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The Effects of Acculturative Stress on the Physical/Mental Health of Immigrant Mexican Women

Maria Del Carmen Mendoza Griego
Walden University

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Walden University

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Maria Del Carmen Mendoza Griego

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Walden University
2022

Abstract

Effects of Acculturative Stress on Mental/Physical Health

of Immigrant Mexican Women

by

Maria Del Carmen Mendoza Griego

MA, Walden University, 2018

MA, Grand Canyon University, 2015

BS, Northern Arizona University, 2012

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

May 2022

Abstract

Immigrants may experience acculturative stress as they adapt to their host country's dominant culture, which previous research has indicated may affect their physical and mental health. The purpose of this quantitative study utilizing a random sample was to examine the effect of acculturative stress and age on the mental and physical health of adult women of Mexican origin living in the United States, considering the moderation of perceived discrimination. The theoretical framework of acculturation by John W. Berry guided this study. The three research questions involved understanding whether immigrant Mexican women experienced a negative effect on their mental and physical health influenced by acculturative stress and age and whether perceived discrimination moderated the impact of acculturative stress. Data were analyzed using multivariate regression with path analysis. It was concluded that the moderator of perceived discrimination had a significant statistical effect on acculturative stress and anxiety sensitivity, depressive symptoms, and role limitation, but no impact on bodily pain, energy fatigue, or general health perceptions. This study may improve the understanding of researchers, theorists, and practitioners regarding the interplay of mental and physical health implications for immigrant Mexican women experiencing acculturative stress while living in the United States and may inform culture- and gender-salient treatments. Further studies are recommended on other Latin ethnic groups as well as male immigrants. Studies on improving acculturation and/or prevention strategies to reduce the incidence of anxiety sensitivity, depressive symptoms, and role limitation are also recommended.

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Dedication

To the wind that motivates my wings to soar higher; to the one who inspires me, always uplifting my soul and making my heart smile; to my strength and courage when hope is fading; to my wonderful daughter, Jahziel, for standing strong next to me in times of adversity and sacrifice. To my biggest fan, my godson, Jay, always there cheering me up, making my spirit dance. To my sister and mother for silently walking this journey with me, always sustaining me with their unconditional love ... With special honor to my angel in heaven, to my father!

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Chapter 1: Introduction to the Study

Introduction

Human beings immigrate to other countries for diverse reasons, such as seeking freedom and living a better life with dignity. Immigrant individuals experience the effects of acculturation as they adapt to a new culture (Berry, 1997). The concept of acculturation encompasses the internal process of change that immigrants experience when they encounter cultural changes resulting from adapting to new cultural contexts (Berry, 1997; Kelly, 2016). This socialization process of acculturation consists of adapting values, norms, customs, attitudes, and behaviors of the dominant culture (Wong et al., 2017). Therefore, the role of culture is significant when living in an unfamiliar cultural environment, as cultural barriers and challenges may prevent individuals from having a sense of well-being (Zhu et al., 2016), which may impact an immigrant's health.

The process of cultural change, adaptation, and assimilation may create acculturative stress on the immigrant individual. Researchers have identified acculturative stress and psychological stress responses resulting from acculturation and intercultural contact experiences (Driscoll & Torres, 2019) as impacting mental health (Kartal et al., 2018). While research leaves no doubt that acculturative stress negatively impacts the mental health outcomes of immigrants, there are important gaps in the literature when it comes to an understanding the interplay of acculturative stress and mental and physical health implications in immigrants from specific gender and ethnic groups (Panchang et al., 2016), such as immigrant Mexican women. Therefore, the

purpose of this study was to investigate and examine the effect of acculturative stress on the mental and physical health of immigrant Mexican women.

This research study represents an important contribution to the existing literature and may enhance social change initiatives through providing an understanding to researchers, theorists, and practitioners on the interplay of mental and physical health implications for immigrants of a specific race, ethnicity, and gender experiencing acculturative stress while living in the United States. Insight on the need for culturally sensitive treatments tailored for the population of immigrant Mexican women may promote the adaptation of innovative interventions. This study may serve to inform and educate the population of immigrant women on the effects of acculturative stress on the mental and physical health of immigrant individuals, aiming toward the potential development of prevention strategies. Additionally, this study may yield an understanding of social constructs such as immigration and health policy as well as providing information on the current immigration crisis of the nation.

For this dissertation, I considered potential psychological distress that may impact mental health, such as depressive symptoms and anxiety sensitivity, and physical health implications such as bodily pain, energy, and fatigue, and general health perspectives. Hence, in the following sections, I explain acculturative stress, its various components, and the need for further research on acculturative stress and its mental and physical health implications for immigrants living in the United States.

Background

Acculturative stress prevents immigrant individuals from adapting to the dominant culture of a foreign country as an acculturative stressor is exacerbated by gender roles affecting the psychological well-being of the individual (Lui et al., 2016; Preciado & D'Anna-Hernandez, 2017). Acculturation is a change in the psychology of individuals who come in contact with a new culture (Berry, 1997). This definition extends to the comprehension of the phenomena resulting from the interaction among individuals exposed to different cultures and the subsequent changes in the original culture patterns of either or both groups (Berry, 1997). Acculturative stress is associated with psychological maladjustment, leading to depressive symptoms (Castillo et al., 2015). Researchers have well documented and identified acculturative stress and its impact on the psychological distress experienced by individuals adapting to a new culture (Lui et al., 2016). For example, immigrant Hispanics have been reported to experience challenges while trying to assimilate into the dominant culture of the United States, which makes them vulnerable to potential psychological distress. Acculturative stress has been found to increase the risk for suicidal ideation, attempts, and fatalities among Hispanic youth in the United States (Silva & Van Orden, 2018).

Acculturative stress impacts health decline in immigrants (Panchang et al., 2016). While no association was found between acculturative stress and health among Latino immigrants, Panchang et al. (2016) highlighted that acculturative stress causes damage to health in immigrants, especially in cases where social support is limited. Studies by Castillo et al. (2015) identified personal difficulties such as learning and becoming

competent in a new language, leaving family and friends behind in the country of origin, personal and institutional discrimination, pressure to adopt new cultural values and behaviors, and pressure from heritage culture members to not become Americanized as components that immigrants face that are associated with acculturative stress. Panchang et al. recommended further research on the effects of acculturative stress on the health of a specific Latino group and gender. Therefore, this study examined the effects of acculturative stress on immigrant Mexican women's mental and physical health.

Acculturative stress components play a significant role in individuals' mental and physical health. These stressors may manifest via disintegration of cultural values, such as religiosity and familism, and social bonds, which may increase health risks such as suicide risk (Silva & Van Order, 2018). Some of the acculturative stressors identified in previous research include self-confidence, identity threat and rejection, value conflict, poor cultural competence, homesickness, and opportunity deprivation (Liu et al., 2016). Therefore, it was important in this study to understand the value of the components associated with acculturative stress, support existing data, and examine a specific Latino group and gender, such as immigrant Mexican women. This research was conducted to provide new insights, add to the body of literature, and raise awareness of the need for treatment plans to overcome culturally sensitive challenges among immigrant Mexican women.

Problem Statement

Acculturative stress prevents immigrant individuals from adapting to the dominant culture of a foreign country (Lui et al., 2016). The process of acculturation

impacts the health of immigrants as they try to make meaning of their life experiences in the host country. Immigrant Mexican women experience the effects of acculturative stress, which may influence their mental and physical well-being. In 2016, there were 13.5% (43.7 million) immigrants in the United States, marking the highest number in the last 106 years (Center for Immigration Studies, 2017). Mexican immigrants form the largest foreign-born population in the country. Between 2010 and 2016, Arizona was named one of the states with the largest increase in immigrants (Center for Immigration Studies, 2017). There has been an exponential increase in the number of immigrants in the United States, with Arizona facing a crush of asylum seekers (Center for Immigration Studies, 2019) increasing the population of racial minorities. Existing literature supports that racial minorities experience severe psychological distress related to the process of acculturation, yet they tend to underutilize psychological treatment in the host country because these services are culturally encapsulated for dominant cultural groups (Sun et al., 2016).

For immigrant women, acculturative stressors are often exacerbated by gender roles such as those associated with motherhood and family dynamics, as well as responsibilities including caregiving, household tasks, financial obligations, and the challenge of being female migrant workers (World Health Organization, 2018). Preciado and D'Anna-Hernandez (2017) stressed that acculturative stress plays a unique role in the high anxiety levels of pregnant women. Bekteshi et al. (2017) argued that discrimination was a key factor in acculturative stress and psychological distress among Latinas and highlighted that Latino subgroups have their own unique needs. These studies indicated

the need to conduct further research on specific immigrant populations, such as the Mexican population. It is also important to consider the impact of acculturative stress on gender (Panchang et al., 2016), as female roles often aggravate the acculturation process experienced by women (World Health Organization, 2018).

A large body of literature has documented the health advantage that Hispanic immigrants have over their U.S.-born counterparts upon arrival in the United States, yet studies on health decline experienced by Hispanic immigrants have not been discussed (Hamilton et al., 2015). According to Teitler et al. (2012), acculturation is an important factor in determining the health trajectories of Hispanic immigrants, as they tend to be healthier and live longer than natives in the host country. However, this immigrant health advantage appears to diminish with time spent in a host country such as the United States (Ceballos & Palloni, 2012; Teitler et al., 2012). Hamilton et al. (2015) conducted a study on Hispanic immigrants using data from 1996–2014, which reflected a variation of health both arrival cohort and U.S. tenure in which the role of acculturation reflected in health decline. The effects of acculturative stress on health decline in Hispanic immigrants are suggestive.

Researchers, based on current research, have suggested the significance of exploring distinct, culturally specific forms of psychological distress (Bakhshaie et al., 2018), as well as advancing the study of immigrants' health experiences as they relate to acculturation (Allen et al., 2014). Further research has been recommended on specific nationalities within the Latino immigrant population, including those from border states with Mexico, in the study of the association of health outcomes and acculturation

(Anderson & Finch, 2017). Although research has shown that acculturative stress is related to a decline in health among immigrants in the United States, this has not been examined in the population of Mexican immigrant women (Bakhshaie et al., 2018; Panchang et al., 2016).

Additionally, perceived racial discrimination is one of the predictors of acculturative stress and impacts the mental and physical health status of the immigrant individual. Vega (2001) examined perceived discrimination and its association with self-reported health statuses of Mexican Americans. The researchers found that perceived discrimination was related to depression as a major factor negatively impacting physical health. Other variables examined in this study included stress, national heritage, social support, and sociodemographic factors (Kolody & Vega, 2001). In another study by Sanchez-Birkhead et al. (2011), perceived racial discrimination was shown to affect not only the mental and physical health of Hispanics, but also the healthcare-seeking behaviors of Hispanic women. The authors suggested that there was a need for further research on the impact of discrimination on acculturative stress because it is also a significant component impacting on the physical health of Hispanics and Mexican Americans.

The relationship between mental health and acculturative stress among Latina immigrant women has been identified in recent research. A study by Da Silva et al. (2017) examined relations between different dimensions of acculturative stress, psychological distress, and religious coping among young Latina women who recently immigrated to the United States. The researchers identified that higher levels of

acculturative stress were associated with higher levels of psychological distress (Da Silva et al., 2017). Consistent with this literature, Dillon et al. (2019) indicated that Latina immigrants who had spent less time in the United States also reported higher levels of distress. These studies illustrate the need to advance research while considering the impact of acculturative stress on mental and physical health and to focus on specific immigrant populations as well as being gender specific, and this study focused on the population of immigrant Mexican women.

Purpose of the Research Study

The purpose of this quantitative research study was to investigate the effects of acculturative stress and age among immigrant Mexican women ages 18 and older, in relation to their mental and physical health. The independent variables in this study were acculturative stress and age. The dependent variables were anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions. The covariates were time in the host country, language proficiency both in English and Spanish, and education. The moderator variable was perceived discrimination.

This research study was designed to gain understanding of the effects of acculturative stress and age on the mental and physical health of immigrant Mexican women. The study results may educate readers and raise awareness of the need for adaptation of culturally salient treatments in the integrated health care approach to benefit the female immigrant population. Additionally, in this research study, I aimed to address the complex interplay of the effects of acculturative stress on the mental and physical health of immigrant Mexican women.

Research Questions and Hypotheses

The three multivariate research questions guiding this study were the following:

Research Question 1: Is there a significant prediction in the effects of acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women?

H01: There is not a statistically significant prediction in the effects of acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women.

Ha1: There is a statistically significant prediction in the effects of acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women.

Research Question 2: Is there a significant prediction in the effects of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women?

H02: There is not statistically significant prediction in the effects of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women.

Ha2: There is a statistically significant prediction in the effects of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women.

Research Question 3: Is there a significant prediction in the effects of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women?

H03: There is not a statistically significant prediction in the effects of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women.

Ha3: There is a statistically significant prediction in the effects of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women.

The moderator variable was perceived discrimination. The three moderator hypotheses were as follows:

H1: Perceived discrimination moderates the impact of acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women.

H2: Perceived discrimination moderates the impact of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women.

H3: Perceived discrimination moderates the impact of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions experienced by immigrant Mexican women.

The type of relationship between the variables was correlational.

Theoretical Framework

The theoretical framework of acculturation formed the theoretical basis for this study, specifically Berry's acculturation theory. This theory illustrates the main factors that affect an individual's adaptation in a new cultural context, generally the dominant culture. Berry's acculturation theory has been used extensively in relation to all aspects of immigrants' attitudes toward acculturation and their behaviors. These behaviors generally correspond to cultural influences and expectations (Berry, 1997).

However, this change of behavior may result in psychological and physical health implications for the nondominant cultural group. It is therefore important to understand the complex relationships between acculturative stress and mental and physical health in the population of immigrant Mexican women, to help address some of the limitations associated with acculturation. A greater understanding of these relationships could promote the development of psychological interventions for immigrant populations, such as immigrant Mexican women. This could enhance not only their psychological well-being, but also their physical health. To increase this understanding, the four categories of acculturation as proposed by Berry's acculturation theory were examined: assimilation, separation, integration, and marginalization (Berry, 1997).

The first category of assimilation refers to when the immigrant individual acquires the receiving dominant culture, seeks daily interactions with this culture, and discards the heritage culture, as these individuals do not wish to maintain their cultural identity. Assimilation is an "individualistic" choice of acculturation strategy. Immigrant individuals may be hesitant to pursue assimilation if they experience or perceive

prejudice and discrimination. These social dynamics may be intended or unintended yet may have an impact on the behavior of the immigrant. Assimilation is an intermediate acculturation strategy toward substantial relationships with positive adaptation of the nondominant cultural group (Berry, 1997).

The second category of separation refers to an immigrant's rejection of the receiving dominant culture by avoiding interactions with individuals from the new culture and retaining the heritage culture. The acculturation strategy of separation is "collective." Separation can only be pursued when other members of one's ethnocultural group are interested in maintaining the interactions and social dynamics with the group's cultural heritage. This is an intermediate acculturation strategy toward substantial relationships with positive adaptation of the nondominant cultural group. Separation occurs when a "fit" is not achieved, and the outcomes for the non-dominant group result in a pattern of conflict and psychopathology (Berry, 1997). This is the phase where immigrants may experience acculturative stress resulting in psychological distress, affecting the mental and/or physical health status of the individual.

The third category of integration refers to when the immigrant individual acquires the receiving culture and retains the heritage culture. Integration is "freely" chosen by the nondominant group but can only be successfully pursued if the dominant cultural group is open and inclusive in its cultural diversity orientation. Therefore, mutual accommodation and acceptance are critical for both cultural groups to live as culturally different individuals. However, this integration represents biculturalism for the nondominant cultural group and can only be pursued in societies that are open to multiculturalism. In

this case, the immigrant individual seeks to maintain some degree of cultural integrity while participating and integrating in a larger social network. Consequently, the acculturation strategy of integration is “collective.” Integration is a successful acculturation strategy that allows substantial relationships with positive adaptation of the nondominant cultural group (Berry, 1997). Hence, this strategy may have a positive impact on acculturative stress experienced by immigrants.

The fourth category of marginalization refers to when the individual rejects the receiving culture and discards the heritage culture. In the process of marginalization, the immigrant individual may experience cultural loss and/or may have little interest in having relations with others for possible reasons of exclusion or discrimination. Marginalization is an acculturation strategy that limits substantial relationships with positive adaptation of the nondominant cultural group (Berry, 1997). This may increase the acculturative stress experienced by immigrants.

The acculturation theory by Berry provides strategies for the understanding of culture shock and how the immigrant individual adapts to and copes with the new dominant culture. This theoretical framework focuses on both the nondominant and the dominant cultural groups, as both groups are implicated in the process of acculturation of immigrants. Therefore, as explained by the four categories of acculturation, the acculturation theory by Berry relates to the current study’s approach and research questions. It focuses on the implications of the mentioned four categories of acculturation, which may impact acculturative stress of immigrants. These strategies of

acculturation may provide an understanding of how to obtain positive outcomes when immigrants are acculturating to the dominant culture.

Nature of the Study

The research design that best answered the research questions of this study was quantitative research methodology and correlational design. Researchers use quantitative methodology to find relationships between two or more variables. In this study, the relationship examined was between acculturative stress and age in immigrant Mexican women's mental and physical health. The independent variables were acculturative stress and age. The dependent variables were anxiety sensitivity and depressive symptoms to assess mental health, as well as bodily pain, role limitation, energy/fatigue, and general health perceptions to assess physical health. The covariates that I employed in this study were time in the host country, language proficiency in both English and Spanish, and education. Power analysis was used to determine the sample size needed for this study. Data were analyzed employing multivariate regression analysis with path analysis. This approach aligned with the problem statement.

The primary focus of this doctoral study was analyzing data that were collected employing a random sampling strategy from immigrant Mexican women participants, to investigate the effects of acculturative stress and age associated with their mental and physical health. I maintained focus on the impact that acculturative stress has on the mental and physical health of the female immigrant Mexican population. The participants in this study were recruited by posting an invitation flyer in public libraries and on social media using Facebook. Data were collected employing electronic surveys. All

participants remained anonymous and provided written consent before completing the surveys. A prescreening of the participants was available on the first page of the survey to ensure that they met the inclusion criteria to participate in the study.

Definitions of Theoretical Constructs and Terms

Acculturative stress: Acculturative stress is the stress reaction in response to life events resulting from the experience of acculturation (Berry, 1997). Acculturative stress may manifest in the form of anxiety, uncertainty, and/or depression. Immigrants experience this stress due to the challenges of adaptation to a new culture, which is the dominant culture.

Acculturation refers to the cultural changes resulting from group encounters from individuals who have developed in one cultural context and aim to adapt to new contexts that result from migration. These cultural contexts include three interrelated aspects of adaptation: psychological, sociocultural, and economic (Berry, 1997).

Assimilation: Assimilation refers to the acquisition of the dominant culture by immigrant individuals as they seek daily interactions with this culture and discard their heritage culture, rejecting their original cultural identity (Berry, 1997).

Separation: Separation involves rejecting the dominant receiving culture by avoiding interactions with individuals from the new culture and retaining the heritage culture (Berry, 1997).

Integration: Integration refers to when the immigrant individual acquires the receiving culture and retains the heritage culture (Berry, 1997).

Marginalization: Marginalization refers to when the individual rejects the receiving dominant culture and discards the heritage culture (Berry, 1997).

Psychological distress: Psychological distress is a general term used to describe negative feelings or emotions that affect the individual's level of functioning and interfere with daily living activities (Gundelach & Henry, 2016). The concept of psychological distress encompasses anxiety, depression, fear, and feeling discouraged (Gundelach & Henry, 2016).

Health: Health is defined by the Constitution of the World Health Organization “as a state of complete physical, mental, and social well-being.” The state of health depends on the presence or absence of diseases, so to be considered healthy, one should not suffer from any disease (Sartorius, 2006). Health implications refer to possible future effects on the individual's physical, mental, and social well-being.

Assumptions

It was assumed that the possible selected participants for this study represented the general population in terms of various demographic characteristics, including age, gender, time in a host country, education, and language proficiency. It was assumed that the participants were honest and as accurate as possible when answering the surveys. This assumption was necessary to ensure the internal and external validity of the study findings.

It was also necessary for the context of this study to assume that the participants understood the questions asked in either the English or Spanish version of the survey. Additionally, it was assumed that the participants' responses reflected their current

mental and physical health status regarding their acculturation experiences. The methodological assumption relevant to this study was that in multivariate regression analysis, unlike parametric procedure, the only critical assumption was the randomization of subjects to treatments (Mielke & Berry, 2002). The survey instruments measured acculturation levels and determined the effect of acculturative stress and age on the dependent variables considering the effect of the moderator variable, perceived discrimination.

Limitations

Some limitations may have existed within this study. Gender may have been a limitation of this research, as it followed gender parameters. The sample size may have been an additional limitation to this study. A potential barrier when collecting primary data (surveys) was the recruitment of participants. To address this limitation, participants were recruited via social media (Facebook), and a paper flyer invitation was posted outside of public libraries for those individuals who did not have access to social media and/or the internet. Potential biases that might have influenced study outcomes included that I am of the same nationality as Mexican women originally from Mexico. I addressed potential bias by maintaining neutrality and high awareness of the situation and my position. Additionally, I reviewed the interpretation of findings with my committee members to ensure accurate conclusions.

Delimitations

The research problem was selected to address the gap in the literature regarding the effects of acculturative stress and age on mental and physical health among

immigrant Mexican women. Previous research had addressed the relationship between acculturative stress and mental health in Hispanics and Latinos. However, no research studies had focused on specific Hispanic ethnic and gender groups, such as immigrant Mexican women. Additionally, there was a need to address the effects of acculturative stress on this population's mental and physical health. This study was delimited to a selection of women of Mexican origin. Because the population sample was small, the results may not be generalized.

Significance

The aim of this study was to provide insights into the complex interplay between acculturative stress and mental and physical health implications for immigrant Mexican women. The collected data could serve as a foundation for understanding the need for culturally sensitive treatments tailored to the immigrant Mexican women population. Insights from this study may also promote innovative interventions in the integrated health care landscape for this population. For example, the study of Cuadrado et al. (2014) on dispositional and psychosocial variables as longitudinal predictors of acculturative stress indicated the relevance of promoting psychosocial interventions with native and immigrant individuals in intercultural contexts.

Additionally, this study may provide a better understanding to researchers, educators, theorists, and practitioners, as well as an empirical platform that may contribute to expanding research and raising awareness of the effects of acculturative stress on mental and physical health among immigrant Mexican immigrant women. This study may contribute to and promote positive social change, as it may open new

perspectives on this racial group of female immigrants that have been historically subordinated and underserved.

This study may also assist in developing an understanding of the context associated with the interplay of a specific race, ethnicity, and gender with the acculturation shape that may lead to a better understanding of acculturative stress and health implications. It may also inform immigrant Mexican women on the possible mental and physical health implications of acculturative stress. Additionally, the acculturation framework of this study may provide insight and understanding of this immigrant population in relation to the aspects of acculturation that they may experience as they try to adapt to a new culture, the dominant culture of the host country.

This study may encourage immigrant Mexican women and men to rethink the process of acculturation in a way that is sensitive to the complexities of the sociocultural context of their lives. Additionally, it may provide a perspective on rethinking mental health as immigrant women of Mexican origin make sense of their newfound selves while living in the United States. According to the National Alliance on Mental Illness (2019), the Latino population lacks information and understanding on mental health because members of the Latino community, in general, do not talk about mental health issues. As a result, many Latinos do not seek treatment for mental health problems because they cannot identify the psychological symptoms associated with mental health disorders or are not aware of where to find help (National Alliance on Mental Illness, 2019). By providing an understanding of the impact of acculturative stress on mental and physical health from immigrant Mexican women's perspective, this study may potentially

open an educational ground for minority groups, advance studies on immigrants and mental health, and promote racial and ethnic development.

Summary

There has been limited research exploring the effects of acculturative stress on immigrant Mexican women's mental and physical health. Therefore, there is a need to help this population comprehend the acculturation process, as challenges in acculturating to the mainstream American culture may lead to psychological distress and health implications. It is significant to understand the strategies of acculturation that immigrant Mexican women may use to assist them in comprehending and adapting to the new culture.

Chapter 2 contains a synopsis of the literature relevant to acculturative stress and its effects on immigrant Mexican women's psychological distress and health implications. An overview of previous studies is provided, along with a discussion on the effects of acculturative stress on individuals' mental and physical health.

Chapter 2: Literature Review

Introduction

The dream of coming to America to have a better life intersects with the challenges of acculturating to a new culture, which may also impact the health of the immigrant. This quantitative research study was conducted to address a gap in the body of literature and investigate the effects of acculturative stress and age on the mental and physical health of immigrant Mexican women. The aim was to enhance the understanding of the impact of acculturative stress on the health of immigrant women of Mexican origin. Research shows that racial minorities experience severe psychological distress related to the process of acculturation, yet they tend to underutilize psychological treatment because these services are culturally encapsulated for dominant cultural groups (Sun et al., 2016). For immigrant women, acculturation stressors are often exacerbated by various gender roles such as those associated with motherhood and family dynamics, as well as responsibilities including caregiving, household tasks, financial obligations, and the challenge of being a female migrant worker (World Health Organization, 2018). For example, previous research supports that immigrant women of Latino origin experience high levels of anxiety symptoms during pregnancy due to the unique role of acculturative stress (Preciado & D'Anna-Hernandez, 2017).

Current research suggests the need to explore distinct, culturally specific forms of psychological distress (Bakhshaie et al., 2018), as well as to advance the study of immigrants' health experiences as they relate to acculturation (Allen et al., 2014; Anderson & Finch, 2017). Although research has shown that acculturative stress is

related to a decline in health among immigrants in the United States, there is currently a need to examine the effects of acculturative stress on mental and physical health among specific ethnic and gender groups (Bakhshaie et al., 2018; Panchang et al., 2016).

Additionally, included in this chapter is the literature search strategy employed in this research study. The acculturation theory by Berry served as a foundation for understanding the effects of acculturative stress on immigrant Mexican women. This chapter includes a literature review related to key variables as well as a summary and conclusions.

Literature Search Strategy

The library databases from Walden University that I used to conduct the literature search included ProQuest, PsycINFO, EBSCOhost, PsycARTICLES, Sage Premier, and Health Science databases, as well as Medline and Thoreau multidatabase search. The key search terms that I used included *acculturative stress, Mexican culture, psychological distress, mental health, health, depression, anxiety, Hispanic, Latino, Mexican, immigrant Mexican women, immigration, and acculturation*. The literature included in this review was published from 1979 to 2019 and included seminal literature and current peer-reviewed literature. The majority of the studies examined the topic of acculturative stress about mental health, anxiety, stress, depressive symptoms, social work, and prosocial tendencies. There was a gap in the literature on acculturative stress and its effects on the mental and/or physical health of immigrant women of Mexican origin; therefore, this literature review includes research studies conducted on Hispanic, Latino, Mexican American, and other minority ethnic group populations, such as Asians.

Theoretical Foundation

Name of the Theory

The acculturation theory of John W. Berry (1997) formed the theoretical foundation of this research study. Berry's acculturation theory illustrates the main factors that affect an individual's adaptation in a new cultural context, generally the dominant culture (Berry, 1997). Acculturation is a complex phenomenon in which, according to Berry (2003), dimensionality is a crucial component, as acculturation takes place on a multidimensional level. This is important when conceptualizing the process of cultural and psychological acculturation.

Origin of the Theory

The term *acculturation* has its roots on immigrant movements and adaptation of the individual to a foreign culture. The first individual who probably used the term *acculturation* in the English language was Powell (1880, 1883), who suggested that acculturation consists of psychological changes influenced by cross-cultural limitations (Berry & Sam, 2016). Berry and Sam (2016) highlighted that in 1936 Redfield defined acculturation as a phenomenon resulting from groups of individuals with different cultures having continuous firsthand contact and subsequent changes in the original cultural patterns of either or both groups. These definitions of acculturation have roots in the construct of adaptation to a new culture. The International Organization for Migration (IOM) in 2004 defined acculturation as “the progressive adoption of elements of a foreign culture (ideas, words, values, norms, behavior, and institutions), by persons, groups or classes of a given culture” (Berry & Sam, 2016, p. 12).

It is crucial to define the historical background of acculturation. This concept was defined by Berry (1997) as involving cultural changes resulting from group encounters that occur when individuals from one cultural context adapt to new contexts as a consequence of migration. In this sense, a cultural context may include psychological, sociocultural, and economic aspects (Berry, 1997). Thus, it is essential to understand Berry's acculturation theory and the application of the framework to this study to draw meaning concerning the effects of acculturative stress on immigrant Mexican women's mental and physical health. Berry's acculturation theory includes four categories of acculturation: assimilation, separation, integration, and marginalization (Berry, 1997).

Theoretical Propositions

The *assimilation* category refers to the acquisition of the dominant culture by immigrant individuals as they seek daily interactions with this culture and discard their heritage culture, rejecting their original cultural identity (Berry, 1997). This acculturation strategy of assimilation is individualistic. However, if the individual perceives prejudice and discrimination, they may resist assimilation (Berry, 1997). Social dynamics may impact the behavior and psychological changes of the immigrant individual. The acculturation strategy of assimilation may promote substantial relationships with the positive adaptation of the nondominant cultural group (Berry, 1997).

Separation involves rejecting the dominant receiving culture by avoiding interactions with individuals from the new culture and retaining the heritage culture (Berry, 1997). In separation, the individual fails to acculturate to the dominant culture. This is a collective strategy because it can only be pursued with the collaboration of other

members of the immigrant's ethnocultural group who are interested in maintaining social dynamics and interactions within the group's cultural heritage (Berry, 1997). In this sense, the nondominant group separates from the dominant cultural group and rejects the dominant culture. Normally, separation occurs when a "fit" is not achieved, and conflict and psychopathology, such as mental distress, may be an outcome for the nondominant group (Berry, 1997). Separation may lead to acculturative stress, which may affect the health of the immigrant individual.

The *integration* category refers to when the immigrant individual acquires the receiving culture and retains the heritage culture (Berry, 1997). Hence, the individual from a nondominant culture becomes bicultural (Berry, 1997). In this case, the immigrant individual seeks to maintain cultural integrity while participating and integrating into a larger social network (Berry, 1997). This collective acculturation strategy of integration may reduce psychological distress in immigrants if their nondominant groups are open to multiculturalism. Integration can only be successfully pursued if the dominant cultural group is open and inclusive in its cultural diversity orientation, so mutual accommodation and acceptance are essential (Berry, 1997). Consequently, substantial relationships and positive adaptation are achieved by the nondominant cultural group, which may have a positive impact on the acculturation process.

The category of *marginalization* refers to when the individual rejects the receiving dominant culture and discards the heritage culture (Berry, 1997). In the nondominant culture, individuals may experience heritage cultural loss and have little interest in having relationships with others, possibly due to exclusion or discrimination

from the dominant culture (Berry, 1997). This acculturation strategy may create acculturative stress in the immigrant. According to Berry (1997), marginalization limits substantial relationships with positive adaptation of the nondominant cultural group. This may reflect a negative impact on the mental and/or physical health of the individual.

Application of Theory in Previous Studies

The essence of Berry's acculturation theory served as a foundation for this study and provided an understanding of the effects of acculturative stress on immigrant Mexican women participants in this study. According to Berry (1997), the theoretical framework of acculturation has been extensively used to analyze immigrant attitudes toward acculturating to a new culture and their behaviors. In this respect, Berry (2005) described the acculturation of individuals in terms of integration, assimilation, separation, and marginalization and concluded that generally, those pursuing integration strategies are able to achieve better adaptation and experience less stress. Phinney et al. (2001) applied this theory of acculturation in their study and found variation in the strengths of ethnic and national identity when it comes to the support for ethnic maintenance and the pressure of assimilation. Consistent with this literature Bulut and Gayman (2016) based on their findings suggested that best adaptation is achieved by strong ethnic identity of the individual. Jean et al., (2001) identified ethnic identity to be a crucial component that influences the developmental process of acculturation that vary across diverse groups. This theoretical proposition of acculturation allows for an analysis on the perspective of

acculturation to obtain a better understanding of the impact of acculturative stress on immigrant individuals.

Analyzing theoretical frameworks of acculturation which are commonly employed in studies or discussions of immigrants implies considering the approaches proposed by Berry. Sam and Berry (2016) proposed diverse approaches to theories of acculturation and suggested that acculturation is also discussed among ethnocultural groups. Acculturation is a complex phenomenon and Sam and Berry (2016) highlighted major theoretical propositions such as the framework for conceptualizing acculturation components and relationships. The researchers elaborated on this framework and the process of how individual and group level factors come together to create the process of acculturation while conceptualizing psychological acculturation and adaptation in a group relationship context. Additionally, Sam and Berry (2016) proposed another theoretical framework of acculturation, the conceptual framework of acculturation, which integrates characteristics of the countries of origin and settlement and characteristics of the ethnic groups. This framework considers acculturation conditions that include relationships between the mainstream and ethnic group members (Sam & Berry, 2016). Examining acculturation and its relations to psychopathology can be a rigorous task when considering the complexity of immigrants.

Among other major theoretical propositions of acculturation frameworks is latent class analysis (LCA). Bulut and Gayman (2016) suggested that this method provides a theoretical and empirical approach that they applied to identify acculturation classes based on patterns reflected in data. The researchers identified the significance of

acculturated factors such as bicultural orientation that influenced better mental health outcomes compared to other single cultural classes (Bulut & Gayman, 2016).

Additionally, acculturative stress associated with immigration is often experienced by parents. In more cases, immigrant parents hold one culture and may experience difficulties acculturating to the dominant culture. Lorenzo et al. (2016) examined the sociocultural stressors that may disrupt the aspects of the family relationship and parenting, employing the family stress model (FSM) to understand acculturation stressors and their influence on youth mental health and substance use outcomes. This theoretical approach was appropriate to the application of the theory on the effects of acculturation stress on the mental health of youth in a family context.

Berry's (1997) acculturation theory and its four categories of acculturation—assimilation, separation, integration, and marginalization—have been applied previously in ways similar to the current study. These various ways of acculturating have been discussed in studies related to how individuals acculturate and how well they adapt with regard to their psychological well-being and sociocultural competence (Sam & Berry, 2010). These underlying strategies of acculturation (assimilation, integration, marginalization, and separation) influence the outcomes of acculturation for immigrant youth in Canada and France (Berry & Sabatier, 2010). The researchers identified positive psychological well-being and higher self-esteem in those who involved themselves and “integrated” in both their heritage culture and that of the national society (Berry & Sabatier, 2010). These studies provided information on how acculturation patterns and strategies explain the variations that influence the relationship between acculturative

stress and psychological well-being. This theoretical framework also related to the present study and provided information on the examination of the effects of the process of acculturation, by considering the four categories of acculturation and their influence on the psychological well-being and physical health of immigrant Mexican women.

Mexican Immigration to the United States

Since the earliest times, humanity has been on the move, facing challenges, overcoming adversities, and pursuing opportunities to live a better life. This initiative has included mass movements of migration for women. Mexican women migrate to the United States despite the construction of gender roles, cultural values, family dynamics, and legal status. Mexican women's motives for migration may include pursuing family reunification. This immigrant population faces acculturative stress, which may impact their mental and physical health.

The United States and Mexico share a common border, which is approximately 2,000 miles long; this makes entry for Mexican migrants convenient compared to migrants from other Latin American countries. However, data from Homeland Security (2018) reflected that an estimate of 12.0 million illegal aliens resided in the United States as of January 2015, compared to 11.5 million in January 2014. The estimated number of lawful permanent Latino residents in the United States was 13.2 million on January 2015 (Homeland Security, 2018). According to the Center for Immigration Studies (2017), Mexican immigrants comprise the largest foreign-born population in the United States, with Arizona being one of the states with the largest increase in immigrants between 2010 and 2016.

Mexican women who move to the United States may face stressors related to acculturating to an unknown land, which may impact their mental and physical health. According to Panchang et al. (2016), it is important to understand the factors that put immigrants such as Latinos at risk for poorer health. This is imperative to develop a better understanding of the interplay of acculturative stress and mental and physical health implications. Acculturative stress has been identified as a risk for prenatal anxiety in early pregnancy for Latino immigrant women (Preciado & D'Anna-Hernandez, 2017). This risk may also be significant for the health implications of the mother and child.

Therefore, health decline in immigrant Latino women due to psychological distress and other life stressors may also have an impact on the health of their children. According to Preciado and D'Anna-Hernandez (2017), women who experience psychological distress are at a higher risk of affecting the health of their child. This is critical for immigrant women when considering their possible contribution to the health of the nation, which also may have implications for future generations. Additionally, there is a need to consider sociocultural stressors such as acculturative stress for postpartum depression prevention (Luis-Sanchez et al., 2019).

The social status of immigrant Mexican women is a factor that impacts their psychological well-being. Undocumented immigrant Mexican women live under a deportation threat, anticipating stressors that have an impact on their health (Garcia, 2018). Exposure to stress is a significant central mechanism that affects health disparities (Garcia, 2018). Additionally, immigrants encounter limitations of ordinary privileges such as having constricted social networks and the absence of purpose or belongingness,

which affects their mental health (Gonzales et al., 2013). Legal status also negatively impacts the mental health of immigrants and their families (Garcia, 2018). Illegal immigration to the U.S. raises views of opposition to immigration to the country. Hence, the anti-immigration social context in the United States, according to Garcia (2018), has exacerbated the negative experiences of immigrants.

History of Immigration in the United States

America has been shaped by immigrants. In previous centuries the nation was free and open to migrants who were in search of a better life. The U. S. Citizenship and Immigration Services (2015) reported that during the 18th and early 19th centuries America was freely open to immigration rarely questioning immigration policies until the late 1800's. At the time of the Mexican Revolution (1910-1920) thousands of Mexican refugees immigrated to The United States to escape violence (U. S. Citizenship and Immigration Services, 2018). Due to enforcement of immigration policies, migration to The United States became challenging for Mexican immigrants. Some refugees were denied entry as per the general immigration laws, but allowed in the nation on humane considerations (U. S. Citizenship and Immigration Services, 2018). However, some of these Mexican immigrants had to leave the nation and go back home in the 1930's.

The Great Depression, in the 1930's, was another challenging time for Mexican immigrants. Mexican individuals and families were sent back to Mexico with the program *Repatriation* while others returned to Mexico voluntary (U. S. Citizenship and Immigration Services, 2016). This legal removal process of Mexican immigrants was due to the economic downturn that was not only affecting the United States, but was also

globally. During the 1950's and early 1960's, the *Bracero Program* opened to promote agricultural jobs for Mexicans. Bracero is a Spanish term that means manual laborer. *The Mexican Agricultural Labor Program* was an agreement between Mexico and The United States that took effect in 1951 and was closed in 1964 (U. S. Citizenship and Immigration Services, 2019). Immigration policies and programs have changed throughout the years; however, Mexican immigrants have continued to migrate to the U.S.

Recent studies have considered the history of immigration contexts and its impact on the psychological well-being of Mexican immigrants. Miranda et al., (2011) in their study with older age population from Mexican origin suggested that the context of immigration may have long-term implications for the psychological well-being of the Mexican immigrant population. The researchers considered three immigration contexts, the Mexican Revolution (1918-1928), the Bracero program (1942-1964), and the Immigration Reform Control Act (1965-1994). Their findings revealed that immigrants who arrived at the U.S. following the Mexican Revolution reported fewer depressive symptoms while those who arrived following the Immigration Reform Control Act reported significantly more depressive symptoms, compared to those who arrived in the Bracero era (Miranda et al., 2011). The impact of migration has been reflected in the health of the vulnerable populations throughout history. Historically, Mexicans continue to migrate to the United States despite new challenges of immigration and health risks.

The Immigration System

Immigration in the United States is an international movement of migrant individuals from around the world. The immigration system comprises immigration laws

such as the Immigration and Nationality Act (INA), enacted in 1952, which provides current immigration policy (US Citizenship and Immigration Services, 2019). The INA forms part of the United States Code (U.S.C), which is a collection of all the laws of the nation (US Citizenship and Immigration Services, 2019). Despite the complex immigration laws in the United States, one international migrant enters the nation every 33 seconds (United States Census Bureau, 2019), which includes migration of the Mexican population.

Undocumented Hispanic women face the exposure to immigration enforcement policies that may affect their health. Local immigration enforcement policies affect the utilization of health services among immigrant Hispanics in some states of the United States, such as North Carolina (Rhodes et al., 2015). This has an impact on the health outcomes of women. The immigration and Nationality Act and the Secure Communities program authorizes local law enforcement agencies to enforce federal immigration laws, affecting the prenatal health care services that Hispanics and Latinas receive in this state (Rhodes et al., 2015). This places undocumented immigrant Hispanic and Latina women at disadvantage impacting the utilization of health services, due to mistrust of health services (Rhodes et al., 2015). Hispanic immigrants in the United States fear the immigration system and this negatively impacting their health. Rhodes et al., (2015) in their study revealed that immigrant women avoid health services in the U.S. and sacrifice their health and the health of their family members. However, the immigration system varies as per geographical areas of the country.

The immigration system in the Southwest Border of the United States, such as in Southern Arizona has turned to aiding immigrants in recent years. The immigration system faces an obligated humanitarian response to alleviate human suffering, since humanity should not be negotiated with the complex application of immigration laws. Currently, immigrant individuals at the Southwest Border port of entry present themselves seeking humanitarian protection under the United States (U.S. Customs and Border Protection, 2019). Migrant women and children from Mexico and Central America arrive to the southwest U.S. border in despair for a better humanity

The United States continues to face the emerging challenge of immigration in which women and children have been exposed to human suffering. Migrant women and children from Mexico as well as unaccompanied children from Central America are detained at immigration retention camps called *facilities*; if they qualify for humanitarian parole, they are released to a humanitarian aid organization in Southern Arizona (Valdez, Valdez, & Sabo, 2015). There is a high need to support and protect the life and dignity of this vulnerable and segregated populations, due to the increasing migration of women and children to the United States. The Southwest Border reported 50,693 total daily apprehensions for the month of August 2019, compared to 71,982 in July, and 94,904 in June (U.S Customs and Border Protection, 2019). A total of 396,579 individuals were apprehended on the Southwest Border in 2018 (U. S Customs and Border Protection, 2019). This situation has impacted the nation and has been declared as an immigration crisis. Humanitarian institutions have been at rise to help with this humanitarian crisis.

The project helping hands (PHHs) is part of the humanitarian parole offered to vulnerable populations such as women and children (Valdez et al., 2015). The project PHHs provides food, water, hygiene products, clothing, hospitality, and legal orientation (Valdez et al., 2015). These are basic human necessities that do not include health care, which may put these population at a high health risk, raising potential health issues. Valdez et al., (2015) conducted a study with immigrant women and children, focusing on structural vulnerability, and stated it has a life-long health implication for a sub-population of young mothers and their children. These encounters of major difficulties and threat to the family are critical for the physical and mental health well-being of Mexican women and children in the United States.

The immigration system of the United States supports the significance of the family structure of immigrant families. This is reflected in the family reunification process that allows immigrants who qualify to reunify with their children. The number of mothers and fathers, who engage in long-term migration to support their children and extended family in their home countries continue to rise (Schapiro et al., 2013). Half of the U.S migrants who cross the national borders seeking a better life are women (Schapiro et al., 2013). Family reunification and the process of adaptation impacts not only family development, but also the process of acculturation.

Present-Day Immigration

The latest national story of the United States is the growing border immigration crisis. The increase in the number of individuals seeking asylum is a recent situation that was not happening a few years ago (Center for immigration Studies, 2019). The overall

apprehensions keep increasing in the areas of Yuma and Rio Grande Valley, Arizona (Center for immigration Studies, 2019). This is a serious situation that puts the psychological distress of these immigrants at risk. Majority of these individuals are minors, and some of them are coming unaccompanied. However, those who are accompanied by their parents are separated at the border due to the new immigration law of “zero tolerance” implemented by the Trump administration (Center for Immigration Studies, 2019). Children who are in detention are put in shelters, and according to the Center for Immigration Studies (2019) critics have derogate this legal action as “family separation”.

In 2010, the Arizona State Bill 1070 (State of Arizona, 2010), allowed for police to check citizenship status of any individual suspected to be an undocumented resident of the United States. This was a major dilemma of racial profiling, which apparently was a violation of the U.S Constitution. On February 2019, President Trump declared the nation a National Emergency to secure funding to build a Southern border wall with Mexico, and remove protection immigrants in the Deferred Action for Childhood Arrivals program (DACA), and under this law children were also separated from their parents (U.S. Citizen and Immigration Services, 2019; Wilson, 2019).

These sociopolitical tensions intensified anti-immigrant tensions, which may exacerbate the discrimination the immigrant community already experiences (Araújo et al., 2010). The immigration experience in the United States can be stressful and as supported by a large body of research may result in health implications among the immigrants (Cariello et al., 2019, Bakhshaie et al., 2018; Panchang, et al., 2016). There

was a decline in health status among Latino population following immigration raids (Lopez et al., 2017). These exposures of immigrant women from Mexican origin may have an impact on their acculturative stress and health implications.

Literature Review Related to Key Variables and Concepts

Previous research studies have examined the constructs of the effects of acculturative stress on mental and physical health of immigrant groups in the United States. Acculturative stress has been associated with mental health decline of Hispanic immigrants. However, limited research has supported that acculturative stress impacts mental and physical health of immigrant Mexican women. Panchang et al., (2016) conducted a quantitative study which reflected that Latinos' levels of acculturative stress and poorer physical and mental health was shown to be higher than Asian immigrants. According to this study acculturative stress has an effect on the relationship between the intersection of acculturative stress, physical and mental health of the Latino participants. However, the researchers suggested further research on specific gender and Latino ethnic subgroup was needed. The chosen methodology for this research study was logistic regression models and multivariate model for all interaction tests (Panchang et al., 2016). Additionally, the quantitative correlational approach study and regression analysis of Wong et al., (2017) revealed that acculturative stress was significantly associated with higher levels of psychological distress in Hispanic and Asians. These methodologies are consistent with the scope the present study on the effects of acculturative stress on the mental and physical health of immigrant Mexican women.

Health outcomes of immigrants are impacted by acculturation, stress, and racism. The quantitative study by Anderson and Finch (2017) documented the significant role of racial microaggressions, stress, and linguistic acculturation in relation to Latino health outcomes in the United States. The regression analysis of this study demonstrated that health disparities exist across the various immigrant and acculturation statuses of the Latino group (Anderson & Finch, 2017). The complexities of linguistic acculturation, stress, and racial microaggressions impacted the negative health effects experienced by the participants of the Latino population. Jang et al., (2017) explored the effects of cultural and linguistically sensitive approaches on the physical, oral, and mental health of the Asian American population. Their qualitative regression analysis study identified that the group alienated from the heritage culture group was at risk for physical and mental health implications, the host group was at risk for oral health, and the fully bicultural group was the most advantaged in terms of physical, oral, and mental health (Jang et al., 2017). Physical and mental health has been an emerging subject of investigation on the adaptation and outcomes of the influence of acculturative stress.

Predictors of Acculturative Stress

Researchers have identified predictors that impact acculturative stress which are risk factors to the mental health of immigrants. According to Torres (2010) annual income is a predictor previously associated with negative outcomes on depressive symptoms. Despite the economic contributions that immigrants make to the United States, overcoming low-income status has been a challenge for ethnic minorities. Torres (2010) identified two stressors that contributed to depressive symptoms on Latinos, and

they included language competency and acculturating to the American society. When considering one's adaptation to a new culture, environmental interactions are crucial to positively acculturate to the dominant culture. Likewise, socio-psychological predictors according to Miranda and Matheny (2000) also relate to acculturative stress. The researchers uncovered major predictors that impact acculturative stress among Latinos such as the efficacy of stress-coping resources, degree of acculturation, language use, family cohesion, and length of residence in the U.S. (Miranda & Matheny, 2000). Therefore, understanding of the factors that moderate acculturative stress may enhance conceptualization when approaching the problem of acculturation.

Becoming familiar with unique acculturation indicators to the expression of mental health, is helpful to understanding the individual's cultural relation and adaptation. Torres and Rollock (2007) investigated the impact of typical acculturation indicators and discovered that intercultural competence and coping, served to moderate the relationship between acculturation and depression. In terms of immigrants who are immersed in a new culture not only predictors of acculturative stress, but also indicators that moderate for positive mental health consequences and are important components to consider. Arcia et al., (2001) explored the impact of gender and country of origin as indicators to health behaviors among Latino immigrants during the acculturation process. Arcia et al., (2001) highlighted those increased years of residency in the United States and increased competence in English and its use, varied as per responder's environment and ethnic identification. Additionally, responses varied by participant's gender. Females used less English and reported perceiving higher social acceptance than males; males

reported non-acceptance, resulting from being identified as Latino, not from coming from different cultural behavior (Arcia et al., 2001).

It is important to note that contextual factors also influence acculturative stress on Latina immigrants. Bekteshi and Van Hook (2015) uncovered that contextual factors such as climate contexts affected the relationship between acculturative stress and psychological distress. Additionally, individual contexts such as English skills, number of years in the U.S., and contentment of the decision to move to the U.S. were also significant predictor factors (Bekteshi & Van Hook, 2015). Moreover, familismo, number of years in the U.S., and perceived racial discrimination predicted acculturative stress. Dillon et al., (2019) identified higher levels of psychological distress on Latinas being associated with undocumented immigration status, more immersion in the dominant U.S. society, and more acculturative stress. On the other hand, less distress was associated with certain marianismo beliefs such as being spiritual leaders and responsible for the family's spiritual growth. Gender pressure was associated with more distress and Latina's beliefs of subordinating and self-silencing to maintain harmony in relationships as well as beliefs of being the main source of strength for their family (Dillon et al., 2019). Based on this studies gender intensifies acculturative stress and psychological distress on Latina immigrants. Previous research has documented predictors that impact acculturative stress in Latinos, yet research on the effects of it on mental and physical health in the immigrant Mexican women population is limited.

Effects of Acculturative Stress

Having robust research on acculturation and its predictors brings useful information and important aspects to consider for its effects on mental and physical health of the Latino population. Emerging research such as Garcia et al., (2017) uncovered the complex relationship of different levels of acculturative stress, on Mexican Americans, associated with distinct cortisol awakening response profiles and suggested that its exposure to culturally unique stressors may be linked to health disparities. This research study highlighted that acculturative stress has the capacity to alter the cortisol reactivity probably due to the experience of stress and worry while acculturating to a new or a second culture. This is a critical variable associated not only with stress symptoms, feeling tense or hyper, but also with somatic illness, and psychological disorders. Consistent with these findings Campos et al., (2007) identified aspects of acculturation linked to health processes among immigrants of Mexican orientation, such as the positive association with pregnancy anxiety, while there was a negative association with stress and birthweight of the child. Both research studies highlighted two concepts of the association of acculturative stress with mental and physical health.

Health relevant acculturative stress may impact mental and physical health of Mexican immigrants. John et al., (2012) in their study included the variables of mental and physical health measuring anxiety and depressive symptoms as well as acculturative stress measurements in U.S born and immigrant Asians. The researchers identified the prevalence of perceived discrimination as strongly associated with any mental disorder, anxiety, or depression, and highlighted that socially disadvantaged immigrants were at

risk of poor mental health (John et al., 2012). An important aspect of this study is that foreign-born was found to have a health protective effect, when controlling for subjective social status, for some outcomes (John et al., 2012). Although acculturation was associated with risk health problems the role of nativity and occupational class were salient components that had an impact on the health of the Asian Americans participants. However, as immigrants become more acculturated to the U.S. culture, they adopt an American diet of fast foods and higher amounts of fat which may lead to health problems (Perreira & Ornelas, 2011). Perreira and Ornelas (2011) reported that a National Longitudinal Study of Adolescent Health found that foreign-born Hispanic youth had healthier diets than U.S born Hispanic youth. Despite the immigrant paradox adapting to a new culture has repercussions on the health outcomes of the immigrant individual.

Health Implications

Previous studies have examined the effects of acculturative stress on mental and physical health of immigrant groups. It has been suggested that variation of immigrant health is influenced by the context of pre- and postmigration conditions (Torres & Wallace, 2013). Torres and Wallace (2013) identified that migration circumstances such as unplanned migration is an acculturative factor significantly related to health outcomes, which would differ by Latino subgroup and gender independently of other measures of acculturation and or socioeconomic status. This acculturation factor had an effect on poor physical health for Latina women respondents, with no significant differences by the subgroup participants (Torres & Wallace, 2013). Across ethnic groups, acculturative stress has been identified to have an adverse impact on mental and physical health and

there appears to be a relationship between acculturative stress and health linked to specific gender and Latino subgroup. Bekteshi and Van Hook (2015) noted that acculturative stress did not always lead to psychological distress and that specific context such as perceived discrimination and difficulty visiting family abroad impacted psychological distress of the Latina immigrant participants. The variables of acculturative stress, mental and physical health have been shown to intersect and have an effect on the immigrant individual and mediators such as the context of acculturation or socioeconomic status play a significant role on mediating this relationship.

Researchers have approached the problem of acculturative stress and physical health in immigrants by considering biomarkers, perceived stress, and acculturation. Gonzales et al., (2011) identified lower risk for metabolic syndrome biomarker when higher acculturation levels in foreign-born individuals, but not U.S.-born, Mexican Americans. D'Alonzo et al., (2019) findings revealed that when high levels of chronic psychological stressors caused by acculturation stress accumulate, may lead to physiologic conditions. These measures considered by D'Alonzo et al., (2019) included perceived stress and biomarkers of allostatic load such as body mass index, waist to hip ratio, finger stick collections of dried blood spots for C reactive protein, systolic and diastolic blood pressure, cholesterol and triglycerides. These measures provided specific physical health results that assisted on determining the physical health implications of acculturative stress on the sample population. However, D'Alonzo et al., (2019) study had also its limitations.

Some of the limitations of this approach included the population, Mexican immigrant women in the U.S. and Mexico, and generalizability of the findings. The acculturation stress immigrant women experienced in their own country, Mexico, may differ from the acculturation stress in their host country, the U.S. Additionally, a majority of women in the U.S. sample did not work outside the home and had not experienced exposure to workplace discrimination, and live in a Mexican community that may offered some protection against acculturative stress (D'Alonzo et al., 2019). For the immigrant Mexican women in Mexico, moving from the U.S to their own country, the demand for the lifestyle, means of transportation, and nutrition transition were factors that impacted on physical health (D'Alonzo et al., 2019). The researchers included highly reliable measures of biomarkers and communality levels were moderate to high, which is a strength of the study. Acculturative stress also affected eating tensions and weight loss strategies and consequences.

Examining acculturative stress as it pertains to immigrant mental and physical health in specific gender and ethnic groups is still developing. Panchang et al., (2016) findings revealed that Latinos immigrants report more acculturative stress than Asians and this has no association with health. However, acculturative stress is health damaging when specific types of social support are low in Latino men and women (Panchang et al., 2016). In Asian immigrants' acculturative stress was associated with physical health among women and mental health among men after adjusting for controls. These findings suggest that acculturative stress varies on its effect on the mental and physical health of men and women, highlighting the significance of the role of gender in the intersection of

acculturative stress, health, and a specific ethnic group. John et al., (2012) supported the influence of acculturative stress on mental health and the strong association of the acculturation factor of perceived discrimination of Asian Americans on any mental disorders, anxiety and depression. Additionally, discrimination, acculturative stress and family conflict are also risk factors on the mental health of Asian and Latino immigrants (Leong et al., 2013). This understanding of specific acculturation factors and psychological symptoms associated with the mental health status of the minority ethnic groups is crucial when examining the challenges of acculturation of immigrant Mexican women.

Bulut and Gayman (2016) employed a multivariate analysis to examine the association of acculturative stress and self-rated mental health among Latino and Asian immigrants. This study supported evidence as per mixed findings from previous research suggesting an association of acculturation and mental health and highlighted that lack of acculturation has adverse mental health impact in both immigrant groups (Bulut & Gayman, 2016). The meta-analytic study of Arpana et al., (2013) explored the relationship between acculturation and depression among Asian Americans. Arpana et al., (2013) revealed that when acculturation was measured as assimilation to the American culture there was a negative relationship statistically significant between acculturation and depression. When acculturation was measure as orientation to the Asian culture the relationship was negative, but not statistically significant. Exploring the relationship between acculturation and depression can be conflictive and it was recommended that further research of these two cultural variables should be considered.

Previous research supports that the challenges of acculturation that lead to higher levels of acculturative stress are associated with negative mental health outcomes across immigrant groups. Very limited work has been done on immigrant Mexican women. However, it is acknowledged that acculturative stress is associated with general distress, anxiety, depression, and suicidal ideation in Hispanic immigrants (Cano et al., 2015; Kim et al., 2014; Sirin et al., 2013, Torres & Rollock, 2007). Recent findings by Calzada and Sales (2019) revealed that there is a link between acculturation and depression among Mexican origin mothers living in the U.S. These rigorous studies suggest that acculturative stress have valuable repercussions in the mental health of Hispanic and Asians immigrants. DeVlyder et al., (2013) examined the risk for psychosis among Asians and Latino immigrants in the U.S. and revealed that acculturative stress was associated with hallucinatory symptoms among the Asian group and hearing voices among the Latino group. The perspective of this study was to link acculturative stress, immigration, and psychotic life experiences exposing the variations and influence of risk factors on specific psychotic symptoms (DeVlyder et al., 2013). According to available literature, the connection of acculturative stress and mental health across some immigrant ethnic groups has been established including a number of psychological symptoms.

Other studies have demonstrated the association of depression with acculturative stress. Hovey (2000) investigated the relationship between acculturative stress, depression and suicidal ideation among Mexican immigrants, and his findings reflected a high correlation among the variables. Participants experiencing elevated levels of acculturative stress may be at risk of depression and suicidal ideation at critical levels

(Hoovey, 2000). On the other hand, Finch et al., (2000) in their study revealed that highly acculturated immigrants were more likely to experience discrimination than less acculturated immigrants, and discrimination was directly related to experiencing depression.

However, it is crucial to consider acculturative factors which are critical components that may influence the mental health outcomes of immigrant individuals. The effects of cultural assets on acculturative stress and perceived discrimination among mothers of Mexican origin was highlighted by Calzada and Sales (2019). The researchers explored depression among mothers of Mexican origin and considered the immigrant paradox employing an acculturative stress model. Important aspects of the findings of this study included the positive and negative effects of cultural assets such as strong ethnic identity that appeared to be a protection for later depression and strong familismo which increased risk for later depression (Calzada & Sales, 2019). Consistent with this literature, Cheng et al. (2016) examined the relationship between cultural variables of familism, ethnic identity (search and commitment), and gender with discrimination and acculturative stress among college students of Mexican ancestry. Familism and strong ethnic identity (search and commitment) had a positive association between acculturative stress and depressive symptoms for women but not for men.

Additional studies support the association of acculturative stress and psychological distress such as anxiety and stress among Hispanic immigrants. Salas et al., (2015) identified that elevated levels of acculturative stress among Hispanic immigrants affects their levels of anxiety and stress, which may place this population at risk of

variety of mental disorders (Alderete et al., 2000; Grant et al., 2004; & Kulis et al., 2009). Based on the cross-cultural examination of Salas et al., (2015) the expression of anxiety and stress relate to the emotional disorders that Hispanic immigrants experience due to the effects of acculturative stress. Revollo et al., (2011) suggested that cultural congruity plays a key role in immigration and mental health since acculturative stress implies a risk factor for depression and anxiety. However, limited empirical work has explored these factors that may highlight the effects of acculturative stress on immigrant Mexican women.

Empirical Research

Limited empirical research studies have been conducted to investigate the effects of acculturative stress on the mental and physical health of immigrant Mexican women. Wong et al., (2017) examined the aspects of acculturative stress and social constraints associated with the psychological distress of Hispanic and Asians immigrant college students. The researchers identified that acculturative stress and social constraints were significantly associated with higher levels of psychological distress (Wong et al., 2017). This supports previous findings of the challenges that Hispanic immigrants experience when dealing with acculturation and adaptation in a new culture and society and its effects on mental health. Additional empirical studies support the adverse health impact of acculturative stress on the Latino communities. Cariello et al., (2019) supported that both acculturative stress and discrimination had an impact on physical health through anxiety and recommended further intervention research on the Latino population considering the effects of acculturative stress on mental and physical health suggesting

innate cultural strengths as mediators. Empirical evidence also supports that acculturative stress, may have valuable repercussions on the mental and physical health of the Latino community and Latino immigrants (Bakhshaie et al., 2018; Dillon et al., 2019; Discroll & Torres, 2019; Hill et al., 2019, Jagers & MacNeil, 2015; Jardin et al., 2018; Maldonado et al., 2018; Zvolensky et al., 2018, & Finch et al., 2001). It is important to note that religious coping plays a significant role as a cultural strength for prevention (Capielo et al., 2015; Hill et al., 2019, Sanchez et al, 2012; & Torres, 2010).

Coping strategies such as self-esteem may mitigate the effects of acculturative stress on the mental health of Mexican immigrants. Kim et al., (2014) empirical study underlined that acculturative stress did not have an impact on the mental health of Mexican immigrants with high self-esteem and that ethnic identity aggravated the negative effect of acculturative stress on their psychological well-being. High self-esteem may positively influence psychological well-being of Mexican immigrants when facing the demands of acculturation. Consistent with this literature Schwartz et al., (2007) also highlighted the important aspects of the influence of ethnic identity and self-esteem on the psychosocial adjustment of Hispanic adolescents while acculturating. Despite these studies of acculturative stress and its association with poor mental and physical health implications additional studies suggested the “immigrant paradox” as mental health advantage.

Bulut and Gayman (2016) highlighted that the “immigrant paradox” suggests a mental health advantage for recent immigrants over their more acculturated counterparts. Katsiaficas et al., (2013) study revealed that Mexican immigrants reported lower rates of

mental disorders in a 12-month prevalence compared to U.S. born Mexican Americans. However, it is significant to consider that type of stressors that Mexican immigrants in the U.S experience also influence on their mental and physical health. Caplan (2007) suggested that types of stressors in new immigrants may vary by ethnicity, separation from family, and lack of a community, finding discrimination to have the most adverse effect on the physical and mental health of Latino immigrants. Additionally, immigrants are less likely to come from families from psychotic problems (Salas-Wright et al., 2018); therefore, consideration of the foreign-born health protective effect apply on some outcomes and generalizing good health for all immigrants using the “immigrant health paradox” should exercise caution (John et al., 2012). Consequently, health outcomes impacted by acculturative stress experienced by immigrant Mexican women the U.S. are suggested being uncovered.

Based on these findings it appears that more research on specific ethnic group and gender, and the interplay between acculturative stress mental and physical health with regards to the immigrant Mexican women population would be valuable (Panchang et al., 2016; Jang et al., 2017; & Anderson & Finch, 2017). Additionally, it is critical to investigate the moderator of perceived discrimination. According to Calzada and Sales (2019) further investigation of this moderator should be conducted since some immigrant individuals may cope with discrimination in a positive way. Many suggestions on the study of additional mediators and moderators such as types of social support, context of acculturation, socioeconomic status, cultural assets, innate cultural strengths,

complexities of preserving core cultural characteristics, and cultural congruity, have been made as well as the impact of gender.

Covariates

The covariates for this research study are three: time in host country, education, and language proficiency in both English and Spanish. These covariates were selected because they have been shown to be associated with the effects of acculturative stress on mental and or physical health of immigrants in the U.S (Arcia et al., 2001; Bakhshaie et al., 2018; Calzada & Sales., 2019; & Torries & Wallace, 2013). The study of Panchang et al., (2016) found no association between acculturative stress and health in Latino immigrants, but for Asian immigrant women there was an association with physical health and with mental health for men.

Summary and Conclusions

Acculturative stress has been linked to have an effect on the health of immigrants as well as in minority racial and ethnic groups. In terms of research linking predictors of acculturation to acculturative stress, such as annual income, degree of acculturation, language use, efficacy of stress coping resources, family cohesion and length of residency in the U. S. have been previously associated with negative outcomes on depressive symptoms and acculturating to the American society (Torres, 2010; & Miranda and Matheny, 2000). Since the process of acculturation affects the psychology of the individual, acculturation research has been also conceptualized from group and gender perspective.

Among additional typical acculturation indicators that have been explored as moderators between acculturation and mental health include the impact of gender, intercultural competence and coping, country of origin, and increased competence in English which varied as per the responder's environment and ethnic identification (Rollock, 2007; Arcia et al., 2001). Moreover, contextual factors, contentment of the decision to move to the U.S, familismo, perceived discrimination, undocumented immigration status, more immersion in the dominant U.S society, and marianismo spiritual beliefs are some of the significant predictors of acculturative stress associated with the intensification of gender on the psychological distress and mental health consequences among Latina immigrants (Bekteshi & Van Hook, 2015, Dillon et al., 2019).

One trend in acculturative research has been examining the complex relationship of different levels of acculturative stress and its effects on distinct cortisol awakening response. Understanding the influences of culturally unique stressor, such as acculturating to a new culture, is linked to health disparities and health processes such as the positive association with pregnancy anxiety and stress (Garcia et al., 2017; Campos et al., 2007). This yield potential considerations for social constructs such as immigration and health policy. Linking the effects of acculturative stress with the health of Hispanic and Mexican immigrants implicated variables including anxiety, depression symptoms, acculturative stress measurements, and perceived discrimination, and covariates of social status, nativity, occupational class, and healthier diets (John et al., 2012; Perreira & Ornelas, 2011). These studies support evidence of the focus on the acculturation

experience and the effects of acculturative stress on the Hispanic and Mexican immigrant community, and its repercussions on mental health outcomes.

The effects of acculturative stress manifested on health implications of Latina immigrants. The role of acculturative stress and the variation of immigrant health are influenced by specific predictors such as the context of pre- and postmigration conditions, unplanned migration, specific gender, socioeconomic status, and difficulty visiting family abroad (Torres & Wallace, 2013; Bekteshi & Van Hook, 2015). These findings revealed the link of acculturative stress with poor physical and mental health of the Latina immigrants' participants. Hence, acculturative stress has been given a more focused attention to its effects on physical health of immigrants.

While investigating the variable of acculturative stress and its effects on the physical health of immigrants a special attention was placed on biomarkers. Consistent research employing reliable measures of biomarkers uncovered that body mass index, waist to hip ratio, finger stick, dried blood spots for C reactive protein, cholesterol, triglycerides, and perceived stress provided specific physical health results such as eating tensions and weight loss implications, when analyzing the link with acculturative stress (Gonzales et al., 2011; D'Alonzo et al., 2019). These results have been associated to the significance of acculturative stress and health implications, highlighting considerations of the variability among acculturation experiences and the attention to physical health implications.

Acculturation experiences among Latino immigrant groups have reflected on health implications depending on the acculturation style of the immigrant group. Findings

across studies support available evidence of the link between acculturative stress with general distress, anxiety, depression, and suicidal ideation in Hispanic immigrants (Cano et al., 2015; Finch et al., 2000; Kim et al., 2014; Sirin et al., 2013, Torres & Rollock, 2007). Cultural congruity and psychological distresses such as anxiety, stress, and depression play a critical role when exploring acculturative stress as a risk factor for mental health (Cheng et al., 2016; Revollo et al., 2011, Alderete et al., 2000; Grant et al., 2004; & Kulis et al., 2009). Immigration and psychotic life experiences are also significant moderators for risk of psychosis among Asian and Latino immigrants (DeVylder et al., 2013).

The complexities of the effects of acculturative stress on the mental and physical health of immigrant Mexican women remain understudied. It is crucial to conceptualize the effects of acculturative stress as per specific group and gender, since acculturation research should be also conceptualized from group and gender perspective (Bakhshaie et al., 2018; Panchang, et al., 2016,). To address this gap in the body of literature, this study examined the effects of acculturative stress and age on mental and physical health of immigrant Mexican women. The questions this study raised used appropriate measures to evaluate the intersection of all variables. Overall, findings are consistent with the acculturation theory of Berry (1997). As emerging evidence suggest the negative effect of conditions for immigrants within the host culture and society increase acculturative stress and manifest in more pronounced psychological distresses.

To capture the effects of acculturative stress on immigrant Mexican women Calzada (2019) recommended perceived discrimination as a moderator. This moderator

has produced the most evidence supporting the negative effect of acculturative stress on health, but also on his recent findings Calzada (2019) suggested that may also work as a positive effect on health. Hence, it is crucial to analyze perceived discrimination as a moderator of acculturative stress in this study. Additionally, Panchang et al., (2016) highlighted the need of examining gender and culture to increase conceptualization of the meaning of acculturative stress and expressed the need of employing time spent in the United States, as well as salient of social support and family cohesion as a buffer. Arcia et al., (2001) explored and recommended the impact of gender and country of origin as indicators to health behaviors among Latino immigrants

It is important to assess acculturative stress at the individual's level and modality of their own culture. *The Social Attitudinal, Familial, and Environmental (SAFE)* scale was used to assess acculturative stress predictors that this scale highlights (Hoovey, 2000). Understanding the influences of acculturation in the immigrant Mexican women group might allow for the understanding of the individual's values, beliefs, as well as mental and physical health behaviors.

Behaviors of depression and anxiety that influence mental health of the immigrant Mexican women were measured. *The Center for Epidemiologic Studies-Depression* scale (*CES-D-20*) and *The Anxiety Sensitivity Index-3 (ASI-3)* were used since these measures have been focused on these sources (Hovey, 2000; Gonzalez et al., 2007, Jardin et al., 2018). To analyze perceived physical health Garcia et al., (2017) recommended the *RAND 36-Item Short Form Health Survey* which was employed in this study. Moreover, the *Experiences of Discrimination (EOD)* instrument recommended by Krieger et al., (2005)

was employed to assess perceived discrimination of the participants. These measurements facilitated the analysis of the relationship between the study variables. Given the recommendations regarding the types of measures best suited for detecting mental and physical health behaviors related to acculturative stress, particular attention was also paid to not only to the variables but to the moderator and its relationship to these variables.

Chapter 3: Research Method

Introduction

The purpose of this quantitative study was to investigate the effects of acculturative stress on the mental and physical health of immigrant Mexican women. The population sample was women from Mexican origin currently living in the United States.

This chapter describes the research design and rationale and the methodology used to examine the effects of acculturative stress and age on the mental and physical health of immigrant Mexican women. Threats to validity, including external, internal, construct, or statistical conclusion validity, are discussed, along with the ethical procedures for this study.

Research Design and Rationale

The outcome variables related to mental and physical health were defined in terms of the range of emotional responses from anxiety sensitivity and depressive symptoms to living in the host culture away from the home culture, and a range of self-rated physical health perceptions such as bodily pain, role limitation, energy/fatigue, and general health perceptions of immigrant Mexican women. The independent variables were acculturative stress and age. The covariates were time in host country, language proficiency in both English and Spanish, and education. The moderator variable was perceived discrimination.

This quantitative study employed a research design of multivariate regression analysis with path analysis to analyze data and answer all three research questions. The first research question addressed whether there is a significant prediction in the effects of

acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women. The second research question addressed whether there is a significant prediction in the effects of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women. The third research question addressed whether there is a significant prediction in the effects of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women. The study also addressed the three moderator questions concerning whether perceived discrimination moderates the impact of acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women; whether perceived discrimination moderates the impact of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women; and whether perceived discrimination moderates the impact of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions experienced by immigrant Mexican women.

This design was necessary to investigate the relationship among these variables for the following reasons. First, the research questions were answered employing surveys. Once data were collected, the data were analyzed employing the multivariate regression approach and path analysis. The multivariate regression approach has substantial methodological advances over univariate regression-based methods for testing substantive hypotheses and analyzing the relationship between two or more variables (Van del Elst et al., 2017). Multivariate regression with path analysis is also theoretically useful.

The path analysis allowed me to examine the relationships between the dependent variable and two or more independent variables. Additionally, the path analysis allowed me to test the moderator variable to analyze whether any linking paths were statistically significant (Liu et al., 2016). These paths of influence estimated the indirect effect of the moderator. In this sense, the path analysis approach extends the method to models with multiple moderators. The moderators or mediators may operate in parallel and serially for the discussion of the comparison of indirect effects in these more complex models (Montoya & Hayes, 2017). The multivariate regression model with path analysis employed a Process code for SPSS to evaluate the moderator model (Montoya & Hayes, 2017). Therefore, the moderation analysis allowed me to investigate the answers of any significant prediction in the effects of acculturative stress and age on the variables concerning the mental and physical health of immigrant Mexican women considering the moderator of perceived discrimination.

A resource constraint of this study was the evaluation of participants at one point in time only. There was no pretest to assess levels of acculturative stress and their effects on the mental and physical health of the participants upon arrival to the United States from Mexico. Therefore, social and personal variables existing prior to and arising during the course of acculturation were unknown. However, this design, multivariate regression with path analysis, is consistent with research designs needed to advance knowledge in the discipline. Panchang et al. (2016) employed a multivariate regression model with a test of mediation within a path model. They conducted their statistical analysis using SPSS Statistics 22 and version 2.13 of the PROCESS macro for SPSS. This design is

consistent with designs needed to advance knowledge in understanding the effects of acculturative stress.

Methodology

Population

The population that I employed for this research study comprised immigrant women of Mexican origin living in the United States. The following statistics are available from the Center of Immigration Studies. As of 2010, Arizona's immigrant population comprised 856,663 immigrants. The American Immigration Council (2017) reported that in 2015, 914,400 immigrants in Arizona were foreign-born individuals and 452,530 were immigrant women. A breakdown of the total number of immigrant women of Mexican origin was not reported. The population of immigrant women reported in 2015 included women from diverse countries, such as Mexico and countries of the Caribbean, Central America, South America, Asia, Europe, the Middle East, Africa, Australia, and "other" regions (Center of Immigration Studies, 2010). If one took the total number of immigrant women (452,530) divided by the total number of migration countries, about 10 countries to get an average, there would be around 45,253 immigrant women from each country of origin living in Arizona. This number would be sufficient to draw a representative population sample of immigrant women of Mexican origin.

Sample and Sampling Procedures

Inclusion and Exclusion Criteria

Inclusion criteria for the sampling strategy indicated that participants needed to be adult female individuals aged 18 and older who were originally from Mexico and

currently living in the United States. The participants had the ability to read, write, and communicate in Spanish and/or English. All participants who met the inclusion criteria were included in this study; this study did not have exclusion criteria. This study was conducted including immigrant Mexican women, as previous research on the Latino population indicated that further research was needed on specific gender and Latino ethnicity groups (Anderson & Finch, 2017; Bakhshaie et al., 2018; Panchang et al., 2016).

Sampling Strategy

Simple random sampling was employed to generate a random probability comprehensive sampling frame targeting all sampling units. A sample of human subjects was drawn from random places to represent the Mexican immigrant population. According to Lee and Cheng's (2006) study on sampling strategy, a random sampling strategy using mail surveys tended to attract more men and "currently working" individuals, and offering an incentive improved response rates among participants. Lee and Cheng highlighted that recruiting representative samples in minority populations is often challenging. Therefore, a face-to-face survey was offered to the participants at a safe site such as a public library. Additionally, an online survey using Survey Monkey was provided to access the survey online. However, no incentive was offered for participating in this study.

Sampling Procedures

A random probability sample was employed to recruit study participants. Data were collected through online surveys, which the participants completed after carefully

reading and acknowledging informed consent. Sampling subjects were obtained from random places, such as by posting flyer invitations in Spanish and English at public libraries and using social media (i.e., Facebook).

Sample Size

G*Power (Faul et al., 2007) was employed to determine the appropriate sample size. Based on the nature of the research questions, the *t*-test test family and statistical test of linear multiple regression model were selected. The effect size was at 0.15 with an error probability size of 0.05 to determine the significance level of large, medium, or small effect size. The power was 0.80, with alpha level at 0.05. The number of predictors was 2. Previous research on acculturative stress and effects on health indicated a large effect size. Bakhshaie (2018) identified in regression analysis effect sizes of $R^2 = .36$ for depressive symptoms, $R^2 = .46$ for anxious arousal, and $R^2 = .40$ for social anxiety among Spanish-speaking Latinos, which related to higher levels of acculturative stress. Anderson and Finch (2017) employed a likelihood ratio test (LRT) model to determine the significance of the interaction between acculturation, microaggressions, and stress for the understanding of Latino health outcomes. The researchers identified a significance of $LR = 1.72$ on the effects of the variables on self-rated health of the Latino participants. These studies indicated robust effect sizes; therefore, based on these specifications, sample size was calculated using a large effect size. For this study, G*Power calculated 43 participants as sufficient to achieve 80% power. This study included many variables and interaction effects.

Procedures

Institutional Review Board (IRB) approval was obtained prior to data collection. Data collection took place immediately following IRB and Walden University approval. The recruitment procedures for selecting suitable candidates for this study were conducted via flyers and social media (i.e., Facebook). Covariates included education, time spent in the host country, and language proficiency in both Spanish and English. The informed consent explained the study's purpose and elaborated that the participants were under no obligation to participate in the study. The informed consent stated the purpose of the study and indicated how the results of the study could benefit the body of literature on immigrant Mexican women. The participants were provided with a written copy of the informed consent. Additionally, the informed consent indicated the required length of time for participation, stated that there were no risks involved with participation, and indicated that anonymity and confidentiality would be protected along with the data, which would be kept secure for 5 years. I provided my contact information as the researcher of the study should the participants have any questions. Upon submitting their materials, all participants received debriefing sheets to thank them for participating. They were provided with information on a national mental health hotline phone number.

Instrumentation and Operationalization

There were two predictor variables (acculturative stress and age), six outcome variables (anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions), and three covariates (time in host country, education, and language proficiency in both English and Spanish) in this

research. There was one moderator variable (perceived discrimination). Covariates were assessed within one questionnaire that was created specifically for this research project; existing instruments were selected to evaluate acculturative stress, mental health (anxiety sensitivity and depressive symptoms) and physical health perceptions (role limitation, energy/fatigue, bodily pain, and general health perceptions). The following focuses on why each of these surveys was selected for the current research study. Additionally, I present published reliability and validity values, as well as previous populations and contexts in which the instruments were used and the data analysis plan.

The Social, Attitudinal, Familial, and Environmental (SAFE) Scale

Acculturative stress of the participants was assessed with the SAFE Acculturation Stress Scale (Mena et al., 1987). Mena et al. (1987) developed the SAFE Acculturation Stress Scale based on interview data from Padilla et al. (1983) and their 60-item scale developed by Padilla et al. (1985). The SAFE scale is composed of 24 items and four subscales that encompass contexts of a social, attitudinal, familial, and environmental nature. Moreover, SAFE has shown good internal reliability in previous studies across ethnic groups including Hispanics, with reliability estimates between $\alpha = .90$ and $\alpha = .95$ (Fuertes & Westbrook, 1996; Hovey, 2000, Jardin et al., 2018). Additionally, evidence for convergent validity for the SAFE scale total score has been demonstrated with Latina samples (Fuertes & Westbrook, 1996). Therefore, the present study employed the SAFE acculturation scale, which has demonstrated excellent reliability and validity with Mexican Americans and had been previously translated to Spanish by a third-party

bilingual researcher until conceptual equivalence of the measures was reached (Hovey, 2000).

The Anxiety Sensitivity Index 3 (ASI-3)

The ASI-3 (Taylor et al., 2007) was used to measure self-reported anxiety sensitivity symptoms of the participants. The original Anxiety Sensitivity Index (ASI) was developed by Reiss et al. in 1986. The original scale included 16 items, which have been used in studies that assessed 5,459 nonclinical participants, with replicated evidence of reliability of the instrument (Reiss et al., 1986). The ASI-3 is an 18-item measure developed based on the original scale. The ASI-3 assesses possible negative consequences of anxiety symptoms, which are rated on a 5-point Likert scale from *very little* to *very much*, and the total sum of the responses creates the total score (Jardin et al., 2018).

The ASI-3 has demonstrated acceptable and good internal consistency in past applications of its physical, cognitive, and social subscales (Taylor et al., 2007). The ASI-3 was an appropriate measure for the current study because it was an established instrument that was previously employed with Hispanic populations and appropriate for adults. The ASI-3 has demonstrated acceptable validity among Hispanics with an excellent internal consistency of $\alpha = .92$ and good consistency for each of the subscales, $\alpha = .82-.89$ (Jardin et al., 2018). This instrument has been previously translated to Spanish by a third-party translator (Jardin et al., 2018). Permission from the developer to use the ASI-3 is included in Appendix B.

Center for Epidemiologic Studies—Depression (CES-D) Scale

The CES-D, originally published by Radloff in 1977, was employed in the current study to assess self-reported symptoms associated with depression experienced by the participants in the prior week. The CES-D is a short self-report scale of 20 items that measure symptoms associated with depression (Radloff, 1977). The 20 items for the CES-D are hereafter called the CES-D-20 (Gonzalez et al., 2017). This scale has scores ranging from 0 to 60, with high scores indicating greater depressive symptoms. The CES-D-20 has been shown to have high internal consistency, reliability, and validity across a wide variety of demographic characteristics, a variety of populations, and language versions including Spanish (Eaton et al., 1999; Knight et al., 1997; Radloff, 1977). Several studies have found that the CES-D-20 scale has adequate internal reliability between .87 to .90 and construct validity for Mexican Americans, as well as a good level of reliability (Cronbach's $\alpha = .81$) for Mexican immigrants (Hoovey, 2000). CES-D-20 was appropriate for the current study because it has been used extensively in Hispanic populations including Mexican immigrants and has been translated into Spanish.

Appendix C includes open permission to use this instrument.

RAND 36-Item Short Form Health Survey (SF-36)

The SF-36 (Stewart et al., 1998) was employed to assess self-reported physical health quality of the participants. The SF-36 is composed of 36 items that assess health concepts of health-related quality of life, which are scaled from 1 to 5, and achievable scores range from 0 to 100, with lower scores indicating poorer perceived health. The SF-36 has shown reliability in Mexican American samples (Ayuso-Mateos et al., 1999), with

good reliability results of $\alpha = .85$ (Garcia et al., 2011). The SF-36 has been translated into Spanish, which made it appropriate for the current study. Permission from the developer to use this instrument is included in Appendix D.

Experiences of Discrimination

Experiences of Discrimination (EOD) measure is based on prior instrument developed by Krieger (1990) used in a study by Krieger and Sidney (1996) Coronary Artery Risk Development in Young Adults (CARDIA). EOD was employed in this study to measure perceived discrimination of the participants, which is a moderator variable. This instrument has been shown to be reliable and valid with Latino Americans and African Americans (Krieger et al., 2005). Scale reliability was high (Cronbach's $\alpha = .74$ or greater) and test-retest reliability coefficients (0.70) (Krieger et al., 2005). It was suggested to employ EOD to measure experiences of racial discrimination as a valid and reliable instrument with working class Latino Americans and African Americans (Krieger et al., 2005), which makes it appropriate for this research study. EOD has been translated to Spanish and this research project would be an opportunity to further examine the scale's reliability in immigrant Mexican women.

Covariates

Covariates included time in host country, language proficiency in both English and Spanish, and education. A demographic survey was tailored-made for this study. The rationale for the inclusion of potential covariates was discussed in detail in Chapter 2.

Age. Participant's age was from ages 18 and older. Age is a continuous independent variable.

Time in Host Country. Participants indicated the time they have been living in The United States. Time in host country is a categorical covariate.

Language Proficiency in Both English and Spanish. Participants indicated both their English and Spanish proficiencies for overall ability, which was indicated as which language the participant speaks fluently and language the participant reads fluently. Language proficiency is a continuous covariate.

Education. Participants indicated their level of education as highest level of school completed with the total number of years of academic education completed. Education is a categorical covariate.

Data Analysis Plan

Data analysis was performed using IBM SPSS Statistics 24. Data was analyzed using a multivariate regression analysis with a path analysis to answer the research questions and hypotheses considering the moderator variable. Data cleaning and screening procedures did not consider missing data.

Research Questions, Hypotheses, and Statistical Test

RQ1: Is there a significant prediction in the effects of acculturative stress and age on anxiety sensitivity experience by immigrant Mexican women?

H01: There is not a statistically significant prediction in the effects of acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women.

Ha1: There is a statistically significant prediction in the effects of acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women.

RQ2: Is there a significant prediction in the effects of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women?

H02: There is not statistically significant prediction in the effects of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women.

Ha2: There is a statistically significant prediction in the effects of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women.

RQ3: Is there a significant prediction in the effects of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women?

H03: There is not a statistically significant prediction in the effects of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women.

Ha3: There is a statistically significant prediction in the effects of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women.

Additionally, three hypotheses are going to be tested to focus on the moderating effect of perceived discrimination:

- H1: Perceived discrimination moderates the impact of acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women.
- H2: Perceived discrimination moderates the impact of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women.
- H3: Perceived discrimination moderates the impact of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women.

The statistical test that I used to test the hypotheses is multivariate regression with a path analysis to explore the effect of the moderator variable (perceived discrimination). The multivariate analysis identified the statistical significance of the correlation between the variables, which was interpreted based on p-values. The utility of the path analysis was to analyze the sources of a correlation between independent variable, dependent variable and the moderator variable and analyzed how it affected the correlation between predictor and outcome variables.

Threats to Validity

Design validity is analyzed in principles of external, internal, and construct or statistical conclusion validity. Derived from the Latin term *validitas*, validity means strength (LaCoursiere, 2003). Since validity can never be proven only argued all conclusions regarding the validity of this research study were approximate. Internal validity looks in on factors that impact the estimation of truth and is more specific while

external validity looks outward to assess the potential conclusions of the research in terms of generalizing findings of population, settings, or treatment variables (LaCoursiere, 2003). Construct validity is the degree to which a test measures the construct it claims to be measuring.

External Validity

Threats to external validity may include testing reactivity, interaction effects of selection and experimental variables, specificity of variables, reactive effects of experimental arrangements, and multiple treatment interference (LaCoursiere, 2003). In the current study, the testing reactivity interaction effect was addressed, considering how the features of testing may have an interaction effect with some of the variables, limiting generalizability. Selection of the participants maintained high awareness of being free of bias. Additionally, situational specifics of the environment such as time, location, noise, lighting were considered. Moreover, the generalizability of how findings can be applied across different settings were considered. To address this issue cultural context in which research took place was considered. Threats to population validity as part of external validity was addressed by employing random sampling where the population sample for this study was selected by chance to enhance the degree of confidence in generalizing finding from the sample of the population. It is also crucial to consider that some threats to internal validity may interact with generalization and I addressed these other interactions accordingly.

Internal Validity

Threats to internal validity such as history, maturation, testing, instrumentation, statistical regression, experimental mortality, and selection maturation interaction were considered to be addressed in the current study. It is crucial to consider that testing may have an effect on the variables and participant's experience within the study, as well as its effects of taking a test upon the scores of a second testing (LaCoursiere, 2003). The selection of the participants was based on random sampling to ensure an appropriate sample representative of the population and voluntary participation. From the ethical standpoint it is crucial that participants know that they are being studied and the content of the questions they answered. History would not be an issue for the current study since there would not be a posttest measure. Additionally, the interaction of maturation of the participants, while completing the surveys was of consideration, since tiredness and getting hungry may be factors to consider in internal validity. Instrumentation refers to changes in the calibration of a measuring instrument (LaCoursiere, 2003). Measures changing during the course of the study considered changes in outcomes. Therefore, statistical regression towards the mean considered natural performance of the participants and measurement errors.

Construct Validity

Many factors may interfere with the meaningfulness of the interpretation of the study threatening validity including construct validity. Construct validity considers the degree of the test or instrument employed in the study that measures what it claims to be measuring. This is, the measure for a specific construct should correlate with measures of

evaluation of indices of the same concept (Guion, 1980). This research project included five measures for which construct validity was determined: The SAFE Acculturation Scale, ASI-3, CES-D-20, RAND 36, and EOD. Threats to construct validity may include divergent validity for measurements, inadequate pre-operational explication of constructs where things should be clearly defined on what would be measured, mono method bias when using only one approach to measuring a construct subject to bias of self-report, mono-operational bias using a single measure of a construct that is not complete, and hypothesis guessing where participants may try to guess responses to the test and act differently.

Ethical Procedures

Agreements to Gain Access to Participants

I did not employ agreements to gain access to participants for this study. I conducted random sampling to recruit participants. I obtained IRB approval for the study #08-28-20-0705510 from Walden University on August 27, 2020.

Treatment of Human Participants

It is crucial to ethically treat human subject participants with respect, beneficence, and justice (Department of Health, Education, and Welfare, 1979). Protection to the participant avoiding harm at all times was a priority. Institutional and IRB permission was included. It was ensured that only those who truly were willing to participate via face to face in this research study participated freely and without unfair research burden.

Ethical concerns related to recruitment materials and processes were addressed. Participants refusing participation or withdrawing early from the study were not reported.

No hesitant participants to complete the study were considered. The hotline crisis phone number was provided.

Treatment of Data

Data was only collected via online surveys. Confidentiality was preserved by keeping data password protected in this researcher's personal computer, and data was not associated with the participants since they did not provide their names or any identifiable information. Only the researcher has immediate access to the data, although it was made available to the committee chair and or other committee members and or professors upon request. Paper documents to be shredded and recycled after a period of five years.

Other Ethical Concerns

Other ethical concerns related to the current study may include articulating a specific plan to share research the results of the study with the participants, which may include posting results in social media, Facebook. The surveys were administrated in public places such as the public library. No incentives were provided to the participants. This project was supervised as part of a dissertation research project.

Summary

The research design that was used is quantitative correlational research design with multivariate regression and path analysis. Random sampling was used to recruit the participants, immigrant women from Mexican origin living in the United States. Data collection took place in public libraries. This research study featured three covariates, two predictor variables (acculturative stress and age), and sic outcome variables (anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general

health perceptions), and one moderator variable (perceived discrimination). The covariates were measured using a questionnaire designed specifically for this project and used established survey measures to assess acculturative stress, self-report anxiety sensitivity, depressive symptoms, and bodily pain, role limitation, energy/fatigue, and general health perceptions. This study served to answer three research questions examining the effects of acculturative stress and age on the anxiety sensitive, depressive symptoms, and bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women, and three moderator hypotheses to assess the impact of perceived discrimination on the dependent and independent variables. The subsequent chapter describes data collection procedures and presents sample characteristics and overall study results describing the effects of acculturative stress and age among these variables within the immigrant Mexican women population at one moment in time.

Chapter 4: Results

Introduction

Through this quantitative research study, I aimed to examine whether there was a statistically significant relationship between the effects of acculturative stress and age as predictors of anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women. The research questions and hypotheses centered on whether statistically significant relationships existed between the independent variables, acculturative stress and age, and the dependent variables, anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions. I also examined whether perceived discrimination moderated the relationship between acculturative stress and age onto anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions.

In this chapter, I present the study results and review the data collection procedures. I present the data preparation and statistical tests for assumptions of multiple regression analysis as a foundation for the following sections of the statistical analyses and results. Chapter 4 concludes with a summation of the analyzed results, discussion, and tables.

Data Collection

Following Walden University IRB approval for the study (# 08-28-20-0705510) on August 27, 2020, the web-based survey became available on SurveyMonkey on September 11, 2020. Data collection began immediately. A review of the survey

responses 2 weeks prior to the intended termination did not produce an ample sample size ($n = 46$); therefore, I extended data collection for 2 more weeks. I notified my committee about the status of data collection. The SurveyMonkey link closed on Sunday, November 8, 2020, confirming a sufficient number of respondents who completed the survey.

Participants responded to the survey via SurveyMonkey, totaling 65 immigrant Mexican women ages 18 and older. The adequate sample size for effect size was 46 participants. Of the 65 total respondents who represented the population of interest, 10 respondents were disqualified because they did not complete enough assessments to be part of any of the study's research questions, leaving a total of 55 completed responses remaining for full consideration. I used the logic options upon building the online web-based survey through SurveyMonkey. The skip-logic feature required each participant to respond to the current question before moving onto the following question. Following the survey's conclusion, I downloaded the data from SurveyMonkey and cleaned for missing data. Before further analysis, I eliminated all surveys with omitted data and insufficient data to participate in the study.

The data collection process was completed according to the plan presented in Chapter 3. The sampling subjects were obtained via the Survey Monkey online survey and meeting participants one on one at a local public library, strictly following the Centers for Disease Control and Prevention guidelines for COVID-19, such as honoring social distancing of 6 feet and using a face mask (Centers for Disease Control and Prevention, 2019). These participants utilized the public library's computer to complete the survey online. The invitation to participate in this research study was extended via

Facebook and flyers posted outside local public libraries in the Phoenix, AZ area. The methodological assumption relevant to this study was that in multivariate regression analysis, unlike parametric procedure, the only critical assumption is the randomization of subjects to treatments (Mielke & Berry, 2002), which are usually and randomly distributed.

Prescreening Data

I analyzed data using IBM Statistical Package for the Social Sciences (SPSS version 27) predictive analytics software. Data in the study were prescreened using the screening and cleaning feature to identify and correct errors and increase the data's reliability. I entered the survey questionnaire responses into SPSS using the Analyze-Descriptive-Statistics-Frequency option to generate descriptive and frequency tables. After survey closure, I downloaded data from SurveyMonkey and screened for missing data. I removed all surveys that included missing data and insufficient data to participate in the study before further analysis. Values for independent and dependent variables were summed and averaged to establish new variables for further analysis in SPSS version 27.

Additionally, I installed the software for PROCESS (Processmacro.org, 2021) into SPSS version 27. I employed the multivariate regression model, including a PROCESS code for SPSS version 27, to evaluate the moderator model with path analysis. This moderation analysis allowed me to investigate the answers of any significant prediction in the effects of acculturative stress and age on the mental and physical health of immigrant Mexican women considering the moderator of perceived discrimination. The results of the analysis are presented in the next section.

Results

Descriptive Statistics

The targeted population for this study was delimited to immigrant Mexican women ages 18 and older living in the United States. The targeted geographical location was the southwestern border states with Mexico, including Arizona and Texas, and the Pacific state of California. The sample population included only female participants (100%) in the study. All female participants (100%) self-reported being initially from Mexico. The total number of participants was 55 ($n = 55$). The SPSS Descriptive Statistics: Frequencies procedure was used to obtain the mean and other simple descriptive statistics presented in Table 1.

A large percentage of participants self-reported within the age range of 40–42 ($n = 55$, 41.96%). The mean (M) of acculturative stress is 75.72, which tells me that approximately 99% of the scores are between 20 and 80, and the standard deviation (SD) is 23.54, which tells me that there is a large amount of variation and the data are dispersed (Warner, 2013). Approximately 95% of the scores for anxiety sensitivity are between 30 and 70, with which $M = 34.37$ and $SD = 18.72$. Additionally, depressive symptoms have an $M = 20.45$, which tells me that approximately 99% of the scores are between 20 and 80, with a more minor variation, $SD = 6.45$, compared to acculturative stress and anxiety sensitivity. Approximately 6% of the participants reported bodily pain with an $M = 5.6$ and $SD = 2.17$, which tells me that there is a slight variation. Role limitation with an $M = 4.2$ and $SD = 1.25$ reflected the more minor variation, and data were less spread out and closer to the mean. Energy fatigue with an $M = 13.82$ and $SD =$

2.20 also reflected a slight variation. General health, $M = 14.74$ and $SD = 1.99$, also reflected a slight variation. Experiences of discrimination, $M = 12.5$ and $SD = 2.66$, reflected a low variation.

Table 1

Descriptive Statistics

		Age	SAFE total	Years of education	How long have you been living in the United States?	ASI total	CES total	RAND role lim. due emotional prob.	RAND energy fatigue	RAND bodily pain	RAND general health	EOD total
<i>N</i>	Valid	55	47	55	55	54	51	54	54	54	54	55
	Missing	0	8	0	0	1	4	1	1	1	1	0
Mean		41.96	75.7234	12.76	14.65	34.3704	20.4510	4.2222	13.8704	5.6296	14.7407	12.5091
Median		40.00	82.0000	12.00	14.00	40.5000	22.0000	4.0000	14.0000	6.0000	15.0000	11.0000
Std. deviation		14.079	23.54709	4.834	8.603	18.72875	6.45698	1.25392	2.20673	2.17443	1.99230	2.66578

Note. $n = 55$.

Results of Moderation Analysis

Moderation allows the researcher to explain “when” or under what conditions a dependent variable and independent variable are related (Hayes & Rockwood, 2017). For this study, the hypotheses were tested to determine whether the effects of acculturative stress and age on anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy fatigue, and general health were moderated by the variable perceived discrimination.

A regression analysis was run to determine if the moderator perceived discrimination (M) had an effect between acculturative stress and age (X) and anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general

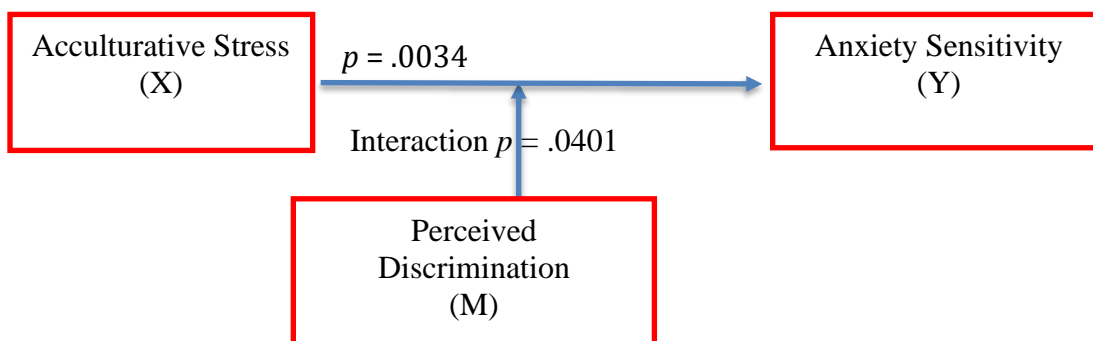
health (Y) and if the effect between X and Y was statistically significant, with the addition of M. Simple moderation analysis graphics that depict this possible relationship are provided in path analysis in Figures 1 to 12.

The moderation analysis regression model was found significant after controlling for the covariates of time in the United States, language proficiency, and education. There was a significant predictor of the effects of the independent variable, acculturative stress, on the dependent variable, anxiety sensitivity ($p = .0034$) experienced by the immigrant Mexican women participants. Similarly, a significant interaction of acculturative stress and the moderator perceived discrimination on anxiety sensitivity produces a statistically significant effect ($p = .0401$), as presented in Table 2. Thus, the influence of perceived discrimination worsened the experience of anxiety sensitivity of the participants, as presented in path analysis (Figure 1).

Table 2

The Effects of Acculturative Stress on Anxiety Sensitivity and the Moderation Effect of Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	-.424026	38.1039	-1.1128	.2726
SAFEtota	1.3758	.4404	3.1239	.0034
EDOtotal	2.7639	2.2811	1.2116	.2329
Int_1	-.0666	.0316	-2.1237	.0401
YearsInU	.0101	.2331	.0433	.9657
SpokenLa	-3.4534	2.3745	-1.4544	.1538
ReadLang	3.0218	2.3622	1.2792	.2084
Educatio	-.0851	.4196	-.2029	.8403

Figure 1*Simple Moderation Analysis*

After controlling for the covariates of time in the United States, language proficiency, and education, there was no statistically significant prediction of the effects of the independent variable, age, on the dependent variable anxiety sensitivity ($p = .7515$) experienced by the immigrant Mexican women participants, as presented in Table 3. Similarly, there is no significant interaction between age and the moderator's perceived discrimination on anxiety sensitivity ($p = .8576$). Thus, it seems that age and the influence of the moderator of perceived discrimination do not worsen the experience of anxiety sensitivity of the participants as presented in path analysis (Figure 2). Additionally, the interaction of the moderator perceived discrimination only moderates the impact of acculturative stress on the anxiety sensitivity experienced by immigrant Mexican women. However, it does not moderate the impact of age on anxiety sensitivity. Based on these results, the null hypothesis was accepted, indicating that there is no statistically significant prediction of the effects of acculturative stress and age on anxiety sensitivity experienced by immigrant Mexican women, as there is the only statistically

significant prediction on the effects of acculturative stress on anxiety sensitivity, but not on the effects of age on anxiety sensitivity. No further analysis was conducted.

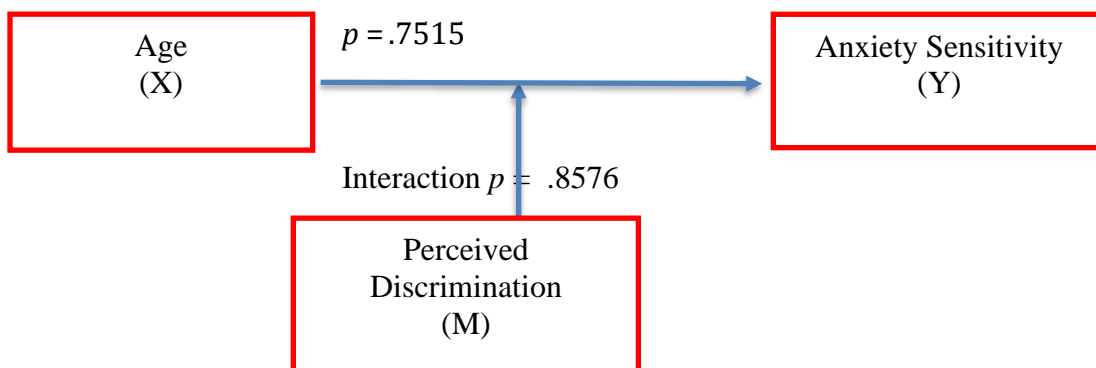
Table 3

The Effects of Age on Anxiety Sensitivity and the Moderation Effect of Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	96.6393	31.9710	3.0227	.0041
Age	.2298	.7214	.3186	.7515
EDOtotal	-3.8689	2.5606	-1.5110	.1376
Int_1	-.0098	.0544	-.1805	.8576
YearsInU	-.4966	.3169	-1.5669	.1240
SpokenLa	-.5466	2.7982	-1.1953	.8460
ReadLang	-.5850	2.5081	-.2332	.8166
Educatio	-.7218	.4508	-1.6011	.1162

Figure 2

Simple Moderation Analysis



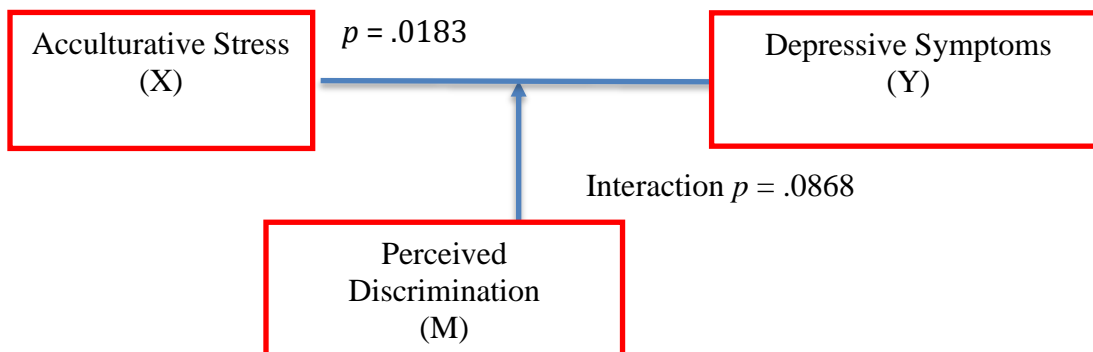
As presented in Table 4, after controlling for the covariates of time in the United States, language proficiency, and education, there was a statistically significant prediction of the effects of the independent variable, acculturative stress, on the dependent variable depressive symptoms ($p = .0183$) experienced by the immigrant Mexican women

participants. On the other hand, there was no statistically significant interaction between acculturative stress and the moderator's perceived discrimination of depressive symptoms ($p = .0868$). Thus, it seems that the influence of the moderator of perceived discrimination did not worsen the experience of depressive symptoms of the participants as presented in path analysis (Figure 3).

Table 4

The Effects of Acculturative Stress on Depressive Symptoms and the Moderation Effect of Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	-1.2299	15.3140	-.0803	.9364
SAFEtota	.4357	.9162	.8128	.0183
EDOtota	.7447	2.5606	-1.5110	.4217
Int_1	-.0221	.0126	-1.7603	.0868
YearsInU	.0547	.0970	.5640	.5762
SpokenLa	-.9873	.9579	-1.0307	.3096
ReadLang	.4064	.9512	.4273	.6717
Educatio	-.0517	.1793	-.2883	.7748

Figure 3*Simple Moderation Analysis*

After controlling for the covariates of time in the United States, language proficiency, and education, there was no statistically significant prediction of the effects of the independent variable, age, on the dependent variable depressive symptoms ($p = .1132$) experienced by the immigrant Mexican women participants, as presented in Table 5. There was almost a significant interaction between age and the influence of the moderator's perceived discrimination on depressive symptoms ($p = .0590$), but not quite. Thus, it seems that the influence of the moderator of perceived discrimination did not worsen the experience of the depressive symptoms of the participants as presented in the path analysis (Figure 4). Additionally, the interaction of the moderator's perceived discrimination did not moderate the impact of acculturative stress and age on the depressive symptoms experienced by immigrant Mexican women. Based on these results, the null hypothesis is accepted, indicating that there was no statistically significant prediction of the effects of acculturative stress and age on depressive symptoms experienced by immigrant Mexican women, as there was only a statistically significant

prediction in the effects of acculturative stress on depressive symptoms, but not on the effects of age on depressive symptoms. No further analysis was conducted.

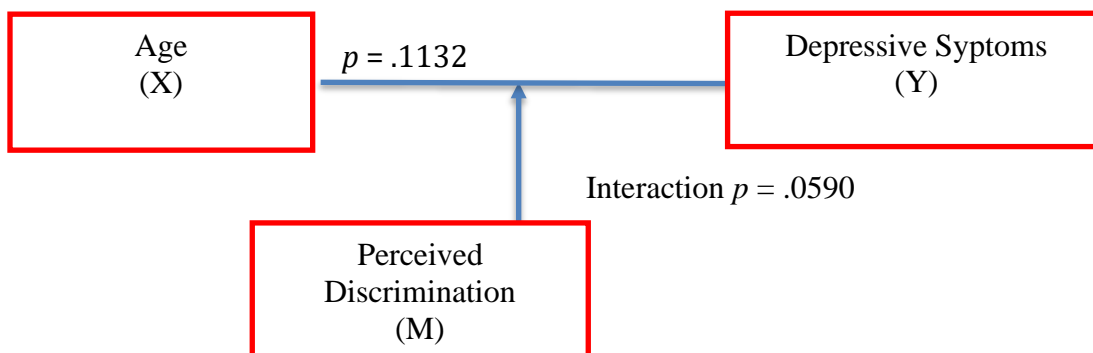
Table 5

The Effects of Age on Depressive Symptoms and the Moderation Effect of Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	61.9714	11.0863	5.5899	.0000
Age	-.4003	.2476	-1.6167	.1132
EDOttotal	-3.1273	.8897	-3.5149	.0011
Int_1	.0363	.0187	1.9398	.0590
YearsInU	-.1136	.1090	-1.0426	.3030
SpokenLa	-.5246	.9584	-.5474	.5870
ReadLang	-.0779	.8558	-.0910	.9279
Educatio	-.1751	.1619	-1.0815	.2855

Figure 4

Simple Moderation Analysis



After controlling for the covariates of time in the United States, language proficiency, and education, there was no statistically significant prediction of the effects of the independent variable, acculturative stress on the dependent variable bodily pain ($p = .6746$) experienced by the immigrant Mexican women participants, as presented in

Table 6. Likewise, there was no significant interaction between acculturative stress and the influence of the moderator's perceived discrimination on bodily pain ($p = .9430$).

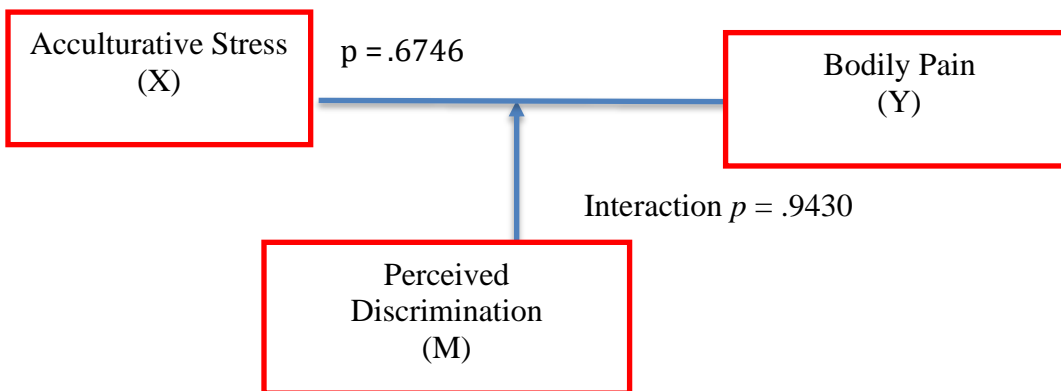
Thus, it seems that the influence of the moderator of perceived discrimination did not make worse the experience of bodily pain of the participants as presented in path analysis (Figure 5).

Table 6

The Effects of Acculturative Stress on Bodily Pain and the Moderation Effect of

Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	15.1345	7.0749	2.1392	.0387
SAFEtota	-.0346	.0818	-.4230	.6746
EDOtota;	-.4189	.4235	-.9891	.3287
Int_1	-.0004	-.0058	-.0720	.9430
YearsInU	.0278	.0433	.6415	.5250
SpokenLa	.1701	.4409	.3857	.7818
ReadLang	-.6704	.4386	-1.5286	.1344
Educatio	-.0520	.0779	-.6674	.5084

Figure 5*Simple Moderation Analysis*

After controlling for the covariates of time in the United States, language proficiency, and education there was no statistically significant prediction of the effects of the independent variable, age on the dependent variable bodily pain ($p = .5169$) experienced by the immigrant Mexican women participants, as presented in Table 7. Similarly, there was no statistically significant interaction of the influence of the moderator perceived discrimination on bodily pain ($p = .3324$). Thus, it seems that age and the influence of the moderator of perceived discrimination did not make worse the experience of bodily pain of the participants as presented in path analysis (Figure 6).

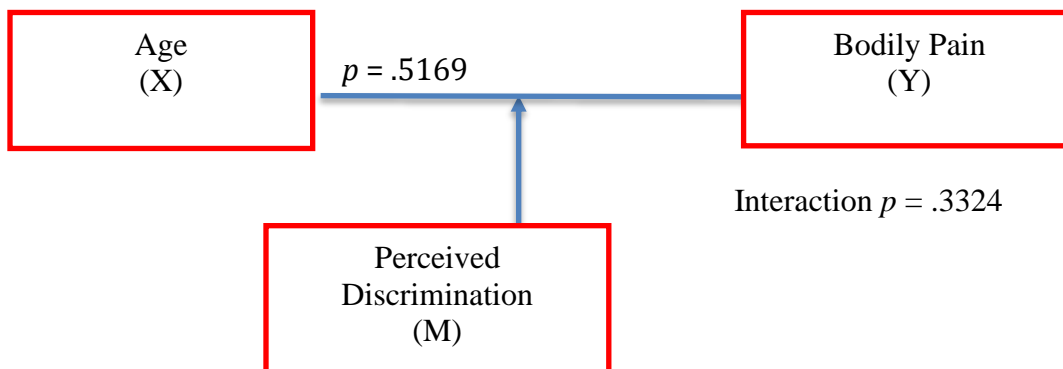
Table 7

The Effects of Age on Bodily Pain and the Moderation Effect of Perceived Discrimination

	Coeff	Se	t	p
Constant	7.6331	3.6794	2.0746	.0436
Age	.054	.0830	.6531	.5169
EDOtotal	-.6370	.2947	-2.1618	.0359
Int_1	.0061	.0063	.9796	.3324
YearsInU	-.0572	.0365	-1.5690	.1235
SpokenLa	.7106	.3220	2.2065	.0324
ReadLang	-.5376	.2886	-1.8625	.0689
Educatio	.0851	.0519	1.6404	.1078

Figure 6

Simple Moderation Analysis



As presented in Table 8, after controlling for the covariates of time in the United States, language proficiency, and education, there was a statistically significant prediction of the effects of the independent variable, acculturative stress on the dependent variable role limitation ($p = .0126$) experienced by the immigrant Mexican women participants. There was also a statistically significant interaction between acculturative stress and the moderator's perceived discrimination on role limitation ($p = .0100$). Thus, it seems that

the moderator's influence on perceived discrimination worsened the experience of role limitation of the participants as presented in path analysis (Figure 7).

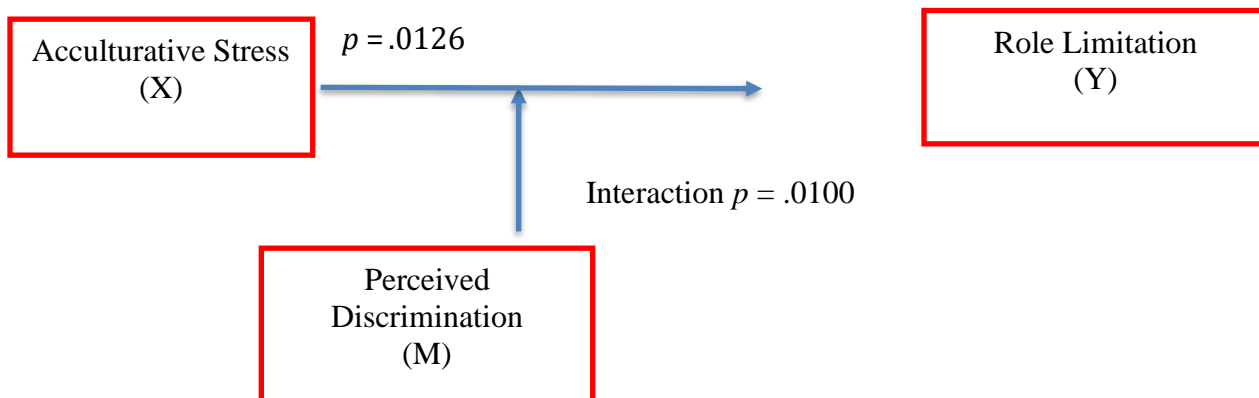
Table 8

The Effects of Acculturative Stress on Role Limitation and the Moderation Effect of Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	6.9508	3.1718	2.1914	.0345
SAFETota	-.0959	.0367	-2.6163	.0126
EDOtotal	-.2050	.1899	-1.0797	.2869
Int_1	.0071	.0026	2.7086	.0100
YearsInU	.0229	.0194	1.1780	.2459
SpokenLa	.1129	.1977	.5711	.5712
ReadLang	-.1038	.1966	-.5281	.6004
Educatio	.0298	.0349	.8520	.3994

Figure 7

Simple Moderation Analysis



After controlling for the covariates of time in the United States, language proficiency, and education, there was no statistically significant prediction of the effects of the independent variable, age on the dependent variable role limitation ($p = .7469$) experienced by the immigrant Mexican women participants, as presented in Table 9.

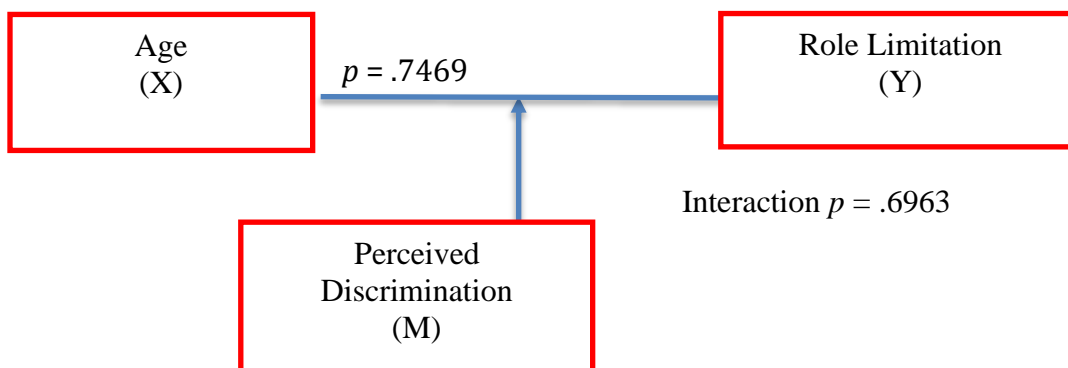
Similarly, there was no statistically significant interaction between age and the influence of the moderator's perceived discrimination on role limitation ($p = .6963$). Thus, it seems that age and the influence of the moderator of perceived discrimination did not worsen the experience of role limitation of the participants as presented in path analysis (Figure 8).

Table 9

The Effects of Age on Role Limitation and the Moderation Effect of Perceived

Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	.1364	2.1012	.0649	.9485
Age	-.0154	.0474	-.3247	.7469
EDOtotal	.3770	.1683	2.1806	.0344
Int_1	-.0014	.0036	-.3927	.6963
YearsInU	.0622	.0208	2.9855	.0045
SpokenLa	.0922	.1839	-.5013	.6185
ReadLang	-.0180	.1648	-.1094	.9134
Educatio	.0125	.0296	.4209	.6759

Figure 8*Simple Moderation Analysis*

After controlling for the covariates of time in the United States, language proficiency, and education, there was no statistically significant prediction of the effects of the independent variable, acculturative stress, on the dependent variable, energy fatigue ($p = .8334$) experienced by the immigrant Mexican women participants, as presented in Table 10. Similarly, there was no statistically significant interaction between acculturative stress and the influence of the moderator's perceived discrimination on energy fatigue ($p = .5653$). Thus, it seems that the influence of the moderator of perceived discrimination did not worsen the experience of energy fatigue of the participants as presented in path analysis (Figure 9).

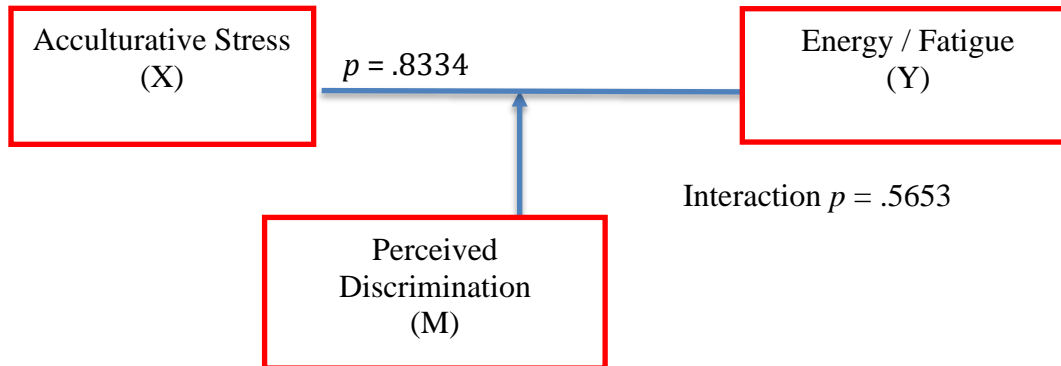
Table 10

The Effects of Acculturative Stress on Energy Fatigue and the Moderation Effect of Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	13.4540	7.7127	.1744	.0890
SAFEtota	.0189	.0891	.2117	.8334
EDOtota	.3584	.4617	.7762	.4423
Int_1	-.0037	.0064	-.5800	.5653
YearsInU	-.0416	.0472	-.8806	.3339
SpokenLa	.0137	.4806	.0286	.9773
ReadLang	-.4664	.4781	-.9754	.3354
Educatio	-.0577	.0849	-.6792	.5010

Figure 9

Simple Moderation Analysis



After controlling for the covariates of time in the United States, language proficiency, and education, there was no statistically significant prediction of the effects of the independent variable, age, on the dependent variable, energy fatigue ($p = .8436$) experienced by the immigrant Mexican women participants, as presented in Table 11. Similarly, there was no statistically significant interaction between age and the influence

of the moderator's perceived discrimination on energy fatigue ($p = .5690$). Thus, it seems that age and the influence of the moderator of perceived discrimination did not worsen the experience of energy fatigue of the participants as presented in path analysis (Figure 10).

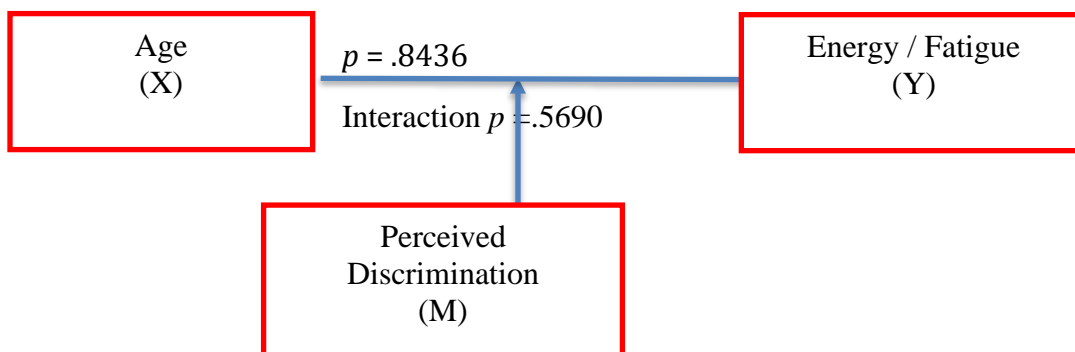
Table 11

The Effects of Age on Energy Fatigue and the Moderation Effect of Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	11.3307	4.7349	2.3630	.0208
Age	.0212	.1068	.1984	.8436
EDOtotal	.0300	.3792	.0790	.9374
Int_1	.0046	.0081	.5736	.5690
YearsInU	-.0920	.0469	-1.9598	.0561
SpokenLa	.1715	.4144	.4139	.6808
ReadLang	-.2655	.3714	-.7147	.4784
Educatio	.0292	.0668	.4374	.6639

Figure 10

Simple Moderation Analysis



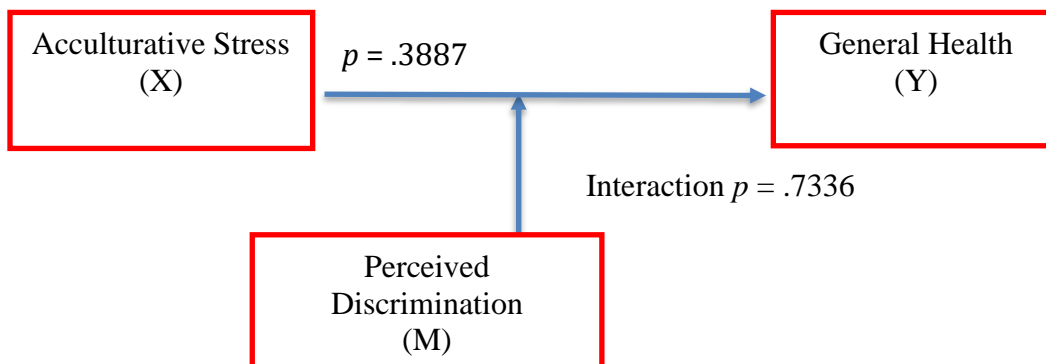
As presented in Table 12, after controlling for the covariates of time in the United States, language proficiency, and education, there was no statistically significant

prediction of the effects of the independent variable, acculturative stress, on the dependent variable, general health ($p = .3887$) experienced by the immigrant Mexican women participants. Similarly, no statistically significant interaction between acculturative stress and the moderator perceived discrimination on role limitation ($p = .7336$). Thus, the influence of perceived discrimination did not worsen the experience of general health perceptions of the participants as presented in the path analysis (Figure 11).

Table 12

The Effects of Acculturative Stress on General Health and the Moderation Effect of Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	20.3064	6.3487	3.1985	.0027
SAFEtota	-.0640	.0734	-8717	.3887
EDOtota	-.1372	.3801	-.3609	.7201
Int_1	.0018	.00052	.3428	.7336
YearsInU	.0488	.0388	1.2565	.2164
SpokenLa	-.0065	.3956	-.0165	.9869
ReadLang	-.3339	.3936	-.8485	.4013
Educatio	-.0595	.0699	-.8506	.4002

Figure 11*Simple Moderation Analysis*

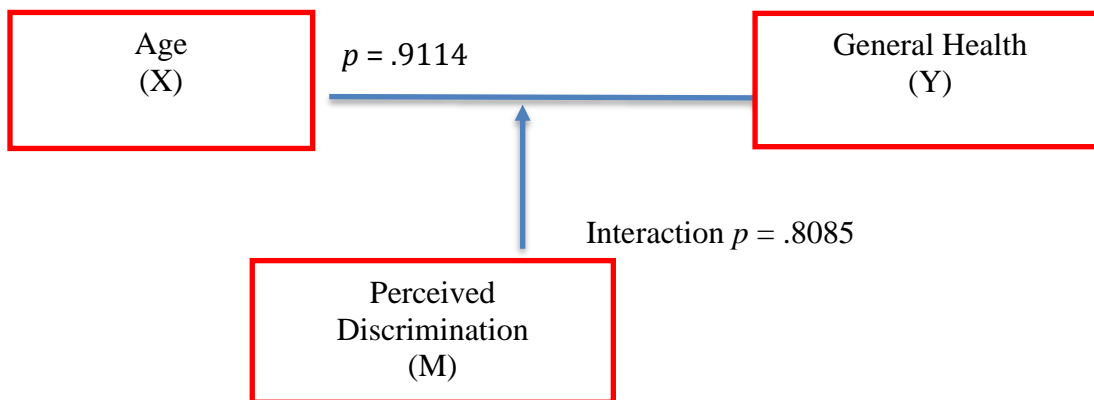
After controlling for the covariates of time in the United States, language proficiency, and education, there was no statistically significant prediction of the effects of the independent variable, age, on the dependent variable, general health ($p = .9114$) experienced by the immigrant Mexican women participants, as presented in Table 13. Similarly, there was no statistically significant interaction of the influence of the moderator's perceived discrimination on general health ($p = .8085$). Thus, it seems that the influence of the moderator on perceived discrimination did not worsen the experience of general health perceptions of the participants as presented in path analysis (Figure 12). Based on these results, the null hypothesis was accepted, indicating no statistically significant prediction in the effects of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions experienced by immigrant Mexican women. However, there was statistically significant prediction in the effects of acculturative stress on role limitation, but not on the effects of age on role limitation. Additionally, the interaction of the moderator perceived discrimination did not moderate

the impact of acculturative stress and age on bodily pain, role limitation, energy/fatigue, and general health perceptions experienced by the immigrant Mexican women participants. However, the interaction of the moderator perceived discrimination moderates the impact of acculturative stress on role limitation experienced by the participant, but did not moderate the impact of age on role limitation. No further analysis was conducted.

Table 13

The Effects of Age on General Health and the Moderation Effect of Perceived Discrimination

	Coeff	Se	<i>t</i>	<i>p</i>
Constant	12.6705	4.4712	2.8338	.0068
Age	-.0113	.1009	-.1119	.9114
EDOtotal	.0629	.3581	.1758	.8612
Int_1	.0019	.0076	.2438	.8085
YearsInU	.0693	.0443	1.5640	.1247
SpokenLa	-.1408	.3913	-.3598	.7207
ReadLang	-.1373	.3508	-.3914	.6973
Educatio	.0181	.0630	.2873	.7752

Figure 12*Simple Moderation Analysis***Table 14***Moderating Effect on Each Research Question*

IV (* = $p < .05$)	Moderator (* = $p < .05$)	DV
RQ1		
Acculturative stress*	Perceived discrimination*	Anxiety sensitivity $p = .0401$
Age	Perceived discrimination	Anxiety sensitivity $p = .8576$
RQ2		
Acculturative stress*	Perceived discrimination	Depression $p = .0868$
Age	Perceived discrimination	Depression $p = .0590$
RQ3		
Acculturative stress	Perceived discrimination	Bodily pain $p = .9430$
Age	Perceived discrimination	Bodily pain $p = .3324$
Acculturative stress*	Perceived discrimination*	Role limitation $p = .0100$
Age	Perceived discrimination	Role limitation $p = .6963$
Acculturative stress	Perceived discrimination	Energy = $p = .5653$
Age	Perceived discrimination	Energy = $p = .5690$
Acculturative stress	Perceived discrimination	General health = $p = .7636$
Age	Perceived discrimination	General health = $p = .8085$

Summary

I tested each hypothesis for the three research questions utilizing multivariate regression analysis considering the moderator. The null hypothesis was accepted for the first research question since it was not found that age had a statistically significant effect on anxiety sensitivity. Only acculturative stress had a statistically significant effect on it. The null hypothesis was also accepted in the second research question when I examined the effects of acculturative stress and age on depressive symptoms. There was no statistically significant effect of age on depressive symptoms. Only acculturative stress affected it. Results of the third research question indicated that there was a statistically significant effect of acculturative stress on role limitation, but not on energy/fatigue and general health perceptions, and age was not found to have a statistically significant effect on bodily pain, role limitation, energy/fatigue, and general health perceptions. Therefore, the null hypothesis for the third research question was also accepted. Moderation analysis was used to examine the moderating effect of perceived discrimination on predicting the effects of acculturative stress and age on anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perception in immigrant Mexican women. The regression model was found to be statistically significant only in predicting the effects of acculturative stress on anxiety sensitivity, depressive symptoms, and role limitation of the participants. The regression model was not found to be statistically significant in the prediction of the effects of age on anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions, as well as in predicting the effects of acculturative stress in bodily pain, energy fatigue, and

general health perceptions. The moderation model was found to be statistically significant only in the interaction of the moderator perceived discrimination with acculturative stress and anxiety sensitivity and acculturative stress and role limitation. The interaction of the moderator was not statistically significant on the effects of age on anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health. Based on the findings, there was not significant evidence that included the significance of all the dependent variables to accept the null hypothesis and to conclude that perceived discrimination moderates the effects of acculturative stress and age on anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions. Further interpretation of these key findings, limitations of the study, and recommendations and implications are presented in Chapter 5.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

Through this quantitative research study, I aimed to examine whether there was a statistically significant relationship between acculturative stress and age as predictors of anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions in immigrant Mexican women. The research questions and hypotheses centered on whether statistically significant relationships existed between the independent variables, acculturative stress and age, and the dependent variables anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions. I employed the moderator variable of perceived discrimination to examine whether this variable moderated the relationship between the dependent and independent variables.

I examined whether perceived discrimination moderated the relationship between the dependent variables acculturative stress and age and anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy fatigue, and general health perceptions. Multiple regression analysis was used to test the effect of the independent variables and the interaction of the moderator perceived discrimination on the dependent variables. The results of the tests indicated that there was a statistically significant relationship between some variables. I found that the predictor variable of acculturative stress had a statistically significant effect on the dependent variables of anxiety sensitivity, depressive symptoms, and role limitation due to emotional problems, employing the moderator variable of perceived discrimination. There was no statistically significant relationship

between the effects of the predictor variable of age on any of the dependent variables when employing the moderator perceived discrimination. Therefore, I deduced that perceived discrimination moderated the relationship only on the effects of acculturative stress on anxiety sensitivity, depressive symptoms, and role limitation of the immigrant Mexican women participants.

The research goals were achieved to add to the body of literature that confirmed the effects of acculturative stress on anxiety sensitivity, depressive symptoms, and role limitation on immigrant Mexican women when employing the moderator factor of perceived discrimination. Moreover, exploring a specific gender, ethnicity, and immigrant population also added to the research goals. This added dimension of examining whether perceived discrimination moderated the effects of acculturative stress and age on anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy fatigue, and general health perceptions was confirmed to affect some of these dependent variables.

Interpretation of the Findings

This research study corroborates a previous study that found a statistically significant relationship between the effects of acculturative stress on Latino participants' physical and mental health (Panchang et al., 2016). After reviewing the results for the first research hypothesis, I found a statistically significant relationship between the effects of the independent variable, acculturative stress, and anxiety sensitivity, the dependent variable, when employing the impact of the moderator variable, perceived discrimination. In this study, participants reporting higher levels of acculturative stress

reported higher levels of anxiety sensitivity when perceiving discrimination. Results of the hypothesis that tested the second research question are interpreted to indicate that acculturative stress has a positive effect on and a statistically significant relationship with the depressive symptoms of the participants when employing the impact of the moderator variable perceived discrimination. Participants who reported higher levels of acculturative stress reported higher depressive symptoms when perceiving being discriminated against. The third research hypothesis reflected a statistically significant relationship between the effects of the independent variable, acculturative stress, and role limitation, which is one of the physical health factors examined as part of the dependent variable, and when employing the impact of the moderator variable perceived discrimination. Participants who reported higher levels of acculturative stress reported higher levels of role limitation when perceiving being discriminated against. On the other hand, the dependent variable of age did not significantly affect any of the dependent variables when employing the moderator variable of perceived discrimination.

According to these findings, the Pearson coefficient indicated a statistically significant effect ($p < 0.05$) of the independent variable acculturative stress on the mental health dependent variables of anxiety sensitivity and depressive symptoms. This was consistent with current findings of the review of literature that reflected that acculturative stress affects the mental and physical health of the immigrant populations in the United States. Additionally, a previous study reflected that acculturative stress was significantly associated with higher levels of psychological distress in Hispanics (Wong et al., 2017).

Similarly, the findings of this study also aligned with previous studies that found an implication of acculturative stress as a risk factor for depression and anxiety in immigrants (Revollo et al., 2011) as well as the association with general distress, anxiety, and depression in Hispanic immigrants (Cano et al., 2015; Kim et al., 2014; Sirin et al., 2013, Torres & Rollock, 2007). Another study among college students of Mexican ancestry reflected a positive association between acculturative stress and depressive symptoms for women but not for men (Cheng et al., 2016). Additional findings revealed that high levels of chronic psychological stressors caused by acculturative stress might lead to physiologic conditions (D'Alonzo et al., 2019) and health disparities among Mexican Americans (Garcia et al., 2017).

Likewise, part of these research findings supported previous findings on the positive influence of the moderator perceived discrimination on the effects of acculturative stress on the mental and physical health of the participants. The influence of acculturative stress on mental health and the moderator factor of perceived discrimination had a strong association with anxiety and depression for Asian Americans (John et al., 2012) and Latino immigrant participants (Leong et al., 2013). Additionally, acculturative stress and discrimination impacted the physical health of Latino participants through the experiences of anxiety (Cariello et al., 2019). It is also worth mentioning that gender pressures intensified acculturative stress and psychological distress in Latina immigrants (Dillon et al., 2019). Despite the robust body of literature on acculturative stress on Latino and Hispanic immigrants, I found no literature representing researchers that

examined the effects of acculturative stress on immigrant Mexican women's mental and physical health.

Numerous studies have focused on acculturative stress when assessing the impact on mental health in some immigrant populations in the United States. In contrast, this study offered the perspective of investigating a specific immigrant ethnicity population and a specific gender while investigating the effects of acculturative stress and age on the mental and physical health of the participants, immigrant Mexican women. In addition, previous studies did not address the effects of age and the moderator factor of perceived discrimination while assessing the participants' mental and physical health. However, research has supported acculturative stress as a predictor influencing other populations' mental and physical health status.

Berry's acculturation theory was the foundational theory to examine the aspects of immigrants' attitudes toward cultural influences, expectations, and behaviors (Berry, 1997). Berry (1997) proposed four acculturation categories: assimilation, separation, integration, and marginalization. This study examined the effects of acculturative stress reported by the participants, employing the lens of Berry's acculturation theory, which increases the understanding of difficulties in acculturating to the host country's culture. According to Berry (1997), an immigrant individual may be hesitant to pursue assimilating to the host country's culture if the individual experiences or perceives prejudice or discrimination. Similarly, in this study, participants who reported experiencing perceived discrimination demonstrated that they were uncertain about assimilating the adaptation to the nondominant cultural group, resulting in higher levels

of acculturative stress. Hence, these attitudes toward cultural influences considered on the participants' behavior are reflected in the statistically significant effect of acculturative stress on the participants' anxiety sensitivity, depressive symptoms, and physical role limitation.

Limitations

As discussed in Chapter 1, the limitations of this study included the simple fact that the participants were females only, with no male participants. Additionally, there were limitations on generalizing the study's findings and the validity of the conclusions based on a small sample size. Participants were asked to self-affirm meeting the delimitation criteria with no option for verification of information before participation. This method to recruit participants offered the potential participants confidentiality but prevented me from having direct access to or contacting participants to clarify the study purpose or instructions.

Additionally, the study participants were mainly from Arizona, a border state with Mexico. The results may differ from those found in small rural areas and other areas in the United States. Responses to some questions may be biased against the host culture and favor the home culture due to the participants' perception of their situation and experience. Moreover, acculturative stress may exclude current interactions with the home culture as long as those from the home culture are available.

Recommendations for Further Study

Further studies are recommended to examine the relationship between the same variables used in the study in the opposite gender, male. Additional studies on other

specific Hispanic or Latin ethnic groups and specific gender employing the same variables are recommended. Another interesting study would be on perceived discrimination against immigrant Mexican women to improve acculturation and reduce the incidence of anxiety sensitivity, depressive symptoms, and role limitation. Studies on prevention strategies to reduce incidences of anxiety sensitivity, depressive symptoms, and role limitation are also recommended. This is with the effort to expand the body of literature on this subject, as the findings of this study are only applicable to immigrant females of Mexican origin living in the United States who tend to be highly influenced by their native cultural norms and the imposed female role of their native culture.

According to the findings in this study, the women participants were experiencing anxiety sensitivity, depressive symptoms, and physical role limitation due to emotional problems created by their acculturative stress and influenced by perceived experiences of discrimination from individuals from the host culture. Could these perceptions of discrimination lead to medical errors? In order to improve the mental and physical health status among immigrant Mexican women, more comprehensive research studies should be conducted to investigate further and possibly develop prevention strategies and culturally sensitive programs and appropriate interventions to meet their needs. The results and recommendations from this study may not eliminate the stressors. However, they may lead to the advancement of a better understanding of the intersection of the effects of acculturative stress and age in the mental and physical health implications of immigrant Mexican women.

Implications

I embarked on this study to add to the body of literature to provide insight into the complex interplay of acculturative stress and age and the mental and physical health implications in immigrant Mexican women, employing the moderator of perceived discrimination. Results of this study reflect the effects of acculturative stress and age on anxiety sensitivity, depressive symptoms, bodily pain, role limitation, energy/fatigue, and general health perceptions experienced by immigrant Mexican women, which may serve as a foundation to gain insight on the need for culturally sensitive treatments tailored for this population. Insights from this study may also promote the adaptation of innovative interventions to the integrated health care approach considering this immigrant population. For example, the study of Cuadrado et al. (2014) that included dispositional and psychosocial variables as predictors of acculturative stress highlighted the relevance of promoting psychosocial interventions with native and immigrant individuals in intercultural contexts.

This study represents an essential contribution to the existing literature. It may enhance social change initiatives by providing an understanding to researchers, theorists, and practitioners of the interplay of mental and physical health implications on a specific race, ethnicity, and gender experiencing acculturative stress while living in the United States. I aimed to gain insight into the need for culture- and gender-salient treatments tailored for the population of immigrant Mexican women, which may promote the adaptation of innovative interventions. This study may yield an understanding of social constructs such as immigration and health policy and provide information on the current

immigration crisis of the nation. Additionally, the acculturation framework of this study may serve to provide insight and understanding of the aspects of acculturation that members of this population may encounter as they try to adapt to a new culture, the dominant culture of the host country. This study may open new perspectives on this racial group of female immigrants, who have been historically subordinated and underserved.

I also aim to add the dimension of examining the impact of perceived discrimination as a moderator variable on acculturative stress, which was found to be statistically significant, impacting the effects of acculturative stress on anxiety sensitivity, depressive symptoms, and physical role limitation of the participants. This study may encourage immigrant Mexican women to rethink the process of acculturation in a way that is sensitive to the complexities of the sociocultural context of immigrant lives.

According to National Alliance on Mental Illness (2019), the Latino population lacks information and understanding on mental health because members of the Latino community generally do not talk about mental health issues. As a result, many Latinos do not seek treatment for mental health problems because they cannot identify the psychological symptoms associated with mental health or are not aware of where to find help (National Alliance on Mental Illness, 2019). By understanding the impact of acculturative stress on mental and physical health from immigrant Mexican women's perspective, this study may potentially open an educational ground for minority groups and advance studies on immigrants and mental health to prevent mental and physical health issues.

Conclusion

The life of immigrant Mexican women may be shaped by the impact of acculturative stress on their mental and physical health, as this research study reflects the effects of acculturative stress on the anxiety sensitivity, depressive symptoms, and physical role limitation of the immigrant Mexican women participants, considering the impact of the moderator variable perceived discrimination. Acculturative stress did not significantly affect the rest of the dependent variables, bodily pain, energy/fatigue, and general health perceptions. Additionally, the second predictor, age, did not significantly affect any of the dependent variables, considering the impact of the moderator's perceived discrimination.

However, the findings of this study provide additional information considering the effects of acculturative stress and age on the mental and physical health of immigrant Mexican women and the impact of perceived discrimination as a moderator factor. This provides awareness and consideration on the possible reduction of health status considering psychological and possible somatic distress and the social aspects of acculturation. This and the increase of understanding of the impact of perceived discrimination offer more comprehensive insight into this dimension that intersects to create acculturation.

There is a need to raise awareness of mental health illness among the Latino population because members lack information and understanding (National Alliance on Mental Illness, 2019). In efforts to promote the identification of mental and physical health-related symptoms that may be linked to experiencing acculturative stress and to

motivate finding help and access to treatment. It aims to serve as educational background for minority groups and advance studies on immigrants and mental health to prevent mental and physical health decline. In efforts to raise awareness of the interplay of mental and physical health implications as well as the impact of perceived discrimination when facing acculturative stress, opening new perspectives on the need of gender salient treatments tailored for the immigrant population.

Utilizing the information from this study, in whole or part, immigrant Mexican women may have the unique opportunity to recognize that acculturative stress may affect their mental and physical health. This information may increase their awareness of seeking help to improve their health, improve their quality of life, and improve the health of their host nation.

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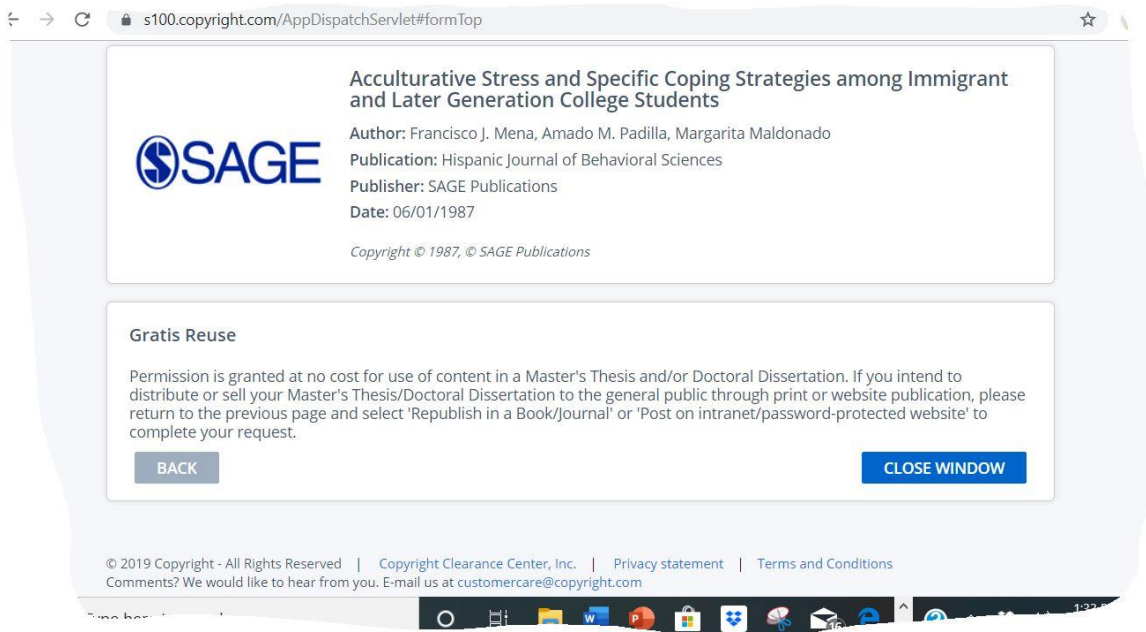
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Appendix A: Permission to Use the Social Attitudinal Familial and Environmental SAFE

Acculturative Scale



The screenshot shows a web browser window with the URL `s100.copyright.com/AppDispatchServlet#formTop`. The main content area features the SAGE logo on the left and the following text on the right:

Acculturative Stress and Specific Coping Strategies among Immigrant and Later Generation College Students
Author: Francisco J. Mena, Amado M. Padilla, Margarita Maldonado
Publication: Hispanic Journal of Behavioral Sciences
Publisher: SAGE Publications
Date: 06/01/1987
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Comments? We would like to hear from you. E-mail us at customercare@copyright.com

Appendix B: Permission to Use the Anxiety Sensitivity Index-3

Instrument Type: Index/Indicator

Test Format: 5-point scale: very little, a little, some, much, and very much.

Source: Bernstein, Amit, Zvolensky, Michael J., Norton, Peter J., Schmidt, Norman B., Taylor, Steven, Forsyth, John P., Lewis, Sarah F., Feldner, Matthew T., Leen-Feldner, Ellen W., Stewart, Sherry H., & Cox, Brian (2007). Taxometric and factor analytic models of anxiety sensitivity: Integrating approaches to latent structural research. *Psychological Assessment*, Vol 19(1), 74-87. doi: <https://dx.doi.org/10.1037/1040-3590.19.1.74>

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Appendix C: Permission to Use the Center for Epidemiologic Studies Depression-20

9:56 PM (59 minutes ago)

(a) Nicholas Carleton

to me

Hi Maria,

Thank you very much for your interest in the work. The CESD is open access and free for non-commercial use with no permissions necessary; that said, I am happy to support your use of the measure. I suggest using only the 14 items as described in the attached paper. Please let me know if and how else I can help - good luck with your research! Nick

Dr. R. Nicholas Carleton, Ph.D., R.D. Psych.
Professor of Psychology, Department of Psychology, University of Regina
Royal Society of Canada Inducted College Member
Scientific Director, Canadian Institute for Public Safety Research and Treatment (CIPSRT; www.cipsrt-icrtsp.ca)
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Dr. Carleton's research is supported by the Canadian Institutes of Health Research

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Appendix D: Permission to Use the 36-Item Short Form Survey

Terms and Conditions for Using the 36-Item Short Form Survey (SF-36)

RAND hereby grants permission to use RAND 36-Item Short Form Health Survey in accordance with the following conditions, which shall be assumed by all to have been agreed to as a consequence of accepting and using this document:

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Appendix E: Permission to Use Experiences of Discrimination

6:19 AM (10 hours ago)

(b) Krieger, Nancy

to me, Nancy

To: Maria Mendoza Griego

Thanks for your interest in using the EOD – and: please go to my website where you will find the link to access the EOD and instructions for use (including how to cite it) – the URL is:

<https://www.hsph.harvard.edu/nancy-krieger/resources/>

You will see that the validation study used the EOD in both English and Spanish and the text in both languages is included.

best wishes with your project –
Prof. N. Krieger

Nancy Krieger, PhD
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pronouns: she/her/hers

Experiences of Discrimination - Nancy Krieger

Access to the "Experiences of Discrimination" (EOD) instrument is free, but to gain access you need to register.

Once you register, you will have access to:

- a copy of the instrument in both English and Spanish, with instructions on both how to score it and how to cite it; and
- the validation study describing the instrument's psychometric properties.

The registration information is requested solely so that it is possible to keep track of interest in and use of the EOD.

The registration information is confidential and will be provided only to the EOD's author and will not be shared with anyone else.