
											(.001)

Notes: Standard errors in parentheses.
+p. <0.1; *p. <0.05; **p. <0.01

Table 5. Logistic Regression Analysis of Cancer with the Coefficients Expressed in Odds Ratios using the Different Monoracial and Ethnoracial Groups as Reference Categories.

	Model Cancer 1	Model Cancer 2	Model Cancer 3	Model Cancer 4	Model Cancer 5
	<i>Reference: NH Whites</i>	<i>Reference: NH Blacks</i>	<i>Reference: White Mexicans</i>	<i>Reference: Black Mexicans</i>	<i>Reference: Other Mexicans</i>
NH Whites	--	2.00** (.049)	1.90** (.081)	1.37 (.412)	2.28** (.463)
NH Blacks	.49** (.012)	--	.95 (.044)	.68 (.206)	1.13 (.231)
White Mexicans	.52** (.022)	1.05 (.049)	--	.71 (.217)	1.19 (.245)
Black Mexicans	.72 (.219)	1.46 (.443)	1.39 (.420)	--	1.66 (.600)
Other Mexicans	.43** (.089)	.88 (.179)	.83 (.171)	.60 (.216)	--

Notes: The effects of all other independent variables remain the same as model cancer 1; standard errors in parentheses.
 +*p.* <0.1; **p.* <0.05; ***p.* <0.01

Table 6. Logistic Regression Analysis of Chronic Illness with the Coefficients Expressed in Odds Ratios using Non-Hispanic Whites as Reference Category.

Model Chronic 1 (Reference: NH Whites)											
NH Blacks	1.01	1.06**	1.06**	1.05**	1.36**	1.29**	1.27**	1.26**	1.26**	1.27**	1.26**
	(.013)	(.013)	(.013)	(.013)	(.017)	(.016)	(.016)	(.016)	(.016)	(.016)	(.016)
White	.48**	.61**	.62**	.62**	.99	.90**	.90**	.90**	.91**	.91**	.89**
	(.008)	(.011)	(.013)	(.013)	(.022)	(.020)	(.020)	(.020)	(.021)	(.021)	(.020)
Mexicans	.51**	.62**	.63**	.62**	1.22+	1.10	1.11	1.11	1.12	1.13	1.08
	(.057)	(.071)	(.072)	(.072)	(.145)	(.132)	(.133)	(.133)	(.135)	(.136)	(.130)
Black	.32**	.47**	.47**	.47**	.79**	.71**	.73**	.73**	.74**	.74**	.82*
	(.018)	(.026)	(.027)	(.027)	(.049)	(.045)	(.047)	(.047)	(.047)	(.048)	(.053)
<i>Nativity and Length of Residency</i>											
FB <5 Years		.24**	.24**	.24**	.42**	.44**	.41**	.42**	.42**	.42**	.42**
		(.012)	(.012)	(.012)	(.023)	(.024)	(.022)	(.022)	(.022)	(.022)	(.023)
FB 5-14		.34**	.32**	.32**	.46**	.47**	.47**	.47**	.47**	.47**	.47**
		(.009)	(.009)	(.009)	(.013)	(.014)	(.014)	(.014)	(.014)	(.014)	(.014)
FB 15+		.92**	.91**	.91**	.65**	.65**	.67**	.67**	.67**	.68**	.67**
		(.016)	(.016)	(.016)	(.012)	(.012)	(.013)	(.013)	(.013)	(.013)	(.013)
<i>Language</i>											
Spanish			1.04	1.04	.91*	.79**	.80**	.80**	.81**	.81**	.82**
			(.036)	(.036)	(.033)	(.029)	(.029)	(.029)	(.029)	(.030)	(.030)
Bilingual			.92*	.92*	.86**	.77**	.78**	.78**	.79**	.79**	.79**
			(.036)	(.036)	(.034)	(.031)	(.032)	(.032)	(.032)	(.033)	(.033)
<i>Gender and Age</i>											
Female			1.09**	1.02*	1.02*	.97*	.97*	.97*	.98*	.98*	.98+
			(.008)	(.009)	(.009)	(.008)	(.008)	(.008)	(.009)	(.009)	(.009)
Age				1.05**	1.05**	1.05**	1.05**	1.05**	1.05**	1.05**	1.05**
				(.0002)	(.0002)	(.0003)	(.0003)	(.0003)	(.0003)	(.0003)	(.0003)
<i>Schooling</i>											
Less than HS						1.67**	1.45**	1.44**	1.45**	1.43**	1.46**
						(.025)	(.022)	(.022)	(.022)	(.022)	(.023)
High School						1.29**	1.21**	1.21**	1.21**	1.20**	1.22**
						(.015)	(.014)	(.014)	(.014)	(.014)	(.014)
Some						1.36**	1.30**	1.29**	1.29**	1.28**	1.29**
						(.015)	(.015)	(.015)	(.015)	(.015)	(.015)
<i>Other Control Variables</i>											
Employed							.64**	.65**	.65**	.65**	.65**
							(.006)	(.006)	(.006)	(.006)	(.006)
Married								.93**	.95**	.95**	.96**
								(.007)	(.009)	(.009)	(.009)
Family Size									.98**	.98**	.98**
									(.003)	(.003)	(.003)
Smoking										1.06**	1.07**
										(.010)	(.010)
Year											1.01**
											(.0009)

Notes: Standard errors in parentheses.
+p. <0.1; *p. <0.05; **p. <0.01

Table 7. Logistic Regression Analysis of Chronic Illness with the Coefficients Expressed in Odds Ratios using the Different Monoracial and Ethnoracial Groups as Reference Categories.

	Model Chronic 1	Model Chronic 2	Model Chronic 3	Model Chronic 4	Model Chronic 5
	<i>Reference: NH Whites</i>	<i>Reference: NH Blacks</i>	<i>Reference: White Mexicans</i>	<i>Reference: Black Mexicans</i>	<i>Reference: Other Mexicans</i>
NH Whites	--	.79** (.010)	1.11** (.025)	.92 (.111)	1.21* (.078)
NH Blacks	1.26** (.016)	--	1.40** (.035)	1.16 (.141)	1.52** (.101)
White Mexicans	.89** (.020)	.71** (.017)	--	.82 (.100)	1.08 (.071)
Black Mexicans	1.08 (.130)	.85 (.103)	1.20 (.146)	--	1.31+ (.182)
Other Mexicans	.82* (.053)	.65** (.043)	.91 (.060)	.76+ (.105)	--

Notes: The effects of all other independent variables remain the same as model chronic 1; standard errors in parentheses.
+*p.* <0.1; **p.* <0.05; ***p.* <0.01

Table 8. Logistic Regression Analysis of Distress with the Coefficients Expressed in Odds Ratios using Non-Hispanic Whites as Reference Category.

Model Distress 1 (Reference: NH Whites)											
NH Blacks	1.12**	1.14**	1.15**	1.13**	1.13**	.93*	.88**	.82**	.83**	.88**	.88**
	(.033)	(.034)	(.034)	(.034)	(.034)	(.028)	(.026)	(.025)	(.026)	(.027)	(.027)
White	.99	1.11*	1.00	1.01	1.00	.72**	.72**	.73**	.75**	.88*	.86*
Mexicans	(.034)	(.043)	(.047)	(.047)	(.047)	(.036)	(.036)	(.036)	(.038)	(.044)	(.043)
Black	1.04	1.15	1.07	1.06	1.05	.80	.79	.78	.80	.88	.84
Mexicans	(.267)	(.298)	(.279)	(.274)	(.271)	(.208)	(.211)	(.208)	(.214)	(.242)	(.232)
Other	1.16	1.34*	1.23	1.23+	1.22	.82	.90	.92	.96	1.10	1.22
Mexicans	(.137)	(.168)	(.158)	(.157)	(.156)	(.105)	(.117)	(.119)	(.124)	(.141)	(.159)
<i>Nativity and Length of Residency</i>											
FB <5 Years		.69*	.55**	.57**	.56**	.56**	.50**	.51**	.50**	.57**	.58**
		(.082)	(.074)	(.076)	(.076)	(.078)	(.070)	(.070)	(.069)	(.079)	(.080)
FB 5-14		.62**	.54**	.54**	.54**	.52**	.52**	.55**	.56**	.65**	.65**
Years		(.048)	(.045)	(.045)	(.045)	(.045)	(.045)	(.047)	(.048)	(.055)	(.055)
FB 15+		.91*	.84**	.84**	.84**	.86*	.94	.97	.98	1.05	1.04
Years		(.039)	(.038)	(.038)	(.038)	(.040)	(.044)	(.045)	(.045)	(.049)	(.049)
<i>Language</i>											
Spanish			1.46**	1.46**	1.46**	.96	.98	1.01	1.03	1.08	1.09
			(.129)	(.129)	(.130)	(.086)	(.088)	(.091)	(.093)	(.098)	(.098)
Bilingual			1.51**	1.51**	1.51**	1.11	1.12	1.14	1.17+	1.23*	1.23*
			(.133)	(.133)	(.133)	(.100)	(.102)	(.104)	(.106)	(.113)	(.113)
<i>Gender and Age</i>											
Female			1.46**	1.46**	1.49**	1.28**	1.28**	1.29**	1.36**	1.37**	
			(.031)	(.031)	(.032)	(.029)	(.029)	(.029)	(.031)	(.031)	
Age				.99	.99**	.98**	.98**	.98**	.99**	.99**	
				(.0005)	(.0005)	(.0005)	(.0004)	(.0005)	(.0005)	(.0005)	
<i>Schooling</i>											
Less than						6.70**	4.43**	4.20**	4.29**	3.22**	3.29**
HS						(.282)	(.190)	(.183)	(.187)	(.144)	(.149)
High School						3.46**	2.79**	2.71**	2.75**	2.19**	2.22**
						(.142)	(.115)	(.113)	(.114)	(.092)	(.093)
Some						2.65**	2.27**	2.19**	2.20**	1.91**	1.92**
College						(.108)	(.093)	(.090)	(.091)	(.080)	(.080)
<i>Other Control Variables</i>											
Employed							.28**	.29**	.29**	.29**	.29**
							(.007)	(.007)	(.007)	(.007)	(.007)
Married								.73**	.77**	.76**	.77**
								(.017)	(.019)	(.019)	(.019)
Family Size									.94**	.96**	.96**
									(.009)	(.009)	(.009)
Smoking										2.65**	2.66**
										(.063)	(.063)
Year											1.01**
											(.002)

Notes: Standard errors in parentheses.
 +p. <0.1; *p. <0.05; **p. <0.01

Table 9. Logistic Regression Analysis of Distress with the Coefficients Expressed in Odds Ratios using the Different Monoracial and Ethnoracial Groups as Reference Categories.

	Model Distress 1	Model Distress 2	Model Distress 3	Model Distress 4	Model Distress 5
	<i>Reference: NH Whites</i>	<i>Reference: NH Blacks</i>	<i>Reference: White Mexicans</i>	<i>Reference: Black Mexicans</i>	<i>Reference: Other Mexicans</i>
NH Whites	--	1.13** (.035)	1.15* (.057)	1.18 (.325)	.81 (.105)
NH Blacks	.88** (.027)	--	1.01 (.054)	1.04 (.285)	.71 (.093)
White Mexicans	.86* (.043)	.98 (.053)	--	1.02 (.282)	.70* (.090)
Black Mexicans	.84 (.232)	.95 (.262)	.97 (.266)	--	.68 (.205)
Other Mexicans	1.22 (.159)	1.39* (.181)	1.41* (.180)	1.45 (.434)	--

Notes: The effects of all other independent variables remain the same as model distress 1; standard errors in parentheses.
+*p.* <0.1; **p.* <0.05; ***p.* <0.01

Table 10. Logistic Regression Analysis of Heart Disease with the Coefficients Expressed in Odds Ratios using Non-Hispanic Whites as Reference Category.

Model Heart 1 (Reference: NH Whites)											
NH Blacks	.66**	.68**	.68**	.68**	.81**	.78**	.77**	.76**	.76**	.76**	.76**
	(.015)	(.015)	(.015)	(.015)	(.018)	(.018)	(.017)	(.017)	(.017)	(.017)	(.017)
White	.34**	.42**	.43**	.43**	.64**	.60**	.60**	.60**	.60**	.60**	.60**
Mexicans	(.010)	(.013)	(.017)	(.017)	(.026)	(.025)	(.025)	(.025)	(.025)	(.025)	(.025)
Black	.20**	.24**	.25**	.25**	.44*	.39*	.39*	.39*	.38*	.39*	.39*
Mexicans	(.072)	(.086)	(.087)	(.087)	(.153)	(.143)	(.144)	(.144)	(.143)	(.144)	(.144)
Other	.21**	.30**	.30**	.30**	.48**	.45**	.46**	.46**	.46**	.46**	.46**
Mexicans	(.040)	(.057)	(.058)	(.058)	(.093)	(.087)	(.089)	(.090)	(.089)	(.090)	(.090)
<i>Nativity and Length of Residency</i>											
FB <5 Years		.20**	.19**	.19**	.34**	.35**	.32**	.32**	.32**	.32**	.32**
		(.028)	(.028)	(.028)	(.050)	(.052)	(.047)	(.047)	(.047)	(.048)	(.048)
FB 5-14		.31**	.29**	.29**	.44**	.44**	.43**	.43**	.43**	.43**	.43**
Years		(.024)	(.024)	(.024)	(.037)	(.039)	(.038)	(.038)	(.038)	(.038)	(.038)
FB 15+		.90*	.90*	.90*	.74**	.74**	.75**	.75**	.75**	.75**	.75**
Years		(.030)	(.031)	(.031)	(.026)	(.026)	(.026)	(.026)	(.026)	(.026)	(.026)
<i>Language</i>											
Spanish			.96	.96	.87	.79*	.80*	.79*	.79*	.79*	.79*
			(.080)	(.080)	(.074)	(.068)	(.068)	(.068)	(.068)	(.069)	(.069)
Bilingual			.96	.96	.92	.87	.87	.87	.87	.88	.88
			(.089)	(.089)	(.087)	(.083)	(.083)	(.084)	(.083)	(.084)	(.084)
<i>Gender and Age</i>											
Female				1.07**	1.00	1.00	.95*	.95*	.95*	.95*	.95*
				(.014)	(.013)	(.013)	(.013)	(.013)	(.013)	(.013)	(.013)
Age					1.03**	1.03**	1.03**	1.03**	1.03**	1.03**	1.03**
					(.0004)	(.0004)	(.0004)	(.0004)	(.0005)	(.0005)	(.0005)
<i>Schooling</i>											
Less than HS						1.31**	1.15**	1.15**	1.14**	1.13**	1.13**
						(.032)	(.028)	(.028)	(.028)	(.028)	(.028)
High School						1.04*	.98	.97	.97	.97	.97
						(.020)	(.019)	(.019)	(.019)	(.019)	(.019)
Some						1.18**	1.12**	1.12**	1.12**	1.11**	1.11**
College						(.023)	(.022)	(.022)	(.022)	(.022)	(.022)
<i>Other Control Variables</i>											
Employed							.60**	.60**	.60**	.60**	.60**
							(.010)	(.010)	(.010)	(.010)	(.010)
Married								.97+	.96*	.96*	.96*
								(.013)	(.015)	(.015)	(.015)
Family Size									1.01	1.01	1.01
									(.007)	(.007)	(.007)
Smoking										1.05*	1.05**
										(.021)	(.021)
Year											1.00
											(.001)

Notes: Standard errors in parentheses.
 +*p.* <0.1; **p.* <0.05; ***p.* <0.01

Table 11. Logistic Regression Analysis of Heart Disease with the Coefficients Expressed in Odds Ratios using the Different Monoracial and Ethnoracial Groups as Reference Categories.

	Model Heart 1	Model Heart 2	Model Heart 3	Model Heart 4	Model Heart 5
	<i>Reference: NH Whites</i>	<i>Reference: NH Blacks</i>	<i>Reference: White Mexicans</i>	<i>Reference: Black Mexicans</i>	<i>Reference: Other Mexicans</i>
NH Whites	--	1.30** (.030)	1.65** (.070)	2.54* (.937)	2.13** (.412)
NH Blacks	.76** (.017)	--	1.26** (.057)	1.95+ (.717)	1.63* (.316)
White Mexicans	.60** (.025)	.78** (.036)	--	1.54 (.570)	1.29 (.249)
Black Mexicans	.39* (.144)	.51+ (.188)	.64 (.240)	--	.83 (.342)
Other Mexicans	.46** (.090)	.61* (.117)	.77 (.149)	1.19 (.485)	--

Notes: The effects of all other independent variables remain the same as model heart 1; standard errors in parentheses.
+*p.* <0.1; **p.* <0.05; ***p.* <0.01

Table 12. Logistic Regression Analysis of Liver Disease with the Coefficients Expressed in Odds Ratios using Non-Hispanic Whites as Reference Category.

Model Liver 1 (Reference: NH Whites)											
NH Blacks	.77**	.78**	.79**	.79**	.86*	.79**	.76**	.74**	.75**	.77**	.76**
	(.037)	(.038)	(.038)	(.038)	(.042)	(.039)	(.038)	(.037)	(.038)	(.039)	(.039)
White	1.03	1.16*	1.21*	1.21*	1.46**	1.29*	1.29*	1.28*	1.34*	1.43**	1.41**
Mexicans	(.054)	(.072)	(.086)	(.086)	(.105)	(.097)	(.096)	(.095)	(.100)	(.107)	(.105)
Black	1.51	1.69	1.75	1.75	2.27*	2.04+	2.02+	2.02+	2.08+	2.27*	2.16*
Mexicans	(.601)	(.667)	(.690)	(.691)	(.900)	(.808)	(.810)	(.807)	(.833)	(.907)	(.864)
Other	.99	1.13	1.20	1.20	1.49+	1.27	1.34	1.36	1.42	1.46+	1.64*
Mexicans	(.203)	(.241)	(.259)	(.259)	(.323)	(.276)	(.294)	(.297)	(.309)	(.319)	(.362)
<i>Nativity and Length of Residency</i>											
FB <5 Years		.51*	.52*	.51*	.66+	.67+	.61*	.57*	.56*	.60*	.61*
		(.105)	(.112)	(.111)	(.143)	(.150)	(.135)	(.126)	(.123)	(.131)	(.133)
FB 5-14		.55**	.50**	.50**	.59**	.58**	.58**	.59**	.59**	.63**	.63**
Years		(.064)	(.058)	(.058)	(.069)	(.071)	(.070)	(.071)	(.072)	(.078)	(.078)
FB 15+		.97	.96	.96	.87+	.89	.94	.95	.96	.98	.97
Years		(.068)	(.067)	(.067)	(.061)	(.064)	(.066)	(.067)	(.068)	(.070)	(.070)
<i>Language</i>											
Spanish			1.05	1.05	.99	.86	.87	.89	.92	.95	.95
			(.118)	(.118)	(.113)	(.099)	(.100)	(.102)	(.105)	(.109)	(.109)
Bilingual			.77	.77	.75	.68*	.69*	.70*	.72*	.74+	.74+
			(.122)	(.122)	(.120)	(.108)	(.109)	(.111)	(.115)	(.118)	(.118)
<i>Gender and Age</i>											
Female				.95	.92*	.91*	.83**	.83**	.83**	.86**	.86
				(.029)	(.028)	(.028)	(.026)	(.026)	(.026)	(.027)	(.027)
Age					1.01**	1.01**	1.00**	1.00**	1.00**	1.00**	1.00**
					(.0007)	(.0007)	(.0007)	(.0007)	(.0008)	(.0008)	(.0008)
<i>Schooling</i>											
Less than HS						1.96**	1.55**	1.52**	1.55**	1.34**	1.38**
						(.105)	(.083)	(.082)	(.084)	(.073)	(.075)
High School						1.51**	1.33**	1.31**	1.33**	1.19**	1.21**
						(.072)	(.064)	(.064)	(.064)	(.058)	(.059)
Some						1.63**	1.49**	1.46**	1.47**	1.37**	1.38**
College						(.074)	(.068)	(.068)	(.068)	(.064)	(.064)
<i>Other Control Variables</i>											
Employed							.44**	.45**	.45**	.45**	.45**
							(.016)	(.017)	(.017)	(.017)	(.017)
Married								.87**	.93+	.98	.95
								(.028)	(.035)	(.036)	(.036)
Family Size									.93**	.94*	.94*
									(.016)	(.016)	(.016)
Smoking										1.78**	1.78**
										(.064)	(.064)
Year											1.01**
											(.003)

Notes: Standard errors in parentheses.
 +*p.* <0.1; **p.* <0.05; ***p.* <0.01

Table 13. Logistic Regression Analysis of Liver Disease with the Coefficients Expressed in Odds Ratios using the Different Monoracial and Ethnoracial Groups as Reference Categories.

	Model Liver 1	Model Liver 2	Model Liver 3	Model Liver 4	Model Liver 5
	<i>Reference:</i> <i>NH Whites</i>	<i>Reference:</i> <i>NH Blacks</i>	<i>Reference:</i> <i>White Mexicans</i>	<i>Reference:</i> <i>Black Mexicans</i>	<i>Reference:</i> <i>Other Mexicans</i>
NH Whites	--	1.30** (.067)	.71** (.053)	.46+ (.183)	.60* (.133)
NH Blacks	.76** (.039)	--	.54** (.044)	.35* (.142)	.46* (.103)
White Mexicans	1.41** (.105)	1.84** (.152)	--	.64 (.263)	.85 (.188)
Black Mexicans	2.16* (.864)	2.83* (1.14)	1.53 (.624)	--	1.31 (.607)
Other Mexicans	1.64* (.362)	2.15* (.481)	1.16 (.256)	.75 (.350)	--

Notes: The effects of all other independent variables remain the same as model liver 1; standard errors in parentheses.
 +*p.* <0.1; **p.* <0.05; ***p.* <0.01

Table 14. Logistic Regression Analysis of Poor or Fair Self-Rated Health with the Coefficients Expressed in Odds Ratios using Non-Hispanic Whites as Reference Category.

Model Poor/Fair (P/F) 1 (Reference: NH Whites)											
NH Blacks	1.66**	1.70**	1.73**	1.72**	2.14**	1.76**	1.71**	1.67**	1.67**	1.71**	1.71**
	(.029)	(.029)	(.030)	(.030)	(.038)	(.030)	(.029)	(.029)	(.029)	(.030)	(.030)
White	1.18**	1.32**	1.11**	1.12**	1.68**	1.19**	1.20**	1.20**	1.21**	1.31**	1.29**
Mexicans	(.025)	(.030)	(.029)	(.029)	(.043)	(.032)	(.032)	(.032)	(.032)	(.035)	(.035)
Black	1.04	1.15	1.03	1.03	1.81**	1.30	1.31+	1.30+	1.31+	1.45*	1.42*
Mexicans	(.166)	(.186)	(.168)	(.167)	(.299)	(.216)	(.217)	(.216)	(.217)	(.243)	(.237)
Other	.94	1.19*	1.03	1.03	1.63**	1.05	1.15	1.16+	1.16+	1.25*	1.31*
Mexicans	(.080)	(.103)	(.088)	(.088)	(.142)	(.093)	(.104)	(.105)	(.106)	(.113)	(.119)
<i>Nativity and Length of Residency</i>											
FB <5 Years		.34**	.24**	.24**	.40**	.38**	.33**	.33**	.33**	.36**	.36**
		(.027)	(.020)	(.020)	(.034)	(.033)	(.030)	(.030)	(.030)	(.033)	(.033)
FB 5-14		.49**	.36**	.36**	.50**	.47**	.47**	.48**	.48**	.53**	.53**
Years		(.025)	(.018)	(.018)	(.026)	(.026)	(.026)	(.026)	(.026)	(.029)	(.029)
FB 15+		1.10**	.94*	.94*	.77**	.77**	.86**	.87**	.87**	.91*	.90*
Years		(.027)	(.024)	(.024)	(.020)	(.022)	(.024)	(.024)	(.024)	(.025)	(.025)
<i>Language</i>											
Spanish			2.25**	2.25**	2.11**	1.37**	1.39**	1.41**	1.41**	1.44*	1.44*
			(.098)	(.098)	(.093)	(.061)	(.063)	(.064)	(.064)	(.066)	(.066)
Bilingual			1.47**	1.47**	1.44**	1.02	1.02	1.03**	1.03	1.05	1.05
			(.071)	(.071)	(.069)	(.050)	(.051)	(.052)	(.052)	(.054)	(.054)
<i>Gender and Age</i>											
Female				1.12**	1.06**	1.05**	.91**	.91**	.91**	.93**	.94**
				(.012)	(.012)	(.012)	(.011)	(.011)	(.011)	(.011)	(.011)
Age					1.03**	1.03**	1.02**	1.02**	1.02**	1.02**	1.02**
					(.0003)	(.0003)	(.0003)	(.0003)	(.0004)	(.0004)	(.0004)
<i>Schooling</i>											
Less than						6.42**	4.72**	4.63**	4.64**	4.06**	4.11**
HS						(.139)	(.101)	(.101)	(.102)	(.091)	(.093)
High School						3.17**	2.72**	2.69**	2.69**	2.43**	2.44**
						(.064)	(.054)	(.054)	(.054)	(.049)	(.050)
Some						2.36**	2.12**	2.10**	2.10**	1.97**	1.97**
College						(.047)	(.043)	(.042)	(.042)	(.040)	(.040)
<i>Other Control Variables</i>											
Employed							.28**	.29**	.29**	.28**	.29**
							(.004)	(.004)	(.004)	(.004)	(.004)
Married								.88**	.89**	.90**	.90**
								(.010)	(.012)	(.012)	(.012)
Family Size									.99	1.00	1.00
									(.006)	(.006)	(.006)
Smoking										1.86**	1.86**
										(.026)	(.026)
Year											1.00*
											(.001)

Notes: Standard errors in parentheses.

+p. <0.1; *p. <0.05; **p. <0.01

Table 15. Logistic Regression Analysis of Poor or Fair Self Rated Health with the Coefficients Expressed in Odds Ratios using the Different Monoracial and Ethnoracial Groups as Reference Categories.

	Model P/F 1	Model P/F 2	Model P/F 3	Model P/F 4	Model P/F 5
	<i>Reference: NH Whites</i>	<i>Reference: NH Blacks</i>	<i>Reference: White Mexicans</i>	<i>Reference: Black Mexicans</i>	<i>Reference: Other Mexicans</i>
NH Whites	--	.58** (.010)	.77** (.020)	.70* (.116)	.76* (.069)
NH Blacks	1.71** (.030)	--	1.31** (.037)	1.19 (.200)	1.30* (.119)
White Mexicans	1.29** (.035)	.75** (.021)	--	.90 (.150)	.98 (.089)
Black Mexicans	1.42* (.237)	.83 (.139)	1.09 (.182)	--	1.08 (.203)
Other Mexicans	1.31* (.119)	.76** (.070)	1.01 (.092)	.92 (.172)	--

Notes: The effects of all other independent variables remain the same as poor/fair model 1; standard errors in parentheses.
+*p.* <0.1; **p.* <0.05; ***p.* <0.01

Table 16. Logistic Regression Analysis of Diabetes with the Coefficients Expressed in Odds Ratios using Non-Hispanic Whites as Reference Category.

Model Diabetes 1 (Reference: NH Whites)											
NH Blacks	1.51**	1.55**	1.56**	1.56**	2.08**	1.93**	1.91**	1.95**	1.94**	1.94**	1.92**
	(.025)	(.026)	(.026)	(.026)	(.035)	(.033)	(.033)	(.034)	(.034)	(.034)	(.034)
White	1.16**	1.31**	1.23**	1.22**	2.13**	1.88**	1.88**	1.88**	1.87**	1.85**	1.78**
Mexicans	(.029)	(.036)	(.038)	(.038)	(.070)	(.063)	(.062)	(.062)	(.062)	(.062)	(.059)
Black	.77	.84	.81	.81	1.76**	1.53*	1.53*	1.55*	1.54*	1.53*	1.39+
Mexicans	(.141)	(.157)	(.152)	(.152)	(.332)	(.293)	(.293)	(.298)	(.295)	(.294)	(.269)
Other	.75*	.98	.93	.93	1.73**	1.51**	1.54**	1.54**	1.53**	1.50**	1.82**
Mexicans	(.071)	(.093)	(.089)	(.089)	(.175)	(.150)	(.153)	(.153)	(.152)	(.149)	(.183)
<i>Nativity and Length of Residency</i>											
FB <5 Years		.21**	.19**	.19**	.39**	.40**	.38**	.38**	.38**	.38**	.39**
		(.028)	(.026)	(.026)	(.053)	(.055)	(.052)	(.052)	(.052)	(.052)	(.054)
FB 5-14		.33**	.29**	.29**	.48**	.48**	.48**	.48**	.48**	.48**	.48**
Years		(.021)	(.019)	(.019)	(.031)	(.032)	(.032)	(.032)	(.032)	(.031)	(.032)
FB 15+		1.20**	1.12**	1.12*	.89*	.91*	.94+	.93*	.93*	.92*	.91*
Years		(.033)	(.033)	(.033)	(.027)	(.028)	(.029)	(.029)	(.029)	(.029)	(.028)
<i>Language</i>											
Spanish			1.34**	1.34**	1.17*	1.01	1.00	1.00	.99	1.00	.99
			(.070)	(.070)	(.063)	(.055)	(.055)	(.054)	(.054)	(.055)	(.055)
Bilingual			1.32**	1.32**	1.25**	1.12+	1.12+	1.11+	1.10	1.11	1.11+
			(.081)	(.081)	(.077)	(.070)	(.070)	(.070)	(.070)	(.070)	(.070)
<i>Gender and Age</i>											
Female			.92**	.82**	.81**	.78**	.79**	.79**	.79**	.78**	.79**
			(.012)	(.011)	(.011)	(.011)	(.011)	(.011)	(.011)	(.011)	(.011)
Age				1.05**	1.05**	1.04**	1.04**	1.04**	1.04**	1.04**	1.04**
				(.0004)	(.0004)	(.0004)	(.0004)	(.0003)	(.0005)	(.0005)	(.0005)
<i>Schooling</i>											
Less than						1.94**	1.76**	1.78**	1.78**	1.80**	1.89**
HS						(.045)	(.041)	(.043)	(.042)	(.043)	(.046)
High School						1.61**	1.52**	1.53**	1.53**	1.54**	1.58**
						(.034)	(.033)	(.033)	(.033)	(.034)	(.035)
Some						1.53**	1.48**	1.49**	1.49**	1.50**	1.51**
College						(.030)	(.029)	(.030)	(.030)	(.030)	(.031)
<i>Other Control Variables</i>											
Employed							.65**	.64**	.64**	.64**	.65**
							(.011)	(.011)	(.011)	(.011)	(.011)
Married								1.11**	1.09**	1.09**	1.10**
								(.016)	(.019)	(.019)	(.019)
Family Size									1.01+	1.01+	1.01
									(.008)	(.008)	(.008)
Smoking										.94*	.95*
										(.018)	(.018)
Year											1.02*
											(.001)

Notes: Standard errors in parentheses.

+p. <0.1; *p. <0.05; **p. <0.01

Table 17. Logistic Regression Analysis of Diabetes with the Coefficients Expressed in Odds Ratios using the Different Monoracial and Ethnoracial Groups as Reference Categories.

	Model Diabetes 1	Model Diabetes 2	Model Diabetes 3	Model Diabetes 4	Model Diabetes 5
	<i>Reference: NH Whites</i>	<i>Reference: NH Blacks</i>	<i>Reference: White Mexicans</i>	<i>Reference: Black Mexicans</i>	<i>Reference: Other Mexicans</i>
NH Whites	--	.52** (.009)	.55** (.018)	.71 (.137)	.54** (.055)
NH Blacks	1.92** (.034)	--	1.07* (.037)	1.37 (.264)	1.05 (.106)
White Mexicans	1.78** (.059)	.93* (.032)	--	1.27 (.247)	.98 (.098)
Black Mexicans	1.39+ (.269)	.72 (.140)	.78 (.151)	--	.76 (.165)
Other Mexicans	1.82** (.183)	.95 (.096)	1.02 (.102)	1.30 (.281)	--

Notes: The effects of all other independent variables remain the same as poor/fair model 1; standard errors in parentheses.
+*p.* <0.1; **p.* <0.05; ***p.* <0.01

APPENDIX B

FIGURES

Figure 1. Modified Version of the Latin Americanization Thesis

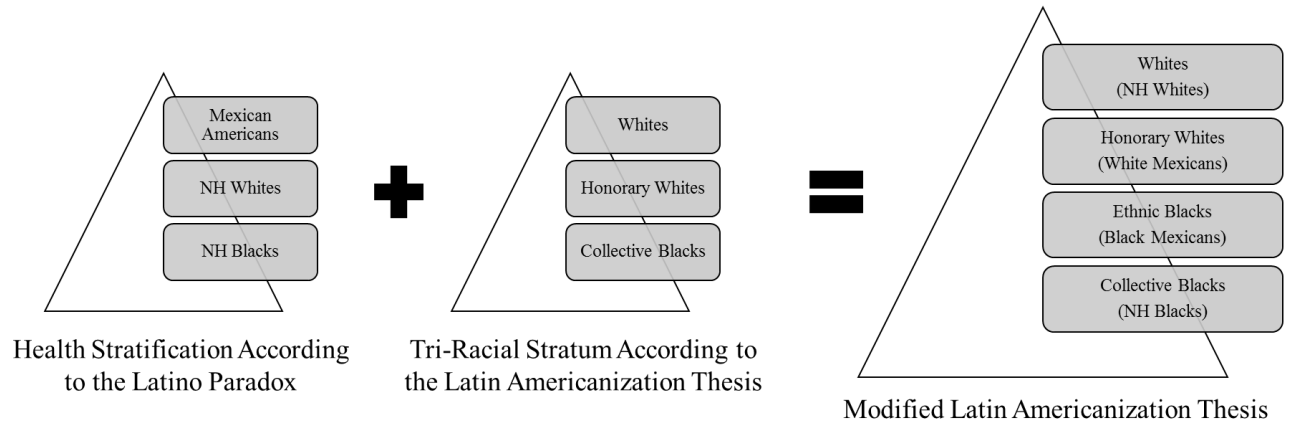
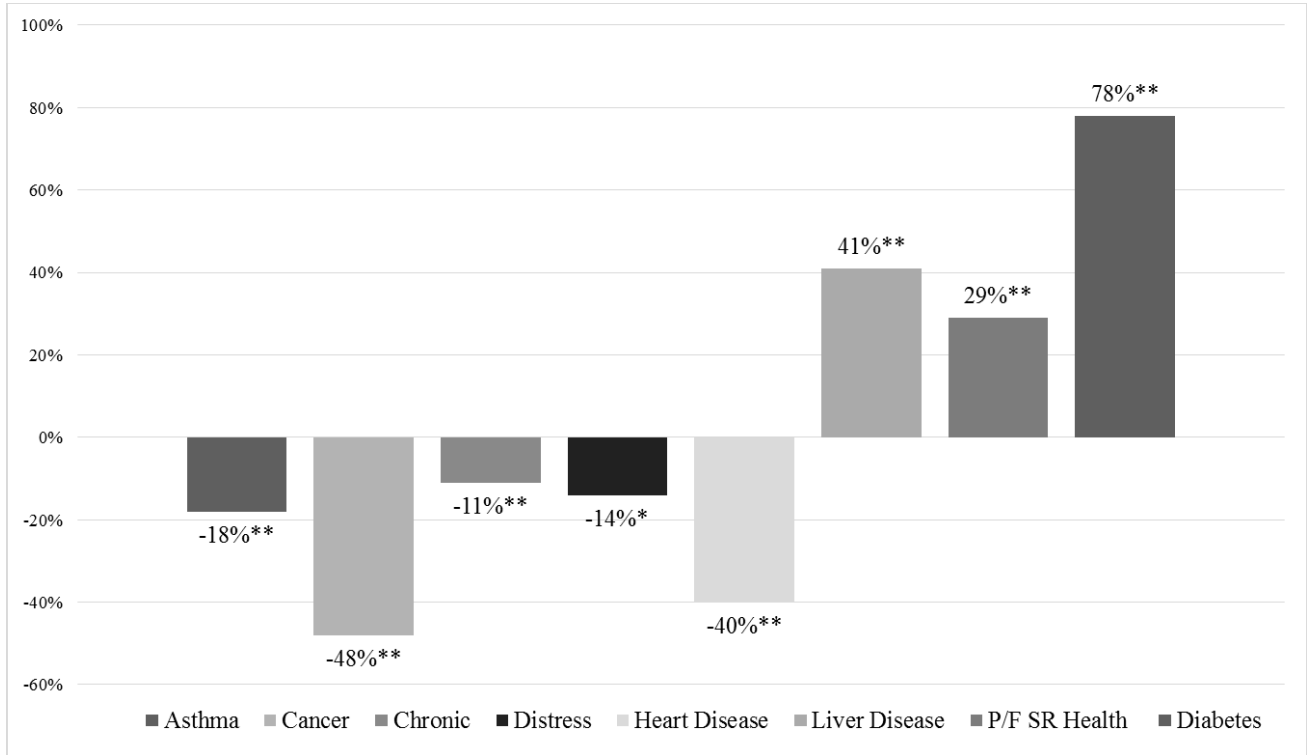
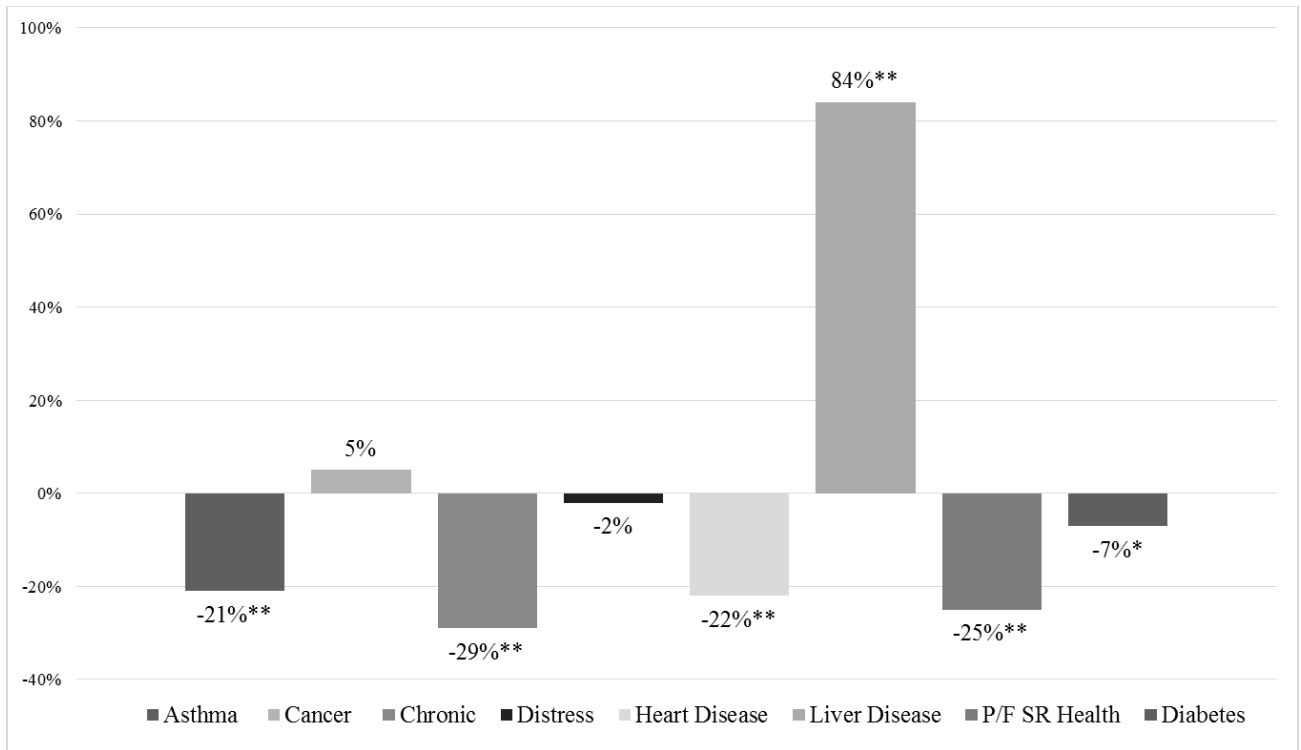


Figure 2. White Mexicans Percentage Change in Odd Ratios in Reference to NH Whites



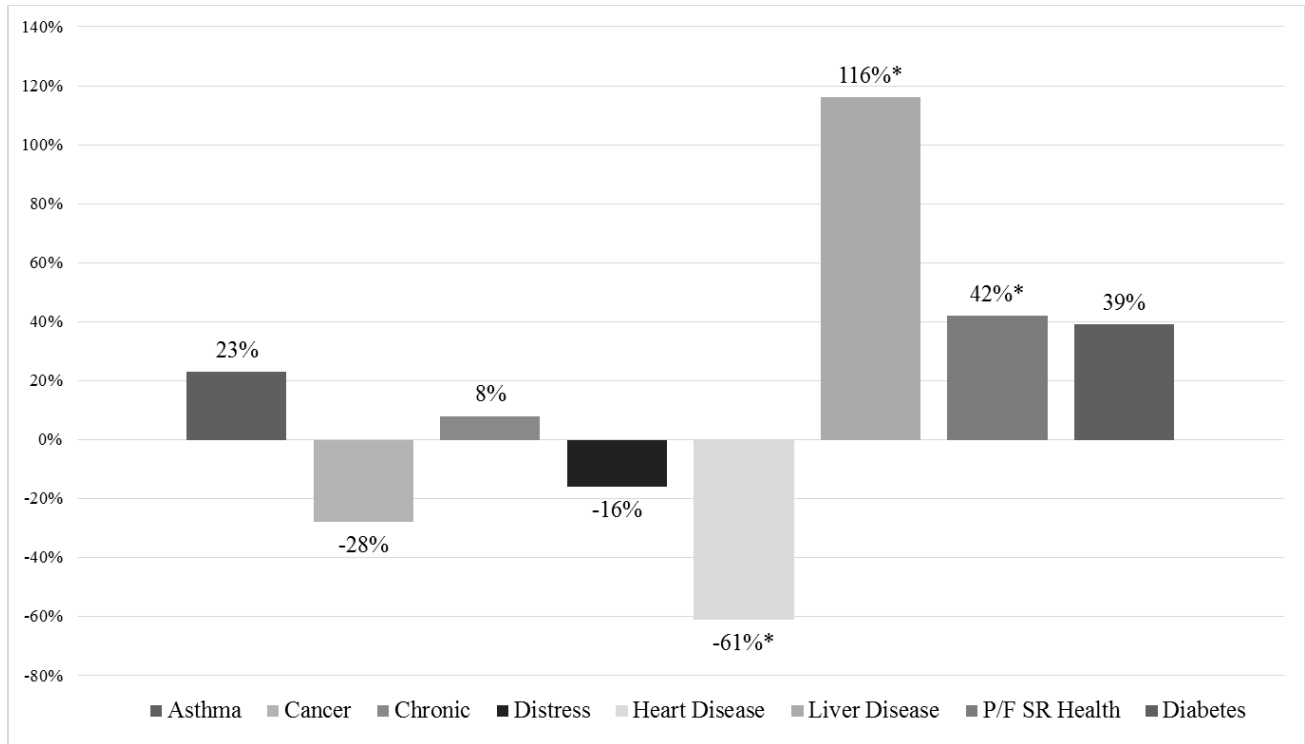
* $p. < 0.05$; ** $p. < 0.01$

Figure 3. White Mexicans Percentage Change in Odd Ratios in Reference to NH Blacks



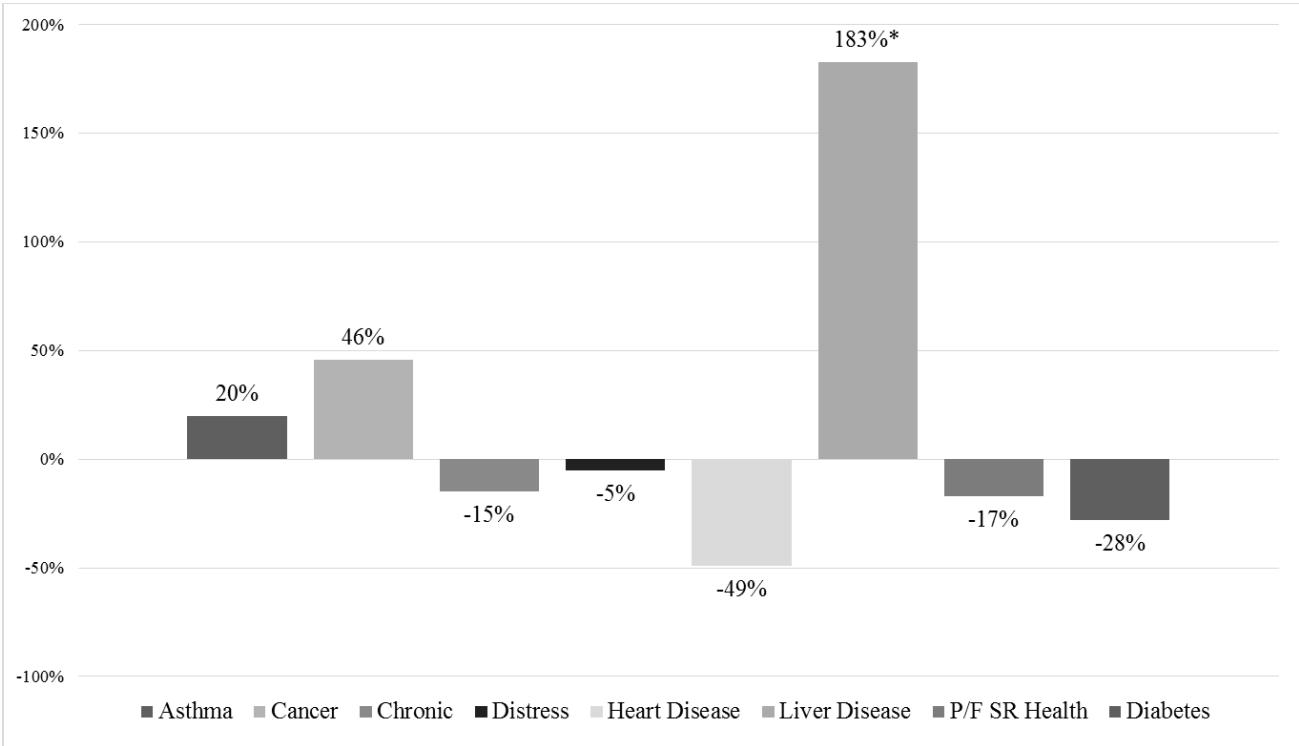
* $p. < 0.05$; ** $p. < 0.01$

Figure 4. Black Mexicans Percentage Change in Odd Ratios in Reference to NH Whites



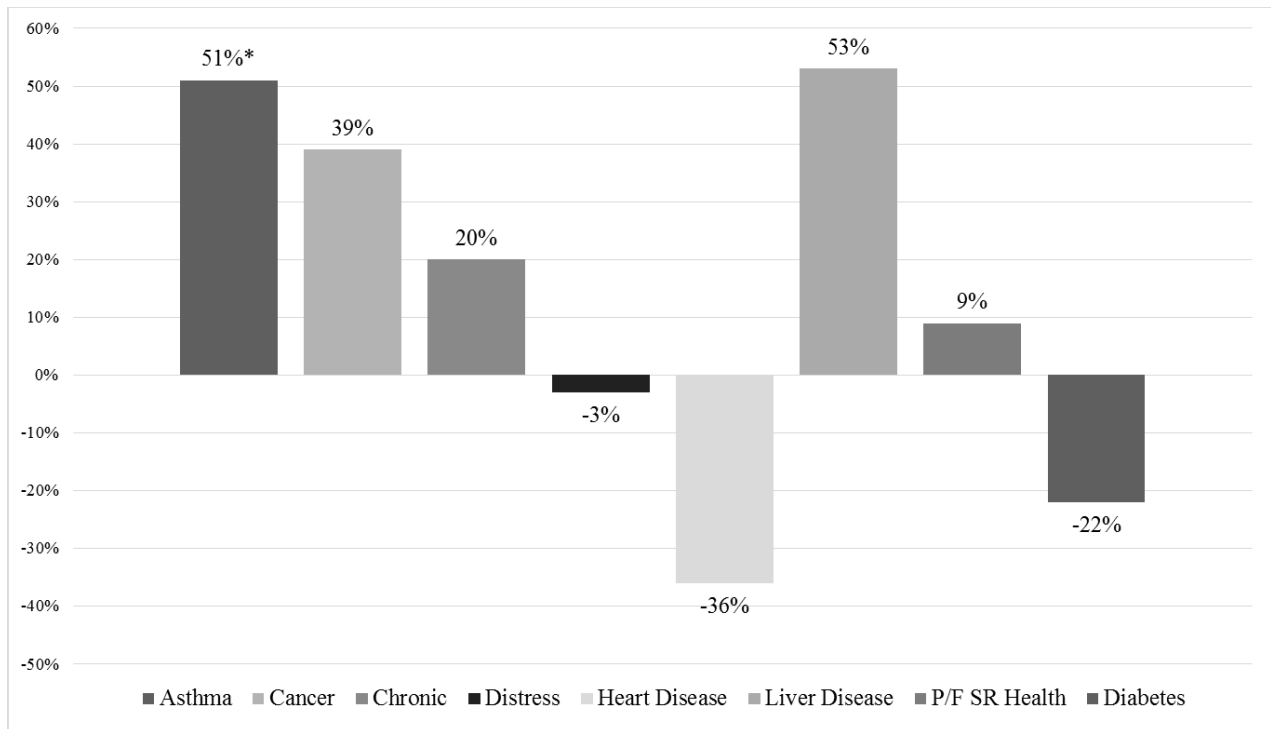
* $p. <0.05$; ** $p. <0.01$

Figure 5. Black Mexicans Percentage Change in Odd Ratios in Reference to NH Blacks



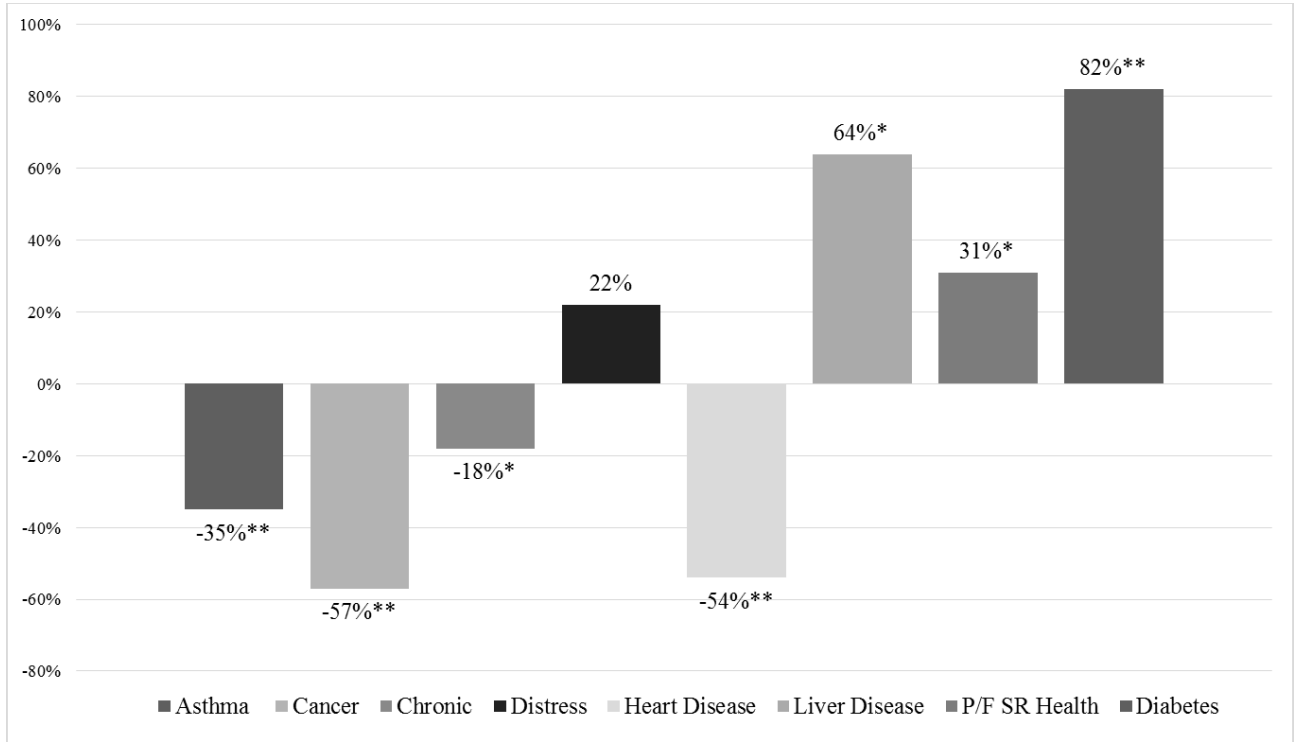
p.* <0.05; *p.* <0.01

Figure 6. Black Mexicans Percentage Change in Odd Ratios in Reference to White Mexicans



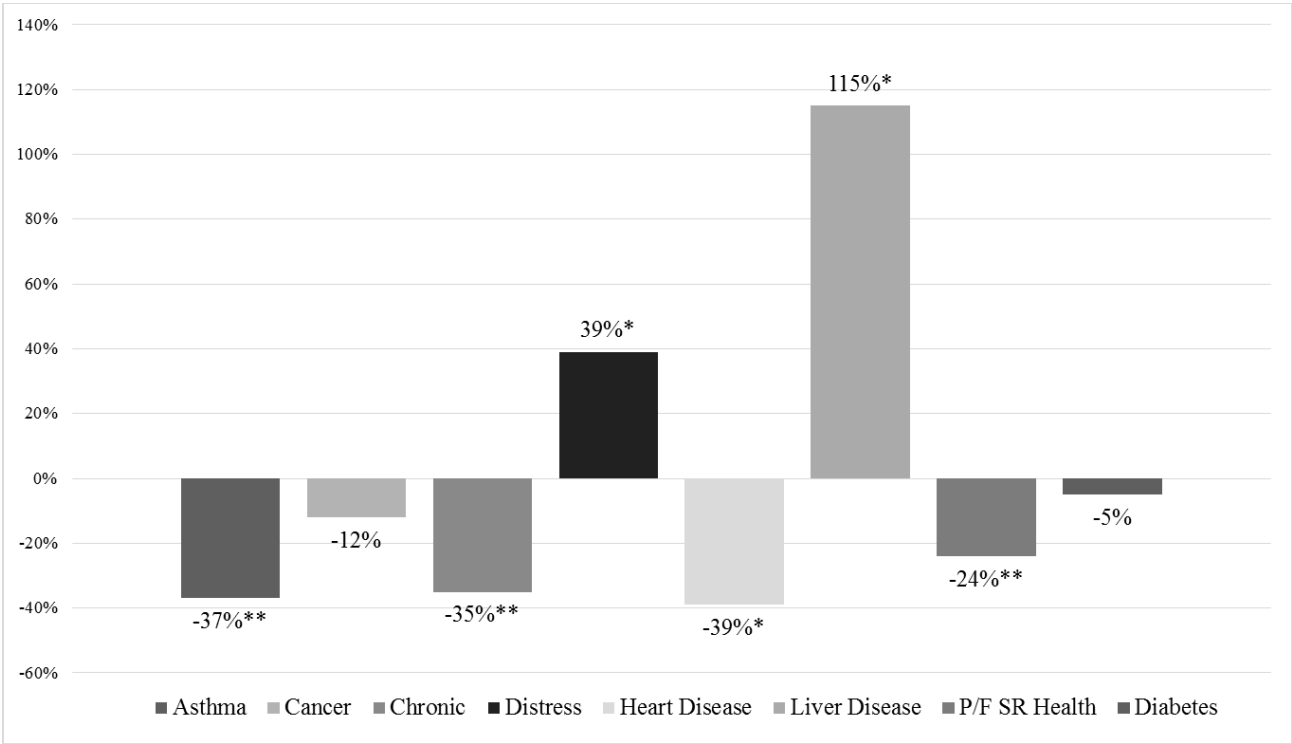
* $p. < 0.05$; ** $p. < 0.01$

Figure 7. Other Mexicans Percentage Change in Odd Ratios in Reference to NH Whites



* $p. < 0.05$; ** $p. < 0.01$

Figure 8. Other Mexicans Percentage Change in Odd Ratios in Reference to NH Blacks



p.* <0.05; *p.* <0.01