Ethnic Identity, Stress, and Anxiety in Latinx University Students at Predominantly White Institutions

Anel Arias

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ETHNIC IDENTITY, STRESS, AND ANXIETY IN LATINX UNIVERSITY STUDENTS
AT PREDOMINANTLY WHITE INSTITUTIONS

by

Anel Arias

A dissertation submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
Counselor Education and Counseling Psychology
Western Michigan University
August 2020

Doctoral Committee:

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Research indicates that ethnic minority-related stressors contribute to poor mental health outcomes in Latinx university students. There are inconsistent results of the moderating role of ethnic identity in ethnic minority stress and mental health outcomes. The purpose of this study was to examine whether ethnic identity moderates the relationship between ethnic minority stress and trait anxiety in Latinx university students attending predominantly White institutions (PWI). The secondary purpose of this study was to explore the effects of ethnic minority stress on trait anxiety symptoms.

Participants were 256 Latinx (67.6% women, n = 173; 31.3% men, n = 80) undergraduate and graduate university students attending predominantly White public universities in the Midwest region of the United States. Anonymous online surveys for demographics, ethnic identity, overall stress, ethnic minority stress, and trait anxiety symptoms were completed by study participants.

Results indicated that higher ethnic minority stress predicted higher trait anxiety symptoms, after controlling for age, gender, and general stress. Ethnic identity was not found to moderate the relationship between ethnic minority stress and anxiety symptoms. However, higher ethnic resolution predicted lower trait anxiety symptoms. In addition, higher ethnic exploration predicted lower trait anxiety symptoms. The study indicates that higher ethnic
minority stress has negative mental health outcomes and higher ethnic identity has positive mental health outcomes. Counselor and psychology training programs should increase knowledge about mental health outcomes and multicultural interventions in Latinx populations. University counseling centers at PWIs should include questions regarding ethnic minority stress during intake assessments and offer group therapy incorporating ethnic exploration and ethnic concerns to their clientele.
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CHAPTER I

INTRODUCTION

The Latinx population is the majority ethnic minority in the United States (Schaeffer, 2019; U.S. Census Bureau [USCB], 2019b). In 2018, an estimated 59 million Latinx were living in the United States, constituting 18.3% of the total population (Flores, Lopez, & Krogstad, 2019; USCB, 2019a). The Latinx population is projected to increase to 111 million in 2060 and constitute 28% of the total population (Duffin, 2020; USCB, 2018a). Most Latinx residing in the U.S. in 2017 were of Mexican ethnic heritage, constituting 36 million (USCB, 2017a). The total population estimates include citizens, legal residents, and undocumented immigrants.

Latinx in the United States face economic disparities, such as low social economic status and poverty. For example, Latinx were reported to have a lower median household income of $50,486 compared to the national median household income of $61,372 in 2017 (Fontenot, Semega, & Kollar, 2018; USCB, 2017a). Also, Latinx are more likely to be below the federal poverty level. The poverty level of Latinx was significantly higher (17.1%) compared to the national poverty level (12.3%) in 2017 (Fontenot et al., 2018; USCB, 2019c). The economic disparities in Latinx populations in the United States can be explained by educational attainment. Lower educational attainment is a barrier to higher income job positions. For example, the mean income for Latinx aged 25 and older in the United States labor force in 2017 with a high school diploma was $33,516 for males and $19,904 for females, while the mean income for Hispanics aged 25 and older bachelor’s degree in 2017 was $63,269 for males and $41,045 for females.
(USCB, 2018b; U.S. Department of Labor, 2018). As a result, lack of access to universities is connected to the economic disparities in Latinx populations.

**Educational Attainment**

Latinx have among the lowest educational attainment compared to other ethnic groups in the United States. At the high school level, Latinx have the lowest high school diploma rates. For example, only 71.6% of Latinx aged 25 and older attained a high school diploma compared to 94.3% of Whites, 90.6% of Asians, 88.6% of Blacks, and 83.6% of Native Americans in 2016 (National Center for Education Statistics [NCES], 2018; USCB, 2017b). Low high school diploma attainment rates negatively impact enrollment in universities. Because universities require a high school diploma or high school equivalence degree, Latinx students who fail to attain a high school diploma are less likely to enrolling in universities. Consequently, the Latinx degree completion at universities is among the lowest in the United States. For example, only 18.3% of Latinx aged 25 and older attained a bachelor’s degree in 2018, compared to 55.6% of Asians, 38.8% of Whites, 25.6% of Blacks, and 18.8% of Native Americans (Brey, Musu, & McFarland, 2018; NCES, 2018). The low educational attainment in Latinx is critical because educational level has ramifications on social economic status and access to resources. Low social economic status limits access to resources, such as housing, education, and healthcare. Healthcare access is important because it determines who has access to health services, including mental health.

The Latinx population is considered a historically underserved population for mental health disparities in the United States (U.S. Department of Health and Human Services [USDHHS], 2019). A report of the Surgeon General indicated that Latinx have higher rates of distress or depression compared to Whites (USDHHS, 2001). According to the Centers for
Disease Control and Prevention (2015), Latinx are significantly less likely to have health insurance than Whites. The lack of health insurance contributes to the statistic that Whites receive mental health services twice more often than Hispanics, even though Hispanics are twice more likely to report mental health distress (Heeju, 2017; USDHHS, 2019). In addition, Latinx students in higher education experience a myriad of stressors. Latinx attending college experience poverty, low self-esteem, and a feeling of not belonging in college (Dueñas & Gloria, 2017; Garcia, 2019; Reyes, 2007). Latinx university students have the added stress of experiencing ethnic discrimination, which has been associated with poor mental health outcomes (Alamilla, Kim, & Lam, 2010; Arbona, Fan, & Olvera, 2018; Chavez & French, 2007). If not attended to, stress can have many negative mental and physical health implications. For example, stress has been linked to depression, anxiety, high blood pressure, increased weight, and a myriad of health complications (Engert, Efanov, Dedovic, Dagher, & Pruessner, 2011; Hinkelmann et al., 2009). As a result, examining factors associated with mental well-being in Latinx university populations is critical to the counseling profession.

**Predominantly White Institutions**

A predominantly White institution (PWI) refers to colleges or universities in the United States with at least 50% of students enrolled identifying as White (Brown & Dancy, 2010). Historically PWIs excluded non-White students, from the establishment of Harvard University in 1636 through the Civil Rights Act of 1964 (Brown & Dancy, 2010). PWIs constitute the majority of institution types in the United States. In 2004, there were an estimated 70% non-minority-serving higher education institutions in the United States (Li, 2007). Non-minority-serving institutions exclude Hispanic-servicing institutions (HSIs), historically Black colleges and
Hispanic-Serving Institutions

Although Latinx students make up a small population at PWIs, it is important to note that larger populations can be found at Hispanic-serving Institutions (HSI). An HSI refers to colleges or universities in the U.S. with at least 25% of students enrolled identifying as Hispanic (Valdez, 2015). HSIs have funding for student support services for Hispanic populations, which may differ from support services at PWIs. HSIs were introduced to U.S. Congress legislation in 1992 (Valdez, 2015). The purpose for the formation of HSIs was to increase resources for Hispanic students in higher education to address the educational attainment gap. The recognition of HSIs in higher education was made possible through the organizational efforts of the Hispanic Higher Education Coalition (HHEC) and the Hispanic Association of Colleges and Universities (HACU). HHEC formed in 1978 and in 1979 advocated to Congress to extend grants to higher educational institutions with a large percentage of Hispanic students (Valdez, 2015). HACU formed in 1986 and in 1992 was successful in receiving legislative approval for HISs’ formation (Valdez, 2015). The HSI policy formation was particularly significant for Hispanic communities because it increased federal financial aid and access to resources for students in higher education. Federal financial aid encompasses resources to grants, loans, scholarships, and student support services geared toward Hispanic students. The increased financial resources were beneficial for all students enrolled in HSIs.

In 2016, there were a total of 472 HSIs, constituting 14% of higher education institutions in the United States (Excelencia in Education, 2017a). HSIs are rapidly growing, with 323 emerging HSIs in 2016 (Excelencia in Education, 2017a). Emerging HSIs refer to higher
education institutions with 15% to 24% of students enrolled identifying as Hispanic (Excelencia in Education, 2017a). HSIs award educational degrees to a significant portion of Hispanic students. The majority (64%) of Hispanic students enrolled in higher education in 2016 were enrolled in an HSI (Excelencia in Education, 2017b). HSIs were present in 20 states, including Puerto Rico, in 2016 (Excelencia in Education, 2017b). Yet the demographic distribution of HSIs was primarily concentrated in the western United States. For instance, the majority (159) of HSIs were located in California (Excelencia in Education, 2017b). In addition, HSIs were not evenly distributed by institution type. For example, 44% of HSIs were public community colleges, compared to 29% of private universities, 22% of public universities, and 5% of private community colleges (Excelencia in Education, 2017b). From these statistics, we can conclude that HSIs constitute a minority of higher education institutions in the United States, are primarily comprised by community colleges, and are mostly concentrated in the state of California. HSIs provide a good model for PWIs to incorporate in their student support services for Latinx students. For example, HSIs have specific grants, loans, scholarships, and student support services geared toward Hispanic student.

**New Latinx Diaspora**

Latinx have always been present in the United States (Library of Congress, 2010). The Mexican-American War, 1846-1848, made Texas, New Mexico, Arizona, and California part of the U.S. territory that was previously on Mexican land (Library of Congress, 2010). With the expansion of territory, Mexican Americans already living in these newly formed states were automatically granted U.S. citizenship (Library of Congress, 2010). From a sociopolitical perspective, Southwestern states have a traditional history of Latinx residents residing in Mexican land.
As the Latinx population in the United States continues to grow, increasing numbers of Latinx have been moving to states that have less experience with Latinx populations. The increasing residence of Latinx in non-traditional states is now referred as the New Latinx Diaspora (Hamann, Worthham, & Murrillo, 2002, 2015). The new Latinx Diaspora encompasses 41 states, not including Arizona, California, Colorado, Florida, Illinois, New Jersey, New Mexico, New York, or Texas (Hamann et al., 2015). Due to their lack of presence in such communities, the New Latinx Diaspora faces challenges with establishing a well-defined model of identity. Their novel presence allows for a dynamic ethnic identity formation that is influenced by the intersection of an individual’s family heritage and their host community’s cultural climate.

The identity models within the New Latinx Diaspora are introduced in early childhood education. The educational system in predominantly White communities typically does not have resources to accommodate the New Latinx Diaspora. For example, these schools often lack competent bilingual educators and place English language learners in deficit-based tracks (Beck & Allexsaht-Snider, 2002; Colomer, 2014; Hamann et al., 2002, 2015). Although students may be fluent in another language, their limited English fluency as measured by biased tests is viewed from a deficit model. The language minority education policies are often met with resistance, as evidenced by the formation of policies aimed at enforcing English-only education (Colomer & Harklau, 2009; Hamann et al., 2002, 2015). Discriminatory education policies continue into higher education. Latinx university students at PWIs face a negative campus ethnic climate, such as discrimination, feelings of not belonging, and a lack of diversity of students, faculty, and classroom curriculum (Arbona et al., 2018; Garcia, 2019; Hamann et al., 2015; Herrera & Holmes, 2015). Although the identity formation differs by region, supporting data show that
states with a new influx of Latinx eventually experience similar institutional oppression as states with traditional Latinx residents (Hamann et al., 2002, 2015). For example, Latinx who speak non-English are met with hostility, their increased presence is viewed as negatively affecting the community, and they face a stereotype of taking advantage of public benefits without contribution (Hamann et al., 2002, 2015). The negative stereotypes attached to the New Latinx Diaspora sum up the view that their presence is a “problem” (Hamann et al., 2002, 2015).

**Ethnicity**

Ethnicity refers to a group of individuals who share a common history and cultural background, such as language, practices, and values (Branch, 1999). Latinx is a global label for populations with heritage in Latin America, while Hispanic is an ethnic label used by the U.S. government that refers to Spanish language heritage (Encyclopedia Britannica, 2020; Moreno & Guido, 2005). Latinx and Hispanic tend to be used interchangeably because the majority of Latinx are of Spanish language heritage, although a small portion of Latinx do not identify as Hispanic. For example, populations from Brazil are considered Latinx and not Hispanic because of their Portuguese language heritage (Garcia-Navarro, 2015; Lopez, Krogstad, & Passel, 2019; Encyclopedia Britannica, 2020). The Latinx umbrella includes populations from many countries in North, Central, South, and Caribbean America, and individuals often identify based on their country of origin, such as Mexican or Dominican (Hernandez & Curiel, 2012). The Latinx ethnic label was chosen to include populations in North and South America and exclude populations who speak Spanish in Europe, such as those from Spain. Latinx are a racially diverse population. Race refers to superficial differences in appearance, such as skin color, hair texture, and eye shape (DiAngelo, 2012). Both race and ethnicity are social constructs aimed at categorizing groups of people. For the purposes of this study, Latinx are individuals self-identifying as Latinx.
Ethnic Minority Stress

Several researchers find that university students face high levels of stress at universities. Regehr, Glancy, and Pitts (2013) conducted a meta-analysis of 24 studies and found that about 50% of university students experience overwhelming levels of stress, although only about 15% seek treatment (Regehr et al., 2013). However, these results are applicable to White students and assume that ethnic minority students similarly experience levels of stress. Students’ perceptions of levels and sources of stress vary greatly depending on ethnicity. For instance, ethnic minority stress is a source of stress reported by university students. Examples include perceived ethnic discrimination and negative ethnic attitudes held by the university, faculty, or students. Ethnic minority stress has been found to contribute to poor mental health outcomes, such as depression and anxiety, in Latinx university students (Alamilla et al., 2010; Chavez & French, 2007). One method of addressing poor mental health outcomes is identifying factors that help Latinx students cope with ethnic minority stress.

Several studies have focused on ethnic identity and have found it to be a protective factor. University students at predominantly White universities with higher ethnic identity had lower associations between their ethnic minority stress and depression and psychological distress (Sellers & Shelton, 2003; Wei et al., 2010). While those studies have contributed to our understanding of the link between ethnic minority stress and mental health outcomes, one study focused on African Americans and another study categorized ethnic minorities into one group (Sellers & Shelton, 2003; Wei et al., 2010). However, combining all ethnic minorities into a single category does not take into consideration significant differences among ethnic minorities. It assumes that all ethnic minorities face similar stress. It overlooks the possibility that Latinx may encounter different stressors than other ethnic groups. On the other hand, two studies found
that ethnic identity did not mitigate the negative effects of ethnic minority stress on mental health in Latinx students attending ethnically diverse universities (Arbona & Jimenez, 2014; French & Chavez, 2010). The inconsistent findings of ethnic identity as a protective factor might be connected to the ethnic composition of institutions. For example, one study found that African-American students experienced higher ethnic minority stress at PWIs compared to African-American students at HBCUs (Greer & Chwalisz, 2007). From these findings, perhaps ethnic identity as a protective factor for ethnic minority stress and mental health outcomes may be more applicable to students attending PWIs. As a result, examining ethnic identity as a protective factor on the effects of ethnic minority stress on mental health outcomes with Latinx university students attending PWIs will address the research gap on institution type.

**Importance of Study**

The low population of Latinx students in higher education has resulted in minimal research on factors that help students cope with ethnic minority stressors. As a result, a limitation is in depicting which components should be incorporated in interventions geared toward promoting mental well-being in Latinx university students. One method of addressing poor mental health outcomes is identifying factors that help Latinx students cope with ethnic minority stressors. A factor under investigation is the role of ethnic identity in helping Latinx university students cope with ethnic minority stress. Examining protective factors in Latinx university students is important because they are the fastest growing ethnic minority group in the United States historically underserved with poor mental health outcomes.

The review of related literature will provide an overview of previous studies that have focused on ethnic minority stress, ethnic identity, and stress-related mental health outcomes through the lens of resiliency theory. The review will include prior findings on the target
population of Latinx, as well as on African Americans and Asian Americans. Latinx, along with African Americans and Asian Americans, are considered to be of ethnic minority status because they constitute underrepresented ethnic groups in the United States. Although these ethnic groups share an ethnic minority status, they differ greatly in cultural norms, practices, and values. In the current study, I examine whether ethnic identity changes the relationship between ethnic minority stress and mental health outcomes in Latinx university students.

**Theoretical Framework**

The theoretical framework guiding this study is resiliency theory. Garmezy, Masten, and Tellegen’s (1984) model on resiliency is based on the factors that protect children of impoverished and vulnerable backgrounds from the impact of stressors. This theory suggests that protective factors help mitigate the negative impacts of stress in historically underserved populations. Garmezy et al.’s model was formulated from longitudinal investigations of children historically underserved. Data were obtained across 10 years from 200 children recruited from two urban communities. The families of these children were low-income and lived in a high-crime community. The majority of these families received government assistance.

Garmezy et al. (1984) found three mechanisms that led to better educational outcomes: (a) personal attributes, (b) levels of stress, and (c) protective factors. First, personal attributes such as cognitive and social skills were associated with better education outcomes. Second, when stress levels were low, children had better educational outcomes. Third, protective factors helped mitigate the negative effects of stress. From these results, Garmezy et al. concluded that protective factors can help populations vulnerable to stressors associated with poverty mitigate the negative effects of stress. These findings provided evidence of the adaptation responses in individuals from historically underserved populations to overcome barriers. To further
understand what protective factors mitigated the negative effects of stress in vulnerable populations, Garmezy (1991) conducted a literature review on the coping responses present in low-income African-American children. Garmezy found that personal attributes, family and social network support, and a supportive educational environment served as protective factors.

Resiliency theory provides a theoretical framework for conceptualizing protective factors in Latinx university students. The Latinx population can be considered a historically underserved population in the United States because of its ethnic minority status, poverty rate, access to healthcare, and level of educational attainment (USCB, 2019a). Particular to Latinx university students, this population faces a myriad of stressors contributing to poor mental health outcomes. For example, Latinx university students report experiencing high levels of stress, depression, and anxiety (Mejia & McCarthy, 2010). Ethnic identity has been identified as a protective factor and has been found in prior studies as minimizing the negative effects of stress on poor mental health outcomes in the Latinx population. As a result, ethnic identity will be examined to determine whether it serves as a protective factor in Latinx university populations attending PWIs. This investigation will expand the literature on the resilient factors in Latinx university students.

**Purpose of Study**

The purpose of this study is to examine whether ethnic identity moderates the relationship between ethnic minority stress and trait anxiety in Latinx university students attending PWIs. Students who attend a PWI were selected for this study because there is support that ethnic minorities experience higher ethnic minority stress at PWIs (Greer & Chwalisz, 2007). The theoretical framework guiding this study is resiliency theory (Garmezy, 1991; Garmezy et al., 1984), which postulates that factors protect historically underserved populations from the impact of stressors. The goal of this study is to expand the literature on the protective
factors that may help Latinx university students mitigate the negative effects of ethnic minority stress on mental health functioning.

**Research Questions**

Two research questions guided the study:

1. Does higher ethnic minority stress predict higher trait anxiety symptoms in Latinx university students attending a PWI?

2. Does ethnic identity moderate the relationship between ethnic minority stress and trait anxiety symptoms in Latinx university students attending a PWI?

**Research Hypotheses**

Two research hypotheses are posed to test the above research questions:

1. Latinx university students attending a PWI with higher ethnic minority stress will have higher trait anxiety symptoms.

2. Ethnic identity will moderate the relationship between ethnic minority stress and trait anxiety symptoms in Latinx university students attending a PWI.

**Definition of Terms**

Terms commonly used in this study are defined in this section. In addition, the terms are defined throughout this paper. The terms commonly used in this paper are *Latinx, ethnicity, ethnic identity, ethnic minority stress, Latinx Diaspora, trait anxiety, Predominantly White Institution, and Hispanic Serving Institution.*

*Latinx* is a global label for populations with heritage in Latin America (Encyclopedia Britannica, 2020; Moreno & Guido, 2005).

*Ethnicity* refers to a group of individuals who share a common history and cultural background, such as language, practices, and values (Branch, 1999).
Ethnic identity refers to the degree to which individuals perceive ethnic group membership as a salient component of their identity (Phinney, 1992).

Ethnic minority stress refers to perceived stress related to one’s ethnic minority status.

Latinx diaspora refers to the increasing residence of Latinx in non-traditional states, this encompasses 41 states that are not Arizona, California, Colorado, Florida, Illinois, New Jersey, New Mexico, New York, or Texas (Hamann et al., 2002, 2015).

Trait anxiety refers to symptoms of anxiety due to general stable aspects of anxiety responsiveness (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983).

Predominantly White Institution (PWI) refers to colleges or universities in the United States with at least 50% of students enrolled identifying as White (Brown & Dancy, 2010).

Hispanic Serving Institution (HIS) refers to colleges or universities in the U.S. with at least 25% of students enrolled identifying as Hispanic (Valdez, 2015).

Summary

This introductory chapter discussed the population demographics, importance of the study, theoretical framework, purpose of the study, research questions, research hypotheses, and definition of terms. Chapter II reviews the related literature. Chapter III presents the study procedures and demographics of the sample. Chapter IV presents the research findings. Chapter V outlines the discussion of the study, study limitations, implications of the study, future research directions, and the conclusion.
CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this section is to introduce terms and summarize previous studies of related literature. This section will cover Latinx at PWIs, trait anxiety, ethnic identity, acculturation, enculturation, biculturalism, and ethnic minority stress as they relate to mental health, followed by a review of the literature.

Latinx at PWIs

Latinx at PWIs are underrepresented in student enrollment; however, with the increasing population, Latinx enrollment at PWIs is projected to increase (Burkham, 2019). One study examined reasons for Latinx under enrollment at a PWI by administering surveys to 52 (71% female) Latinx students at a PWI (Burkham, 2019). Significant obstacles reported by students were psychological or emotional distress, lack of financial support from the university, lack of household financial resources, and discrimination (Burkham, 2019). Results indicated that psychological or emotional distress was the most significant obstacle (Burkham, 2019). Latinx university students at PWIs face the added stressor of discrimination (Arbona et al., 2018; Burkham, 2019; Von Robertson, Bravo, & Chaney, 2016). A qualitative study examined the experiences of discrimination in 13 (10 male, 3 female) Latinx university students at a PWI (Von Robertson et al., 2016). Results indicated that 52% of the participants reported racism at their university, such as microaggressions, stereotypes, worries about failing due to expectations of race, and feeling invisible (Von Robertson et al., 2016). In addition, Latinx students face ethnic cultural pressure at PWIs (Rudick et al., 2017). A study that examined 134 (90 female, 44 male)
university students found that Latinx students were more likely to feel the pressure to show their ethnic culture as valuable at PWIs compared to students at HSIs (Rudick et al., 2017). These results support the need for PWIs to increase student services for Latinx populations on their campuses.

**Trait Anxiety**

This study will focus on examining anxiety outcomes. Anxiety is critical for mental health providers because anxiety disorders are the most common mental illness in the United States, with an estimated 19% of adults experiencing an anxiety disorder in the past year (National Institute of Mental Health, 2017). A common type of anxiety investigated is trait anxiety, which refers to symptoms of anxiety due to general stable aspect of anxiety responsiveness (Spielberger et al., 1983). Trait anxiety has been found to be associated with poor mental health outcomes (Bradley, 2016; Elkins, Carpenter, Pincus, & Comer, 2014; Norton et al., 2012). One study that investigated 490 adults, found that out of the individuals with elevated trait anxiety, 61.2% met criteria for a depression disorder (Norton et al., 2012). Also, one study found that individuals with Generalized Anxiety Disorder had more attention difficulties and more likely to have Attention-Deficit Hyperactivity Disorder (Bradley, 2016; Elkins et al., 2014). Trait anxiety is also found to be associated with more sleeping difficulties. One study found that undergraduate students with higher trait anxiety had poorer sleep compared to undergraduate students with lower trait anxiety (Arapova & Verbitsky, 2016). One study that investigated 249 university students found that higher trait anxiety was associated with lower career self-efficacy (Isik, 2012). In Isik’s (2012) study, career self-efficacy was defined as an individuals’ perception to being able to successfully complete assignments required to make career decisions. Overall,
higher trait anxiety is associated with poorer mental health outcomes, sleeping difficulties, and lower career self-efficacy.

**Ethnic Identity**

Individuals hold more than one identity that influences their self-concept. Ethnic identity refers to the degree to which individuals perceive ethnic group membership as a salient component of their identity (Phinney, 1992). One of the pioneers of identity formation is Erik Erikson. Erikson (1968) proposed that identity develops through a psychosocial process of placing oneself in society and developing a sense of belonging influenced by historical circumstances. Historical circumstances, such as family history, cultural traditions, and society history, were viewed as important for fostering a sense of belonging to something that carried through time (Logan, 1983). From this perspective, identity can be viewed as a function of seeking to belong to something that could be passed through history. Erikson’s psychosocial theory of development provided a model for conceptualizing identity as a social construct shaped by history that formulated a sense of self and sense of belonging.

Conceptualizing from Erikson’s (1968) model, Phinney (1992) developed a theoretical model of ethnic identity. Phinney postulated that three constructs describe ethnic identity formation: (a) ethnic affirmation and belonging, (b) ethnic achievement, and (c) ethnic other-group orientation. Ethnic affirmation and belonging refers to the degree of pride toward one’s ethnic group. Ethnic achievement refers to the degree of engaging in activities to learn more about one’s ethnic group. Ethnic other-group orientation refers to the degree of involvement with other ethnic groups that differ from one’s ethnic group. Phinney also contended that ethnic identity can be derived from an overall level. Umaña-Taylor, Yazedjian, and Bámaca-Gómez (2004) expanded Phinney’s model of ethnic identity formation and proposed that three constructs
describe ethnic identity formation: (a) exploration, (b) resolution, and (c) affirmation. Exploration refers to the degree of seeking knowledge about one’s ethnic group, resolution refers to the degree of understanding meaning of one’s ethnic group, and affirmation refers to feelings associated with one’s ethnic group. Umaña-Taylor et al. proposed that each racial group could be best divided into ethnic groups, that ethnic identity formation was multifaceted, and that ethnic identity constructs could be described on a continuum from low to high levels.

Ethnic identity formation is impacted by various sociocultural variables, such as education, history, policy, and community settings (Hamann et al., 2015; Wortham, Murillo, & Hamann, 2002). For example, in community settings with longer histories of Latinx presence, an ethnic identity discourse tends to be already socially constructed. However, Latinx in community settings with novel Latinx presence tend to be less clear about their ethnic identity (Hamann et al., 2015; Wortham et al., 2002). Latinx in majority White communities face unique challenges due to dominant White populations’ attempt to develop identity constructs for Latinx populations (Hamann et al., 2015; Wortham et al., 2002). As a result, Latinx populations have to navigate the emerging ethnic identity labels placed by their communities that, in turn, inform their ethnic identity development in predominantly White communities. From this conceptualization, Latinx university students at a PWI who grew up in predominantly White communities may have a less defined ethnic identity status compared to Latinx university students who grew up in ethnically diverse communities. As a result, the sociohistorical community location is a significant influence in the ethnic identity formation of Latinx populations residing in the United States.

Ethnic identity is relevant to Latinx populations because it has been associated with mental health outcomes. Vasquez (2009) examined the relationship between ethnic identity and affect in Latinx university students. Ethnic identity was defined as the level of exploration,
resolution, and affirmation one has toward their ethnic group (Umaña-Taylor et al., 2004). Affect was defined as emotions experienced that may be positive or negative in nature (Watson, Clark, & Tellegen, 1988). Undergraduate students were recruited from an ethnically diverse public university located in the Southwest United States. Out of the 247 participants, 177 identified as women and 70 identified as men (Vasquez, 2009). Most participants reported being born in the U.S. and identified having ethnic Mexican heritage. Vasquez conducted hierarchical regression analyses and found that (a) higher ethnic identity exploration predicted higher positive affect, (b) higher ethnic resolution predicted higher positive affect, (c) ethnic identity affirmation did not predict positive affect, and (d) ethnic identity did not predict negative affect. These results supported that higher levels of ethnic exploration and ethnic resolution predicted positive feelings in Latinx university students. It appears that level of ethnic identity may not be sufficient to predict negative affect.

**Ethnic Acculturation Stress**

Acculturation stress was defined as stressors identified as originating from the process of adapting to two or more cultures (Williams & Berry, 1991). Mejia and McCarthy (2010) examined depression and anxiety levels in students who identified as having an ethnic Mexican heritage. Students were recruited from a Southwest ethnically diverse university located in the United States. Of the 168 undergraduate participants, 107 identified as women and 61 identified as men. Most of the participants reported as being low-income, being born in the U.S., attending their first year of university, and being the first in their family to attend university. Participants took a survey that assessed acculturation stress, depression, and anxiety. Descriptive statistics showed that 55% of the sample reported elevated levels of depression, which was higher than the expected 20% of elevated levels of depression in the general population (Mejia & McCarthy,
Depression and anxiety symptoms were moderately correlated ($r = .68$), but no cut scores were used to delineate high or low anxiety levels. Men were found to have a higher level of acculturation stress than women. These results show that acculturative stress is associated with levels of depression or anxiety in a sample of Mexican-American university students.

Iturbide, Raffaelli, and Carlo (2009) examined whether ethnic identity moderated the relationship between acculturation stress and mental health in university students who identified having an ethnic Mexican heritage. Ethnic identity was measured by Phinney’s (1992) Multigroup Ethnic Identity Measure. Students were recruited from three ethnically diverse Southwest universities located in the United States. Of the 148 participants, 67% identified as women. Most of the participants reported being born in the United States and having parents born outside the United States. Participants took a survey that assessed acculturation stress, depression, anxiety, and ethnic identity. Descriptive statistics showed that women reported higher ethnic affirmation than men. For women, higher acculturation stress was associated with higher depression symptoms and lower self-esteem. For men, higher acculturation stress was associated with higher depression symptoms. Iturbide et al. conducted hierarchical regression analyses and found that higher acculturation stress predicted higher depression symptoms. For women, ethnic affirmation was found to moderate the relationship between acculturation stress and depressive symptoms. At low levels of acculturation stress, women with higher ethnic affirmation had lower depression symptoms than women with low ethnic affirmation. Ethnic affirmation did not moderate the relationship between acculturation stress and depression in men. For women, ethnic achievement was found to moderate the relationship between acculturation stress and self-esteem. When acculturation stress levels were low, women with high ethnic achievement had lower depression symptoms than women with low ethnic achievement. Ethnic
achievement did not moderate the relationship between acculturation stress and depression in men. For men, ethnic orientation was found to moderate the relationship between acculturation stress and self-esteem at low levels of acculturation stress. When acculturation stress levels were low, men with higher ethnic orientation had higher self-esteem than men with lower ethnic orientation. Ethnic orientation did not moderate the relationship between acculturation stress and self-esteem in women (Iturbide et al., 2009). These results show that under conditions of high ethnic identity, lower levels of acculturation stress predict higher self-esteem.

**Ethnic Enculturation**

Enculturation refers to the process of socialization of culture at birth (Kim, 2007). Edwards and Lopez (2006) examined acculturation, enculturation, family support, and life satisfaction in high school students who identified as having an ethnic Mexican heritage. Students were recruited from private and public high schools located in California, Kansas, and Texas. Of the 266 participants, 150 identified as girls and 116 identified as boys (Kim, 2007). Most of the participants reported being Catholic and having parents born outside the United States. The average age in the sample was 15 years old. Edwards and Lopez conducted hierarchical regression analyses and found that higher enculturation predicted higher perceived life satisfaction ($\beta = .12$). Higher perceived family support predicted higher perceived life satisfaction ($\beta = .50$). Acculturation did not predict life satisfaction (Edwards & Lopez, 2006). These results support that higher enculturation and higher family support may predict higher life satisfactions in adolescents who identified as having an ethnic Mexican heritage. It appears that degree of acculturation may not predict life satisfaction in Mexican adolescents.

Cano and Castillo (2010) examined the role of acculturation and enculturation in the psychological distress of Latina university students. Undergraduate and graduate students were
Recruited from two Southern universities. Participants were 214 undergraduate women who reported being low-income, being born in the U.S., and having ethnic Mexican heritage (Cano & Castillo, 2010). Cano and Castillo conducted hierarchical regression analyses and found that high enculturation predicted lower perceived distress symptoms ($\beta = .24$). Acculturation did not predict perceived distress symptoms (Cano & Castillo, 2010). These results support that incorporating ethnic cultural values predicts lower perceived distress in Latina university students.

**Ethnic Biculturalism**

Latinx in the United States often have to navigate two cultures—mainstream White culture and ethnic Latinx culture. The capacity to navigate two groups in an effective manner that does not compromise an individual’s ethnic identity is referred to as bicultural self-efficacy (LaFromboise, Coleman, & Gerton, 1993). According to LaFromboise et al. (1993), bicultural self-efficacy is conceptualized as six components: (a) knowledge of cultural values, (b) positive attitudes toward ethnic mainstream and ethnic minority groups, (c) belief in effectively navigating two cultural groups, (d) ability to communicate with two cultural groups, (e) exhibiting cultural norms, and (f) having social networks in both cultural groups. LaFromboise et al. noted that individuals vary in the level of bicultural self-efficacy, ranging from low to high.

David, Okazaki, and Saw (2009) examined whether bicultural self-efficacy was associated with ethnic identity and mental health in ethnic minority university students. Undergraduate students were recruited from a Midwest public university located in the United States. Of the 164 participants, 106 identified as Asian American, 28 as Latinx, 27 as African American, and 3 as multiracial (David, Okazaki, & Saw, 2009). Most of the participants were
born in the United States. Participants took a survey that assessed bicultural self-efficacy, ethnic identity, collective self-esteem, and depression. Collective self-esteem was defined as the degree to which one’s social identity was viewed as positive (Luhtanen & Crocker, 1992). Based on bivariate correlations, David et al. (2009) found that higher bicultural self-efficacy was associated with higher ethnic identity and higher collective self-esteem. Higher bicultural self-efficacy was associated with lower depression symptoms. These results supported that higher bicultural self-efficacy may be associated with higher ethnic identity.

Carrera and Wei (2014) examined the relationship among bicultural self-efficacy, acculturative family distancing, and depression in Latinx university students. Acculturative family distancing was defined as the perceived different cultural values and communication gap in children and their parents navigating two cultures (Hwang, 2006). Undergraduate students were recruited from eight public Midwest PWIs located in the United States. Out of the 241 participants, 68% identified as women (Carrera & Wei, 2014). Most of the participants reported being born in the United States, in their fourth year of university, and having an ethnic Mexican heritage. Participants completed an online survey at two points in the study within a year. The first time point (T1) occurred in the fall semester of the beginning of the academic year, and the second time point (T2) occurred in the spring semester toward the end of the same academic year. Carrera and Wei conducted hierarchical regression analyses and found that higher acculturative family distancing at T1 predicted higher depression symptoms at T1. Higher acculturative family distancing at T1 predicted lower bicultural self-efficacy at T2. Higher bicultural self-efficacy at T2 predicted lower depression symptoms at T2. Bicultural self-efficacy was found to mediate the relationship between acculturative family distancing at T1 and depression symptoms at T2. Participants with higher acculturative family distancing at T1 tended
to have lower bicultural self-efficacy at T2, which in turn was associated with higher depression symptoms at T2. These results support that higher bicultural self-efficacy may predict lower depression symptoms in Latinx university students who attend a PWI.

One of the documented adaptive responses to mitigate the negative effects of stress in ethnic minority university students is ethnic identity. Wei et al. (2010) conducted a study to determine whether bicultural self-efficacy buffered the relationship between ethnic minority stress and depressive symptoms in ethnic minority university students. Undergraduate students were recruited from a predominantly White Midwest university located in the United States. Of the 167 participants, 57 identified as Asian American, 54 as African American, and 56 as Latinx American (Wei et al., 2010). Most of the participants who identified as Asian American or Latinx American reported being born in the United States, while their parents were born outside the United States. Participants took a survey that assessed perceived general stress, ethnic minority stress, bicultural self-efficacy, and depression symptoms. Wei et al. conducted hierarchical multiple regression analyses and found that general stress predicted higher depressive symptoms, and ethnic minority stress incremented the prediction of higher depressive symptoms. After controlling for general stress and ethnic minority stress, bicultural self-efficacy was found to predict lower depressive symptoms. Wei et al. conducted a simple effect of analysis on slopes and found that bicultural self-efficacy served as a moderator between ethnic minority stress and depression symptoms. Participants with high bicultural self-efficacy did not have an association between ethnic minority stress and depressive symptoms. Participants with low bicultural self-efficacy had an association between ethnic minority stress and depressive symptoms. These results supported that students who believed they were capable of navigating a PWI and maintain their ethnic identity coped better with ethnic minority stressors.
**Ethnic Minority Stress**

Individuals may experience different types of stressors. One specific source of stress Latinx populations report experiencing is associated with their ethnic membership. Chavez and French (2007) examined the effects of ethnic-related stressors on mental health outcomes in Latinx university students. Chavez and French measured perceived racial discrimination, own-group conformity pressure, and stereotype confirmation concern. To assess mental health outcomes, Chavez and French measured depression, anxiety, loss of behavioral/emotional control, and general positive affect. Students were recruited from a southern California ethnically diverse university. Of 105 participants, 80 identified as women and 25 as men (Chavez & French, 2007). Most of the participants reported being low-income, in their first year of university, the first in their family to attend university, and of ethnic Mexican heritage. Chavez and French conducted hierarchical regression analyses and found that after controlling for gender, ethnicity-related stressors accounted for a significant increment in the variance of anxiety ($R^2\Delta = .17$) and loss of behavioral/emotional control ($R^2\Delta = .16$). No significant results were found when regressing depression and general positive affect on ethnicity-related stressors. These results supported that in ethnically diverse universities, Latinx students may experience stressors associated with their ethnic membership that negatively influence their mental health.

Alamilla et al. (2010) examined whether acculturation and enculturation changed the relationship between ethnic minority stress and psychological symptomology in Latinx university students. To assess psychological symptomology, Alamilla et al. measured anxiety, somatization, and hostility. Ethnic minority stress was defined as perceived stress resulting from one’s ethnic minority status (Smedley, Myers, & Harrell, 1993). Students were recruited from a predominantly White public university in the Northwest. Of 130 participants, 74 identified as
women and 56 identified as men (Alamilla et al., 2010). Most of the participants reported being of ethnic Mexican heritage, in their third year of university, and the second family generation to attend university. Alamilla et al. conducted hierarchical regression analyses and found that ethnic minority stress predicted higher anxiety symptoms ($r^2 = .17$). Ethnic minority stress was found to predict higher hostility ($r^2 = .25$). Ethnic minority stress was found to predict higher somatization ($r^2 = .10$). Acculturation and enculturation did not moderate the relationship between ethnic minority stress and psychological symptomology. These results supported that stress associated with ethnic minority status may predict higher anxiety, hostility, and somatization in Latinx university students. Acculturation and enculturation did not appear to play a role in mitigating the negative effects of ethnic minority stress on mental health outcomes.

Greer and Chwalisz (2007) examined whether ethnic minority stress levels differed between African-American students who attended a historically Black college/university (HBCU) and students who attended a PWI. Geer and Chwalisz measured general stress, ethnic minority stress, and coping behaviors. Participants were recruited from an HBCU ($n = 101$) on the East Coast and a PWI ($n = 102$) in the Midwest, both in the United States. Of the 203 participants, 137 identified as women and 66 identified as men (Greer & Chwalisz, 2007). Greer and Chwalisz found that students did not differ in general perceived stress levels based on the type of school attended. Results indicated that students who attended a PWI reported higher ethnic minority stress compared to students who attended an HBCU. Greer and Chwalisz conducted a MANOVA and found that students who attended a PWI reported higher social climate, interracial, and within-group stressors than students who attended an HBCU. No differences were found in level of perceived discrimination and academic achievement stressors. Regarding coping behaviors, students who attended an HBCU reported more approach-coping
behaviors than students who attended a PWI. Approach coping was defined as engaging in problem-focused behaviors in response to stressors (Carver, Scheier, & Weintraub, 1989). These results supported that even though students who attended an HBCU and students who attended a PWI report similar general perceived stress levels, those who attended a PWI experience higher ethnic minority stress. It appears that African-American university students who attend a PWI may be more likely to experience stress associated with their ethnic minority status.

**Ethnic Identity as a Protective Factor**

One of the identified protective factors for mitigating the negative effects of stress on mental health is ethnic identity. Cronin, Levin, Branscombe, Van Laar, and Tropp (2012) examined whether ethnic identity mediated the negative effects of perceived discrimination on self-esteem in Latinx university students. Data were obtained from a larger longitudinal study; only 252 Latinx university students who participated in their first and fourth years of university were included in the current study (Cronin et al., 2012). Participants were recruited from a Southwestern public university with an ethnically diverse student body. Participants completed a survey in their first year and fourth year of university. The survey assessed perceived discrimination, ethnic identity, self-esteem, and activism. To assess activism, students were asked to rate their level of willingness to take action based on ethnic group membership. Cronin et al. conducted structural equation modeling and found that activism in the first year of university predicted higher ethnic identity in the fourth year of university. Higher ethnic identity in the fourth year of university then predicted higher self-esteem and higher activism in the fourth year of university. In other words, Latinx university students who were more willing to participate in activism in their first year of university were more likely to develop a higher ethnic identity across time. Having a higher ethnic identity across time was associated with higher self-
esteem. These results support that higher ethnic identity may help Latinx university students foster a positive view of themselves even in the face of discrimination.

Sellers and Shelton (2003) examined whether racial ideology buffered the relationship between perceived racial discrimination and psychological distress in a sample of African-American university students. In this study, psychological distress was assessed by perceived general stress, depressive symptoms, and anxiety symptoms. A total of 267 participants were recruited in their first semester of university from three predominantly White universities, two located in the Midwest, and one located in the Southeast United States. Most participants (75%) identified as women, and the median reported family income ranged from $55,000 to $65,000 (Sellers & Shelton, 2003). Participants took the same survey within a year, early in their first semester of university and toward the end of their second semester of university. Sellers and Shelton created z-scores for perceived general stress, depressive symptoms, and anxiety symptoms and averaged the z-scores to create a psychological distress score. Sellers and Shelton conducted a hierarchical ordinary least squares regression model and found that higher perceived racial discrimination predicted higher levels of psychological distress. Racial ideology was found to moderate the relationship between perceived discrimination and psychological distress. Participants with a high nationalist ideology had a weaker association between perceived discrimination and psychological distress than participants with a low nationalist ideology. Nationalist ideology was defined as acknowledging that unique responses exist for being African American (Sellers, Rowley, Chavous, Shelton, & Smith, 1997). These results supported that holding a high nationalist ideology may help African-American university students attending a PWI mitigate the negative effects of perceived racial discrimination on psychological distress.
Arbona and Jimenez (2014) examined whether ethnic identity buffered the negative effects of ethnic minority stress on depressive symptoms in Latinx university students attending an ethnically diverse university campus. Participants were recruited from an ethnically diverse Southwest university in the United States. Of the 309 undergraduate students who participated in this study, 53% identified as women (Arbona & Jimenez, 2014). Most of the participants reported being of ethnic Mexican heritage, born in the United States, the first in their family to attend university, and in their third year of university. Participants took a survey that assessed general university stress, ethnic minority stress, ethnic identity, and depressive symptoms. Arbona and Jimenez conducted hierarchical regression analyses and found that after controlling for gender, general university stress predicted depressive symptoms. After controlling for general university stress, ethnic minority stress incremented the prediction of higher depressive symptoms. Ethnic identity did not moderate the relationship between ethnic minority stress and depressive symptoms. These results supported that higher ethnic minority stress predicted higher depressive symptoms in Latinx university students attending a diverse university campus. These findings did not support ethnic identity as a protective factor in mitigating the negative effects of ethnic minority stress on mental health in Latinx university students attending ethnically diverse universities.

French and Chavez (2010) examined whether ethnic identity buffered the effects of ethnic-related stressors on depressive symptoms in Latinx university students attending an ethnically diverse university campus. To assess ethnic related stressors, French and Chavez measured perceived discrimination, own-group conformity pressure, and stereotype confirmation concern. Participants were recruited from an ethnically diverse university in the Southwest. Of the 171 undergraduate students who participated in this study, 134 identified as women and 37
identified as men. Most of the participants reported being of ethnic Mexican heritage, born in the United States, and in their first year of university. French and Chavez conducted hierarchical regression analyses and found that higher stereotype confirmation concern predicted higher depressive symptoms. Ethnic identity was found to moderate the relationship between stereotype confirmation concern and depressive symptoms when stereotype confirmation concern was low. When stereotype confirmation concern was low, students with higher ethnic identity had lower depressive symptoms. At high levels of stereotype confirmation concern, ethnic identity did not moderate the relationship between stereotype confirmation concern and depressive symptoms. These findings supported that at high levels of ethnic-related stressors, ethnic identity may not serve as a protective factor for mental health outcomes. Instead, ethnic identity may serve as a protective factor from depression symptoms when ethnic-related stressors are low in Latinx students attending ethnically diverse universities.

**Review of Related Literature**

Based on the literature review, ethnic minority-related stressors appear to contribute to poor mental health outcomes in Latinx university students. Ethnic identity as a protective factor in mitigating the negative effects of stress on mental health is less evident. Some studies found that ethnic identity mitigated the negative effects of ethnic minority stress on mental health outcomes in ethnic minority students attending a PWI (Sellers & Shelton, 2003; Wei et al., 2010). Other studies found that ethnic identity did not mitigate the negative effects of ethnic minority stress on mental health in Latinx students attending ethnically diverse universities (Arbona & Jimenez, 2014; French & Chavez, 2010). No study has examined whether ethnic identity serves as a protective factor in an exclusive Latinx university sample at a PWI.
Most of the studies that examined ethnic identity as a protective factor for ethnic minority-related stress have focused on depressive symptoms (Arbona & Jimenez, 2014; French & Chavez, 2010; Wei et al., 2010). Studies examining ethnic identity as a protective factor for anxiety-related symptoms are limited. The examination of ethnic identity and anxiety symptoms is important because previous studies have found an association between ethnic minority stress and anxiety symptomology (Alamilla et al., 2010; Chavez & French, 2007). Spielberger, Gorsuch, Lushene, Vagg, and Jacobs (1983) found that a type of anxiety can be described by trait anxiety. Trait anxiety refers to symptoms of anxiety due to general stable aspects of anxiety responsiveness (Spielberger et al., 1983). To address the measurement limitation observed in prior studies, the focus will be on ethnic minority stress and trait anxiety symptoms.
CHAPTER III
METHOD

Data Management

A total of 295 participants started the online survey. Participants that indicated they did not identify as Latinx were removed as only those identifying as Latinx qualify for study \((n = 5)\). Participants who did not indicate a race, which is critical demographic data, were removed \((n = 23)\). Responses that were missing at least 10 responses in the measures were removed due to missing significant data \((n = 11)\). The total number of participants excluded was 39. The total sample, after participants were removed, consisted of 256 individuals.

Participants

Participants were university students who identified as ethnically Latinx, at least 18 years old, and were attending a PWI in the Midwest region of the United States. The final sample size used for statistical analyses was 256 Latinx university students. The racial makeup of the total sample was as follows: White \((n = 179; 69.9\%)\); American Indian or Alaska Native \((n = 38; 14.8\%)\); Black or African American \((n = 25; 9.8\%)\); Native Hawaiian or Other Pacific Islander \((n = 8; 3.2\%)\); and Asian \((n = 6; 2.3\%)\). Racial composition is displayed in Figure 1. The ethnic makeup of the total sample was as follows: Mexican \((n = 173; 67.6\%)\); Puerto Rican \((n = 17; 6.6\%)\); Dominican \((n = 12; 4.7\%)\); Colombian \((n = 10; 3.9\%)\); Cuban \((n = 8; 3.1\%)\); Ecuadorian \((n = 4; 1.6\%)\); Brazilian \((n = 4; 1.6\%)\); Honduran \((n = 3; 1.2\%)\); Peruvian \((n = 3; 1.2\%)\); Venezuelan \((n = 3; 1.2\%)\); Costa Rican \((n = 3; 1.2\%)\); Guatemalan \((n = 2; 0.8\%)\); Argentinian \((n = 1; 0.4\%)\); El Salvadorian \((n = 1; 0.4\%)\); Nicaraguan \((n = 1; 0.4\%)\); Panamanian \((n = 1;
0.4%); Chilean (n = 1; 0.4%); and other (n = 9; 3.5%). The academic year of university of participants was as follows: frosh (n = 17; 6.6%); sophomore (n = 43; 16.8%); junior (n = 50; 19.5%); senior (n = 75; 29.3%); master’s student (n = 39; 15.2%); and doctoral student (n = 32; 12.5%). Academic year composition is displayed in Figure 2.

Figure 1

*Racial Identity Statistics for the Sample*
Students ranged in age from 18 to 51 years old ($M = 23.18; SD = 5.404$). Completed hours in their academic program ranged from 0 to 200 ($M = 59.95; SD = 40.727$). Overall grade point average ranged from 0 to 4 ($M = 3.44; SD = 0.490$). For a complete list of majors, see Appendix A. The participants mostly identified as woman ($n = 173; 67.6\%$). The sample also consisted of those identifying as men ($n = 80; 31.3\%$), transgender ($n = 1; .4\%$), gender neutral ($n = 1; .4\%$), and one individual who preferred not to disclose (.4%). The sample included single ($n = 157; 61.3\%$), cohabitating ($n = 51; 19.9\%$), married ($n = 24; 9.4\%$), divorced ($n = 3; 1.2\%$), separated ($n = 1; .4\%$), and other ($n = 20; 7.8\%$). Relationship status composition is displayed in Figure 3.
Most of the participants’ mother’s level of education was a high school diploma or GED ($n = 70; 27.3\%$), followed by some college ($n = 37; 14.5\%$), bachelor’s degree ($n = 36; 14.1\%$), master’s degree ($n = 25; 9.8\%$), middle school ($n = 21; 8.2\%$), associate’s degree ($n = 19; 7.4\%$), some high school ($n = 18; 7\%$), elementary school ($n = 14; 5.5\%$), trade school ($n = 6; 2.3\%$), graduate/professional ($n = 6; 2.3\%$), none ($n = 3; 1.2\%$), and no response ($n = 1; 0.4\%$). Most of the participants’ father’s level of education was high school diploma or GED ($n = 58; 22.7\%$), followed by bachelor’s degree ($n = 38; 14.8\%$), middle school ($n = 26; 10.2\%$), some college ($n = 26; 10.2\%$), master’s degree ($n = 25; 9.8\%$), elementary school ($n = 20; 7.8\%$), some high school ($n = 19; 7.4\%$), graduate/professional ($n = 13; 5.1\%$), associate’s degree ($n = 13; 5.1\%$), trade school ($n = 10; 3.9\%$), and none ($n = 8; 3.1\%$). The family income of the total sample was as follows: under $20,000 ($n = 44; 17.2\%$); $20,000 to $39,999 ($n = 65; 25.4\%$); $40,000 to
$59,999 (n = 51; 19.9%); $60,000 to $79,999 (n = 38; 14.8%); $80,000 to $99,999 (n = 20; 7.8%); $100,000 to $119,999 (n = 14; 5.5%); $120,000 to $139,999 (n = 8; 3.1%); and over $140,000 (n = 16; 6.3%). Family income composition is displayed in Figure 4.

Figure 4

*Family Income Statistics for the Sample*

![Pie chart showing family income distribution](image)

Most of the participants were first-generation college students (n = 137; 53.5%), followed by second-generation college students (n = 118; 46.1%), and no response (n = 1; 0.4%). A first-generation college student in this study was defined as the first in the family to attend college; neither parent has attended college. Second generation in this study was defined as one or more parent(s) has attended college. The language first learned was English for the majority (n = 136; 53.1%), followed by Spanish (n = 110; 43%), Portuguese (n = 4; 1.6%), and other (n = 6; 2.3%). Most of the participants were born in the United States (n = 219; 85.5%), and a minority were
not born in the United States ($n = 37; 14.5\%$). The majority of the participants’ mothers were not born in the United States ($n = 131; 51.2\%$), and a minority were born in the United States ($n = 125; 48.8\%$). The majority of participants’ fathers were not born in the United States ($n = 141; 55.1\%$), and a minority were born in the United States ($n = 115; 44.9\%$). The majority of participants mostly grew up in a predominantly White (50% or more) community ($n = 112; 43.8\%$), followed by a predominantly Latinx community ($n = 68; 26.6\%$), racially diverse (inclusive of Blacks, Whites, Latinx, etc.) community ($n = 58; 22.7\%$), predominantly African-American community ($n = 7; 2.7\%$), predominantly Asian community ($n = 1; 0.4\%$), and other community ($n = 10; 3.9\%$). Community racial makeup composition is displayed in Figure 5. The majority of the participants attended a predominantly White high school ($n = 137; 53.5\%$), followed by racially diverse (inclusive of Blacks, Whites, Latinx, etc.) high school ($n = 58; 22.7\%$), predominantly Latinx high school ($n = 41; 16\%$), predominantly African-American high school ($n = 14; 5.5\%$), predominantly Asian high school ($n = 1; 0.4\%$), and other high school ($n = 5; 2\%$). High school racial makeup composition is displayed in Figure 6.
Figure 5

*Community Racial Makeup Statistics for the Sample*

![Community Racial Makeup Statistics Pie Chart]

- Predominantly White, 112, 43.8%
- Predominantly Latinx, 68, 26.6%
- Predominantly African American, 7, 2.7%
- Predominantly Asian, 1, 0.4%
- Racially Diverse, 58, 22.7%
- Other, 10, 3.9%

Figure 6

*High School Racial Makeup Statistics for the Sample*

![High School Racial Makeup Statistics Pie Chart]

- Predominantly White, 137, 53.5%
- Predominantly Latinx, 41, 16%
- Predominantly African American, 14, 5.5%
- Predominantly Asian, 1, 0.4%
- Racially Diverse, 58, 22.7%
- Other, 5, 2%
Measures

Demographics

The demographics questionnaire used in this study was comprised of 22 questions (see Appendix B). The questionnaire obtained information about participants’ self-reported age, gender, sexual orientation, relationship status, ethnic identity, racial identity, language first learned, country of birth, mother’s country of birth, father’s country of birth, family income, mother’s level of education, father’s level of education, college generation, academic year, major, hours in program, racial makeup of community they mostly grew up in, and racial makeup of high school attended. The questionnaire consisted of multiple-choice questions, as well as a few short fill-in questions.

General Stress

The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) is a 10-item scale that measures self-reported global stress to the degree individuals perceive having insufficient resources to cope with situations during the last month. The PSS was formulated based on how out of control, unpredictable, and overloading individuals perceived their lives to be. A sample item is, “In the last month, how often have you felt that you were unable to control the important things in your life?” Participants rated items on a 5-point Likert scale, ranging from 0 (never) to 4 (very often). Specific items were reverse coded before all items were summed to a total. Total scores ranged from 0 to 40. A total score is used to measure global perceived stress. Higher scores on the PSS indicate higher perceived global stress.

The reliability of the PSS scores was obtained from three samples in the original scale development. Cronbach’s alphas of the scores were .84, .85, and .86 (Cohen et al., 1983). The reliability of the PSS scores in ethnic minorities has also been supported. Wei et al. (2010)
obtained a Cronbach’s alpha of .86 from a sample of Asian-American, African-American, and Latinx-American university students. A meta-analysis of the PSS over the last 30 years supported a two-factor model over the originally proposed one-factor model (Lee, 2012). Taylor (2015) conducted a confirmatory factor analysis of the PSS scores obtained from a sample of 1,236 participants. Results from the confirmatory analysis found that the data were a better fit for the two-factor model than the one-factor model. A comparative fit index (CFI) of .99 and a root mean standard error of approximation (RMSEA) of .049 were found for the two-factor model, and a CFI of .93 and RMSEA of .14 were found for the one-factor model. The two factors that emerged were perceived helplessness and perceived self-efficacy and the reliability of the PSS total scores was a Cronbach’s alpha of .84. Mitchell, Crane, and Kim (2008) assessed the convergent validity of the PSS by conducting a correlation of the PSS and the Impact of Events Scale ($r = .54$; IES; Horowitz, Wilner, & Alvarez, 1979). Mitchell et al. assessed discriminant validity by conducting a correlation between the PSS and the Medical Outcomes Study-Short Form 36, physical health component subscale ($r = .21$; MOS-SF36; Ware & Sherbourne, 1992).

In the present study, the Cronbach’s alpha was .88. This exceeds the recommended Cronbach’s alpha of at least .70 for reliability (Cronbach, 1951).

**Ethnic Minority Stress**

The Minority Status Stress Scale (MSS; Smedley et al., 1993) is a 33-item scale that measures self-reported perceived stress related to one’s ethnic minority status. The MSS is composed of five subscales labeled social climate stresses (11 items), interracial stresses (7 items), racism and discrimination stresses (5 items), within-group stresses (4 items), and achievement stresses (6 items). The subscale social climate stresses measures perceived attitudes that the university has toward ethnic minorities. The subscale interracial stresses measures
perceived integration with White individuals and individuals of other ethnic groups. The subscale racism and discrimination stresses measures perceived ethnic discrimination. The subscale within-group stresses measures perceived integration with individuals from the same ethnic group. The subscale achievement stresses measures perceived ability to succeed in college compounded by social background. A sample item from the social climate stresses subscale is, “Negative attitudes / treatment of students of my race by faculty.” Participants rate items on a 6-point Likert scale, ranging from 0 (does not apply) to 5 (extremely stressful). Items are summed to the respective subscale to produce five subscale scores. Higher scores on the MSS subscales indicate higher social climate, interracial, racism and discrimination, within-group, and achievement stresses. All items are also summed to a total. Total scores range from 0 to 185. Higher scores on the MSS indicate higher ethnic minority stress.

Smedley et al. (1993) obtained reliability of the MSS scores from a sample of 161 college students identifying as African American (n = 45), Latinx (n = 79), or Filipino (n = 37) attending a PWI. Cronbach’s alphas for the scores were .93 for social climate stresses, .85 for interracial stresses, .87 for racism and discrimination stresses, .78 for within-group stresses, and .76 for achievement stresses. Alamilla et al. (2010) obtained a Cronbach’s alpha of .95 for the MSS total score in a sample of 130 Latinx university students. Arbona and Jimenez (2014) conducted a principal axis factor on a sample of 309 Latinx university students attending an ethnically diverse university. A four-factor model of the MSS was obtained that excluded interracial stresses. Cronbach’s alphas for the scores were .86 for social climate stresses, .80 for academic achievement stresses, .91 for racism and discrimination stresses, and .87 for within-group stresses. Arbona and Jimenez assessed convergent validity by correlating the MSS academic achievement stresses subscale with the academic stress subscale of the College Stress Scale.
predictive validity by correlating the MSS academic achievement stresses subscale with GPA ($\beta = -0.31$). In the present study, the Cronbach’s alpha was .97. This exceeds the recommended Cronbach’s alpha of at least .70 for reliability (Cronbach, 1951).

**Ethnic Identity**

The Ethnic Identity Scale–Brief (EIS-B; Douglas & Umaña-Taylor, 2015) is a 9-item scale that measures self-reported perceived identification with one’s ethnic cultural group. The EIS-B is the brief version of the original 17-item Ethnic Identity Scale (EIS; Umaña-Taylor, Yazdjian, & Bámaca-Gómez, 2004). The EIS-B is composed of three subscales labeled exploration (3 items), resolution (3 items), and affirmation (3 items). Exploration refers to degree of seeking knowledge about one’s ethnic group, resolution refers to degree of understanding meaning of one’s ethnic group, and affirmation refers to feelings associated toward one’s ethnic group. A sample item from the resolution subscale is, “I have a clear sense of what my ethnicity means to me.” Participants rate items on a 4-point Likert scale, ranging from 1 (*does not describe me at all*) to 4 (*describes me very well*). Specific items are reverse coded before items are summed to the respective subscale to produce three subscale scores. A total score is not recommended for the EIS-B (Douglas & Umaña-Taylor, 2015). Higher scores on the EIS-B subscales indicate higher exploration, resolution, and affirmation.

The EIS-B was developed based on an ethnic composition of White ($n = 5,787$), Latinx ($n = 1,408$), East Asian ($n = 955$), South Asian ($n = 298$), Black ($n = 834$), and Middle Eastern ($n = 126$) university students. Douglas and Umaña-Taylor (2015) reported the following Cronbach’s alphas for the scores of the Latinx group: .85 for exploration, .81 for affirmation, and .87 for resolution. Douglas and Umaña-Taylor conducted a confirmatory factor analysis on the
overall sample and found that the data supported the three-factor structure of the EIS-B. In addition, the confirmatory factor analysis found the data fit the model well, $CFI = .99$ and $RMSEA = .04$. In the present study, the Cronbach’s alpha was .85 for ethnic exploration, .89 for ethnic resolution, and .88 for ethnic affirmation. This exceeds the recommended Cronbach’s alpha of at least .70 for reliability (Cronbach, 1951).

**Trait Anxiety**

The State Trait Anxiety Inventory–Short Form (STAI; Spielberger et al., 1983) is a 20-item inventory that measures self-reported anxiety. The STAI–Short Form is the brief version of the original 40-item State Trait Anxiety Inventory (Spielberger et al., 1983). The STAI-Short Form is composed of two subscales labeled state anxiety (10 items) and trait anxiety (10 items). State anxiety refers to symptoms of anxiety attributed due to one’s current state of reference (Spielberger et al., 1983). Trait anxiety refers to symptoms of anxiety due to general stable aspects of anxiety responsiveness (Spielberger et al., 1983). In this study, I administered the trait anxiety subscale to assess generalized anxiety. A sample item from the trait subscale is “I feel nervous and restless.” Participants rate items on a 4-point Likert scale, ranging from 1 (*not at all*) to 4 (*very much so*) for the state scale, and 1 (*almost never*) to 4 (*almost always*) for the trait scale. Two subscale scores and a total score is used to measure anxiety. Total scores range from 0 to 80. Higher scores on the STAI–Short Form indicate higher state and trait anxiety. Specific items are reverse coded before all items are summed to a total. The normative sample reported a Cronbach’s alpha of .90 for trait anxiety (Spielberger et al., 1983). Novy, Nelson, Goodwin, and Rowzee (1993) obtained Cronbach’s alpha for the scores of .94 for trait anxiety in a sample of 35 Latinx adult community members. Kohn, Kantor, DeCicco, and Beck (2008) assessed concurrent validity of the scores by correlating the STAI and the Beck Anxiety Inventory–Trait ($r = .66$). In
the present study, the Cronbach’s alpha was .89. This exceeds the recommended Cronbach’s alpha of at least .70 for reliability (Cronbach, 1951).

**Procedures**

**Recruitment**

This study was approved by the university’s Human Subjects Institutional Review Board on August 18, 2017, and two extensions were approved through July 11, 2020 (see Appendix C). The sampling approach for this study was purposeful in that the researcher selects participants and sites that can purposefully provide knowledge of the research problem (Creswell, 2013). In this study, I purposefully selected four predominantly White universities (PWIs) located in the Midwestern United States. The Latinx student population for these universities ranged from 3.59% to 6%. These four universities were selected because they are all public research degree-granting universities located in the Midwest with 50% or more European-American/White students enrolled. These universities were selected because they have different academic rankings yielding diverse data of participants. The inclusionary criteria for participants are that they (a) are at least 18 years of age, (b) self-identify as Latinx (e.g., heritage from Latin American, such as Mexican, Brazilian, Puerto Rican, etc.), and (c) are currently enrolled in an undergraduate or graduate degree-granting university located in the U.S. Midwest composed of 50% or more European-American/White students. The exclusionary criteria for participants apply if they are (a) under 18 years of age, (b) not currently enrolled in a degree program, (c) enrolled in an online degree program, or (d) not enrolled in a university located in the Midwestern United States composed of 50% or more European-American/White students. Criteria for participating were selected because subjects aged 18 and older do not need parental consent to participate, Latinx identification addresses the target population of this study, and
being enrolled at the university where participants attend in-person is necessary for answering questions related to stress associated with attending a PWI.

**Online Survey**

Participants were asked to take an online survey that would be accessed by clicking on the link provided in an email invitation. Invitations via email to participate in an online survey were sent to students via corresponding university officials and by reaching out to campus student program/organizations (see Appendices D and E). The survey was created on the online survey company PsychData (2017). PsychData was chosen because it allows for page breaks that redirect participants to a new URL page that is not linked to their responses. The email invitations were sent on three occasions: once in Spring 2018, once in Summer I 2018, and once in Fall 2018. Participants were provided the email addresses of the student investigator and principal investigator in case they had questions or expressed interest in participating in the study. The estimated time to complete the questionnaire was 15-20 minutes. For optional reimbursement, participants were given a $5 Walmart gift card. The survey could be taken on a computer, tablet, or cell phone that had internet access in a location and time of participants’ choice. The survey had two page breaks: one page break from the consent form to start the survey and another page break at the end of the survey to the last page where participants had the option of entering their email address.

After potential participants opened the online survey link, they were directed to the consent form page (see Appendix F). The consent form page explained the purpose of this research study, time commitments, procedures used in the study, risks and benefits of participating in this research study, and compensation for participation. In addition, the consent form page explained study eligibility, content of questionnaires, confidentiality, and contact
information. At the end of the consent form page, instructions explained that participants provided consent by deciding to participate in the survey. When participants began the survey, they consented to participating in the study. Even after providing consent, participants had the option to exit the survey whenever they wanted, and their responses were not used. Only responses from completed surveys were used in the study. The survey is completely anonymous and no identifiable information was collected. After participants selected that they consented to participate, they were redirected to the questionnaires. The survey consisted of five questionnaires: (a) Demographics, (b) Perceived Stress Scale, (c) Ethnic Identity-Scale Brief, (d) Minority Status Stress Scale, and (e) State-Trait Anxiety Inventory–Short Form (Form Y-2). After participants completed the survey, they were provided with a link to stress management resources and a link for obtaining compensation (see Appendix G). If participants clicked on the link for compensation, they were redirected to a new page not linked to their responses where they had the option of entering an email address (see Appendix H).
CHAPTER IV
RESULTS

The research design is quantitative. A quantitative method is appropriate for this study because it allows predictions and interactions to be tested. Based on the statistical software G*Power, a sample size of 264 participants is recommended to run a moderator regression with one outcome variable, two predictors, and their interaction to detect a small Cohen’s $f$ effect size of .03 with an alpha level set at .05 and minimum power of .80 (see Appendix I). The current sample size of 256 participants is close to the recommended 264 sample size.

Descriptive Statistics

The data were tested to determine whether they meet assumptions of linearity and residual homoscedasticity for regression analyses. To test hypotheses, four regression models corresponding to ethnic minority stress, ethnic identity-resolution, ethnic identity-exploration, and ethnic identity-affirmation were conducted. All regression models were tested for homoscedasticity by selecting plots in the corresponding linear regression model (see Figures 7–18). Based on the normal P-P plot, because the circles follow the diagonal line, we can conclude that the data are normal. Based on the scatterplot of the residuals, because the points are randomly scattered, the data also meet the assumption of homoscedasticity. Thus, homoscedasticity was met for the four models; we also found the data were normally distributed. Due to the results, linearity assumption was met for the four regression models. Homoscedasticity and linearity assumptions were met for the data; therefore, the researcher decided to move forward with the statistical analysis.
Figure 7

*Histogram for Hypothesis 1 Regression Model: Ethnic Minority Stress Predicting Trait Anxiety Symptoms*

![Histogram](image)

Figure 8

*Scatterplot for Hypothesis 1 Regression Model: Ethnic Minority Stress Predicting Trait Anxiety Symptoms*

![Scatterplot](image)
Figure 9

*Normal P-P Plot for Hypothesis 1 Regression Model: Ethnic Minority Stress Predicting Trait Anxiety Symptoms*

![Normal P-P Plot for Hypothesis 1](image)

Figure 10

*Histogram for Hypothesis 2 Regression Model: Testing Interaction of Ethnic Resolution*

![Histogram for Hypothesis 2](image)
Figure 11

Scatterplot for Hypothesis 2 Regression Model: Testing Interaction of Ethnic Resolution

Figure 12

Normal P-P Plot for Hypothesis 2 Regression Model: Testing Interaction of Ethnic Resolution
Figure 13

*Histogram for Hypothesis 2 Regression Model: Testing Interaction of Ethnic Exploration*

![Histogram](image)

Figure 14

*Scatterplot for Hypothesis 2 Regression Model: Testing Interaction of Ethnic Exploration*

![Scatterplot](image)
Figure 15

*Normal P-P Plot for Hypothesis 2 Regression Model: Testing Interaction of Ethnic Exploration*

![Normal P-P Plot](image)

Figure 16

*Histogram for Hypothesis 2 Regression Model: Testing Interaction of Ethnic Affirmation*

![Histogram](image)
Figure 17

*Scatterplot for Hypothesis 2 Regression Model: Testing Interaction of Ethnic Affirmation*

![Scatterplot](image1)

Figure 18

*Normal P-P Plot for Hypothesis 2 Regression Model: Testing Interaction of Ethnic Affirmation*

![Normal P-P Plot](image2)
The mean, standard deviations, and correlations for the measures are reported in Table 1. Results found that higher perceived stress was significantly associated with higher ethnic minority stress, \( r = .389, p = .000 \). Higher perceived stress was significantly associated with higher trait anxiety symptoms, \( r = .751, p = .000 \). These results indicated that high perceived stress has negative effects on mental health. Higher ethnic minority stress was significantly associated with higher trait anxiety symptoms, \( r = .386, p = .000 \), indicating that higher ethnic minority stress has negative effects on mental health. Higher ethnic minority stress was significantly associated with higher ethnic resolution, \( r = .244, p = .000 \). These results indicated that students who experience higher levels of ethnic minority stress are more likely to have a higher degree of understanding of meaning of one’s ethnic group. Higher ethnic minority stress was significantly associated with higher ethnic exploration, \( r = .405, p = .000 \), indicating that students who experience higher ethnic minority stress are more likely to seek knowledge about one’s ethnic group. Higher ethnic resolution was significantly associated with higher ethnic exploration, \( r = .488, p = .000 \), which indicates that students who have a higher degree of understanding meaning of one’s ethnic group are more likely to seek knowledge about one’s ethnic group. Checking for multicollinearity (having predictors that are highly correlated with each other) is also part of checking the assumptions for linear regression. Assuming a threshold of \( r = 0.80 \), since all our correlation coefficients are less than 0.80, we can say that no multicollinearity exists among our predictors and that our linear regression models are valid.
Table 1

Means, Standard Deviations, and Correlations of the Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.PSS</td>
<td>29.144</td>
<td>6.974</td>
<td>_</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.MSS</td>
<td>82.378</td>
<td>33.925</td>
<td>.389**</td>
<td>_</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.STAI</td>
<td>23.054</td>
<td>6.653</td>
<td>.751**</td>
<td>.386**</td>
<td>_</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.EIS-Resolution</td>
<td>9.628</td>
<td>2.334</td>
<td>.023</td>
<td>.244**</td>
<td>-.073</td>
<td>_</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.EIS-Exploration</td>
<td>8.191</td>
<td>2.828</td>
<td>.097</td>
<td>.405**</td>
<td>.007</td>
<td>.488**</td>
<td>_</td>
<td></td>
</tr>
<tr>
<td>6.EIS-Affirmation</td>
<td>11.332</td>
<td>1.587</td>
<td>-.089</td>
<td>-.017</td>
<td>-.070</td>
<td>.079</td>
<td>.112</td>
<td>_</td>
</tr>
</tbody>
</table>

Note. N = 256. PSS = Perceived Stress Scale; MSS = Minority Stress Scale; STAI = State-Trait Anxiety Inventory; EIS-Resolution = Ethnic Identity Scale-Resolution; EIS-Exploration = Ethnic Identity Scale-Exploration; EIS-Affirmation = Ethnic Identity Scale-Affirmation. **p < .01.

Analyses of variance (ANOVAs) were conducted to determine the effects of demographic variables on ethnic minority stress. Results found that students identifying as Black or African American reported significantly higher ethnic minority stress compared to students identifying as White ($M = 112.04, SD = 24.37; M = 76.01, SD = 31.14; F(4, 8739.00) = 8.48, p = .000, \eta^2 = .119$). In addition, students identifying as American Indian or Alaska Native reported significantly higher ethnic minority stress compared to students identifying as White ($M = 93.89, SD = 36.71; M = 76.01, SD = 31.14; F(4, 8739.00) = 8.48, p = .000, \eta^2 = .119$). Results did not find significant main effects in ethnic identity, racial makeup of community, and racial makeup of high school on ethnic minority stress. ANOVAs were conducted to determine the effects of demographic variables on ethnic affirmation. Results did not find significant main effects in race, ethnic identity, racial makeup of community, and racial makeup of high school attended on ethnic affirmation.
ANOVA were conducted to determine the effects of demographic variables on ethnic resolution. Results found that students growing up in a predominantly Latinx community had significantly higher ethnic resolution compared to students growing up in a predominantly Asian community ($M = 10.61, SD = 1.82; M = 7, SD = 0; F(5, 32.65) = 6.65, p = .000, \eta^2 = .117$). These results indicated that students growing up in a predominantly Latinx community have a higher degree of understanding meaning of one’s ethnic group compared to students growing up in a predominantly Asian community. However, these results should be interpreted with caution because only one student reported growing up in a predominantly Asian community. Results found that students attending a predominantly Latinx high school had significantly higher ethnic resolution compared to students attending a predominantly Asian high school ($M = 10.70, SD = 2.19; M = 7, SD = 0; F(5, 16.21) = 3.09, p = .010, \eta^2 = .05$). These results indicated that students attending a predominantly Latinx high school have a higher degree of understanding meaning of one’s ethnic group compared to students attending a predominantly Asian high school. However, these results should be interpreted with caution as because only one student reported attending a predominantly Asian high school. Results did not find significant main effects in race and ethnic identity on ethnic resolution.

ANOVA were conducted to determine the effects of demographic variables on ethnic exploration. Results found that students growing in predominantly African-American communities had significantly higher ethnic exploration compared to students attending a predominantly Asian community ($M = 9.14, SD = 4.01; M = 5, SD = 0; F(5, 20.82) = 2.69, p = .022, \eta^2 = .051$). These results indicated that students growing up in a predominantly African-American community are more likely to seek knowledge about one’s ethnic group compared to students growing up in a predominantly Asian community. However, these results should be
interpreted with caution because only one student reported growing up in a predominantly Asian community. Results found that students attending a predominantly Latinx high school had significantly higher ethnic exploration compared to students attending a predominantly Asian high school ($M = 9.39, SD = 3.10; M = 5, SD = 0; F(5, 22.40) = 2.90, p = .014, \eta^2 = .055$). These results indicated that students attending a predominantly Latinx high school are more likely to seek knowledge about one’s ethnic group compared to students attending a predominantly Asian high school. However, these results should be interpreted with caution because only one student reported attending a predominantly Asian high school. Results did not find significant main effects in race and ethnic identity on ethnic exploration.

Bivariate correlations and ANOVAs were conducted to determine if the dependent variable of trait anxiety covaried with demographic variables. Bivariate correlations were conducted with age, hours completed in academic program, and overall grade point average on the dependent variable of trait anxiety. Results indicated that age was significantly correlated with trait anxiety symptoms, such that trait anxiety decreased as age increased, $r = –.130, p = .039$. Hours completed in academic program and overall grade point average were not correlated with trait anxiety symptoms. ANOVA results found that women reported higher trait anxiety symptoms compared to men ($M = 24.24, SD = 6.40; M = 20.35, SD = 6.24; F(4, 288.30) = 7.13, p = .000, \eta^2 = .102$). ANOVA results did not find significant main effects in sexual orientation, relationship status, ethnic identity, race, language first learned, country of birth, mother’s country of birth, father’s country of birth, income, academic year, racial makeup of community they grew up in, and racial makeup of high school on trait anxiety symptoms. One sample independent $t$-test did not find significant differences between undergraduate and graduate students on trait anxiety symptoms. The means for trait anxiety symptoms in
undergraduate \((M = 23.24)\) and graduate \((M = 22.56)\) students are displayed in Figure 19. Due to age and gender being covariates with trait anxiety symptoms, they were added to the regression models as variables to control.

**Figure 19**

*Undergraduate and Graduate Student Means for Trait Anxiety*

![Trait Anxiety Means](image)

*Note.* The undergraduate student mean was 23.24 and the graduate student mean was 22.56. One sample independent *t*-test did not find significant differences between undergraduate and graduate students on trait anxiety symptoms, \(p = .465\).

**Hypothesis 1**

The first research hypothesis is that Latinx students attending a PWI with higher ethnic minority stress will have higher trait anxiety symptoms. To test the hypothesis, a linear regression was conducted. Linear regression analyses are appropriate for identifying unique contributions of two or more predictor variables and testing interaction effects (Heppner, Wampold, Owen, Thompson, & Wang, 2015). The outcome variable was trait anxiety, and the
two predictors were (a) perceived stress and (b) ethnic minority stress. In block 1 of the regression model, age and gender were entered as covariates. In block 2, general stress was entered to examine its main effect on trait anxiety symptoms. In block 3, ethnic minority stress was entered to examine its main effect on trait anxiety symptoms. Results of hierarchical linear regression are reported in Table 2. In step 1 of this analysis, age and gender accounted for 12.4% of the variance in trait anxiety symptoms. In step 2, general stress accounted for 45.4% of the variance in trait anxiety symptoms. In step 3, ethnic minority stress contributed a significant increment in predicting trait anxiety symptoms ($\Delta R^2 = .011$, $p = .013$), after controlling for age, gender, and general stress. The regression coefficient was positive, showing that higher ethnic minority stress predicted higher trait anxiety symptoms. The results supported our first hypothesis.
**Table 2**

*Hierarchical Linear Regression Analyses Summary Predicting Trait Anxiety Symptoms from Ethnic Minority Stress*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>ΔR²</th>
<th>ΔF</th>
<th>df</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Age</td>
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<td>.073</td>
<td>-137*</td>
<td>.124</td>
<td>7.022***</td>
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</tr>
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<tr>
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<td>-1.004*</td>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
<td><strong>Step 2</strong></td>
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<td></td>
<td>.454</td>
<td>266.019***</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Gender Neutral</td>
<td>-6.317</td>
<td>6.247</td>
<td>-.059</td>
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</tr>
<tr>
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<td>.045</td>
<td>.675***</td>
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<tr>
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<td>.023</td>
<td>.009</td>
<td>.115*</td>
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</tr>
</tbody>
</table>

*Note. N = 256. The ΔR² for step 3, where ethnic minority stress was entered was statistically significant, p = .013.*

*p < .05. ***p < .001.
Hypothesis 2

The second research hypothesis is that ethnic identity will moderate the relationship between ethnic minority stress and trait anxiety symptoms in Latinx university students attending a PWI. To test the hypothesis, a linear regression was conducted. Linear regression analyses are appropriate for identifying unique contributions of two or more predictor variables and testing interaction effects (Heppner et al., 2015). The outcome variable was trait anxiety, and the three predictors were (a) perceived stress, (b) ethnic minority stress, and (c) ethnic identity. Three regression models were conducted pertaining to ethnic resolution, ethnic exploration, and ethnic affirmation.

The first regression model tested the hypothesis that higher ethnic resolution will moderate the relationship between ethnic minority stress and trait anxiety symptoms in Latinx university students attending a PWI. In block 1 of the regression model, age and gender were entered as covariates. In block 2, general stress was entered to examine its main effect on trait anxiety symptoms. In block 3, ethnic minority stress was entered to examine its main effect on trait anxiety symptoms. In block 4, ethnic resolution was entered to examine its main effect on trait anxiety symptoms. In block 5, the product of ethnic minority stress and ethnic resolution was entered to examine their interaction effect on trait anxiety symptoms. Results of hierarchical linear regression are displayed in Table 3. In step 4, ethnic resolution contributed a significant increment in predicting trait anxiety symptoms ($\Delta R^2 = .012, p = .007$). The regression coefficient was negative, showing that higher ethnic resolution predicted lower trait anxiety symptoms. These results indicated that students who had a higher degree of understanding meaning of their ethnic group experienced lower trait anxiety symptoms. In step 5, the interaction of ethnic resolution on the relationship of ethnic minority stress and trait anxiety symptoms was not
significant. These results indicated that ethnic resolution did not moderate the relationship between ethnic minority stress and trait anxiety symptoms. The results did not support our second hypothesis.

Table 3

*Hierarchical Linear Regression Analyses Summary Predicting Trait Anxiety Symptoms from Ethnic Minority Stress and Ethnic Resolution*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>( \Delta R^2 )</th>
<th>( \Delta F )</th>
<th>df</th>
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<td></td>
<td></td>
<td>.012</td>
<td>7.461**</td>
<td>1, 245</td>
</tr>
<tr>
<td>Age</td>
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<td>.051</td>
<td>−0.25</td>
<td></td>
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</tr>
<tr>
<td>Woman</td>
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<td>4.376</td>
<td>−.424</td>
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<tr>
<td>Man</td>
<td>−6.941</td>
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<td>−.483</td>
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<tr>
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<td>.635</td>
<td>.045</td>
<td>.666***</td>
<td></td>
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<td></td>
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<tr>
<td>EMS</td>
<td>.029</td>
<td>.009</td>
<td>.148**</td>
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<td>−.118**</td>
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<td>Ethnic Minority Stress</td>
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<td>−.046</td>
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<td>.004</td>
<td>.242</td>
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</tbody>
</table>

*Note. N = 256. Steps 1, 2, and 3 are omitted because the analyses and results are the same as Steps 1, 2, and 3 in Table 2. EMS = Ethnic Minority Stress. The \( \Delta R^2 \) for step 5, where the interaction of ethnic minority stress and ethnic identity-resolution was entered, was not statistically significant.*

**p < .01. ***p < .001.
The second regression model tested the hypothesis that higher ethnic exploration will moderate the relationship between ethnic minority stress and trait anxiety symptoms in Latinx university students attending a PWI. In block 1 of the regression model, age and gender were entered as covariates. In block 2, general stress was entered to examine its main effect on trait anxiety symptoms. In block 3, ethnic minority stress was entered to examine its main effect on trait anxiety symptoms. In block 4, ethnic exploration was entered to examine its main effect on trait anxiety symptoms. In block 5, the product of ethnic minority stress and ethnic exploration was entered to examine their interaction effect on trait anxiety symptoms. Results of hierarchical linear regression are displayed in Table 4. In step 4, ethnic exploration contributed a significant increment in predicting anxiety symptoms ($\Delta R^2 = .013, p = .006$). The regression coefficient was negative, showing that higher ethnic exploration predicted lower trait anxiety symptoms. These results indicated that students who sought knowledge about one’s ethnic group experienced lower trait anxiety symptoms. In step 5, the interaction of ethnic exploration on the relationship of ethnic minority stress and trait anxiety symptoms was not significant. These results indicated that ethnic exploration did not impact the relationship between ethnic minority stress and trait anxiety symptoms. The results did not support our second hypothesis.
Table 4

Hierarchical Linear Regression Analyses Summary Predicting Trait Anxiety Symptoms from Ethnic Minority Stress and Ethnic Exploration

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>ΔR²</th>
<th>ΔF</th>
<th>df</th>
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<td></td>
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<td>7.778**</td>
<td>1, 245</td>
</tr>
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<td>−.013</td>
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</tr>
<tr>
<td>Woman</td>
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<td>−.397</td>
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<td></td>
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<tr>
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<td>−6.722</td>
<td>4.385</td>
<td>−.468</td>
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<tr>
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<tr>
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<td>.044</td>
<td>.671***</td>
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<tr>
<td>EMS</td>
<td>.033</td>
<td>.010</td>
<td>.168**</td>
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<tr>
<td>Ethnic Exploration</td>
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<td>−.126**</td>
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<td>−.014</td>
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<td></td>
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<tr>
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<tr>
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<td>−.471</td>
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<td>Gender Neutral</td>
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<td>.671***</td>
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<td>.002</td>
<td>.003</td>
<td>.151</td>
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</tr>
</tbody>
</table>

Note. N = 256. Steps 1, 2, and 3 are omitted because the analyses and results are the same as Steps 1, 2, and 3 in Table 2. EMS = Ethnic Minority Stress. The ΔR² for step 5, where the interaction of ethnic minority stress and ethnic exploration was entered, was not statistically significant. *p < .05. **p < .01. ***p < .001.
The third regression model tested the hypothesis that higher ethnic affirmation will moderate the relationship between ethnic minority stress and trait anxiety symptoms in Latinx university students attending a PWI. In block 1 of the regression model, age and gender were entered as covariates. In block 2, general stress was entered to examine its main effect on trait anxiety symptoms. In block 3, ethnic minority stress was entered to examine its main effect on trait anxiety symptoms. In block 4, ethnic affirmation was entered to examine its main effect on trait anxiety symptoms. In block 5, the product of ethnic minority stress and ethnic affirmation was entered to examine their interaction effect on trait anxiety symptoms. Results of hierarchical linear regression are displayed in Table 5. In step 4, ethnic affirmation was not significant in predicting trait anxiety symptoms. In step 5, the interaction of ethnic affirmation on the relationship of ethnic minority stress and trait anxiety symptoms was not significant. The $\Delta R^2$ was 0 in both steps 4 and 5, meaning that the ethnic affirmation does not account for any variation at all in trait anxiety symptoms. These results indicated that ethnic affirmation did not moderate the relationship between ethnic minority stress and trait anxiety symptoms. The results did not support our second hypothesis.
Table 5

*Hierarchical Linear Regression Analyses Summary Predicting Trait Anxiety Symptoms from Ethnic Minority Stress and Ethnic Affirmation*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
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<th>β</th>
<th>ΔR²</th>
<th>ΔF</th>
<th>df</th>
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<td></td>
<td></td>
<td>.000</td>
<td>.219</td>
<td>1, 245</td>
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<tr>
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<td>-.025</td>
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<td></td>
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<td>-.363</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
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<td>4.456</td>
<td>-.440</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transgender</td>
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<td>6.144</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>-.060</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Stress</td>
<td>.641</td>
<td>.045</td>
<td>.673***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMS</td>
<td>.023</td>
<td>.009</td>
<td>.115*</td>
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<tr>
<td>Ethnic Affirmation</td>
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<td>-.020</td>
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<tr>
<td><strong>Step 5</strong></td>
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<td></td>
<td>.000</td>
<td>.226</td>
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</tr>
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<td>.674***</td>
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<tr>
<td>Ethnic Minority Stress</td>
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<td>.004</td>
<td>-.121</td>
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</table>

*Note. N = 256. Steps 1, 2, and 3 are omitted because the analyses and results are the same as Steps 1, 2, and 3 in Table 2. EMS = Ethnic Minority Stress. The ΔR² for step 5, where the interaction of ethnic minority stress and ethnic affirmation was entered, was not statistically significant. *p < .05. ***p < .001.*
CHAPTER V
DISCUSSION

The purpose of the study was to examine the effects of ethnic minority stress on mental health outcomes, specifically trait anxiety symptoms. In addition, this study sought to investigate whether ethnic identity served as a moderator in the relationship between ethnic minority stress and trait anxiety symptoms in Latinx university students attending PWIs. Two hypotheses were tested. The first hypothesis was supported and the second hypothesis was not supported.

Hypothesis 1, which examined whether higher ethnic minority stress predicted higher trait anxiety symptoms in Latinx university students attending PWIs was supported: higher ethnic minority stress predicted higher trait anxiety symptoms after controlling for age, gender, and general stress. Hypothesis 2, which examined whether ethnic identity moderated the relationship between ethnic minority stress and trait anxiety symptoms in Latinx university students attending PWIs was not supported: ethnic resolution, ethnic exploration, and ethnic affirmation did not moderate the relationship between ethnic minority stress and trait anxiety symptoms.

The findings that higher ethnic minority stress predicted higher trait anxiety symptoms have important implications for the mental health of Latinx university students attending PWIs. This study showed that ethnic minority stress increases the likelihood of having higher trait anxiety symptoms. Because anxiety is the most common mental illness and is associated with ethnic minority stress in Latinx students, university counseling centers at PWIs would benefit from receiving training and providing resources for students experiencing ethnic minority stress.
Multicultural counseling guidelines from the American Psychological Association (APA), Council for Accreditation of Counseling and Related Educational Programs (CACREP), and American Counseling Association (ACA) state the competencies that counselors should exemplify to provide multicultural treatment (American Counseling Association [ACA], 2015; Arredondo, Rosen, Rice, Perez, Tovar-Gamero, 2005; Council for Accreditation of Counseling and Related Educational Programs [CACREP], 2016; Sue, 2001; Sue, Arredondo, & McDavis, 1992;). They relayed that counselor and client are tied to historical and current sociopolitical events of racism in the United States (ACA, 2015; Sue et al., 1992). One of the recommendations stated in the guidelines for counselors is that they have knowledge about the issues faced by clients (ACA, 2015; Arredondo et al., 2005; CACREP, 2016; Sue, 2001). Therefore, counselors at PWIs need to be aware of the negative mental health effects on Latinx students experiencing ethnic minority stress.

Another recommendation is that counselors need to have the skills to address the concerns of clients. Based on this study, counselors would benefit from receiving training on how to respond to clients who are experiencing ethnic minority stress. This training would need to be implemented in counseling programs, internship placement, and workplace settings. Multicultural training would include increasing sociocultural knowledge about issues faced by clients, increasing self-awareness of multicultural issues and biases, and practicing evidenced based multicultural skills for specific populations (Sue, 2001; Sue et al., 1992). In addition, counseling training programs should train mental health clinicians from a culturally responsive pedagogy. Culturally responsive pedagogy refers to including cultural aspects of students’ in the teaching curriculum (Ladson-Billings, 1995, 2006). For example, counseling training programs should incorporate counseling techniques for various cultures as part of the curriculum.
Based on these guidelines and results from this study, university counseling centers should attempt to create ethnic-based groups where students have a safe place to process their ethnic minority stress. For example, university counseling centers can create a Latinx support/therapy group. Specific training and development of groups aimed at addressing the mental health needs of Latinx students would ensure that competent multicultural treatment is available to students.

Hypothesis 2 was not supported, indicating that ethnic identity does not moderate the relationship between ethnic minority stress and trait anxiety symptoms. These results match other studies that found that ethnic identity did not mitigate the negative effects of ethnic minority stress on mental health in Latinx students attending ethnically diverse universities (Arbona & Jimenez, 2014; French & Chavez, 2010). However, some contradicting studies found that ethnic identity mitigated the negative effects of ethnic minority stress on mental health outcomes in students attending a PWI (Sellers & Shelton, 2003; Wei et al., 2010). This study answered whether the type of institution provided a clearer picture of whether ethnic identity was a protective factor in the negative effects of ethnic minority stress on mental health in Latinx students. The findings of this study suggest that ethnic identity did not mitigate the negative effects of ethnic minority stress on mental health in Latinx students attending PWIs. The results may be due to the majority of the sample identifying as White, and White students reported lower ethnic minority stress compared to students who identified as African American and American Indian or Alaska Native.

Although hypothesis 2 was not supported, the effects of ethnic identity on trait anxiety symptoms are meaningful. Higher ethnic resolution predicted lower trait anxiety symptoms. Thus, Latinx students who had higher degree of understanding meaning of their ethnic group
experienced lower trait anxiety symptoms. Higher ethnic exploration predicted lower trait anxiety symptoms. Thus, Latinx students who sought knowledge about one’s ethnic group experienced lower trait anxiety symptoms. These findings indicate that higher ethnic resolution and higher ethnic exploration have positive effects on mental health. Based on these findings, PWIs would benefit from offering opportunities for Latinx students to explore their ethnicity and increase their understanding of meaning to their ethnic group. For example, PWIs can offer Latinx welcome events where they are provided with information on their ethnicity, such as Latinx organizations on campus, Latinx organizations in the community, and Latinx therapy groups. Due to the increasing Latinx population and subsequent increase in student enrollment, it is essential that PWIs provide multicultural opportunities that promote the mental well-being of Latinx students. In addition, students can take the opportunity to choose class assignments geared toward increasing their knowledge about their ethnicity. For example, a Latinx student enrolled in a history class can choose to focus on the historical events of Latinx populations in the United States. Another example may be a Latinx student who chooses to focus their research paper on the mental health outcomes of Latinx population in the United States. These examples are supported by the findings that increasing ethnic knowledge is associated with positive mental health outcomes (Vasquez, 2009).

**Limitations**

The research design of this study investigated associations and did not test for cause and effect between variables. Therefore, the results do not indicate that one variable caused another variable; but the analyses explain where relationships exist. The sample was not evenly distributed among racial and ethnic groups, which limits the generalizability of the results to Latinx students. The majority of the sample was racially White and ethnically Mexican.
Therefore, the results of this study cannot be generalized to all races and ethnicities in Latinx students.

The racial makeup of the community students grew up in and the racial makeup of the high school they attended provided different opportunities for ethnic identity development. The sample consisted of students who mostly grew up in predominantly White communities and the minority of students who grew up in predominantly Asian communities. In addition, the sample consisted mostly of students who attended predominantly White high schools, and one student attended a predominantly Asian high school. The findings showed that students who grew up in predominantly Latinx communities had the highest ethnic resolution. These findings support that students who grew up in predominantly Latinx communities are more likely to have a higher degree of understanding meaning to one’s ethnic group. Similarly, students attending predominantly Latinx high schools had higher ethnic resolution. These findings support that students attending predominantly Latinx high schools are more likely to have a higher degree of understanding meaning to one’s ethnic group. The findings support that students who grew up in predominantly African-American communities are more likely to seek knowledge about one’s ethnic group. The findings support that students who attended predominantly Latinx high schools had the highest ethnic exploration. These findings support that students attending predominantly Latinx high schools are more likely to seek knowledge about one’s ethnic group. Overall, the sample consisted of students who grew up in predominantly White communities and attended predominantly White high schools, which limits the generalizability of Latinx students growing up in communities and attending high schools with other racial makeups. Most importantly, only one person reported growing up in a predominantly Asian community and one person reported they attended a predominantly Asian high school, which means the results may be severely
underestimating or overestimating the mean for students growing up in predominantly Asian communities and students who attended predominantly Asian high schools. Thus, the ANOVA results for students that grew up in a predominantly Asian community and students that attended a predominantly Asian high school are unreliable.

**Implications of Study**

This study expanded the literature on the protective factors in Latinx university students attending a PWI. Examination through the lens of resiliency theory that guided this study, results indicated that ethnic identity did not mitigate the negative impacts of ethnic minority stress in Latinx university students attending a PWI. Although ethnic identity did not serve as a protective factor in this study, the findings on ethnic identity are meaningful. Results found that ethnic exploration and ethnic resolution predicted lower trait anxiety symptoms. These results support that higher ethnic identity predicts better mental health outcomes in Latinx university students attending a PWI. Further investigation of protective factors that aid Latinx university students be resilient is critical. One strength of our study is that we examined both Latinx undergraduate and graduate students, whereas previous studies only examined undergraduate students. Future studies would benefit from also including Latinx graduate students to include a more comprehensive sample.

The implications of this study were to expand the knowledge about mental health outcomes in Latinx university populations. Results from this study showed that students with higher ethnic minority stress had higher trait anxiety symptoms. These results have implications for training in higher education for the counseling field. Counseling training programs should be up to date with Latinx issues. Current sociopolitical issues include the current Donald J. Trump presidential administration’s anti-immigrant standpoint and stereotype statements against Latinx
populations, Latinx Mexican border family separation policies, and racism against African Americans exemplified by police brutality. The results support that counseling programs should receive multicultural treatment geared toward increasing knowledge about ethnic minority stress. Ethnic minority stress is a type of stress that has shown to be present in Latinx populations. Therefore, it is important for counselors to be aware that Latinx students’ mental health concerns may be associated with ethnic minority stress they may be experiencing. This can be achieved by training counselors to ask students if they are experiencing ethnic minority stress on their campus. It is important that university counseling centers at PWIs inquire about ethnic minority stress as part of their intake procedures. A recommendation is that mental health clinicians specifically ask clients during the intake session, “Are you experiencing racial or ethnic identity stress?” In addition, to continued monitoring during treatment. Another recommendation is that all forms at university counseling centers be available in other languages, including Spanish.

Results from this study have implications for the interventions geared toward Latinx students attending PWIs. Results found that higher ethnic resolution predicted lower trait anxiety symptoms. These results support that counselors should gear interventions aimed at increasing a degree of understanding meaning to Latinx students’ ethnic group. Students with higher ethnic exploration had lower trait anxiety symptoms. These results support that counselors should gear interventions for Latinx students toward increasing the knowledge about their ethnic group. These interventions can be provided in individual and group counseling. In individual counseling, counselors can provide clients with information on cultural mental health outcomes to increase awareness. Counselors can then provide clients with an option of engaging in activities to increase their ethnic exploration and ethnic resolution. For example, if a Latinx student presents with ethnic minority stress, a counselor can recommend as an intervention that a
client join a Latinx group on campus to increase their ethnic exploration and ethnic resolution. In
the area of group counseling, university counseling centers can offer a Latinx support/therapy
group geared specifically to students who identify as Latinx. The results support that this group
should incorporate aspects of ethnic exploration and ethnic resolution, such as validating their
experiences, providing knowledge about Latinx populations in the United States, and creating
activities for increasing group belongingness and ethnic understanding.

Mental health clinicians should also practice culture humility in psychotherapy. Cultural
humility refers to a continual process of self-reflection, evaluation of power imbalances, and the
development of mutually respectful relationships of other cultural groups (Gallardo, 2014;
Tervalon & Murray-Garcia, 1998). In practicing cultural humility, mental health clinicians will
acknowledge their cultural background, privilege, and power dynamics of self and client, while
validating the cultural backgrounds from each individual client (Gallardo, 2014; Rosen &
Delgado-Romero, 2014). This provides an understanding for acknowledging that each client
holds unique cultural values and the importance of assessing and learning about the cultural
backgrounds of each client.

University counseling centers at PWIs should have Latinx counselors available as an
option for clients. A recommendation for recruitment of Latinx mental health clinicians would be
that university counseling centers are PWIs visit and call HSIs to establish communication with
faculty members and staff that train masters and doctoral level mental health clinicians, such as
counselors, social workers, and psychologists. Overall, this study has implications for training,
hiring practices, and individual and group therapy.
Future Research Directions

The results indicated that ethnic identity does not serve as moderator in Latinx students attending PWIs. Thus, future research studies should explore other protective factors in Latinx students attending PWIs. Given the current social political climate of Latinx populations in the United States, it is critical that protective factors should be identified to address the poor mental health outcomes of ethnic minority stress. Replication of the current study exploring multiple cultural factors, such as bicultural self-efficacy, may yield interesting results. For example, three studies found that higher bicultural self-efficacy was associated with lower depression symptoms (Carrera & Wei, 2014; David et al., 2009; Wei et al., 2010). Moreover, conducting a qualitative study to identify themes that have been helpful for Latinx students attending PWIs in coping with ethnic minority stress can help propose additional protective factors to explore. Future qualitative studies should investigate colorism, such as how Latinx students present racially and their phenotype appearance, and how that influences their experiences with ethnic minority stress and protective factors.

Due to the limitations of this study, future research should aim to reduce the limitations found in this study for more generalizable results. Ideally, the sample should be evenly distributed among demographics variables. The study was not evenly distributed among race, ethnicity, academic year, gender, makeup of community they grew up in, and racial makeup of high school. Future studies should emphasize even distribution among race and ethnicity because those demographics variables are related to the independent variable of ethnic identity. For example, results from this study pertained to a majority White and Mexican sample, which is not representative of the diversity in Latinx populations. In addition, future studies would benefit from making the question about race mandatory to answer to avoid missing data.
Examination of the multicultural therapy outcomes geared toward Latinx students at PWIs should be examined. Future studies would benefit from exploring the mental health outcomes of cultural techniques for individual and group counseling. Therapy outcomes should incorporate before and after treatment results of using specific cultural techniques. Thus, future research should examine the effects of utilizing ethnic exploration and ethnic resolution techniques on mental health outcomes.

Future researchers could examine cultural protective factors in a sample of Hispanic-serving institutions. Latinx students attending Hispanic serving-institutions would create a larger sample size for increased power analysis. Ethnic composition of the university could have implications on the level of ethnic identity and ethnic minority stress Latinx students may experience. Therefore, specific cultural protective factors may differ based on the ethnic composition of the university. Researchers would benefit from comparing mental health outcome differences between Latinx students attending a PWI and those Latinx students attending HSIs. For example, Latinx students attending PWIs may have fewer opportunities to explore their ethnicity and understand meaning of one’s ethnic group.

**Conclusion**

The current study examined the effects of ethnic minority stress on trait anxiety and whether ethnic identity served as moderator in the relationship between ethnic minority stress and trait anxiety symptoms. Hierarchical linear regression analyses were conducted to test for interactions. Results found that higher ethnic minority stress significantly predicted higher trait anxiety symptoms. There was no interaction effect of ethnic identity on the relationship between ethnic minority stress and trait anxiety symptoms. Thus, ethnic identity did not serve as a moderator in this study. Although ethnic identity was not a moderator, results found that higher
ethnic resolution predicted lower trait anxiety symptoms. In addition, higher ethnic exploration was found to predict lower trait anxiety symptoms.

These results from this study show the detrimental effects of ethnic minority stress on the mental health of Latinx populations. Those in the counseling profession should be aware of the sociopolitical climate that Latinx students face in PWIs. Based on these findings, it is imperative that multiculturally focused training to counselors be provided. In addition, counseling interventions geared toward increasing ethnic resolution and ethnic exploration should be integrated in the individual and group counseling services available to Latinx students.

The results from this study have implications for community outreach, counseling, programming, and training in the counseling field. Counseling centers at PWIs should be intentional in conducting community outreach to Latinx student organizations on campus, such as workshops or presentations. Creating a liaison between the counseling center and student organizations increases the delivery of services to populations that would not otherwise reach for services. Training and programming of counseling education programs should incorporate a multicultural focus of assessing and treating Latinx students who experience ethnic minority stress. Latinx supervisors should also be present in the counseling training programs. Due to the low educational attainment and high stressors Latinx students face, continued funding of programs geared toward increasing enrollment and retention of Latinx students should be supported. Training for counselors, psychologists, administrative assistants, and clerical staff working with Latinx on a regular basis and not on a one shot basis but two to three times a year and each year. Most importantly, to adequately address counselor preferences of students, counseling centers should have Latinx clinicians available. Race/ethnicity matching in
psychotherapy has been found to be associated with better mental health outcomes in treatment, such as higher attendance and higher symptom improvement (Kim & Kang, 2018).

Due to the limited studies examining cultural protective factors against the detrimental effects of ethnic minority stress, additional research on protective factors in Latinx populations should be explored to develop a greater knowledge of coping strategies. Identifying coping strategies effective in Latinx populations would enhance the training for counselors and inform the development of multiculturally competent counseling interventions.
REFERENCES


Appendix A

Majors of Total Sample
1. Communication Studies
2. Neurophysiology
3. Higher Education
4. Psychology
5. English
6. Sociology
7. Latina/o Studies and Pre-med
8. Economics
9. Social Work
10. Computer Science
11. Electrical Engineering
12. Spanish
13. International Affairs
14. Counselor Education and Supervision
15. Speech-Language Pathology
16. Education
17. Chemical Engineering
18. IHS
19. Nursing
20. Biomedical Sciences
21. Secondary English Education
22. History Education Secondary
23. Business
24. Aerospace Engineering
25. Education
26. Business
27. English/ Creative Writing
28. Psychology
29. Pre-Occupational Therapy
30. Criminal Justice
31. Psychology
32. Business Management
33. English
34. Finance
35. Religious Studies
36. Business
37. Mechanical Engineering
38. Fashion Design and Development
39. Dietetics
40. Rehabilitation Counseling
41. Occupational Therapy
42. French
43. Social Work
44. Criminal Justice
45. Gender and Women’s Studies
46. Psychology
47. Industrial Engineering
48. Counseling Psychology
49. Business
50. Business Administration
51. Nursing
52. Engineering
53. English/Gender & Women’s Studies
54. Biology
55. Supply Chain Management
56. Accounting/Finance
57. Anthropology/Geography
58. Electrical Engineering
59. Pre-IHS
60. Spanish
61. English
62. Psychology
63. Interdisciplinary Health Services
64. Music Education
65. Educational Leadership
66. Social Work
67. Health Education
68. Exercise Science, Focus in Occupational Therapy
69. Computer Engineering
70. Music Education
71. Counseling Psychology
72. Criminal Justice
73. Economics (BBA) & Interpersonal Communication (BA)
74. Counselor Education and Supervision
75. Aviation
76. Accounting
77. Public Health
78. Psychology
79. Biomedical Sciences
80. Nursing
81. Aerospace Engineering
82. Psychology & Women’s Studies
83. Theatre: Design and Technical Production
84. Nursing
85. Biology/Pre-Dental
86. Dietetics
87. Psychology
88. Engineering
89. Earth Science/Anthropology
90. Business/Marketing
91. Chemistry
92. Accounting and Finance
93. Public Health/Public Policy
94. Computer Science Engineering
95. Sociology
96. Sales and Business Marketing
97. Comparative Religion
98. Communication Studies
99. Behavioral Sciences
100. Master of Social Work
101. Computer Science
102. Nursing
103. Business
104. Family Consumer Science Education
105. Nursing
106. Chemical Engineering
107. Public Relations
108. Social Work
109. Business
110. Bachelor of Art
111. Social Work
112. Computer Information Systems
113. Chemistry
114. Educational Leadership
115. Mechanical Engineering
116. Sociology
117. Engineering
118. History
119. Psychology
120. Social Work
121. Acting/Theatre
122. History
123. Biomed
124. IHS
125. Computer Information Systems
126. Biomedical Sciences
127. Industrial and Entrepreneurial Engineering
128. Interdisciplinary Health Services
129. Accounting
130. Mechanical Engineering
131. Aviation Flight Science
132. Occupational Therapy
133. Mechanical Engineering
134. Biomedical Sciences
135. Business
136. Education
137. Accounting/Finance
138. Biomedical Sciences
139. Behavior Analysis
140. Human Resource Management
141. Global International Studies
142. Social Work
143. Biomedical Sciences (Pre-dental)
144. Public Adm.
145. Public Health
146. Accounting
147. Interpersonal Communications
148. Social Work
149. Nursing
150. Chemical Engineering
151. Mechanical Engineering
152. Criminal Justice
153. Biblical Studies with concentration in Worship Arts
154. Interpersonal Communication
155. Occupational Therapy
156. IHS
157. Social Work
158. Engineering
159. University Studies
160. Organizational Psychology
161. Advertising
162. Human Biology
163. Civil Engineering
164. Social Work
165. Criminal Justice and Psychology
166. Human Bio
167. Human Resources Management
168. HDFS- Couple and Family Therapy
169. Social Work
170. Nursing
171. Chemistry Education
172. Sustainability
173. Zoology
174. Social Work
175. Political Science
176. Fisheries & Wildlife
177. Anthropology
178. Social Work
179. Political Science
180. Chemical Engineering
181. Human Resource Management (Business)
182. Chemistry
183. Psychology
184. Special Education
185. Spanish and Neuroscience
186. Journalism
187. Psychology
188. Engineering
189. Accounting
190. Construction Management
191. Geography
192. Accounting
193. Organizational Psychology
194. Social Work
195. Experience Architecture
196. Psychology
197. Rehabilitation Counseling
198. Education
199. Student Affairs Administration
200. Social Work
201. Criminal Justice
202. English
203. Criminal Justice/Anthropology
204. Political Science Pre-Law
205. Human Biology
206. Sociology
207. Clinical Psychology
208. Educational Psychology
209. Human Development
210. Chemistry
211. Political Science
212. Accounting
213. Finance
214. Interdisciplinary Humanities & Chicano/Latino Studies
215. Biosystems Engineering
216. Media and Information
217. Mechanical Engineering
218. Arts and Humanities
219. Hospitality Business
220. Human Resources and Labor Relations
221. Education and Chicano/a Studies
222. Criminal Justice
223. Advertising
224. Human Biology
Education
Advertising Management
Actuarial Science
Accounting
Civil Engineering
Human Biology
Neuroscience
Spanish
Interdisciplinary Studies
Criminal Justice
Arts and Humanities
Engineering
Zoology
Computer Science
Anthropology
Environmental Studies and Sustainability
Business
Accounting
Psychology
Social Relations and Policy
Engineering
Anthropology
Accounting
Criminal Justice
Clinical Social Work
Social Work
Supply Chain Management & Logistics
Social Work
Elementary Education
Kinesiology
Genetics
Supply Chain Management
Appendix B

Demographics Questionnaire
1. What is your age? __________

2. What is your gender?
   □ Woman
   □ Man
   □ Transgender
   □ Gender-Neutral
   □ Other (please specify) __________

3. What is your sexual orientation?
   □ Heterosexual
   □ Gay
   □ Lesbian
   □ Bi-Sexual
   □ Pansexual
   □ Asexual
   □ Other (please specify) __________

4. What is your relationship status?
   □ Single
   □ Partnered
   □ Married
   □ Divorced
   □ Separated
   □ Widowed
   □ Other (please specify) _________

5. Do you identify as Latina/o (e.g., heritage from Latin America, such as Mexican, Brazilian, Puerto Rican etc.)?
   □ Yes
   □ No

6. What is your ethnic identity (ethnicity refers to cultural traditions, beliefs, and behaviors that are passed down through generations. Please choose one that you most identify with)?
   □ Argentinian
   □ Belizean
   □ Bolivian
   □ Brazilian
   □ Chilean
   □ Colombian
   □ Costa Rican
   □ Cuban
   □ Dominican
   □ Ecuadorian
   □ El Salvadorian
7. What is your racial identity (Latinas/os are racially diverse and often times choose “other” in questions regarding race. This question refers to your most prominent physical characteristics. Please choose only one racial group that applies most to you)?

- □ American Indian or Alaska Native
- □ Asian
- □ Black or African American
- □ Native Hawaiian or Other Pacific Islander
- □ White

8. What language did you learn first?

- □ Creole
- □ English
- □ French
- □ Portuguese
- □ Spanish
- □ Other ________________

9. Were you born in the United States (including Puerto Rico, Virgin Islands, and other U.S. territories)?

- □ Yes
- □ No (please specify country) ________________

10. In what country was your mother born?

- □ United States
- □ Other (please specify) _____________
11. In what country was your father born?
   - United States
   - Other (please specify) ____________

12. What is your family income?
   - Under $20,000
   - $20,000-39,999
   - $40,000-59,999
   - $60,000-79,999
   - $80,000-99,999
   - $100,000-119,999
   - $120,000-139,999
   - Over $140,000

13. What is your mother’s level of education?
   - None
   - Elementary School
   - Middle School
   - Some High School
   - High School or GED
   - Trade School
   - Some College
   - Associate’s Degree
   - Bachelor’s Degree
   - Master’s Degree
   - Graduate/Professional

14. What is your father’s level of education?
   - None
   - Elementary School
   - Middle School
   - Some High School
   - High School or GED
   - Trade School
   - Some College
   - Associate’s Degree
   - Bachelor’s Degree
   - Master’s Degree
   - Graduate/Professional

15. What is your generation to attend college?
   - First generation (first in family to attend college; neither parent has attended college)
   - Second generation or more (one or more parents has attended college)

16. What university are you currently attending? ________________
17. What is your academic year in college/university?
- □ Frosh (first year)
- □ Sophomore
- □ Junior
- □ Senior
- □ Masters Student
- □ Doctoral Student

18. What is your academic major/program discipline (e.g. History, Psychology, Chemistry)?
________________

19. How many hours have you completed in your current academic program? ____________

20. What is your overall grade point average? _________

21. What was the racial makeup of the community you mostly grew up with (please select one)?
- □ Predominantly Latina/o (50% or more)
- □ Predominantly African American
- □ Predominantly Asian
- □ Predominantly White
- □ Racially diverse (Inclusive of Blacks, Whites, Latinas/os, etc.)
- □ Other (please specify) ______________

22. What was the racial makeup of the high school you mostly attended (please select one)?
- □ Predominantly Latina/o (50% or more)
- □ Predominantly African American
- □ Predominantly Asian
- □ Predominantly White
- □ Racially diverse (Inclusive of Blacks, Whites, Latinas/os, etc.)
- □ Other (please specify) ______________
Appendix C

Human Subjects Institutional Review Board
Letter of Approval
Date: August 18, 2017

To: Joseph Morris, Principal Investigator
    Anel Arias, Student Investigator for Dissertation

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number 17-08-12

This letter will serve as confirmation that your research project titled “The Role of Ethnic Identity on Stress and Anxiety Amongst Latina/o University Students” has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may only be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., you must request a post approval change to enroll subjects beyond the number stated in your application under “Number of subjects you want to complete the study.”) Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

Reapproval of the project is required if it extends beyond the termination date stated below.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: August 17, 2018
Appendix D

Email Study Invitation
Dear Students,

My name is Anel Arias and I am a sixth year Counseling Psychology Doctoral Student at Western Michigan University. I am seeking participants for my dissertation, which is under the supervision of Dr. Joseph R. Morris. The purpose of this study is to further understand Latina/o university students’ perception of ethnic identity and experiences of stress attending predominantly White universities. Participation in this study is voluntary and involves completing an online survey that will take approximately 20 minutes. There is minimal to no risk associated with participating in this study. The minimal risk is that you may feel mildly uncomfortable due to recalling experiences associated with stress and discrimination throughout your university attendance. There is a $5 Walmart electronic gift card compensation for participating in this study. If you complete the survey, you will have the option to enter your email address to obtain one $5 Walmart electronic gift card.

In order to participate in this study, you must: (a) be at least 18 years of age, (b) self-identify as Latina/o (e.g. heritage from Latin American, such as Mexican, Brazilian, Puerto Rican etc.), and (c) be currently enrolled in an undergraduate or graduate degree-granting university located Midwest of the United States composed of 50% or more European American/White students.

Should you have any questions prior to or during the research study, you may email me at anel.arias@wmich.edu, or email my academic advisor at joseph.morris@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study. This study was approved by the Western Michigan University Human Subjects Institutional review Board (HSIRB; Project # 17-08-12) on August 18, 2017.

If you are interested in participating in the study, please click the link below to access the survey questionnaire. Your responses will be completely anonymous and confidential.

https://www.psychdata.com/s.asp?SID=181470

Thank you for your time and interest in this study!

Sincerely,

Anel

Anel Arias M.A.
Counseling Psychology Doctoral Candidate
Western Michigan University
anel.arias@wmich.edu
Appendix E

Email Study Invitation Outreach
Dear [name of director],

I hope your semester is going well! I am reaching out to you as a Counseling Psychology Doctoral Candidate at Western Michigan University conducting research on ethnic identity and stress at predominantly White Universities. I am seeking undergraduate and graduate university students who identify as Latina/o to participate in my dissertation.

In the hopes of reaching students, I am writing to ask if you would be willing to forward the following request along with the included link to students currently in your program. Again, your assistance is greatly appreciated and I thank you in advance. Should you have any questions, please do not hesitate to contact me at anel.arias@wmich.edu, or email my academic advisor at joseph.morris@wmich.edu.

Sincerely,
Anel Arias

______________________________________________________________________________

Dear Students,

My name is Anel Arias and I am a sixth year Counseling Psychology Doctoral Candidate at Western Michigan University. I am seeking participants for my dissertation, which is under the supervision of Dr. Joseph R. Morris. The purpose of this study is to further understand Latina/o university students’ perception of ethnic identity and experiences of stress attending predominantly White universities. Participation in this study is voluntary and involves completing an online survey that will take approximately 20 minutes. There is minimal to no risk associated with participating in this study. The minimal risk is that you may feel mildly uncomfortable due to recalling experiences associated with stress and discrimination throughout your university attendance. There is a $5 Walmart electronic gift card compensation for participating in this study. If you complete the survey, you will have the option to enter your email address to obtain one $5 Walmart electronic gift card.

In order to participate in this study, you must: (a) be at least 18 years of age, (b) self-identify as Latina/o (e.g. heritage from Latin American, such as Mexican, Brazilian, Puerto Rican etc.), and (c) be currently enrolled in an undergraduate or graduate degree-granting university located Midwest of the United States composed of 50% or more European American/White students.

Should you have any questions prior to or during the research study, you may email me at anel.arias@wmich.edu, or email my academic advisor at joseph.morris@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study. This study was approved by the Western Michigan University Human Subjects Institutional review Board (HSIRB; Project # 17-08-12) on August 18, 2017.
If you are interested in participating in the study, please click the link below to access the survey questionnaire. Your responses will be completely anonymous and confidential.
Thank you for your time and interest in this study!

Sincerely,

Anel

Anel Arias M.A.
Counseling Psychology Doctoral Candidate
Western Michigan University
anel.arias@wmich.edu
Appendix F

Consent Form
The Role of Ethnic Identity on Stress and Anxiety Amongst Latina/o University Students

Hello! Welcome to the study on Latina/o student’s experiences of ethnic identity and stress at predominantly White universities. Thank you for your interest in this study. Before you proceed, please take a moment to read the information below to obtain more details about the study and determine if you meet eligibility requirements to participate.

Please read this consent information in its entirety before you begin the survey.

Western Michigan University
Department of Counselor Education and Counseling Psychology
Principal Investigator: Joseph. R. Morris, Ph.D.
Student Investigator: Anel Arias, M.A.
Title of Study: The Role of Ethnic Identity on Stress and Anxiety Amongst Latina/o University Students

You have been invited to participate in a research study on “The Role of Ethnic Identity on Stress and Anxiety Amongst Latina/o University Students.” This research study will serve as Anel Arias’s dissertation project in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Counseling Psychology. This consent document will explain the purpose of this research study, time commitments, procedures used in the study, risks and benefits of participating in this research study, and compensation for participation.

What is the purpose of this research study?

The purpose of this study is to further understand Latina/o university students’ perception of ethnic identity and experiences of stress attending predominantly White universities.

Who can participate in this study?

In order to participate in this study, you must: (a) be at least 18 years of age, (b) self-identify as Latina/o (e.g. heritage from Latin American, such as Mexican, Brazilian, Puerto Rican etc.), and (c) be currently enrolled in an undergraduate or graduate degree-granting university located Midwest of the United States composed of 50% or more European American/White students.

You are not eligible to participate in this research study if you are: (a) under 18 years of age, (b) not currently enrolled in a degree program, (c) enrolled in an on-line degree program, (c) not enrolled in a university located Midwest of the United States composed of 50% or more European American/White students.

Where will this research study take place?

This research study is conducted via an online survey. You may take the survey on a computer, tablet, or cell phone that has internet access in a location and time of your choice.
What is the time commitment for participating in this research study?

It is anticipated that the survey will take approximately 20 minutes to complete. This is a one-time survey. Please do not complete more than one survey if you have already participated.

What will you be asked to do if you choose to participate in this research study?

You will be asked to complete a series of questions related to your demographics, perceptions of ethnic identity, experiences of stress, stress associated with your ethnic status, stress and discrimination associated with attending a predominantly White university, and anxiety symptoms. The survey consists of multiple choice questions, as well as a few short fill-in questions.

What information is being measured during the research study?

This research study will collect information about your personal, academic, family, and community demographics. In addition, information about your ethnic identity, levels of stress, stress associated with your ethnic status, stress and discrimination associated with attending a predominantly White university, and anxiety symptoms will be collected.

What are the risks of participating in this research study and how will these risks be minimized?

There is minimal to no risk associated with participating in this study. The minimal risk is that you may feel mildly discomfort due to recalling experiences associated with stress and discrimination throughout your university attendance. To minimize risks, a link to mental health resources will be provided at the end of the survey for participants to access.

What are the benefits of participating in this study?

There are no immediate known personal benefits to participating in this research study. However, the results of this study have the potential to add to the underrepresented literature on Latina/o university students. Also, findings from this study may provide recommendations for university programs to help Latina/o university students experiencing stress.

Are there any costs associated with participating in this research study?

The only known cost for participating in this study is the personal time it will take to complete the survey.
Is there any compensation for participating in this study?

At the end of the survey, you will have the option to enter your email address to obtain one $5 Walmart electronic gift card. You must complete the entire survey in order to obtain compensation. If you choose to obtain compensation, you must follow the link on the last page of the survey. The link will redirect you to another webpage where you will have the option to submit your e-mail address. The e-mail addresses cannot be linked to the surveys in order to ensure confidentiality and privacy of the participants. It is your choice to enter your email address in order for the $5 Walmart eGift Card to be emailed. The gift card will be distributed within one month of the time you completed the survey.

Who will have access to the information collected during this study?

Your confidentiality and privacy are very important. Your responses to the survey are completely anonymous. No names will be collected. You will only be identified by a pre-generated Research ID number provided by the on-line survey system. No information provided can be linked to your name or academic records. Full confidentiality cannot be guaranteed due to the chances of people passing by a public computer station and observing the computer or phone screen. During the course of this research study, the principal investigator and the student investigator will be the only persons who will have access to the information collected.

The results of this research study will be published as a dissertation. There is also potential for the results to be presented at professional conferences, published in scientific journals and/or inclusion of grants. As a participant in this study, you have the right to request a summary of the results that are gathered at the conclusion of this study. Should you be interested in receiving a summary report, please contact the student investigator, Anel Arias, at anel.arias@wmich.edu.

What if you want to stop participating in this study?

Your responses to the survey will be completely anonymous. When you start the survey, you are consenting to participate in this study. If you do not agree to participate in this study, simply exit the survey now. If, after beginning the survey, you decide that you do not wish to continue, you may stop at any time. By ending the survey early and deciding to not complete the survey in its entirety, means you are withdrawing from the study and your responses will not be used. You will not suffer any prejudice or penalty by your decision to stop your participation. You will experience NO consequences either academically or personally if you choose to withdraw from this study. The investigator can also decide to stop your participation in the study without your consent. The survey will be closed to participants after 300 surveys are completed.

Should you have any questions prior to or during the research study, you may contact the student investigator, Anel Arias, M.A. at (269) 544-9203 or anel.arias@wmich.edu, or the principal investigator, Joseph R. Morris, Ph.D. at (269) 387-5112 or joseph.morris@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.
This study was approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB; Project # 17-08-12) on August 18, 2017. Please do not participate in this study after August 17, 2018.

**Participating in this online survey indicates your consent for use of answers that you supply.**

Continue ONLY when finished. You will be unable to return or change your answers. By clicking below, you consent to participate in this study.
Appendix G

Last Page of Survey
Thank You for Your Participation in This Study!

Your responses may provide recommendations for university programs to help Latina/o university students experiencing stress.

If you choose to obtain a $5 Walmart electronic gift card, you must click on this link that will redirect you to another webpage that is not linked to your responses.

https://www.psychdata.com/default.asp  (not actual link)

If you would like to obtain more information on stress and mental health resources, please click on this link: http://www.apa.org/topics/stress/index.aspx
Appendix H

Email Compensation Page
It is your choice to enter an email address in order for the $5 Walmart eGift Card to be emailed. The e-mail address you provide cannot be linked to your responses. The gift card will be distributed within one month of the time you completed the survey by the student investigator, Anel Arias.

Enter Email Address

- Submit
Appendix I

G*Power Statistical Software
$F$ Tests- Linear Multiple Regression: Fixed Model $R^2$ increase

Power Analysis- A Priori: Computer required sample size given $\alpha$, power, and effect size

Input Parameters:

Effect Size $f^2 = .03$

$\alpha$ error probability = .05

Power $(1 - \beta$ err prob) = .80

Number of tested predictors = 1

Total number of predictors = 3

Output Parameters:

Noncentrality $\lambda = 7.92$

Critical $F = 3.87$

Numerator $df = 1$

Denominator $df = 260$

Total sample size = 264

Actual Power = .80