

THE ROLE OF MIGRATION PROCESSES
ON MEXICAN AMERICANS'
ANXIETY

by

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DEDICATION

To all Latinos.

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ABSTRACT

The U.S Census estimates that there are approximately 31 million Mexican Americans living in the U.S (U.S. Census 2013). Currently, little research has focused on the relationship between migration processes and the worries/anxiety of Mexican Americans. Studies show that worries/anxiety related to migration is an issue among Mexican Americans (Acevedo-Garcia and Almeida 2012). The purpose of this study is to analyze if there is a relationship between the prevalence of worries/anxiety and migration processes, specifically age at migration, frequency of migration, and remittances. A sample of 868 Mexican Americans from the National Latino and Asian American Study (NLAAS) 2002-2003 survey that estimates the prevalence of mental disorders and rates of mental health service by Latinos and Asian Americans in the United States was analyzed. NLAAS asked several questions related to demographic background, migration social processes and self-reported worries. Chi-Square analyses and logistic regression analysis show that migration processes do have a statistically significant relationship with worries/anxiety, specifically, age at migration. In general, foreign-born respondents of Mexican descent reported a higher prevalence of worries compared to U.S. born. However, specific age group differences did reveal that foreign-born individuals who migrated to the U.S. between the ages of 18 – 34 years old reported less worries compared to those who migrated at under 12 and between 13 – 17 years. Relative to U.S. Mexican Americans, Mexican Americans who migrated to the United States before the age of 12 and between 11 – 17 years old were more likely to report

worrying more than others and had excessive worries. Language, class, gender and education were additional factors that were found to be significant social determinates of worries/anxiety. Respondents who preferred to speak Spanish at home reported a lower prevalence of worries/anxiety; however, female respondents reported higher prevalence of worries/anxiety. Additionally, respondents who did not have a high school diploma were more likely to report less worries/anxiety than respondents who did have a high school education, and individuals who earned \$20,299 – \$40,000 annually were also less likely to report a prevalence of worries/anxiety than those who made more annually. Tests showed frequency of migration, and remittances did not result to be statistically significant. The prevalence of high worries that were found among Mexican Americans, suggests that demographic background and timing of migration play a role in the manifestation and course of worries/anxiety. Additional research and health care interventions are needed to address worries/anxiety among Mexican Americans living in the United States.

CHAPTER I

Introduction

In 2010, Hispanics represented the largest minority in the United States and is expected to increase (U.S. Census 2013). The U.S. Census reports that the number of Hispanics grew from 35.3 million to 50.5 million from 2000 to 2010, respectively (U.S. Census 2013). Hispanics encompass many ethnicities with Mexicans and Mexican Americans representing the largest population, which is estimated to be 31 million (U.S. Census 2013). This increase in the Hispanic population has occurred since 1965, particularly with Mexican Americans (Martin and Midgely 2006). Among this ethnic group, 11.5 million are Mexican Americans who are foreign born (Motel and Patten 2013).

Demographic trends show that Mexican Americans have a mean age of 27 years and the majority live in the Southwest of the United States (Saenz 2010). Moreover, Mexican Americans are not a monolithic group and there are differences among such individuals. For example, there are generational differences with the majority of Mexican Americans being under the age of 16, and those who are younger tend to be liberal compared to those who are older (Rouse Wilkinson, and Garand 2010). Additionally, Mexican Americans are more willing to migrate to the U.S. than Hispanics from other regions in Latin America (Nelly Salgado de Snyder et al 1990).

Migration to the U.S. is contributing the increasing population (Martin and Midgely 2006). Little is known about the impact that migration processes have on the worries/anxiety of Mexican Americans; however, anxiety among Mexican Americans is prevalent. Studies show Mexican Americans and Mexicans with the condition experience

significant fear that their opportunities will be limited (Barrera, Gonzalez, and Jordan 2013).

Mexican Americans have a unique experience in the prevalence of anxiety when compared to Non-Hispanic Whites (Guarnaccia et al. 2011; Hirai, Stanley, and Novy 2006; Kanel 2002). Researchers suggest that, in general, Hispanics view Generalized Anxiety Disorder (GAD) and anxiety as the amount of worries they have, and this is also the standard definition for GAD (DSM IV 2000; Hirai et al. 2006; Kanel 2002). However, a qualitative study found that Mexican Americans view and report the condition of extreme anxiety as “the nerves” or expressing a state of nervousness (Barrera et al. 2013; Guarnaccia et al. 2011).

Researchers have attributed that language also influences how Mexican Americans experience anxiety. For example, Hispanics use Spanish phrases like “*los nervios*” and “*ataque de nervios*” to describe cases of extreme anxiety (Barrera et al. 2013; Guarnaccia et al. 2011; Kanel 2002). Subsequently, anxiety for Mexican Americans involves having excess worries and nervousness that are often hard to control (Barrera et al. 2013; Guarnaccia et al. 2011). Notably, excessive and prolonged worries and nervousness will be a useful definition for understanding Mexican Americans’ anxiety.

Epidemiological trends from a survey of 33,000 individuals suggest that Mexican Americans have slightly lower percentages (4.4%,) of constantly feeling nervousness when compared to other Hispanics (4.6%,) (National Center for Health Statistics 2012). Relative to Non-Latino Whites (4.8%), Mexican Americans also had a slightly lower percentage (4.4%) of feeling nervousness (National Center for Health Statistics 2012).

Additionally, anxiety, for Hispanics, is a significant risk factor for mental health problems and needs, which warrants further investigation (Guarnaccia et al. 2011). Also, Hispanics do not know how to seek out help when it comes to mental health, and it is more difficult since most mental health services do not have enough Spanish speakers or are culturally sensitive to the Hispanic culture (Kanel 2002; Vega 2005). So, anxiety among Mexican Americans is prevalent and is a health disparity that warrants further attention.

Few studies have mentioned how migration processes impacts the mental health of Hispanics, but none have made anxiety the sole focal point of study. For example, age at migration has been shown to have a significant impact on the anxiety of Hispanics, specifically those individuals who were younger than 18 or older than 35, with both groups having more anxiety (Breslau et al. 2011; Familiar et al. 2011). Furthermore, how often migrants return to their country of origin has an effect on their anxiety; with those migrants who frequently returned to their country of origin experiencing increased amounts of worries (Breslau et al. 2011; Familiar et al. 2011). Research has also shown that migrants who have strong social ties with family and friends in the United States are less likely to send remittances to their country of origin, but there has been no study to analyze whether remittances are linked to migrants' anxiety (Durand et al. 1996).

This study further analyzes the problem of anxiety and how migration processes influences anxiety. Acevedo-Garcia and Almeida (2012) argue that migration is a “set of dynamic processes” that encompasses the journey and its risks as well as how immigrants adapt to their new society. As previously stated not much is known on such processes and their affect on anxiety, so this study will examine three of these processes.

Factors such as age at migration, frequency of migration, and remittances are a part of the migration process, but to what extent do these migration processes impact Mexican American's anxiety. This study fills this major gap in the literature. Therefore, I will analyze the relationship between anxiety of Mexican Americans and migration processes, specifically age at migration, frequency returned to country of origin, and remittances.

CHAPTER II

Literature Review

Theoretical Perspective

The focus of this paper is migration; hence, the study utilizes a migration theory. Lee (1966) states that migration studies need to apply theory to provide an explanation. However, Massey et al. (1993) express that there is a minimal theoretical base for migration and then outline those that do exist. One theory they discussed was cumulative causation theory, which proposes that migration is likely to continue the more often the individual migrates over time (Massey et al. 1993). There are a couple migration factors that are explained by this theory that can be used to identify how anxiety can be affected, which are culture of migration and the distribution of income (Massey et al. 1993; Fussler 2010).

First, a factor from the theory that will prove useful is culture of migration, which assumes that the prevalence of migration increases within a community then the probability of other individuals within such a community migrating will also increase (Massey et al. 1993). This happens because values and cultural perceptions were changed among individuals in the migrating community (Massey et al. 1993). For example, individuals who migrate get a stronger sense of social mobility, so the likelihood of migration will increase (Massey et al. 1993). Values changed in the community as well as migration becomes a normal process for individuals in the community; in migrating communities, it becomes a right of passage for men to elevate their status by going to the U.S. to earn income (Massey et al. 1993).

Kandel and Massey (2002) further supported this change in their research by

finding that communities in Mexico with high migration rates were likely to have children who also wanted to migrate to the U.S. So, age will be a useful variable to test since younger children are more willing to migrate (Kandel and Massey 2002). Additionally, cumulative causation, in a quantitative analysis, was shown to be an important dynamic in explaining the continuing migration flow from Latin American countries, especially for those from Mexico (Fussel 2010). The willingness to migrate is increased as the frequency of migration within families and communities increases (Fussel 2010).

Another factor of cumulative causation is distribution of income, which is the most significant reason for those in Mexico to migrate to the U.S (Kandel and Massey 2002; Massey et al. 1993). Migrants leave their country of origin to improve their income, thus there is a larger disparity when it comes to income with those individuals within the community who do not migrate (Massey et al. 1993). This is important because families tend to receive remittances from the family member who has migrated to the U.S. Cumulative causation suggests that as families see themselves or others improve their lives from remittances, then they are more likely to want to migrate or keep doing so (Massey et al. 1993).

In addition to cumulative causation theory, I will also use a concept that was introduced by Patricia Zavella, which is peripheral vision. This concept is the idea that Mexicans on either side of the border are often reminded how their life is unstable when compared to those on the other side of the border (Zavella 2011). Zavella (2011) uses this when talking about Mexicans, whether it be in the United States or Mexico, so it will be particularly useful with individuals who migrate. Furthermore she asserts that

peripheral vision occurs at the same time and both Mexican and Mexican Americans are often seen as the same by Non-Hispanics Whites, so they often also struggle with an unstable identity (Zavella 2011). It is this unstable identity that may have an effect on the worries/anxiety of individuals who have migrated to the United States.

Peripheral vision is useful in helping to explain the Hispanic paradox and it is better suited than the acculturation model that is popular among many scholars, which suggests that immigrants who come to the U.S. adopt the dominant culture (Caplan 2007). Castaneda (2010), points on a few problems with the acculturation model, which are that it presumes immigrants enjoy cultural traits that protect them, it has superficial and stereotyped notions of the Hispanic culture, it also does not look at other potential factors, and the acculturation model also assumes that the U.S. health care system is superior than the one in the migrants country of origin. Time in the United States does matter but peripheral vision and the instability it suggests is a better model to help explain anxiety levels in both Mexican and Mexican Americans (Castaneda 2010; Familiar et al. 2011). Therefore, as mentioned previously, I will add peripheral vision to the framework especially since I will be analyzing anxiety

Age at Migration

The focus of this paper is solely on migration processes, and, as mentioned previously, there is minimal research that has focused on the effects of migration on the anxiety of Mexican Americans. A qualitative study that examined Mexican migrants suggested that those who were 35 years of age or older had higher odds of having mild anxiety, but this was outside of significance (Familiar et al. 2011). Still, a quantitative study found that age at migration makes a difference when it comes to Mexican

American youth (Breslau et al. 2011). Mexican Americans who were younger than 18 years of age at the time of migration to the U.S. were more likely to have anxiety when compared to those who are not older (Breslau et al. 2011). Patterns were shown for both young and older Mexican Americans, which require further investigation.

The previous studies did not solely examine anxiety since the researchers also studied how migration affected depression. Also, Mexican citizens overwhelmingly represented both studies, and there was not a shared definition of anxiety. Breslau et al. (2011) used the definition of anxiety that was established by the National Latino and Asian American Study (NLAAS), which focuses on anxiety, worries, and nervousness. Familiar et al. (2011) examined anxiety by having respondents answer a 21-item questionnaire that asked about common symptoms of anxiety and their frequency. Therefore, there is a need for a study that solely examines the relationship between age at migration and anxiety, and uses the NLAAS definition that Breslau et al. (2011) used since it is ideal for Mexican Americans.

Age at migration is important because Hispanic youth have shown to be prone to anxiety. Martinez et al. (2012) identified that some aspects of Hispanics culture, specifically respect, obedience, and deference that were shown to affect Hispanic youth and led to higher anxiety that affected physical symptoms. Those aspects of culture negatively affects young Hispanics because of the emphasis Hispanics' have on family cohesion, so younger Hispanics' anxiety is affected by the pressure to maintain such cohesion (Martinez et al. 2012).

Yet, culture did not affect social anxiety among Hispanic youth, which involved anxiety in social settings (Martinez et al. 2012). There is lack of consistency with the

definition of anxiety since the study used to different versions of anxiety. Also, this was not a representative study because it only focused on youth in Chicago, and it also included other Latinos. Again it is important to only focus on Mexican Americans and have a study that is more representative.

Now, cumulative causation theory will prove useful to this study when examining age at migration and anxiety. Literature has suggested that age at migration will have a significant impact on the anxiety of individuals migrating to the U.S, particularly for young and older Mexican Americans. Earlier it was stated that the culture of migration perpetuated migration by changing cultural values and norms in the community, but it is unclear whether migration affects the anxiety of Mexican migrants who live in a migrating community but have not been influenced to migrate, such as older individuals. The same can be said about migrating Hispanic youth who were also shown to have more depression and anxiety since they spent more time in the U.S; still a study that focuses solely on anxiety has not been performed.

Frequency of Migration

There is minimal research that focuses on how the frequency of migration affects the anxiety levels of migrants as well. Yet, there is evidence that suggests that the migration experience does play a role in migrants' anxiety when compared to those who did not leave Mexico (Breslau et al. 2011). Immigrants who traveled to the United States from Mexico and stayed for more than four years had higher anxiety levels than those who stayed for a shorter amount of time (Familiar et al. 2011).

One particular finding in a quantitative study was that Mexican migrants who

returned to their country of origin were shown to have less anxiety when compared to those who stayed in the United States (Familiar et al. 2011). However, the previous studies focused solely on Mexican migrants and compared them to individuals who did not leave Mexico. Also, both studies focused on individuals who returned home or stayed in the United States. Such studies did not accurately account for the migration experience; thus, a study is needed that focuses on Mexican migrants who are migrating to the U.S. from Mexico.

Therefore, frequency of migration is important because migration experience matters, which is evident in immigrant farmers. Those who migrate to work in farms experience the most stress that is associated with both farm work and the immigration experience (Hovey and Magana 2002b). Caplan (2007) confirms that undocumented immigrants and immigrant farm workers are most affected by such stressors.

Moreover, the stress from farm work and migrating was a significant predictor of anxiety (Hovey and Magana 2002b). Yet, those who were willing to migrate were less at risk of having anxiety than those who were unwilling to migrate to the U.S. (Hovey and Magana 2002a). This was due to the fact the immigrants did not feel they did not have the power to control their lives when it came to migration (Hovey and Magana 2002a). Therefore, as a factor of migration, frequency returned to country of origin needs to be further analyzed because it provide some insight in the anxiety of Mexican American migrants.

Frequency of migration may cause anxiety problems among Mexican American migrants compared to those who do not migrate. Mexican migrants who returned home were found to have less anxiety then those who remained in the U.S (Familiar et al.

2011). Cumulative causation suggests that those who migrate frequently become accustomed to the experience, but it is unknown if frequent migration to the country of origin affects the anxiety levels.

Remittances as a Migration Process

The possibility of finding work in the United States is one of the main reasons that migrants make the decision to leave their country of origin (Kandel and Massey 2002; Massey et al. 1993). Individuals in Mexico and other Latin American countries leave to improve their income and often their families receive remittances (Massey et al. 1993). It is known that the “odds of remitting depends on life cycle stage, access to human and financial capital, attachment to the U.S., economic circumstances of the trip, and the conditions prevailing in the sending community” (Durand et al. 1996: 257).

The same quantitative study of migrants living in Mexico found that those migrants who have stronger ties in the U.S. are more likely to not send remittances (Durand et. al. 1996). Moreover, the loss of a social support system did increase the likelihood of anxiety in migrants travelling to the U.S. (Familiar 2011). Yet, there are not any studies that established if remitting affects the anxiety of Mexican and Mexican American migrants who keep social ties in Mexico by remitting.

Remittances to country of origin may have an effect on migrants since they are keeping contact with family members. For example, when family members in Mexico attain additional income from family working in the U.S. they will express interest in traveling themselves, as cumulative causation suggests (Massey et al. 1993). This can cause additional anxiety to the migrant in the U.S. Moreover, migrants with strong social

ties in the U.S. will be less likely to express they have anxiety issues (Durand et. al. 1996). However, it is still uncertain whether this pattern will exist when analyzing only anxiety and Mexican migrants.

CHAPTER III

Methodology

The Data

In order to examine if there is a relationship between migration processes and anxiety, this study utilized a quantitative analysis, which is ideal since it will be nationally representative and immigrants have large population numbers that are spread out throughout the United States. For this, the National Latino and Asian American Study (NLAAS) was used, which is a national survey that provides information on the mental health of Latinos and Asians (CMMHR 2013). NLAAS is perfect because it acknowledges that the lack of quality data for Latinos and Asian Americans makes it difficult to develop public policies and prevention and treatment programs appropriate for these populations. A primary aim of the NLAAS was to enable comparisons of mental health characteristics both among the NLAAS survey populations of Latinos and Asians and with the larger US population.

The data was randomly attained between May 2002 and November 2003; moreover, to be eligible for the study individuals had to be 18 years old, living in the United States, and be of Hispanic or Spanish decent (CMMHR 2013). The final NLAAS sample consisted of 2,554 Latino respondents. For the purposes of my study, only Hispanics of Mexican origin, including those that were born in Mexico and migrated to the U.S., will be examined. After filtering out Asian Americans, the dataset has a total sample of 868.

Research Questions

Question 1: Does age at migration to the United States have a significant relationship

with the anxiety of Mexican American migrants?

Hypothesis 1: Age at migration will have a significant relationship with Mexican Americans' anxiety, and individuals who migrated for the first time to the United States between the ages of 18 – 35 will have lower odds of having anxiety when compared to younger and older age groups.

Question 2: Does frequency of migration have a significant relationship on the anxiety of Mexican Americans who frequently return to their country of origin compared to those who do not?

Hypothesis 2: The more frequent Hispanic migrants from Mexico visit their country of origin then the higher the odds of they will have anxiety as oppose to those who do not visit as frequent.

Question 3: Is there a significant relationship in the prevalence of anxiety between Mexican Americans who remit to country of origin and those who do not?

Hypothesis 3: Mexican Americans who remits to families in their country of origin will significantly have more anxiety than those who do not remit.

Variables Measuring Migration Processes

As mentioned, the focus of this study is on migration; therefore, the only variables used from the NLAAS data set were those on migration. NLAAS has three particular questions on migration that were useful. They consist of the age at which an individual first migrated to the U.S., how frequently the respondent visits his/her country of origin,

and if money is sent to relatives in their country of origin. These variables represent the independent variables since the purpose of this study is to analyze whether migration processes have a relationship with the anxiety of the respondents.

Age at migration is a categorical variable that includes U.S. Born, Less than 12 years of age, 13-17 years, 18-34 years, and 35 and older. The NLAAS also asked the respondents if money was sent to relatives in country of origin, and that will be the remittances variable, which is dichotomous yes or no. Finally, the last migration variable will be whether or not the respondent returned to their country of origin. This was an ordinal variable that was measured by labeling the respondents' answers with often, sometimes, rarely, and never (if voluntary). However, the variable was recoded into a dichotomous variable by changing often and sometimes to "does return home" and rarely and never into "does not return home."

Dependent Variables: Anxiety

NLAAS measures anxiety by examining the duration and intensity of the worries/anxiety/nervousness the respondents reported, and categorizes them as General Anxiety Disorder (GAD). This is an ideal definition for anxiety especially for Mexican Americans. Moreover, several variables will be used to measure anxiety for this study, and the first one will utilize is a screening question asking whether the respondent felt that he/she worried more than others about the same problems, which was answered with a yes or no.

If any of the respondents answered yes to the screening question on anxiety then they were asked further questions about their worries/anxiety. So, this study uses two

additional post screening anxiety questions that measured the intensity of the respondents' anxiety. The second variable used to measure anxiety asked the respondent how often they found it difficult to control their worry/or/anxiety/or nervousness. This variable was also recoded into a dichotomous yes or no variable by changing often and sometimes into "yes" and rarely and never into "no." This will measure if the respondent finds it difficult to control their worries/anxiety.

The last measure of anxiety question used in this study asked if the respondent felt they had excessive worries. This was also a dichotomous yes or no variable. The reason for choosing multiple variables on anxiety, instead of just one, is because it will give a better understanding of how migration can affect the anxiety of Mexican migrants. Also using multiple variables will ensure that this is simply not just a measure of worries or nervousness; instead it will be prolonged and excessive worries, which is typical of GAD.

Statistical Measures

Using SPSS, I performed bivariate analyses with age at migration, frequency of migration, remittances and each anxiety variable to examine if there is a significant relationship. Chi-Square was run to compare age of migration, frequency of migration, and remittances to the first screening question on anxiety and the two post-screening anxiety questions. Performing a Chi-Square will provide initial insight into the relationship between migration processes and anxiety of migrants of Mexican origins.

However, to ensure that the Chi-Square analyses were not compensating for other relationships, multiple regressions were conducted. To begin, a logistic regression was performed on the migrating variables and the anxiety variable that is a screening question

asking if the respondent felt they worried more than others. Additionally, two more logistic regressions were run on the migration processes variables and the next two anxiety variables. A logistic regression is ideal for the previous variables since the anxiety variables nominal and dichotomous.

Also, within these regressions, demographic characteristics will also be included as control measures. Such demographic characteristics will include income, education, language preferred at home, and gender. Income will be recoded into brackets representing less than \$20,000, \$20,299 – 40,000, \$40,299 – 80,000, and \$84,499+ annually; moreover, education is based on whether a high school diploma was attained or not and attended college or graduate school. The language variable asked the respondents' preference of language, Spanish, English, or none had in their household. Gender was coded as female or male.

Sample

There were 868 respondents that were of Mexican descent or born in Mexico and migrated to the United States. The age of the respondents ranges from 18 – 88 years, with a sample average of 36. Fifty four percent of the sample was female (470) and 45.9% were male (398). Of the selected respondents 618 were married, 102 were divorced/separated/widowed, and 148 have never been married.

Most of the respondents were employed at the time of the survey (528); however, 340 respondents were not employed. NLAAS did recognize that most of the sample came from the southwest but were still confident that respondents were nationally representative. Moreover, looking the age, gender, marital and employment status, the

sample is nationally representative of U.S. born respondents of Mexican descent and individuals born in Mexico who migrated to the United States.

Table 1. Descriptive Characteristics of Mexican/Mexican–Americans

Migration Processes	<i>f</i>	%
Nativity		
N = 868		
Foreign Born	483	56.0
U.S. Born	380	44.0
Age at Migration		
Foreign Born		
N = 483		
Less Than 12 years	98	20.3
13 – 17 years	105	21.7
18 – 34 years	260	53.8
35+ years	20	4.2
Returned to Country of Origin		
N = 861		
Does Return	323	37.6
Does Not Return	538	62.4
Send Money to Relatives in Country of Origin		
N = 486		
Yes	282	58.0
No	204	42.0

Additional information on migration processes is provided in Table 1. Some initial observations are that most of the respondents do not travel back to their country of origin, and most respondents were older than 18 when first migrating, which confirms

current and previous research that find most Mexican migrants are 18 and older when first migrating to the United States (Motel and Patten 2013). Finally, the total number of respondents who send money to relatives in Mexico and those who do not are similar; with more respondents stating that they do send money.

CHAPTER IV

Results

The purpose of this study is to understand how the migration experience can affect the anxiety of migrants of Mexican descent. As mentioned earlier, I rely on a quantitative analysis and NLAAS data set to perform such an analysis. The goal is to examine if there is a significant relationship between those who migrate and those who do not. Specifically, does migration processes such as, age at migration, frequency of migration and remittances have a relationship with Mexican migrants' anxiety?

Chi-Square Analyses

Question 1: Does age at migration to the United States have a significant relationship with the anxiety of Mexican American migrants?

Table 2 shows the relationship between age at migration and the three anxiety variables that were asked to the respondent. The analysis reported that, among those who did have more worries than others, respondents who were born in the United States and those who migrated between the ages of less than 12 years and between 13 – 17 years had higher percentages, 41.4%, 28.6% and 26.9% respectively. This was significant at $\alpha = .00$ and is important because individuals that were between 18 – 35 years when first migrating to the United States reported a lower percentage (24.4%) of having more worries than others.

The second test examined the relationship between age at migration and the respondents' response on whether or not they had excessive worries. U.S. born individuals (52.9%) and those who first migrated at under the age of 12 (70.4%) had the

highest percentage to report they had excessive worries when compared to those who migrated and were 13 – 17 years (30.8%) and over the age of 35 years old (25.0%), significant at $\alpha = .10$. Respondents that were between 18 – 34 years old when migrating to the U.S. also had lower percentages (37.3%) but not as low as those who were between 13 – 17 and older than 35.

Table 2. Chi-Square Analysis (Age at Migration and Anxiety Variables)

Anxiety Variables	U.S. Born	Age at Migration Foreign Born			
		Less Than 12 yrs	13 – 17 yrs	18 – 34 yrs	35+ yrs
Worried More					
No	222 (58.6)	70 (71.4)	76 (73.1)	210 (80.8)	11 (57.9)
Yes	157 (41.4)	28 (28.6)	28 (26.9)	50 (24.4)	8 (42.1)
N = 860 P < .000					
Excessive Worries					
No	77 (47.8)	14 (51.9)	18 (69.2)	37 (62.7)	6 (75.0)
Yes	84 (52.9)	13 (48.1)	8 (30.8)	22 (37.3)	2 (25.0)
N = 285 P < .10					
Hard to Control Worries					
No	68 (41.7)	8 (29.6)	14 (51.9)	24 (40.0)	2 (25.0)
Yes	95 (58.3)	19 (70.4)	13 (48.1)	36 (60.0)	6 (75.0)
N = 281 P value = .454					

Parentheses indicates percent

A third test reported that migrants who were under 12 years old and older than 35 years at migration had higher percentages of reporting finding it hard to control their worries, 70.4% and 75.0% respectively, than those who were 13 – 17 when first migrating (48.1%) and U.S. born (58.3%), but this analysis was not significant. Again, the last two analyses used questions that were only answered by individuals who said yes to the initial screening question, so the number of respondents decreased significantly. Also, the number of responses from those who were over the age of 35 was significantly low.

Question 2: Does frequency of migration have a significant relationship on the anxiety of Mexican Americans who frequently return to their country of origin compared to those who do not?

Table 3 reports the relationship between frequency of migration and each anxiety variable. Respondents who visited their country of origin resulted in lower percentages when reporting having more worries than others compared to those who did not return, 29.8% and 32.5% respectively. Those who returned home had a higher percentage of reporting they did not worry more than others compared to those who did not return, 70.2% and 67.5% respectively.

When asked if the respondents had excessive worries, those who did return to their country of origin had a higher percentage (46.2%) of reporting they did have excessive worries than those who did not return (44.9%). The percentage was lower among those who did return (53.8%) when reporting they did not have excessive worries compared to those who did not return (55.1%). Finally, the third test reported those who

did return to their country of origin had a lower percentage of reporting they did not have excessive worries, 37.9%, than those who did not return, 41.7%. Moreover, those who did return had a higher percentage of reporting they had excessive worries (62.1%) than those who did not return (58.3%). The three tests did not result in any statistical significance

Table 3. Chi-Square Analysis (Frequency Returned to County of Origin and Anxiety)

<i>Anxiety Variables</i>	<i>Returns to Country</i>	
	No	Yes
Worried More than Others		
No	360 (67.5)	226 (70.2)
Yes	173 (32.5)	96 (29.8)
N = 855 P value = .420		
Excessive Worries		
No	102 (55.1)	50 (53.8)
Yes	83 (44.9)	43 (46.2)
N = 278 P value = .828		
Difficult to Control Worries		
No	78 (41.7)	36 (37.9)
Yes	109 (58.3)	59 (62.1)
N = 282 P value = .537		

Parentheses indicates percent

Question 3: Is there a significant relationship in the prevalence of anxiety between

Mexican Americans who remit to country of origin and those who do not?

Table 4. Chi-Square Analysis (Remittances and Anxiety Variables)

Anxiety Variables	Remittances	
	No	Yes
Worried More		
No	212 (75.4)	157 (77.3)
Yes	69 (24.6)	46 (22.7)
N = 484 P value = .629		
Excessive Worries		
No	40 (58.8)	34 (65.4)
Yes	28 (41.2)	18 (34.6)
N = 120 P value = .464		
Difficult to control Worries		
No	26 (37.1)	21 (40.4)
Yes	44 (62.9)	31 (59.6)
N = 122 P value = .716		

Parentheses indicates percent

Table 4 reports the relationship between remittances and each anxiety variable. When it came to reporting if the respondent worried more than others, those who did send money to family members had higher percentages of reporting both they did not have more worries, 77.3%, when compared to those who did not remit, 75.4%. Respondents who did not remit also had higher percentages of reporting that they did worry more than others when compared to those who did remit, 24.6% and 22.7% respectively. The

second test that measured excessive worries reported that those who did remit had a lower percent (34.6%) of reporting they did have excessive worries when compared to those who did not remit (41.2%). Moreover, those who did remit had a higher percentage, 65.4%, of reporting they did not have excessive worries than those who did not remit, 58.8%.

The third test examined if the respondents found it difficult to control their worries, and those who did remit had a lower percentage (59.6%) of reporting yes when compared to those who did not remit (62.9%). Respondents who did remit also had a higher percentage (40.4%) of reporting they did not find it difficult to control worries when compared to those who did not remit (37.1%). None of the three tests resulted in statistical significance.

Logistic Regressions

Logistic regressions were run in order to understand that the relationship that the Chi-Square analyses showed were not compensating for other variables. Age at migration, frequency of migration, and remittances were run along with several control variables, such as education, income, gender, and language preferred at home. The first regression was run on the screening question asking whether the respondent felt they had more worries than others.

The results from the analysis can be seen in Table 5. Mexican migrants who came to the United States and were less than 12 years old were 97% less likely ($\alpha = .01$) to report they did worry more than other compared to U.S. born respondents. Similarly, those who migrated between the ages of 18 – 34 years old were 95% less likely ($\alpha = .01$)

than U.S. born respondents to have more worries than others.

Table 5: Logistic Regression Analysis Predicting Worried More than Others

Variables	Exp(B)	S.E.
U.S. Born	----	----
Age at Migration Foreign		
Less than 12 years	.032**	1.252
13 – 17 years	.129^	1.197
18 – 34 years	.053**	1.171
35+ years	N/A	N/A
Migration		
Remittances	.960	.389
Frequency Returned	1.051	.324
Controls		
Education		
High School Diploma	----	----
No High School Diploma	.632	.401
College	1.067	.490
Graduate School	.664	.829
Sex		
Males	----	----
Females	1.301	.614
Language Preferred at Home		
English Preferred	----	----
No Language Preference	.534	.543
Spanish Preferred	.281*	.554
Income (Annually)		
Less than \$20,000	----	----
\$20,299 – 40,000	.417*	.439
\$40,299 – 80,000	.762	.413
\$80,469 +	.945	.537
N = 240		
Cox & Snell: .122		
Nagelkerke R ² : .180		

^ is .10, * is .05, ** is .01, *** is .001.

Also, individuals who migrated between the ages of 13 – 17 years old were 86% less likely to report they worried more than others, but this was marginally significant at $\alpha = .10$. However, remittances and frequency of migration provided some interesting

insight because those who sent money to relatives in their country of origin were only 4% less likely to report that yes they had more worries compared to those who did not remit. Moreover, migrants who returned home were 5% more likely to report they did have more worries than those who did not return home. However, both categories did not result in statistical significance.

Language preferred at home results showed that those who preferred to speak Spanish at home were 72% less likely to report they had more worries than individuals who preferred to use English at home, and this was significant at $\alpha = .05$. Additionally, those who made between \$20,299 – 40,000 annually were 58% less likely ($\alpha = .05$) to have more worries than others when compared to those who made less than \$20,000 annually. Interestingly, as each income bracket increased the likeliness the respondent saying they did not have more worries than others decreased.

Although not significant, females did report to have more worries when compared to males. Also, individuals who went college reported to have more worries than respondents who only had a high school education. Graduate students were less likely to report to have more worries than others.

Table 6 shows the logistic regression that examined migration processes with the post screening anxiety variable that asked if the respondent had excessive worries. The regression provided some insightful patterns, but it must first be noted that the sample size reduced significantly for this analysis and only used 64 cases. Still, those who sent remittances were more than twice as likely to report they had excessive worries, and those who did return to their country of origin had a 28% chance of saying they also had excessive worries. However, this regression reported that those less than 12 years old

and 18 – 35 years old at migration had excessive worries compared to U.S. born individuals.

Table 6. Logistic Regression Predicting Excessive Worries

Variables	Exp(B)	SE
U.S. Born	----	----
Age at Migration Foreign		
Less than 12 years	1.466	1.831
13 – 17 years	.702	1.627
18 – 34 years	1.409	1.492
35+ years	N/A	N/A
Migration		
Remittances	2.417	.868
Frequency Returned	.725	.612
Controls		
Education		
High School Diploma	----	----
No High School Diploma	.184*	.845
College	1.110	.906
Graduate School	.114^	1.638
Sex		
Males	----	----
Females	2.058^	.696
Language Preferred at Home		
English Preferred	----	----
No Language Preference	4.220	1.072
Spanish Preferred	1.400	1.212
Income (Annually)		
Less than \$20,000	----	----
\$20,299 – 40,000	.933	.883
\$40,299 – 80,000	.569	.791
\$80,469 +	1.904	1.051
N = 64		
Cox & Snell: .202		
Nagelkerke R ² : .275		

^ is .10, * is .05, ** is .01, *** is .001.

The results from the migration variables did not result in any statistical significance. However, females were twice as likely to report they had excessive worries

than males, significant at $\alpha = .10$. When compared to respondents with only a high school diploma, those who were in graduate school were 90% less likely to report they had excessive worries, significant at $\alpha = .10$, and respondents with no high school diploma were 81% less likely to report excessive worries, significant at $\alpha = .05$. However, respondents who only had a college education were more likely to report they had excessive worries.

Individuals who had no preference in language at home revealed that those respondents were more three times as likely to report they did have excessive worries. Those who spoke Spanish at the household were only 40% more likely to have more worries. This language variable did not have any statistical significance.

Again, it must be reiterated that the cases that were used for this regression is significantly low. A similar problem occurred with the last regression that examined migration processes and the anxiety that asked if respondents felt that it was hard to control their worries. The results from this analysis only created an error that was due to the lack of cases that were available, and this problem will be further discussed later. Finally, it must also be known that the regression did not account respondents that were older than 35 due the low number of respondents in the survey.

CHAPTER V

Discussion and Conclusion

The Hispanic population has increased from 35.3 million to 50.5 million in 10 years and will only continue to increase (U.S. Census 2013). Individuals of Mexican descent represent the largest population within this ethnic group (U.S. Census 2013). As mentioned earlier one factor adding to the Mexican population is migration into the United States from Mexico (Martin and Midgely 2006).

However, there is minimal research that examined the relationship between migration processes and anxiety. Acevedo-Garcia and Almeida (2012) state that there should be an emphasis on migration processes, as oppose to an immigrant label, because such processes are better measures to identifying health disparities among Mexican Americans. Specifically, age at migration, frequency returned to country of origin, and remittances were the migration processes examined in this study.

This study addresses several limitations from other studies and only analyzed anxiety. Also, how anxiety is defined is different for Mexicans, and they often view anxiety as “the nerves” and the amount of worries they experience (Barrera et al. 2013; Guarnaccia et al. 2011). As a result this study, utilized the NLAAS definition of General Anxiety Disorder, which asked questions that defined anxiety as the amount of worries/nerves/anxiety. Moreover, NLAAS asked respondents about several migration processes including the processes previously stated, age at migration, frequency of migration, and remittances.

Previous literature suggested that those who were younger than 18 and older than 35 would be more prone to dealing with anxiety (Breslau et al. 2011; Familiar et al.

2011). Also, cumulative causation theory suggests that Mexican migrants who were under 12 and older than 35 when first migrating to the U.S. would have more anxiety (Massey et al. 1993). This study confirms previous literature because those individuals who first migrated to the United States at under 12 years age and between the ages of 11 – 17 years old had higher proportions of having worries. Again, it is important to note that other studies did not focus solely on anxiety, as with this study.

Age at migration was significant in bivariate analysis and a logistic regression that controlled for demographic variables. Among foreign-born respondents, all age groups were less likely to have anxiety when compared to U.S. born individuals, which previous literature identifies as the immigrant health advantage (Vega et al. 2009). However, respondents who migrated to the U.S. and were under the age of 12 and between the ages of 13 – 17 years old had higher percentages of reporting they had worries when compared to those who migrated between the ages of 18 – 35.

This study not only confirms previous literature is also emphasizes that anxiety is a unique experience for Mexicans and Mexican Americans. Literature has reported that familismo is acting buffering factor when comes to young Hispanics physical and depression. Donato and Duncan (2011) established that children that stuck with family members during migration had better physical health. Also, strong family cohesion was shown significantly lowered anxiety levels for young Hispanics (Hirai et al. 2006; Martinez et al. 2012).

However, this study contradicts such research and confirms that younger Mexican migrants have a higher prevalence of anxiety. Martinez et al. (2012) explains that some aspects of Hispanics culture were shown to affect Hispanic youth and led to higher

anxiety that affected physical symptoms. Specifically, respect, obedience, and deference, were shown to be a form a stress on young Mexicans because they still must maintain such values during migration (Martinez et. al. 2012). Also, migration into the United States is often a stressful experience (Evans 1987). Young Mexicans migrating into the U.S. are more affected by this experience, since they are reporting more worries.

Again, the Chi-Square analyses showed that individuals were between the ages of 18 – 35 were less likely to have anxiety. It is important to reiterate that age group is the most common for a migrant first leaving Mexico (Motel and Patten 2013). Caplan (2007) found that migrant workers were the most affected by stressors that can effect depression and anxiety. In fact, Caplan (2007) also established that undocumented immigrants had significantly more mental health issues than others.

Yet, when examining anxiety, respondents in this study who were 18 – 35 years old when first migrating to the U.S. did not have a higher prevalence of anxiety. Ethnic pride is very important to Hispanics, especially Mexicans, which was the focus of this study. Depression was affected by ethnic pride because those with higher ethnic pride have less depression (Dinh et al. 2009). Ethnic pride is acting as a buffer for anxiety as well, and this is confirmed because those who are able to speak Spanish were less likely to report worrying more than others.

The hypothesis for this study expected younger and older individuals to have a higher prevalence of anxiety because they would not have had a chance to experience the changing values and norms that puts emphasis on migration. As previously stated, the relationship between age at migration and anxiety was statistically significant. Thus, the hypothesis that expected a relationship between age at migration and anxiety is accepted.

It was expected that respondents who returned to their country of origin would have less anxiety because they would be familiar with the migration experience and visit family members in their country of origin, which was assumed from cumulative causation theory. However, Chi-Square analyses reported that those who did not return home had higher percentages of having excessive worries and finding it hard to control worries when compared to those who did not return home. Familiar et al. (2011) established that migrants who returned home only had more depression and did not have additional anxiety issues.

However, when asked if they felt they had more worries than others those who returned home reported a higher percentage than those who did not. This relationship also held when controlling for demographic characteristics in the regression, and those who returned to their country of origin were 5% more likely to say they worried more than others. As previously stated, Evans (1987) established that migration not only hazardous but the experience is also extremely stressful. This explains why individuals who often return to their country of origin have more worries than others when compared to those who do not return.

This study utilized Zavella's (2011) peripheral vision theory because it states that Hispanics must deal with how White individuals view them and still have their ethnic identity to ensure their fellow Hispanics do not accuse them of not being Hispanic. This is particularly true for individuals who do return to their country because they keep a migrating status, which is why they report more worries. Again, individuals of Mexican origin have a unique struggle because they must worry not only how other races perceive them but also those who are Hispanic. This is particularly true during times of recession

and is evident in state laws targeting immigrants, such as Arizona law SB 1070, which targets undocumented immigrants but also poses a problem to those who are both U.S. citizens. Laws like this only add more stress and worries to Mexican Americans.

This is further evident in language because after controlling for other variables, language was statistically significant in the logistic regression. Those respondents who preferred to speak Spanish were 72% less likely to say they worried more than others. Feagin and Cobas (2014) established that for Hispanics speaking Spanish has social capital that is often threatened by non-Latinos, and the authors also claimed that those who grew up with Spanish feel more comfortable speaking it.

Yet, there is a problem because Latinos are often pressured to give up their Spanish language and struggle to keep it (Feagin and Cobas 2014). So, this explains why those who prefer to speak Spanish at home are less likely to have more worries than others. They are more comfortable speaking Spanish and do not struggle as much as those who have no preference or speak English at home

Cumulative causation is still useful because it perpetuates migration. Again, the theory suggests that migration perpetuates itself by changing cultural norms and values, so individuals will still have the desire to migrate. As a result, returning home allows migrants to use the language that they are most comfortable speaking. Still, it is important to repeat the fact that there was no statistical significance when examining frequency of migration. As a result, I must reject the hypothesis stated for frequency of migration and anxiety since there was not a statistically significant relationship.

The third hypothesis for this paper suggested that there would be a significant relationship between those who remitted and anxiety, and those who remitted would have

more anxiety than those who did not. The Chi-Square analyses reported the opposite and those who did remit reported lower percentages of having more worries than others, excessive worries, or finding it hard to control worries. Yet, there was no statistical significance with examining the bivariate relationship between remittances and anxiety

Then, the first regression that examined migration processes with the first screening question also did not show any statistical significance and only showed that those who did send money were 4% likely to say they worried more than others.

However, the second regression that looked at excessive worries reported that those who did remit were twice as likely to say they had excessive worries. The sample size for this regression was significantly low.

Still, those who did remit had a higher prevalence with anxiety, when controlling for demographic variables, than those who did not remit. This is because those who remit are less likely to establish social support in the United States; previous research has shown that social support can act as a buffer towards depression and anxiety (Durand et al. 1996; Familiar et al. 2011; Ornelas and Perreira 2011). Cumulative causation states that Mexicans who migrate to the U.S. are likely to do so to send remittances. However, there was not statistical significance; therefore, I must reject the hypothesis stating there is a statistically significant relationship between remittances as a migration process and anxiety.

In both the regressions, other interesting relationships emerged in addition to the ones between the age at migration, frequency of migration, remittances and anxiety. For example, in the first logistic regression that had the screening question as a dependent variable income had statistical significance. Those who made between \$20,299 and

40,000 were 58% less likely to say they had more worries than others.

Past research has shown that those who are poor are to more risk to have poor physical health, especially for those who migrate frequently (Davies et al. 2011). Also, not having a job has been shown to cause depression (Catalano et al. 2000). This helps explain the anxiety relationship that exists between those who make less \$20,299 and why they are less likely to have anxiety. It is important to note that having more income did not result in respondents worrying less. In fact people with higher incomes worry more than those who make lower income.

In the second regression that examined migration processes with the anxiety variable that asked if the respondent had excessive worries reported significance ($\alpha = .10$) for gender. Women were almost three times as likely to report they had excessive worries than males. Likewise, although not statistically significant, women were 30% more likely in the first regression to say they worried more than others when compared to males. This coincides with previous research that as found that Hispanic women had increased odds of having anxiety due to separation from the family when compared to Hispanic men (Hiott et al. 2006).

Women, especially those who are mothers, are more affected by the lack of family cohesion and family type (Roosa et al. 2009). So, it is evident that family plays a major role in Hispanic women's anxiety during the migration experience. This is especially true because a study that examined both immigrants and Mexican Americans determined that the migration experience affected the anxiety of women because they must still fulfill their traditional roles within the Hispanic culture while migrating (Nelly Salgado de Snyder et al. 1990). Mexican women must still be wives and mothers before,

during and after the migration process, in a patriarchal culture, and this explains why women have a higher prevalence of anxiety than males.

As far as education, those without a high school diploma were more likely not to have excessive worries or report having more worries than others. This may seem odd but as mentioned earlier ethnic identity and Spanish language are important to Hispanics (Dinh et al. 2009; Feagin and Cobas 2014). As Hispanics become educated they are forced to and/or start losing some of those factors (Feagin and Cobas 2014). This explains why those with high school diplomas are more likely to have anxiety.

Also, college students were more likely to report they had more worries than others and to have excessive worries. Previous research has shown that higher education levels decreased the prevalence of depression (Ayon et al. 2010; Dinh et al. 2009). However, this study has reported that prevalence of anxiety increases with respondents who only went to college, and slightly decreases for those who went to graduate school. Still, it is unmistakable that class, gender, and education are social factors that were found to be significant determinates of anxiety and require further research.

Conclusion

In conclusion, this study examined migrations processes, which no other study had done. Age at migration, frequency of migration and remittances were examined with questions that asked about anxiety/worries. Previous literature also did not have clearly defined and operationalized anxiety variables. NLAAS was ideal for this study because it used three terms to analyze anxiety, which were worries, nerves, and anxiety. These are all terms that Mexicans and Mexicans American use when describing anxiety.

Analyses were able to determine that there is a statistically significant relationship

between migration and anxiety, specifically age at migration. Respondents who first migrated to the U.S. at under 12 years of age and between 13 – 17 years old reported a higher prevalence of anxiety. However, when compared to U.S. born individuals, foreign-born individuals had a lower prevalence of anxiety.

Frequency of migration did report that those who returned home were more likely to have anxiety than those who did not, but the analyses were not statistically significant. Peripheral vision helps explain why U.S. born individuals and those who return home have a higher prevalence of anxiety. Remittances also did not have any statistical significance but a multivariate analysis did reveal that those who sent money were more likely to say they had excessive worries, and this is probably because those who remit do not make strong social bonds in the United States.

Income also had statistical significance and those who were poor were apt to say they had more worries than others, and this was established by previous research. Moreover, gender and education were marginally significant, and respondents with no high school education did not have excessive worries compared to those who had a high school education. As for gender, females had a significant prevalence of anxiety and were three times as likely than males to say they had excessive worries, and the same relationship existed in the regression that measures whether or not they had more worries than others.

Limitations and Future Research

There were several limitations to the study with the first being that the NLAAS data set is from 2002. Ideally, an updated data set would be useful because how prevalent immigration is in recent political discourse. As previously stated, few states are

trying to implement immigration laws that are not only affecting migrating individuals but also all Hispanics, which can affect their anxiety.

Another limitation with the study was the number of respondents available for analysis. The focus on the paper was migration but U.S. born individuals also were included, so migrating individuals were compared to those born in the United States. Still, it must be noted that being born in the U.S. does not indicate that individuals are not migrating. Mexican Americans are known to migrate as well, but there was not a variable within the study to ensure that only those individuals were examined.

Finally, the fact that most respondents did not answer the entire set of post anxiety questions is a significant limitation. Again, any respondent that answered yes to the first screening question were asked additional anxiety questions, but the number of answers dropped significantly, as can be seen in the bivariate and multivariate analyses. In fact, the second regression that measured excessive worries only have a sample size of 64, and there were not enough respondents to have a third regression with the anxiety variable that measured if the respondent found it difficult to control their worries. These are all significant limitations.

Further Research

As previously stated, there is little research that focuses on the relationship between migration processes and Hispanics' anxiety. Migration processes can encompass many variables, and this study examined age at migration, frequency of migration and remittances. Further research must analyze other variables like duration spent in the United States, undocumented immigrants, location of migration, etc.

Future research needs to also ensure they have a sufficient sample size that

focuses solely on anxiety. Hispanics stigmatize mental health more than others ethnic groups and any study must be sensitive to this to ensure proper data is attained. Such a study must take into account language and how Latinos define anxiety (Guarnaccia et al. 2011). NLAAS is working on a second data set, but phone interviews may not be the best way to get information from Hispanics, particularly since they are not comfortable talking about mental health.

This study has shown that health disparities among Hispanics are not simple. Migration processes did not only play a factor on the prevalence on Mexican American's anxiety. Culture, income, education, and gender also had a relationship with respondents' anxiety. So, factors that contribute to health disparities among Hispanics are complex and further research must be aware of such complex factors.

Finally, this study showed that respondents who were foreign born had a lower prevalence of anxiety when compared to U.S. born individuals. Immigrants from Mexico have shown to have better physical and mental health when compared to U.S. born Hispanics, and this is known as the "Immigrant health advantage" (Vega, Rodriguez, Gruskin 2009). Future research must analyze why immigrants are losing such advantage with additional time that they spend in the United States.

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