

November 2018

The Role of Migration-Related Stress in Depression Among Haitian Immigrants in Florida: A Mixed Method Sequential Explanatory Approach

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The Role of Migration-Related Stress in Depression Among Haitian Immigrants
in Florida: A Mixed Method Sequential Explanatory Approach

by

Dany Amanda C. Fanfan

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Nursing
College of Nursing
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Date of Approval:
October 18, 2018

Keywords: migration-related stress, depression, migration-related stressors, Haitian immigrants,
mental health

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DEDICATION

First and foremost, I dedicate this dissertation to God, my source of strength, wisdom, knowledge, inspiration and guidance.

I dedicate this work to my mom and my dad, Catherine and Daniel Fanfan, who instilled in me the value of education, discipline, altruism, independence and a strong work ethic. I would also like to thank my mom and dad for their endless love, prayers, encouragement, and support.

I dedicate this work to my cousins, Jersen and Claudine, who have been more like a sister and brother to me my whole life and have always pushed me to strive for the best and to never give up.

I dedicate this work to my closest friends from Miami, Glenisha and Ana, who were always eager to listen to my frustrations and be my sounding board.

Lastly, I would like to dedicate this work to the many unsung heroes that I met along my journey who ignited my passion and drive for research and inspired me to seek a career path where I could continually make a difference.

The road to a Ph.D. is long with many twists and turns, but in the end, the journey is the destination.

In loving memory of my aunt, Anne Telfort (1962-2018)

ACKNOWLEDGMENTS

Many people have earned my expressive gratitude for their contribution and support during my time in graduate school. More specifically, I would like to acknowledge and thank five groups of people, without whom this dissertation would not have been possible: my dissertation committee, my BS-PhD advisors, my mentors, my Fanm Kreyol sisters, and my family.

My Dissertation Committee

First, I am indebted to my co-major professors Dr. Carmen Rodriguez and Dr. Maureen Groer for choosing to become my advisors and providing their endless support and encouragement, at a time when I needed it the most. I must thank Dr. Groer for providing guidance, forcing me to deal with the realities of research and urging me to question my received views of society, health, nursing and research, leading me to question many of my families' and Haitian culture's paradigm. I am especially grateful to Dr. Groer for connecting me with Dr. Rodriguez and encouraging her to take a chance on a student she barely knew, but saw immense potential. Thank you Dr. Rodriguez for being amazingly accessible and responsive, providing supportive writing and research advice, and doing close and constructive reading of all my work. In addition, I am grateful to Dr. Kevin Kip for the invaluable advice, confidence in my research, writing critique, and more broadly for his statistical contributions and endless hours making sure my data analysis and write ups were accurate, clear and concise. Finally, I would like to thank Dr. Kevin Yelvington for challenging me to think outside the box, making me consider mental illness beyond the dominant biomedical approach and calling attention to the individualistic, socioeconomic, environmental and political strata that shape and reinforce mental health and illness.

BS-PhD Advisors

My deepest gratitude to Dr. Cecile Lengacher and Dr. Rasheeta Chandler, for their guidance, advice and support during the early years of my doctoral coursework. This dissertation research owes its existence and foundation to Dr. Chandler who provided great insight and feedback during the proposal development stage.

Mentors

I am grateful to the many mentors who recognized my drive and passion for research at an early age and encouraged me to pursue a PhD. In that regards, special thanks to Sonia Warren-Salmon, Dr. Karen D'Alonzo, Dr. Jane Miller, Dr. Debra Dobbs, Dr. Carla Hunter and all the professors who facilitated the 2018 USF/SOTA Research Bootcamp.

Fanm Kreyol sisters

When I moved to Tampa to pursue a PhD, I knew that a sense of isolation and many moments of doubt and pain were inevitable in this journey. I often found myself struggling for ownership, navigating from dependence to independence, and continually striving to develop my

professional identity as a researcher, scholar and writer, under a cloud of uncertainty. During these profound periods, my Fanm Kreyol sisters were a source of empowerment, inspiration and social engagement. Therefore, I will always be extremely grateful to my sisters for keeping me sane, forcing me to have some semblance of a social life, keeping me company for long hours at the library, strengthening my leadership skills, helping me find my voice and independence, and lastly for being my gateway into the Haitian community in Florida. Your endless love, support and friendship will never be forgotten.

Family

Finally, there is my family, who deserves my deepest gratitude for always being there with support, encouragement, wisdom and love. A special thanks to my mom for mandating daily phone calls to ensure I was doing fine and making sure I maintained a connection to my family and the outside world. Thanks, mom, for making it impossible for me to ever give up on this doctoral journey.

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ABSTRACT

Recognizing, appropriately treating depression, and meeting the mental health needs of the growing number of Haitian immigrants in the United States (US), continue to pose a challenge because of differences in culture, beliefs, idiom of distress, expression of depression as well as specific stressors associated with the migration process. Previous studies, while limited, document high levels of depression among Haitian migrants, and postulated that migration-related stress (MRS) may play a significant role. Aspects of the migration process, more specifically stressors endured during settlement in the US may negatively precipitate the development of depression.

This study used a mixed method sequential explanatory approach to pursue the following specific aims: **Aim 1:** to identify demographic factors associated with MRS; **Aim 2:** to identify demographic factors associated with depression; **Aim 3:** to examine the relationship between MRS and depression overall and the extent to which this relationship is modified by other factors; and **Aim 4:** to provide an in depth overview of the most significant migration-related stressors experienced by first generation Haitian migrants with high scores of MRS. Seventy-six first generation Haitian migrants were recruited from the southeast region of Florida through three purposive sampling methods: venue-based sampling, snowball sampling, and convenience sampling. Among participants who consented and completed quantitative data, eight with high MRS scores (> 25 on the Demands of Immigration Scale, DIS) completed an in-depth interview about MRS. Descriptive statistics, Analysis of Variance, Chi-square, Pearson correlations and multiple linear regressions were utilized to assess MRS (DIS), depression (Center for

Epidemiological Studies Depression (CESD) and Zanmi Lasante Depression Symptom Inventory (ZLDSI)) and demographic variables. Qualitative interviews were analyzed using a double-coding approach.

While MRS significantly correlated with gender, age, English language fluency, and age at migration; only gender ($\beta = -.280, p = .011$) and English language frequency ($\beta = -.264, p = .017$) emerged as significant predictors of MRS. Findings showed a strong positive linear relationship between MRS and depression (CESD ($r = .606, p < .000$) and ZLDSI ($r = .624, p < .000$)) and between CESD and ZLDSI ($r = .738, p < .000$). MRS remained the strongest predictor of depression when controlling for all other significant predictors of depression (CESD: gender, income, education and direct impact from the 2010 earthquake; ZLDSI: in Haiti during the 2010 earthquake and moving to the U.S. during the first visit). Being in Haiti during the 2010 earthquake moderated the relationship between MRS and depression (ZLDSI), showing an amplifying effect for depression between MRS and reported 2010 earthquake exposure. Findings from the in-depth interviews revealed five migration-related stressors to be of most significance to the development of mental illness among Haitian migrants: language barriers, financial strains, loss of social networks, family conflicts and exposure to discrimination and stigma. Moreover, findings provided information to explain why Haitian migrants found each high-ranking migration-related stressor stressful.

This study made unique and innovative contributions to the migrant stress literature and shed light on the mental health of Haitian migrants and risk factors long implicated in MRS and depression. Health care providers should work with Haitian migrants when diagnosing and treating depression to facilitate the consideration of both the unique migration stressors and risk factors Haitian migrants may face, and the ethnic differences in their expression of depression.

The use of culturally appropriate and validated measures is instrumental to better capture depression among Haitians.

CHAPTER ONE:

INTRODUCTION

Your family's motto to dealing with stress was "God will never give you more than you can bear". Thus, difficulties in life were regarded as a normal part of life and a part of God's plan. Whether bad or good, these experiences were not expected to negatively impact your mental health. You were expected to develop resilience, reflecting the old saying that "what doesn't kill you, makes you stronger". Furthermore, as a privileged member of the Haitian community, with a private school education, a personal driver, several maids, you were not allowed to complain, feel sad or powerless. You did not talk about the challenges of life because someone else always seemed to have it worse. You asked yourself, "why should I be sad, I get to eat several meals per day, I have a supportive family, I vacationed to a foreign country every summer, nothing should ever get me down". Therefore, you grew up internalizing and suppressing most of your thoughts and feelings.

You have now been enlightened. You know that mental health/mental illness exists and that it is not a byproduct of some inherent weakness, or an illusion that's all in your head. Mental health means having a good way to deal with your feelings during life's challenges, it is the way one thinks, feels, and acts every day in the mist of these challenges. Everyone has mental health. It is normal to feel and express those feelings, to be angry, happy, anxious, upset, disappointed, feel like a failure; everyone faces pressures/difficulties at some point in their life. What you have found to be of utmost significance (and inherently different from those who suffer from mental illness) are one's culture, beliefs system, past experiences in handling challenges, coping

mechanisms, access to a support system and personality/personal characteristics. Any breakdown in these factors could cause someone to become susceptible to mental illness.

As a Haitian immigrant in the US, you and I have heard the stories; thus, I embarked on a journey to elucidate the Haitian community. Stress and depression are important concerns for Haitian migrants. To better understand depression and stress in this population, we must learn more about their personal life story (qualitatively and quantitatively) and make significant efforts to comprehend where in their life a breakdown/maladaptation occurred and what were the potential triggers. This dissertation research is the response to a cry and need for awareness and knowledge about mental illness in the Haitian migrant community.

Overview of Migration

Migrants constitute approximately 192 million of the world's population. As of 2014, more than 42 million immigrants reside in the United States (US) according to the Census Bureau data (Zong & Batalova, 2016). The sheer scale of this transposition has transformed migrant health and health care access into a public health concern in the US. A large number of migrants move from developing to developed countries. Causes of migration include economic disparity, family reunification, natural disasters, forced migration due to conflicts, political forces and persecution. While migrants make up one of the most vulnerable population in this country, migrants are also a heterogeneous population with respect to culture, ethnicity, language, religion, reasons for migrating, migration experiences and many other characteristics. Even migrants from the same country of origin are considered a very heterogeneous group. Despite these differences, the health impact of migration and the stress of relocation and adapting to a new country are often the same among immigrants (Schenker, Castaneda, & Rodriguez-Lainz, 2014).

Migration can have positive and destabilizing effects on migrants. Migration entails separating from ones' family and friends, learning a new language and culture, and the possibility of working and living in unfavorable conditions; it alters both the human and nonhuman components of their environment and ways of living. In the host country, migrants encounter unfamiliar landscapes, climates, behaviors, cultures, foods, beliefs/practices, health patterns, health care access, language, which may ultimately have a significant impact on their behavior, culture, and health over a period of time. The majority of migrants are confronted with migration-related stress and stressors such as the sense of loss of family, home, and country along with social and economic problems and the challenges of adapting to the country of

destination (Bhugra, 2004). Relocating to another country is stressful; it is a life change event; it is a discrete, objectively reportable event that requires some degree of social and psychological adjustments, which may precipitate mental illness. Five types of stress reactions among immigrants have been identified: 1) feelings of distress; 2) homesickness; 3) depressive reactions, going along with alienation and hopelessness; 4) psychosomatic complaints, vulnerability to diseases; and 5) psychosocial maladjustment, psychopathic behavior (Schmitz, 1997). Of most concern, and the present focus of this research study is depression, a global indicator of stress among migrants.

This chapter provides an overview of Haitian migration by considering the historical and political context that shaped and encouraged the increasing flow of Haitian migrants to the US. A review of major health issues faced by Haitian migrants and details about the cultural, social, and environmental factors that might affect the mental health of Haitians living in Haiti before migration and Haitian migrants living in the US are presented. Furthermore, this chapter articulates the significance of this dissertation research and provides a glimpse of the potential contribution of this study to the literature. Finally, this chapter discusses the theoretical underpinnings that served as a pragmatic guide for this study and ends by highlighting the primary aims of this research.

Proliferation of Haitian Migration

The Haitian immigrant population continues to be a significant part of the migrant population expansion of the US, especially in Florida. Centuries of hardship and turmoil has led many Haitians to seek refuge elsewhere, especially in the US, the home of the largest Haitian migrant population worldwide. In 2015, 676,000 Haitian immigrants (Schulz & Batalova, 2017) resided in the US, making this population one of the largest growing Black migrant subgroups in the US and the second highest migrating group to Florida. Other report indicated that the number of Haitian immigrants in the US is gravely underestimated considering that undocumented individuals often do not take part in the census (Williams & Jackson, 2000) and that more than 900,000 Haitian immigrants may actually reside in this country (Sanon, Mohammed & McCullagh 2014).

More than 70% of all Haitian immigrants in the U.S reside in just two states, Florida and New York (Schulz & Batalova, 2017). Of the top 10 Haitian immigrant concentration metropolitan areas, the state of Florida contained five: Miami/Fort-Lauderdale/West Palm Beach (#1) with 218,000 Haitian immigrants; Orlando/Kissimmee (#4) with 34,000 Haitian immigrants; Naples/surrounding areas (#7) with 10,000 Haitian immigrants; Tampa Bay area (#9) with 8,000 Haitian immigrants; and Cape Coral/Fort Myers (#10) with 8,000 Haitian immigrants (Schulz & Batalova, 2017). Camarota (2010) reported that about 46% of Haitian immigrants living in the US lived in Florida in 2008, and that number has only grown since. Major causes of migration for Haitians include economic disparity (often related to lack of job opportunities and low salaries), family reunification, natural disasters, forced migration (due to conflicts, political forces and persecution, natural disasters and subsequent health effects), globalization, safety and

changes in migration policies (e.g. issuance of Temporary Protected Status and the Haitian Family Reunification Parole Program U.S. Citizenship and Immigration Services, 2016) (Desrosiers & Fleurose, 2002; Shellman, & Stewart, 2007; Trouillot, 1990).

A Historical Context of Haitian Migration

In the 1800s, Haiti did the unexpected and made history by leading a rebellion that drove out the Spanish and the French, abolished slavery and gained their freedom. Haiti and its inhabitants were proud to be the second independent nation in the Americas and looked forward to a bright and prosperous future. Nevertheless, Haiti's proliferation was hindered by disunity, ostracism by the international community, corruption, despotism, inadequate infrastructure, external influences, unstable economy and violence very early on and never recovered (Trouillot, 1990).

Patterns of Haitian migration in the US reflect the political atmosphere in Haiti. Five major periods of Haitian migration to the US are documented in the literature: the period of French colonization; the Haitian revolution (1791-1803); the US occupation of Haiti (1915-1934); the Duvaliers' regime (1957- 1986); and the overthrow of President Aristide (1991) (Stepick, 1992; Stepick & Swartz, 1998; Jackson, 2011). However, the most significant turning point in Haitian migration was during the Duvaliers' regime, which sparked the first wave of mass migration, and lasted almost 30 years.

The US Occupation of Haiti

Haiti was inscribed in the geopolitical orbit of the US during the occupation period (1915-1934), which helped fracture ties with France, and had far-reaching impact on Haitians. While Haitian migration to the US during this period was extremely low in comparison to the Duvalier era, the occupation created an avenue of migration to the US. The initial relationship

between the US and Haiti was intense and bitter because of 1) oppression 2) severe racial discrimination, often instigated by US marines, 3) economic and political centralization, which increased Haiti's dependence on foreigners, and 4) use of violence against the nation (Trouillot, 1990). The specific circumstances of the American occupation asserted solidarity between black Americans and Haitians and ignited anti-occupation activism in the US (Trouillot, 1990).

During this period, many Haitian immigrants moved to Harlem in order to avoid racial segregation in the South where they made significant contributions to the Harlem Renaissance (Dash, 1997). However, racial tensions and segregations limited the number of Haitians who migrated to the US; less than 2000 Haitians migrated to the US from 1900 to 1950 (Wah, 2013).

The Rise of Duvalierism

For centuries, dictators who utilized authoritarian leaderships, which involved some degrees of violence and oppression, ruled Haiti (Trouillot, 1990). Many presidents, even in a position of power, often felt no responsibility as public servants, but instead established corrupt and authoritarian regimes, enriched themselves at the country's expense, and attempted to stay in their position of power until death (Trouillot, 1990). Francois Duvalier, known as "Papa Doc," and Jean Claude Duvalier, known as "Baby Doc," both elected president of Haiti, were no exception. Francois Duvalier was elected president of Haiti in 1957. From 1957 until his death in 1971, Duvalier ruled with an iron fist, not unlike his predecessors and after his death, his son followed his footsteps continuing a repressive regime that utilized similar tactics as his father's (Trouillot, 1990).

Distinguishing characteristics of the Duvaliers' dictatorship significantly differed from previous authoritarian regime in Haiti. The Duvaliers' transformed Haiti into a totalitarian state and employed several tactics that solidified their power and consequently resulted in an

increased level of Haitian migration. Tactics included: 1) violence (a new kind of violence unprecedented in Haiti), 2) auto-neutralization, 3) and degradation of all institutions (except the chief of state) (Trouillot, 1990). Whereas past dictatorships directed most of their violence toward political adversaries, violence under Duvalier: 1) was not subjected to a social, moral, or cultural code; 2) impacted more innocents than before; 3) no longer spared women, children, and the elderly; 4) targeted high level civil servants, even from schools and churches; 5) forced professionals such as judges, physicians, and clergymen, to be accomplices of the state or become a victim of “tonton macoutes” (the unofficial state militia) violence; and 6) utilized torture-rape to acquaintance-rape to marriage of women as a tool of political leverage (Trouillot, 1990). No one was safe during that era; the polarization of the nation forced everyone to either be for or against the Duvalier and no form of dissent was tolerated. For those who were against Duvalier, they risked losing everything including their own lives and those of their families and friends on a daily basis. Observers described Haiti as a “climate of terror” (Trouillot, 1990). Under this tyranny of violence, many Haitians were forced to flee to countries like the US, Europe, Francophone Africa, and Canada (Quinn & Sutton, 2013). Thousands of professionals, middle-level bureaucrats, high-ranking army officers were eliminated by measures of imprisonment, torture, and emigration (Trouillot, 1990).

Haitian Migration during Duvalierism

Duvalier’s reign was imperative in influencing the first wave of mass migration and brain drain epidemic that plagued Haiti. Right after Duvalier came onto power, the first group of Haitians to leave was the upper-class mulattos/blacks and professionals who immediately threatened his regime. The best-educated and most experienced professional Haitians such as physicians, lawyers, teachers, business owners, and engineers (just to name a few), voluntarily

fled the country (to escape the formation and strengthening of Duvalier's totalitarian regime) or were forced into exile (Trouillot, 1990). According to an article written by Lana Bell on Haitian immigrants, between 1957 and 1963, three out of the 264 graduates of Haiti's medical school remained in Haiti (2010). As daily life worsened under Duvalierism, more Haitians fled to the US, where a supportive US government welcomed them. President Kennedy protested to the vicious human rights violations of Duvalier and overtly persuaded Haitians to come to the US (Stepick & Swartz, 1998). Furthermore, this first wave of Haitian migrants was considered more desirable to the US because of their skills and education; thus, they received considerable legal, social and economic support (Desrosiers & Fleurose, 2002).

Considering Haiti's dire situation, its proximity, historical ties to the US and many Haitian-American citizens, it came as no surprise that the US wanted to extend a helping hand. However, this support did not last long. The assassination of Kennedy led to policy changes and although his successor, Lyndon Johnson, did not prioritize the human rights issues of Haiti, the middle class was accepted by the US. The middle class began to migrate to the US around the mid-1960's. The 1965 Immigration Act allowed legal residents to bring close families (Desrosiers & Fleurose, 2002). By the late 1960s, almost 7,000 Haitians became permanent immigrants to the US, and another nearly 20,000 came with temporary visas each year (Stepick & Swartz, 1998).

Unlike earlier migrants who were well-off and flew to the US, by the late 1970s, later group of migrants were mostly poor peasants from rural and urban areas of Haiti (Desrosiers & Fleurose, 2002; Trouillot, 1990). This group of migrants was often called the "boat people" because they began arriving to the US illegally on sailboats along the shores of South Florida. During the period of great influx around the 80s, Haitian migrants were often met with hostility,

negative stereotypes and a multitude of difficulties (Stepick 1992); they were less covetable to the US with their limited education and resources (Desrosiers & Fleurose, 2002). Haitian migrants were viewed as disruptive and a burden to public resources, which justified a campaign to restrict the number of Haitian migrants that included incarcerating a disparate number of Haitians who made it to US shores, rejecting requests for political asylum, and denying work permits (Stepick 1992; Stepick & Swartz, 1998). Those who managed to stay in the US among this wave of migrants experienced extreme difficulties in obtaining legal status and were often separated from their families for years (Desrosiers & Fleurose, 2002).

Haitian migrants have also faced discrimination as alleged bringers of disease, which caused a hysterical scare among South Floridians. The media and US officials labeled Haitian migrants as a health threat by attributing tuberculosis as an endemic disease among them in the 1970s, and later identified Haitians as one of the primary groups at risk for acquired immunodeficiency syndrome (AIDS) based on a report by the Centers for Disease Control and Prevention (CDC) (Stepick, 1992). Although these allegations proved incorrect and the fear subsided overtime, the damage was already made. Even when removed from the list, the Food and Drug Administration (FDA) refused to accept blood from individuals of Haitian origin well into the late '80s (Stepick, 1992). Under political pressure, support and improved reception, Haitian migrants have made considerable progress since the 80's. While Haitian migrants have moved on from the struggles of the past and are eager and grateful for help from the US, many have not forgotten; the strain between pride in their Haitian roots and perceived prejudice against Haitians in the US increase stress and have profound impact on health outcomes.

Post-Duvalierism: Factors that Maintained High Rate of Migration

Following the collapse of the Duvaliers' dictatorship in the 1980s, some Haitians returned to Haiti and the flow of refugees decreased. However, Haiti fell into chaos and suffered from four military coup and a fraudulent election (Trouillot, 1990). The continuing political unrest, repression, increasing inequality, natural disasters and economic misery that plagued Haiti forced many Haitians to flee to the US, in pursuit of a better life. Thousands of Haitians from all social class voluntarily fled to cities like Miami, Boston, Orlando, and New York (Desrosiers & Fleurose, 2002; Stepick, 1992). Over three-quarters of all Haitian immigrants now residing in the US arrived after 1980 (Wasem, 2011).

Haitian migration has reflected a pattern of ongoing upsurge of migrants in the US. Between 1980 and 2000, the Haitian population in the US more than quadrupled from 92,000 people to 419,000, and currently, more than 900,000 Haitian immigrants live in the US (Sanon, Mohammed & McCullagh 2014). For many Haitians, the solution to their despair rest outside its borders. Violent political strife and grave poverty are two main reasons for the steady flow of Haitian to the US. Haiti is one of the poorest countries in the world with a gross domestic product (GDP) of approximately eight billion dollars as of 2014 (The World Bank, 2015). Recent incentives that have encouraged many Haitians to immigrate to the US include the many natural disasters that ravaged Haiti such as the 2010 Earthquake, the ensuing cholera epidemic that followed the earthquake and changes in migration policies under the Obama administration (Bilham, 2010). Since the 1990's, Haiti has endured several natural disasters; however, the one in 2010 devastated Port-au-Prince's infrastructure leaving Haiti in an even more fragile state. Since the conditions in Haiti became further compromised due to the earthquake and the cholera endemic, migration policies such as temporary protected status (TPS) to many undocumented

Haitian migrants and the Haitian Family Reunification Parole Program (FRPP) (US Citizenship and Immigration Services, 2016) have played a significant role in the substantial flow of Haitian migrants.

Another important aspect of the specific migration context of Haitian is family reunification. Many Haitians come to the US primarily because relatives migrated earlier and they wanted to reunite with their families. Families and kinship networks sponsor and organize migration; once an immigrant flow commences, the momentum of reunification sustains it. Family is the cornerstone of Haitian life and the focal point of decisions about migration (Fjellman & Gladwin, 1985).

Conclusion

Haiti's history provides significant lessons to inform our approach to the health care issues of the present and future, and continually plays a pivotal role in Haitians' psyche. This brief historical overview provided a better understanding of the Haitian migrant population, more specifically why many left Haiti in the first place. Furthermore, Haitians' experiences of corruption, violence, poverty and oppression while in Haiti are both directly and indirectly related to their current mental health status in the US.

Overview of Haitian Migrants' Mental Health and Beliefs

Socioeconomic status, education, environment, religion, culture, values, beliefs, and many other factors can mediate and shape one's view of illness. There are some common elements of belief that may be shared among members of similar cultural and ethnic groups. Nevertheless, past experiences and research demonstrate that we cannot make the assumption that individuals from one ethnic group will conceptualize health and illness in the same manner, as such is the case for Haitian migrants.

Haitian's Health Belief

Religion, spirituality, family, and community shape Haitian's health care norms and practices, including those related to mental health. Haitians believe in both the natural/biomedical and the supernatural cause of illness. The Haitian immigrant may conceptualize illness as a result of God's will (natural illness), contact with forces of nature, sudden stressful life events, the degree of symptoms, perception regarding the severity of illness through its duration, imbalances of hot and cold, evil influences that altered God's plan (unnatural illness, witchcraft) or as a result of punishment from the spirits (Sterling, 2006). Many Haitians believe that supernatural forces cause mental illnesses; these beliefs are reinforced through culture and religion. For instances, those who practice voodoo, which is not only a religion but also encompasses a health care system, are more likely to believe in unnatural causes of illness and seek the help of a voodoo priest for treatment and healing practices. A major depressive episode may be attributed to a curse sent by a jealous individual (Desrosiers & Fleurose, 2002). Churches, spiritual and religious practices help Haitians cope with mental and emotional problems, and provide a parallel system of strength and healing (World Health Organization [WHO], 2010).

For Haitians, the topic of mental illness is a taboo; it is highly stigmatized and shameful for the family and community. Haitians may have difficulties seeking and accepting treatment for mental illness and experience difficulties in divulging and discussing personal issues with mental health professionals (Nicolas, DeSilva, Prater, & Bronkoski, 2009). Furthermore, health-seeking behaviors are socioeconomically based; upper- and middle-class Haitians are more likely to seek help from a psychiatrist or consider a biomedical approach to treating mental illness (Desrosiers & Fleurose, 2002). Developing a clearer understanding of Haitians' beliefs about illness and healing may assist in providing culturally effective mental health promotion and treatment for this population.

Health Status of Haitians in Haiti

For Haitians living in Haiti, generally, only substandard care is available and most of the population have no access to formal health care services (Alsan, Westerhaus, Hecce, Nakashima, & Farmer, 2011). The health of Haitians is compromised from the conditions they often have to endure while living in Haiti. Haiti has the worst health indicators of the Americas: the highest infant and maternal mortality rates, the highest malnutrition rates, and the highest number of persons living with human immunodeficiency virus (HIV)/AIDS (WHO, 2012). Some Haitians may have never been to a hospital or seen a doctor (Alsan et al., 2011). Political distress in Haiti has explicit mental health implications for Haitians because Haitians are often victims of violence or torture. Additionally, many Haitians have been exposed and have witnessed traumatic violent acts or sexual abuse (Gage & Hutchinson, 2006). Approximately, 70% of adolescent girls and women have been exposed to violence (WHO, 2012). Furthermore, with one of the lowest rates of professional psychosocial support in the Americas, mental health services are scarce (James, 2004). However, recent initiatives and aids from many international

organizations and psychologists, especially in the aftermath of the 2010 earthquake, have made significant progress in initiating a mental health care infrastructure (Nicolas, Jean-Jacques, Wheatley, 2012).

Health Status of Haitian Migrants

As we move forward to a future where the flow of Haitian immigrants will remain steady, we are asked to treat migration as a social determinant of health. The health of Haitians migrants is determined in part by exposure during the life course (before, during, and after migration), which is often not experienced by the members of the host country. An increased vulnerability to certain health risks, barriers to health care access and utilization, stigmatization, higher stress from displacement are all major factors that greatly influence the overall health of Haitian migrants.

The current Haitian migrant population living in the US suffers from many health challenges and decreased health care access because of linguistic barriers (Allen et al., 2015). Because of their triple minority status (foreigner, black, and Creole speaking), they have endured barriers to health that are harder to surmount than those facing many immigrants (Stepick & Swartz, 1998; Saint-Jean & Crandall, 2005). They may not seek care because of language barriers, lack of understanding and trust of the US health care system, discrimination, and fear of deportation or reprimand. Furthermore, Haitian migrants are often frustrated, ashamed, or embarrassed about speaking English and as a result do not utilize available health care resources (Saint-Jean & Crandall, 2005; Allen et al., 2015). Another major barrier to health care access for current Haitian migrants is a lack of health insurance and cost (Saint-Jean & Crandall, 2005). In a community study of Haitian migrants living in Little Haiti, Miami, over 75% percent of participants stated that lack of insurance was the main reason for not seeking care followed by

high costs (Haitian Neighborhood Center, 2004). Barriers to insurance lead to gaps in coverage, which in turn results in delayed care, out-of-pocket medical costs, and medical debt. Additional barriers to health care for Haitian migrants included financial strains. Haitian migrants are among the lowest paid workers in US, with 43% grossing less than \$15,000 per year (Orozco, & Burgess, 2011). Furthermore, even when plagued with low wages and unemployment, Haitian migrants are committed to maintaining their remittance levels, often at a sacrifice to their own health and economic needs (Orozco, 2006; Orozco, & Burgess, 2011). Moreover, physical and political distress in Haiti has explicit and ancillary implications on Haitian migrants' health status.

The most significant physical health conditions declared by Haitian immigrants were back, neck, and bone or joint problems (30%), vision problems (27%), hypertension (22%), arthritis (19%) and diabetes which affected 15% of the adults (Saint-Jean & Crandall, 2005). Depression, acculturative stress, anxiety, post-traumatic stress disorder (PTSD) and somatic problems are common mental health issues (Belizaire & Fuertes, 2011; Nicolas et al., 2007; Nicolas, Arntz, Hirsch, & Schmiedigen, 2009; Nicolas & Smith, 2013). Past studies demonstrated that Haitian migrants have an increased risk for depression while living in the US (Nicolas et al., 2007; Nicolas & Smith, 2013). Haitian migrants living in Boston noted increased distress and depressive episodes while living in the US, while at the same time faced insufficient mental health resources (Allen et al., 2015). Several mental and physical health outcomes were identified as a result of trauma, including headaches, heart attacks, inability to sleep, flashbacks, strokes, and exacerbations of hypertension and diabetes (Allen et al., 2015). Many studies have shown that communities that experience historical trauma are more vulnerable to diminished mental health in later generations (Evans-Campbell, 2008; Whitbeck et al., 2009; Karenian et al.,

2011; Lopez, 2011) and such may be the case for Haitian immigrants. For example, historical trauma has been linked to PTSD (Karenian et al., 2011) and symptoms of anxiety and depression, with a preponderance of shame and fear (Evans-Campbell, 2008; Whitbeck et al., 2009).

Conclusion

Haitian's culture and beliefs greatly affect perceptions of health, illness and death, beliefs about causes of disease, approaches to health promotion, how illnesses are experienced and expressed, where they seek help, and the types of treatment preferred. The cultural differences and past experiences and issues faced by Haitians must be taken into account in mental health care. Research has the potential to assist in obtaining the necessary resources and knowledge to provide culturally sensitive and linguistically appropriate psychological and psychiatric services to Haitian migrants.

Overview and Significance of Present Study

Depression is a complex illness that knows no boundaries and affects millions of all ages, races and ethnic groups in the US (National Institute of Mental Health [NIMH], 2015). As one of the leading causes of disability-adjusted life years (DALYs), morbidity, and mortality, depression affects approximately 15 million people in the US, yearly, and was forecasted to be the second largest contributor to global disease burden by 2020 (Murray & Lopez, 1996). From 2000 to 2015, the annual economic burden of depression increased by approximately \$127 billion in the US (NIMH, 2015). Depression is defined as mental/mood disorder, characterized by sadness, loss of interest or pleasure, weight loss or weight gain, feelings of guilt or low self-worth, disturbed sleep, feelings of tiredness and poor concentration (NIMH, 2015). According to the DSM-V, at least five of the aforementioned symptoms must be present for a two-week period or more for a diagnosis of depression (NIMH, 2015).

Health Disparities in Depression

Several studies showed that there are significant disparities in the diagnosis and treatment of depression. While Blacks are less likely to suffer from depression in comparison to Whites, Blacks are less likely to get diagnosed and receive treatment and are more likely to suffer from the chronic and severe forms of depression (Akincigil et al., 2012; Alegría et al., 2015). Past research posits that depression is underestimated in Blacks due to selection bias and measurement error (Akincigil et al., 2012; Alegría et al., 2015). Most epidemiological studies suffer from selection bias because they exclude certain populations where depression is more prevalent, such as the incarcerated and the homeless. Measurement errors reflect potential diagnostic bias (e.g. Blacks interviewed by health care providers were more likely to be

diagnosed with psychotic disorders while Whites were more likely to be diagnosed with a mood disorder when the same symptoms were presented) and the inability of current diagnostic tools to capture depression because depression may be expressed differently in Blacks (Akincigil et al., 2012; Alegría et al., 2015).

Furthermore, significant differences in depression may exist between diverse Black ethnic groups; however, this is rarely exhibited in mental health research. Haitian immigrants, the population of interest in this study, are often categorized as Blacks in health research because of skin color, not as a separate ethnic group, making it difficult to ascertain the mental health needs of this population. For instance, 10.4% of African Americans, and 12.9% of Caribbean Blacks were found to have a major depressive disorder at some point in life (Williams et al., 2007). Ethnic differences were not identified in this study but depending on the generational status of the Haitian migrant, they may identify with both of the aforementioned racial categories. Since Blacks, including immigrants, are more likely to experience the most severe and chronic forms of depression and less likely to get diagnosed and treated with depression (as mentioned earlier), there is a greater chance for grim prognoses in this population (Akincigil et al., 2012; Alegría et al., 2015). Moreover, immigrants are also more likely to suffer from depression while in the US than those who remain in their native countries (Breslau et al., 2011; Cuadrado, Taberner, & Briones, 2014; Kalibatseva & Leong, 2011).

Depression is not considered a disease, but a disorder/illness characterized by a collection of symptoms that research has shown to associate greatly with a specific emotional state. While it is possible that some diseases have universal characteristics, illnesses are not universal and are intricately connected with their social, cultural, and environmental context. Cultural, social and environmental factors do not simply shape the presentation of depression; these factors have an

impact at all stages of depression: origin, recognition, course of illness, and treatment.

Nevertheless, little is known regarding the prevalence, risk factors and mechanism of depression among black migrant groups in the US because past studies have ignored the ethnic differences that impact their expression, course, diagnosis, and treatment of depression.

Significance of the Present Study

This study examined an illness that is a major public health concern, with serious socioeconomic consequences, in a population that will only continue to grow and experience unique and considerable mental health disparities, while being simultaneously overlooked in the mental health research and workforce. Despite improvements in diagnostic tools, medications, and psychological treatments, depression remains a major challenge in this nation, regardless of racial or ethnic background. Currently, there is a deficit in knowledge about depression and stress among Haitian migrants, a highly vulnerable group and one of the largest and fastest growing black migrant populations in the US.

Very little information is available regarding the burden of depression among Haitian immigrants. However, many Haitians in Haiti (even prior to migration) struggle with depression, and this number has only escalated since events of the 2010 earthquake and ensuing cholera epidemic (Allen et al., 2015). In 258 hospital patients in Haiti, 54% met the criteria for major depression (Martsof, 2004). Using the Creole Beck Depression Inventory (BDI), a cross-sectional, zone-stratified six household survey in Haiti found that the mean scores on the BDI was 20.4, which signifies borderline, clinical depression (Wagenaar, Hagaman, Kaiser, McLean, & Kohrt, 2012). About 64.4 % of respondents showed moderate/severe depression, with 41.7% scoring 20 or greater on the BDI, and 22.7% scoring 29 or greater on the BDI (Wagenaar et al., 2012).

Among 168 Haitian immigrant youth at a public school in Boston, 14% showed symptoms of depression (Fawzi et al., 2009). Forty-five percent of Haitian immigrants in Miami who were directly exposed to the 2010 earthquake showed symptoms of major depression, while 24% of Haitian migrants with indirect earthquake showed symptoms of major depression (Rasmussen et al., 2015). Haitians immigrants are especially susceptible to depression because they have experienced or were exposed to many known risk factors shown to impact depression such as physical and political distress, traumatic events like the death and devastation of the 2010 earthquake, acts of violence/ torture and poverty, just to name a few.

In the context of depression, migration-related stress is a concern because a substantial amount of evidence supports a strong association between depression and stress (Hammen, 2005; Gillespie, Whitfield, Williams, Heath, & Martin, 2005; Kendler, Karkowski, & Prescott, 1999). Compared to White immigrants, Black immigrants experience greater level of migration-related stress (Rogers-Sirin, 2013). High levels of stressors have been observed before the onset of major depressive episodes in a number of studies (Hammen, 2005; Gillespie, Whitfield, Williams, Heath, & Martin, 2005; Kendler, Karkowski, & Prescott, 1999). While everyone, including Haitians immigrants, may experience all forms of stress (e.g. life event stress, daily stress, relocation stress) regularly, migration-related stress is an additional stressor that immigrants are more vulnerable to and do not cope as well with over time compared to natives (Cuadrado, Taberero, & Briones, 2014). Past studies that have compared the rate of depression among immigrants of color (e.g. Latinos, Asians) living in the US with their native counterparts found higher level of depression among the immigrant population and speculated that migration-related stress may be a significant factor in this difference (Breslau et al., 2011; Kalibatseva & Leong, 2010). In an analysis where acculturative stress (defined as stress experienced during the

acculturation process post-migration), social support, family functioning, expectations for the future, church attendance, perception of religiosity, income, and gender were investigated as predictors of depression, acculturative stress remained the strongest predictor of depression, and accounted for 29% of the variance in depression (Hovey, 2000). In more than 20 years of literature, greater acculturation or migration-related stress was related to greater depression symptom severity; however, only two of those studies focused on the Haitian population (Nicolas & Smith, 2013; Nicolas, Desilva, Prater, & Bronkoski, 2009). In light of limited knowledge as a result of a lack of research in this population, this study adds uniquely to the literature because it used a mixed-method approach, which is not frequently applied to studies in this population and has the potential to provide noteworthy breadth of knowledge about the mental health of Haitian immigrants.

Depression was identified as a major mechanism through which migration-related stressors such as discrimination may affect physical health and quality of life (Finch et al., 2001). Stress in elevated levels may lead to decreased quality of life (Finch & Vega, 2003). Higher levels of migration-related stress have been associated with reports of lower physical health among Latinos (Salgado, Castañeda, Talavera, & Lindsay, 2012) and Haitian immigrants (Belizaire & Fuertes, 2011). Furthermore, migration-related stress was correlated with psychological health and environment quality of life among Haitian immigrants (Belizaire & Fuertes, 2011). As one of Healthy People 2020 goals, improvement of health-related quality of life for all, especially vulnerable and underserved migrants, such as the Haitian migrants, should be a priority. As a multi-dimensional concept comprised of physical, mental, emotional, and social health domains, assessing migration-related stress and depression (two factors known to

affect quality of life), can provide invaluable insight regarding key factors that influence mental health-related quality of life among Haitian migrants.

To summarize, this research adds to the literature base because it took into account the ethnic differences in the expression of depression by using a culturally appropriate instrument that may better capture depression among Haitians and seeks to identify Haitian's explanatory model of stress within their social and cultural perspectives. This study employed innovative approaches with the potential to provide a nuanced depiction of the link between depression and migration-related stress. This study helped to bridge the current knowledge gap about the mental health of Haitian migrants and results may help to determine the best strategies for screening, preventive efforts and interventions for mental health disorders in this population.

Theoretical Framework: The Stress Process Model

Pearlin and colleagues (1981) developed the stress process model, which articulates that when examining stress, three major conceptual domains should be explored: the sources of stress, the mediators and/or moderators of stress, and the manifestations of stress (Figure 1). The stress process framework has been applied principally to studies of depression and other mental health problems (Pearlin & Bierman, 2013). The source of stress can usually originate from two conditions: life events or chronic strains. Life events are described as discrete events that are relatively short in time with a defining start and endpoint. On the other end, chronic strains are usually continuous without a clear point of onset and termination. The impact of the life event is not only embedded in the change itself but on the magnitude, quality and quantity of events.

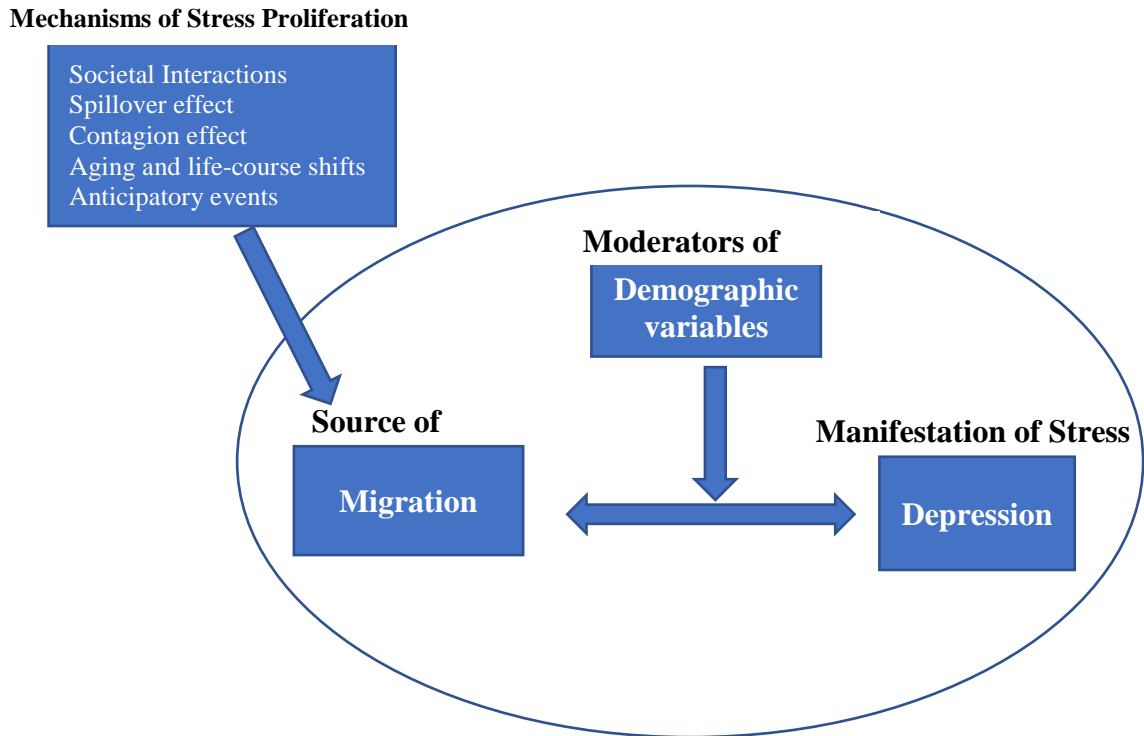


Figure 1. The Stress Process Model

This model demonstrates how and under what circumstances sources of stress arise. Many researchers have studied the life events and chronic strains as distinct and unrelated entities; however, Pearlin demonstrated that some life events may exert their influences through a life strain context; thus, resulting on the convergence of both life events and chronic strains to produce stress. Migration itself can be described as a life event because it is an acute phenomenon with pre-determined onset and termination, for most. However, adapting to the socioeconomic, cultural, environmental, political changes inherent in the migration process is a lifelong process with no termination point.

Pearlin indicated that life events might formulate new strains or aggravate existing strains, serving as “potent antecedents” (Pearlin, 1981). In this context, what Pearlin calls “stress proliferation” in his later works may ensue (Pearlin, Aneshensel, LeBlanc, 1997; Pearlin &

Bierman, 2013, p. 327). Stress proliferation is the tendency for stressors to beget additional stressors. New strains that may proliferate post migration while living in a new country includes exposure to discrimination, language barriers, loss of social status and networks, just to name a few. From these new strains, for example, language barriers, additional strains or stressors such as employment difficulties and social isolation may arise. Pearlin conceptualized stressors as “the external circumstances that challenge or obstruct” while stress denotes internal maladjustments that arise from stressors (Pearlin & Bierman, 2013). Pearlin refined the original 1981 stress process model to include the concept of stress proliferation during source of stress considerations (Pearlin, Aneshensel, LeBlanc, 1997; Pearlin & Bierman, 2013). Pearlin articulated that stress may proliferate from interactions with the social environment, anticipatory negative events, aging and life course-shifts, via a contagion effect where individuals experience stress as a result of a close family’s stressful experience (lateral proliferation), or via a spillover effect where secondary stressors arise from primary stressors (Pearlin, Aneshensel, LeBlanc, 1997; Pearlin & Bierman, 2013). The stress proliferation paradigm draws attention to a series of stressors along the life-course continuum instead of a single stressor at one point in time.

Another important facet of the stress process model is the pervasive influences exercised by socioeconomic and environmental factors and the unequal distribution of stressors. Individuals differ significantly in the ways and extent to which they are affected by sources of stress. Efforts to explain these differences are embedded in the examination of mediators or moderators capable of influencing the effects of stressors on mental health. As such, this study also focuses on demographic moderators of the relationship between migration-related stress and depression. In this study, particular potential moderators of interest included pre-migration factors such as

exposure and direct impact of the 2010 earthquake and post migration factors such as length of time in the U.S., age at arrival, income, immigration status and language preference.

Pearlin (1999) emphasized that stress does not follow a singular pathway or a set of rules. Given the wide range of responses to stress (cellular, organ-specific, physiological, emotional, biochemical, particular diseases and psychological), researchers must determine beforehand whether to assess manifestations of stress as a global trait or a situational state, or by using subjective symptoms versus objective signs. All approaches to studying manifestations of stress are vital to the stress process, however, in the present study, depression is the global indicator of stress of interest.

Purpose Statement/Aims

The literature documents that stress may be a precursor to depression and that many Haitian immigrants experience high levels of migration-related stress (Belizaire & Fuertes, 2011; Fawzi et al., 2009; Nicholas et al., 2007). Furthermore, sustained stress has been shown to over-activate the body's stress-response mechanism (e.g. cortisol, a predominant stress hormone), which may lead to major depression in vulnerable individuals (Cowen, 2002; Gillespie et al., 2005; McEwen, 2004). The following remain unknown and unclear in this population: 1) an understanding of the relationship between migration-related stress and depression, 2) risk factors for depression and migration-related stress, and 3) which migration-related stressors are most impactful and elevate the risk for depression. Haitian immigrants are understudied and underrepresented in mental health research, and as this population continues to grow in Florida, more knowledge will be needed in order to effectively treat depression as well as plan, intervene and promote mental health well-being. The long-term goal is to adapt/develop depression screening tools that are more culturally sensitive and consider the unique pre/post migration

stressors and risk factors and ensure that diagnostic tools and treatment options are better aligned with Haitian migrant's mental health needs and beliefs. Through the lens of the stress process model, this mixed methods sequential explanatory study pursued the following specific aims:

Aim 1: to identify demographic factors associated with migration-related stress

Aim 2: to identify demographic factors associated with depression

Aim 3: to examine the relationship between migration-related stress and depression overall and the extent to which this relationship is modified by other factors.

Aim 4: to provide in depth overview of the most significant migration-related stressors experienced by first generation Haitian migrants with high scores of migration-related stress.

Organization of Manuscript Chapters

The next three chapters of this dissertation focus on three manuscripts prepared for publication. Chapter two (Manuscript One) provides in-depth information regarding the demographic and mental health factors associated with migration-related stress (e.g. acculturative stress) via a review of the literature. Chapter three (Manuscript Two) describes the quantitative phase of this mixed method study and provides answers to the first three aims aforementioned. Chapter four (Manuscript Three) provides an in-depth overview of migration-related stress by identifying which migration-related stressors were ranked most stressful, and subsequently informs readers what aspect of each stressors was of most significance post-migration.

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CHAPTER TWO:
CORRELATES OF ACCULTURATIVE STRESS AMONG FIRST GENERATION
HISPANIC AND HAITIAN IMMIGRANTS: A REVIEW OF THE LITERATURE

Abstract

Given the rapid rise in Hispanic and Haitian immigrants to the US, it is imperative that we understand their experiences of stress. Past studies document higher acculturative stress among first generation immigrants; however, these studies have not synthesized the literature to expose the stressors that may be unique to first generation immigrants. This literature review explored the factors that correlate and may predict acculturative stress among first generation Hispanic and Haitian immigrants, with a focus on highlighting the small amount of work conducted with Haitian immigrants in particular, who have been generally neglected in such research. Twenty-four studies published in peer-reviewed journals between 2000-2016 were examined. Themes emerged in the results that suggested different factors associated with acculturative stress in Hispanic and Haitian first-generation immigrants. Among first generation Hispanic immigrants, significant correlates of acculturative stress included finances, education, English language skill, shifts in family dynamics, discrimination, level of satisfaction with decision to move, violated expectations regarding migration, and migration status. The aforementioned factors were also associated with important indicators of physical and psychological health: including depression, anxiety, suicidal ideation, auditory hallucinations, and psychological well-being. Among first generation Haitian immigrants, correlates of acculturative stress included English language proficiency, contentment with life in the US, inadequate coping, relational anxiety, and depression. Synthesis and review of this literature provides a comprehensive picture of the contextual, sociodemographic and health factors associated with acculturative stress among first generation Hispanic and Haitian immigrants. Importantly, the review highlighted the current knowledge gap in the acculturative stress literature for Haitian immigrants, including identifying areas where additional research would be helpful and is necessary.

Keywords: acculturative stress, migration, mental health, first generation Hispanic and Haitian immigrants,

Introduction

Global conflict, environmental disasters, economic necessity and the need for a better life continue to drive one of the highest levels of migration in history. Approximately 192 million of the world's populations are migrants (Zong & Batalova, 2016). As of 2014, more than 42 million immigrants reside in the United States (US), according to the Census Bureau data (Zong & Batalova, 2016). Hispanic and Haitian immigrants represent a significant number of this expansion. Among either Latinos, or persons of Hispanic descent, the fastest growing minority groups in the US, roughly 19 million are immigrants (Zong & Batalova, 2016). Haitian migration demonstrates a similar pattern, with an upsurge of migrants in the US. Between 1980 and 2000, such that the Haitian population residing in the US more than quadrupled from 92,000 people to 419,000 people. By 2012, this immigrant population stood at more than 900,000, representing the second largest Black migrant population in the US (Sanon, Mohammed, & McCullagh 2014).

Migration, whether voluntary or involuntary, entails many changes. Before leaving their native country, many first-generation immigrants experience stress related to violence, religious persecution, poverty, political oppression, starvation, and unsafe and unhealthy environmental exposures (Stepick, 1992; Torres, 2012). The process of adaptation includes a settlement period during which immigrants are forging their new identity, using elements from both their home and host culture (Berry, 1997, 2003). Forced with a different set of social, economic, cultural and ecological factors, immigrants have to readjust many aspects of their life, and find ways to assimilate into a new culture. In the social science literature, this process is often termed acculturation (Berry, 1997, 2003). As immigrants adjust to life in an alien country, they must cope with the loss of friends and family (Concha, Sanchez, De La Rosa & Villar, 2013), loss of wages and social status (Caplan, 2007), learning an unfamiliar language and culture (Lueck &

Wilson, 2011), discrimination/racial stereotyping (Finch & Vega, 2000; Walker, Ruiz, Chinn, Marti & Ricks, 2012), and restrictive immigration policies (Arbona, Olvera, & Rodriguez, 2010). As such, contact with the host culture may symbolize external stressors for first generation Haitian and Latino/Hispanic immigrants, especially during the first few years. The subsequent sections aim to provide a brief overview of the theoretical underpinning of acculturative stress that drives this review.

Acculturative Stress Framework

Berry's (1997) acculturation model proposes that as a result of contact with two or more cultures, an immigrant may experience at least three forms of change. The first change is associated with acculturation, which is defined as changes to everyday values, beliefs and practices while assimilating in an alien country. Depending on the acculturation pathway chosen (*assimilation, separation, integration or marginalization; see Berry, 1997*), behavioral shifts may be seen in dietary habits, attire, attitudes toward religion, leisure pursuits, just to name a few. The second level of change suggested by Berry's acculturation model addresses the emotional reactions/stress that arise during critical cultural conflicts, created by the acculturation process, often called acculturative stress (Berry, 1997). Acculturative stress arises as immigrants face challenges from cultural conflicts/differences that are not easily dealt with by conveniently adjusting or adapting to them (Berry, 2006). Using discrimination as an example of acculturative stress, experiences of discrimination that are dissimilar from prior experiences in one's native country can be appraised negatively and too demanding to overcome, resulting in subsequent impact on one's health (Lueck & Wilson, 2011). In the face of major challenges accompanied with the inability to properly cope, Berry suggested that psychological disturbances, that he termed "psychopathology" or mental health disorders (the third level of change), such as

depression and anxiety could ensue (Berry, 1997; 2006). Evidence supports that high levels of acculturative stress may promulgate declines in overall health, especially mental health (Berry, 2006).

Acculturative Stress

Acculturative stress has come to be accepted as a complex psychosocial and psychocultural experience for immigrants. In spite of the environmental, structural, cultural, social, and economical changes involved in the post migration period, Berry hypothesized that the overall process of adaptation to a new society appears to have a degree of universality for acculturating groups (1997). However, what fluctuates from immigrant to immigrant is the level of difficulty and stress faced during the acculturation process (e.g., acculturative stress), which has been shown to have the greatest impact on the mental and emotional health of migrants, rather than just the acculturation process (Berry, 1997, 2006). With no gold standard conceptualization of acculturative stress, this paper defines acculturative stress as the psychosocial stress faced by immigrants as a result of assimilating and adapting in a new country (Arbona et al., 2010; Berry 2006; Rudmin, 2009). In light of the ambiguities in the conceptualization of acculturative stress, Caplan's (2007) conceptual analysis also helped refined the concept of acculturative stress by identifying contextual factors. Caplan (2007) identified three major types of acculturative stressors among Latino immigrants in particular: instrumental/environmental (e.g. employment, access to health care, language), social/interpersonal (ex: reestablishment of sources of family and social support) and societal (discrimination, fear of deportation). The correlation between acculturative stressors and health can be governed by a number of moderating variables as identified by Caplan, which may include pre-migration

circumstances, nature and socio-political context of new culture, and personal characteristic of acculturating group/persons (Berry, 1997, 2003; Schemer et al., 2014).

There are also several measures of acculturative stress. Rudmin (2009) identified three types of acculturative stress measures in the literature: projective psychiatric measures, psychometric measures of mental health, and direct measures of acculturative stress. While psychiatric measures are no longer used, the remaining two types of acculturative stress reflect the measures used in the current acculturative stress literature and by articles in this review. Psychometric measures of mental health capture the negative outcomes of stress under the postulation that acculturative stress is associated with diminished mental health status. Direct measures of acculturative stress focus on construct of stress directly attributable to the acculturation process (e.g. English language proficiency) that extends beyond general life stresses.

Since the introduction of the acculturative stress concept, many researchers have explored the predictors, correlates and health outcome of acculturative stress in a diverse group of immigrants across a mixture of generations (1st generation migrants through 4th generation migrants) (Lueck & Wilson, 2011; Rogers-Sirin, 2013). While immigrants from all generations can face migration-related stressors, first generation/recent immigrants experience the greatest degree of stressors (Gil & Vega, 1996; Concha, Sanchez, De La Rosa & Villar, 2013; Sanchez, Dillon Concha & De La Rosa, 2015). One study showed that first generation immigrants experienced on average about 13% more acculturative stress than second generation immigrants; while refugees experienced about 3.2% more stress than those who voluntarily left their country of origin (Lueck & Wilson, 2011). First generation immigrants also face unique acculturative stress experiences in respect to English language skills, relocation stress, and cultural conflict.

For instance, first generation Latino immigrants encounter daunting pressures to learn English and adapt to a new culture; however, later generations face increasing demands to learn Spanish and conform to the Latino-oriented culture of previous generations (Rodriguez, Myers, Mira, Flores, & Garcia-Hernandez, 2002). Furthermore, compared to White immigrants, Asian (Polanco-Roman & Miranda, 2013; Rogers-Sirin, 2013) Latino/Hispanic, and Black (Rogers-Sirin, 2013) immigrants experienced greater levels of acculturative stress. Given that substantial disparities exist among the acculturative stress of migrants from differing generational status, researchers should strive to better understand which factors contribute to acculturative stressors among first generation immigrants, especially Black and Latino immigrants.

Significance/Objectives

This literature review explores the current empirical evidence on acculturative stress among first generation immigrants coming from Latin American countries and from Haiti, two distinct populations in the US, to identify factors that correlate and may predict acculturative stress. These two populations were chosen because the bulk of the acculturative stress literature focuses primarily on Latinos/Hispanic migrants providing significant data to draw conclusions and I wanted to examine research on Haiti as an understudied group who may face similar stressors as those coming from Latin American countries. With the increasing number of Hispanic and Haitian immigrants, it is imperative that we examine factors associated with acculturative stress and its impact on mental health outcomes. Understanding contributing factors of acculturative stress among those who are most affected or more likely to experience acculturative stress, e.g. first-generation immigrants, can provide information that may ultimately be used by clinicians to plan, implement, and evaluate appropriate health promotion, assessment techniques, and interventions or programs for Hispanic and Haitian migrants.

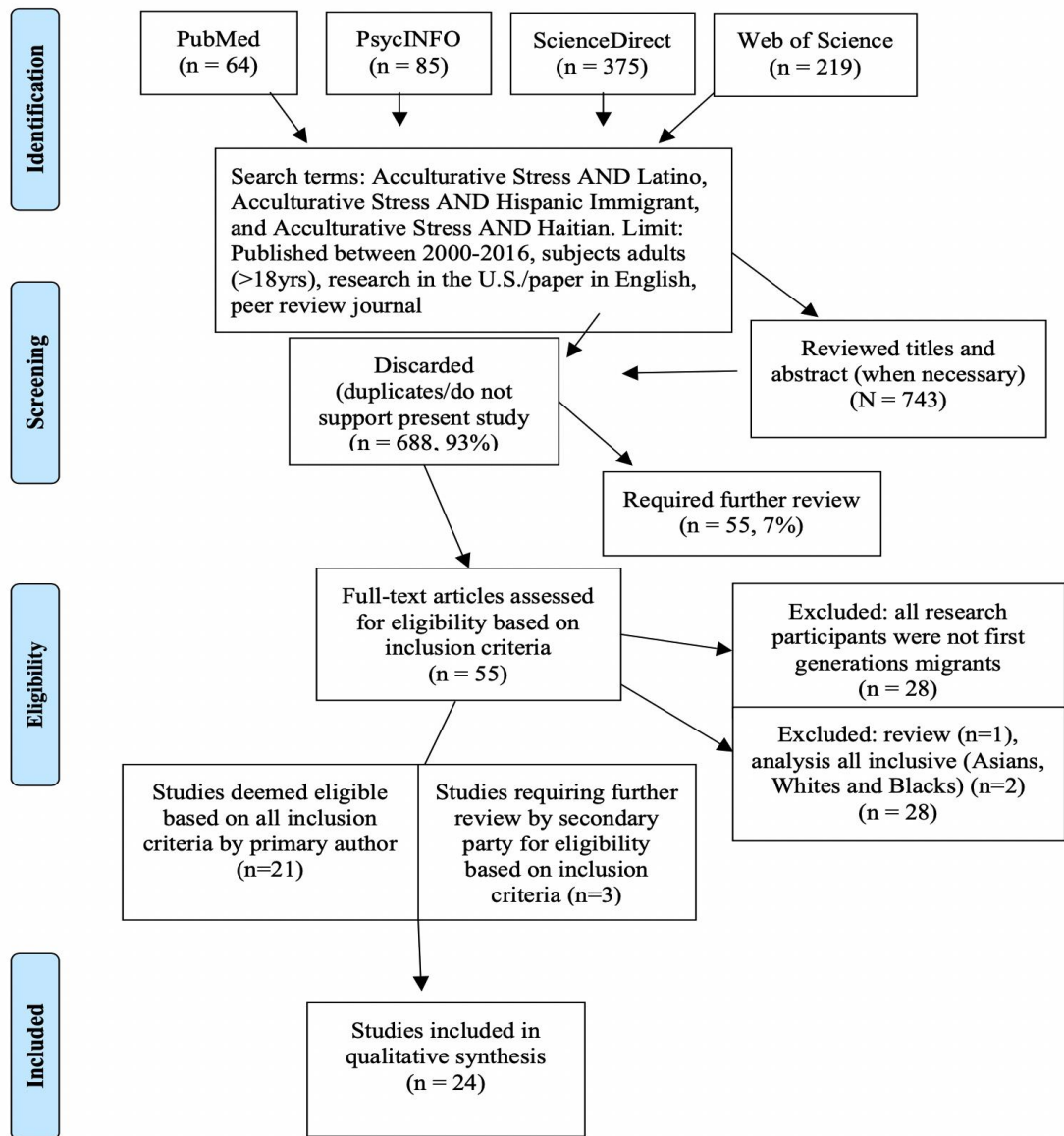
Methods

A systematic search was implemented to identify research studies conducted in the context of acculturative stress, specifically focusing on the Latino and Haitian immigrant population in the US. Four research databases were searched: PubMed, Web of Science, PsychINFO, and ScienceDirect. The search terms used for all the databases included: acculturative stress AND Latino, acculturative stress AND Hispanic immigrant, acculturative stress AND Haitian, immigration stress and acculturation stress. Title, abstract, or full text of the articles were examined to determine the article's relevance to the review and the adherence to the inclusion criteria. Potential articles were reviewed and selected based on the established inclusion and exclusion criteria. Inclusion criteria were: 1) articles written in the English language; 2) original research/ articles conducted in the United States; 3) articles published within the last 16 years (2000-2016); 4) participants were Haitian and Hispanic/Latino first generation immigrant adults (>18 years of age); 6) articles examined acculturative or acculturation stress; and 7) articles published in peer reviewed journals. Exclusion criteria included 1) case studies; 2) unpublished studies; 3) abstract-only articles; 4) dissertations, and 5) studies containing participants from several migrant generations. The reference lists of retrieved articles were examined for any studies that may have been overlooked.

Electronic Search Results and Study Characteristics

A total of 743 articles were identified, 219 from Web of Science, 85 from PsychInfo, 64 from PubMed and 375 from ScienceDirect (Figure 1). Abstracts of these potential articles were screened using the inclusion/exclusion criteria. Among this initial screening, 688 articles were eliminated because they were duplicates, or did not meet the inclusion criteria. Additional articles were eliminated if they merged results of all four generations of migrants or did not

exclude Asian and/or White immigrants from their analysis. A total of 24 articles were reviewed; 21 articles were about Latino/Hispanic migrants and three articles were about Haitian migrants. Twenty-one articles derived data from cross sectional studies, compared to three articles based on longitudinal studies.



Adapted from: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

Figure 1. Literature Review Flow Diagram

Results

The literature results are organized by the following themes: measures of acculturative stress used by studies in this review, and demographic correlates of acculturative stress and health outcomes that correlated with acculturative stress. Table 1 provides a summary of findings from each article included in this review. Additional information about study measures, sample size and study design are also provided in Table 1.

Measures of Acculturative Stress

Fourteen articles in this review used either a psychometric measure of mental health or a measure that emerged from components of psychometric measures of mental health to operationalize acculturative stress. The well-known Hispanic Stress Inventory-Immigrant version (HSI-I) (Cervantes et al., 1991) was used by eight articles in this review; however, two out of eight only used the immigration stress subscale of HSI-I, while Conway et al. (2007) used 20 of the 73 items of the HSI-I. Five articles were based on the National Latino and Asian Study (NLAAS) national study, which used nine dichotomous items that originated from the HSI and the Mexican American Prevalence and Services Survey (MAPSS). However, the Bekteshi et al. studies (Bekteshi, van Hook & Matthew, 2015; Bekteshi, van Hook, Levin, Kang, and Van Tran, 2016) separated items dealing with discrimination and acculturative stress, resulting in a six dichotomous items survey. It is important to note that the MAPSS was adapted from the Occupational/Emotional Stress subscale of the HSI (Cervantes, Padilla et al., 1991), and the NLAAS measure was modified from the MAPSS, highlighting the interconnection between the three measures. The remaining 10 articles in this review used the Societal, Attitudinal, Familial, and Environmental (SAFE) and the Multidimensional Acculturative Stress Inventory (MASI) acculturative stress scale; both identified as direct measures of acculturative stress.

Demographic Correlates of Acculturative Stress

Social Factors.

Language.

Several studies found that English language proficiency and adherence to Spanish were significant predictors of acculturative stress among Haitian and Hispanic immigrants. English skills emerged as the strongest predictor of acculturative stress in a sample of 639 Latinas (Bekteshi & van Hook, 2015). English language skills were related to lesser levels of acculturative stress among Latinas (Bekteshi et al., 2016; Bekteshi, van Hook & Matthew, 2015). When the association between English proficiency and acculturative stress was measured from the same participants at three different time points after migration (12, 24, 36 months), a significant negative correlation was observed between English proficiency and acculturative stress among Hispanics (Concha, Sanchez, De La Rosa, & Villar, 2013). In contrast, Miranda and Matheny (2000) found that preference for Spanish language was a significant predictor of acculturative stress. Three other studies demonstrated connections between ability to communicate in English and acculturative stress among Hispanics (Arbona et al., 2010; Dillon, De La Rosa, Ibanez, 2013; Negy, Schwartz, & Reig-Ferre, 2009). While eight articles examined the relationship between English language proficiency and acculturative stress, only one focused on Haitian immigrants. Among Haitian immigrants, a similar pattern to Hispanic immigrants was observed, where English fluency was significantly associated with lower levels of acculturative stress (Belizaire & Fuertes, 2011). Proficiency in the dominant language (English) emerged as a significant acculturative stressor for first generation Hispanic and Haitian immigrants; however, more studies should explore this variable among the Haitian population.

Family Dynamics.

Family dysfunction/cohesion, separation from family, pre-immigration friends, emotional/informational support, support from parents, family members in the US, materialized as significant predictors of acculturative stress. Among Hispanics, absence of pre-immigration friends, lack of emotional/ information support, and lack of support from children were associated with greater acculturation-related stress after living in the US for 12 months, 24 months and 36 months, respectively (Concha et al., 2013). At 12 months, support from parents was positively related to acculturative stress (Concha et al., 2013). Bekteshi and van Hook (2015) and Bekteshi et al. (2016) found that difficulties visiting family abroad and family conflicts were linked with higher acculturative stress among Latinas. In another study, high family conflict was associated with high religiosity, which was subsequently correlated with higher levels of acculturative stress (Bekteshi et al., 2015). In line with the aforementioned studies, Dillon and colleagues (2013) found that among recent Latino immigrants, those who had family members in the US, as well as those with more pre and post-migration family cohesion experienced less acculturative stress. Furthermore, this study discovered that a decline in family cohesion (as was observed with more time in the US) was associated with higher level of acculturative stress. In another study by Ibanez and colleagues (2015), which used the same dataset as Dillon et al. (2013), a significant positive relationship existed between family cohesion and acculturative stress. However, this study showed that family cohesion diminished less over time for those who encountered more acculturative stress (Ibanez et al., 2015). Arbona et al. (2010) also demonstrated a significant association between acculturative stress and family structure. Among Latinas, lower social support was associated with elevated acculturative stress (Kiang, Grzywacz, Marín, Arcury & Quandt, 2010). Nicolas, DeSilva, Prater, and Bronkoski

(2009) found a significant correlation between empathic family stress (defined as stress and worry experienced in response to family members' problems) and acculturative stress among Haitian immigrants. All studies that examined the relationship of social family dynamics and acculturative stress were concentrated in the Latino/Hispanic population, which helps to identify a major gap in knowledge about first generation Haitian immigrants.

Education.

Education can play a significant role in migrants' acculturative stress experiences. Salas-Wright, Robles, Vaughn, Cordova, and Perez-Figueroa (2015) identified four acculturative stress subgroups: low acculturative stress (LAS), social and linguistic acculturative stress (SLAS), acculturative stress, no fear of deportation (ASnFD), and acculturative stress, fear of deportation (ASFD). The highest number of participants who completed college belonged to the LAS group, and the smallest proportion of participants who completed college were part of the SLAS group. Members of the ASFD group had the highest percentage of respondents with less than a high school education (78.10%). Current studies do not examine the relationship between education and acculturative stress among Haitian immigrants.

Economy.

Economic factors such as finances, financial constraint and employment were associated with acculturative stress among first generation immigrants. Financial constraint was significantly associated with higher acculturative stress among a sample of immigrant Latinas (Bekteshi & van Hook, 2015; Bekteshi et al., 2016). In another study, meeting economic expectations was significantly associated with lower acculturative stress among Hispanic immigrants, but only among men (Kiang et al., 2010). When examining the relationship between employment/finances and acculturative stress, this association was not statistically significant at

the 95% confidence level. However, these findings were marginally significant ($p=0.07$) denoting a trend, which supports that meeting economic and employment needs was correlated to less acculturative stress among this sample of Hispanics (Negy, Schwartz, & Reig-Ferre, 2009). In another study, members of the LAS group had the highest mean household income ($M = 60,850$), and respondents that experienced moderate-high acculturative stress with fear of deportation had the lowest mean of household income ($M = 25,444$) (Salas-Wright et al., 2015). No studies in this review examined the impact of economic factors on acculturative stress among Haitian immigrants.

Environmental Factors.

Discriminatory experiences (in all forms) including major racist events and daily racial discrimination hassles were associated with high levels of acculturative stress among first generation Dominican immigrants (Dawson & Panchanadeswaran, 2010). After controlling for seven covariates, discrimination accounted for 35% of the variance in acculturative stress (Dawson & Panchanadeswaran, 2010). Jagers and MacNeil (2015) found a significant association between acculturative stress and discrimination among Latinos. When pre-migration expectations in comparison to post-migration experiences were analyzed in a group of Hispanic immigrants, dissatisfaction with post-migration experiences in regard to community safety and racism were associated with more reports of acculturative stress (Negy, Schwartz, & Reig-Ferre, 2009). Contentment with the decision to move to the US and years in the US were negatively correlated with acculturative stress; while, perceived racial discrimination was positively associated with acculturative stress in another study (Bekteshi & van Hook, 2015; Bekteshi et al., 2016). In Bekteshi and van Hook (2015), US climate context such as perceived racial discrimination and happiness with the decision to move to the US exhibited the strongest impact

on acculturative stress. In three estimated models, racial and ethnic discrimination emerged as one of the strongest correlates of acculturative stress (Bekteshi et al., 2016). Among recent Latinos in the US, acculturative stress was found to decrease over time (from 12 to 36 months) (Concha et al., 2013). Subsequently, discrimination and time was found to interact with each other in their relationship with acculturative stress. At differing levels of discrimination, Latina immigrants who have been living in the US for five to ten years experienced higher levels of acculturative stress (Bekteshi & van Hook, 2015). For a group of Haitian immigrant women, greater levels of enjoyment of life in the US was associated with reduced levels of acculturative stress (Nicolas & Smith, 2013). Violated expectations between pre and post migration experiences and discrimination are important factors in the context of acculturative stress for Haitian immigrants; however, this review found no studies in the literature with such a focus.

Legal Factors.

Legal factors that emerged as significant predictors of acculturative stress in this review, included documentation status, immigration status and fear of deportation. Arbona and colleagues (2010) examined legal factors that predicted two dimensions of acculturative stress: extrafamilial stress and intrafamilial stress. Extrafamilial acculturative stress implicated stress related to economic, occupational and migration issues; while intrafamilial acculturative stress involved stress related to marital, parental, cultural and family challenges. In this study, undocumented immigrants recounted higher levels of extrafamilial acculturative stress (Arbona et al., 2010). Gender and undocumented status explained 12% of the variance in extrafamilial acculturative stress. When fear of deportation was added in the third step of the regression model, it contributed an additional 21% of the variance to extrafamilial acculturative stress. Fear of deportation remained the only immigration stressor to provide unique variance to extrafamilial

acculturative stress when all other variables were accounted for (Arbona et al., 2010). Fear of deportation was the only significant predictor of intrafamilial acculturative stress (Arbona et al., 2010). Undocumented immigrants reported more acculturative stress in two other studies in this review (Dillon et al., 2013; Sanchez, Dillon, & De La Rosa, 2015). The results described above focused solely on the Hispanic immigrant population.

Mental Health Correlates of Acculturative Stress

Depression and Anxiety.

Eight studies indicated that as acculturative stress factors escalate so does the risk of developing depression among Latinos and Haitian immigrants living in the US. Measurement of depression included the Center for Epidemiological Studies Depression Scale (CESD) (5 studies), the revised CESD (1 study), Beck's Depression Inventory (1 study), and the World Mental Health Initiatives Composite International Diagnostic (1 study). For Hispanics, high levels of acculturative stress significantly correlated with high levels of depression (Hovey, 2000a; Hovey, 2000b; Hovey & Magana, 2000). When acculturative stress, social support, family functioning, expectations for the future, church attendance, perception of religiosity, income, and gender were investigated as predictors of depression, acculturative stress remained the strongest predictor of depression ($p < .0001$) and accounted for 29% of the variance in depression (Hovey, 2000a). Among Hispanic immigrants who migrated at a young age, acculturative stress was found to have a direct impact on depressive symptoms (Jagers & MacNeil, 2015). In another study, women who conveyed poor family functioning and high acculturative stress had higher scores of depression in comparison to men (Sarmiento & Cardemil, 2009). In a sample of 134 Haitian immigrants, a significant positive relationship was found between depression and acculturative stress ($p < .01$) (Nicolas, DeSilva, Prater, &

Bronkoski, 2009). In another study with Haitian immigrants, acculturative stress was not significantly correlated with depression; however, higher reporting of enjoyment in life was associated with lower acculturative stress (Nicolas & Smith, 2013). Another factor that remained a constant was that Latino and Haitian women were more likely to present with higher level of depression than their male counterparts (Nicolas et al., 2009; Sarmiento & Cardemil, 2009). For Hispanics, acculturative stress was related to greater depression but only when immigrants were newly arrived (Kiang et al., 2010). In this study, acculturative stressors were associated with depression after controlling for anxiety, and a one-unit increase in acculturative stress increased the odds of meeting criteria for comorbidity (anxiety and depression) by 4% (Kiang et al., 2010).

Both, high degrees of acculturative stress and high degrees of anxiety were associated to elevated levels of depression among Hispanics (Hovey & Magana, 2000). After controlling for age, gender, Hispanic heritage, household income, education level, region of the US, and age at the time of immigration, members of the ASFD class were 3.5 times more likely than members of the LAS class to meet criteria for generalized anxiety disorder as measured by the World Mental Health Composite International Diagnostic Interview scale (Salas-Wright et al., 2015). In addition, when accounting for the aforementioned variables, marginal differences were identified for the ASFD and ASnFD classes in regard to major depressive disorder (Salas-Wright et al., 2015). Greater acculturative stress was significantly associated with high level of anxiety (Hovey & Magana, 2000; Kiang et al., 2010). In both studies, the Anxiety scale of the Personality Assessment Inventory measured anxiety. In three multivariate models, acculturative stress was significantly correlated with psychological distress (operationalized using the Kessler's Psychological Distress Scale, which surveys symptom of depression and anxiety) (Bekteshi & van Hook, 2015). However, when age, family conflict, income, and financial constraints (all

factors that significantly correlated with acculturative stress) were controlled for in a fourth model, acculturative stress was no longer significantly associated with psychological distress (Bekteshi & van Hook, 2015). The author could not locate any articles that examined the association between acculturative stress and anxiety among first generation Haitian immigrants. However, one study with Haitian immigrants did examine the relationship between attachment-related anxiety (defined as fear of rejection and feelings of abandonment from a romantic companion) and acculturative stress (Belizaire & Fuertes, 2011). In a sample of 155 Haitian immigrants, attachment-related anxiety and maladaptive coping were significant positive predictors of acculturative stress. Participants with high attachment-related anxiety experienced more acculturative stress (Belizaire & Fuertes, 2011).

Suicide, Psychological Well-Being and Other Mental Illness.

While depression and anxiety remain the most studied mental health outcomes of acculturative stress, acculturative stress has been associated with other mental illnesses and well-being. Acculturative stress was negatively associated with psychological well-being (Kim, Hogge, Salvisberg, 2014). In this study, self-esteem moderated the relationship between acculturative stress and psychological well-being, while ethnic identity exacerbated the negative effect of acculturative stress on psychological well-being (Kim et al., 2014). Among the three subtypes of psychotic-like experience (visual hallucinations, hearing voices, delusions), acculturative stress was associated with hearing voices in Latino immigrants (DeVylder et al., 2013). Greater acculturative stress, and high levels of depression were also significantly correlated with high levels of suicidal ideation (Hovey, 2000b) among Hispanics. Acculturative stress emerged as a significant independent predictor of suicidal ideation (Hovey, 2000a). In Puerto Rican immigrants who suffered from substance abuse disorders, they were more likely to

experience co-occurring mood disorders when they conveyed high levels of acculturative stress (Conway et al., 2007). A positive association was also found between affective disorders and acculturative stress (Conway et al., 2007). While this review provides evidence that exposure to acculturative stressors is a risk factor for adverse mental health outcomes among first generation Hispanic immigrants, more research will be needed among Haitian immigrants to determine whether the pattern observed amongst Hispanic immigrants holds true for them as well.

Discussion

This review is one of the first to focus on the correlates and predictors of acculturative stress among first generation Haitian and Hispanic immigrants. Though researchers have studied acculturative stress among the Latino/Hispanic population extensively, many studies do not differentiate among generational status and do not provide an in-depth understanding of acculturative stress among first generation immigrants. In comparison to their US-born counterparts, first-generation immigrants undergo distinctive migration and acculturation related stressors, which encompasses events leading up to migration, experiences during migration, and early settlement experiences (Schenker et al., 2014). Aside from highlighting the acculturative stress factors that may be unique to just first-generation immigrants, this review reinforces the findings obtained from Caplan's (2007) conceptual framework and provides additional support regarding the contextual factors that impact acculturative stress as well as the health outcomes associated with acculturative stress.

Significant differences exist in the experiences of first generation immigrants in comparison to later generations. Our review revealed that social support, English language skills, family dynamics, education, and meeting economical needs emerged as significant social predictors of acculturative stress. All type of support, ranging from emotional, informational,

family, and social support was shown to mitigate the degree of acculturative stress and its health impact. Social support and perceived social support whether from friends, family, parents in the US and native countries can provide first generation immigrants with the resources available to cope with acculturative stress (Concha et al., 2013). On the other hand, family conflicts and decline in family cohesion can have the opposite impact on acculturative stress (Bekteshi & van Hook, 2015). Those who come to the US without relatively high levels of social support may be more susceptible to the strain associated with acculturative stressors. Over time, loss of native culture and support system, and longer periods of stress duration may be contributing both additively and/or multiplicatively to poorer health among Latino immigrants. The same notion could also apply to Haitian immigrants; however, to date, no studies have investigated the impact of support on acculturative stress for this population.

English language proficiency was a significant predictor of acculturative stress for both Hispanic and Haitian first-generation immigrants. In contrast to later generations who are born and raised in the US, where they get the opportunity to learn English early on in grade schools, first generation Hispanic and Haitian immigrant experience considerable stress as they adapt and learn English for the first time. Furthermore, first generation Haitian and Hispanic immigrants may face considerable discrimination when they speak English with their native accent. For instance, Haitian migrants were found to often be frustrated, ashamed, or embarrassed about speaking English (Saint-Jean & Crandall, 2005). In an environment where migrants are constantly pressured to learn and speak English, English competency pressures remain a fundamental aspect of acculturative stress, especially for first generations immigrants (Rodriguez et al., 2002; Sanchez et al., 2015).

While only one study in this review examined level of education and acculturative stress among first generation immigrants, past studies among immigrants indicate a significant inverse relationship between education and acculturative stress (Berry et al., 1987). Other studies have also showed that international students experience elevated level of acculturative stress when pursuing higher education degrees in the US (Sullivan & Kashubeck-West, 2015). Finances and employment status emerged as significant predictor of acculturative stress for first generation immigrants in this review (Yeh & Inose, 2003; Poyzrali, Kavanaugh, Baker, & Al-Timimi, 2004). First generation immigrant adults face substantial hurdles as they start over and attempt to find job in the US and obtain financial stability. For immigrants who were well-established professionals in their career in their native countries, vocational and career readjustment in the US may pose significant challenges because of the loss of career identity, professional life, and lack of foreign credential recognition (Chen, 2008). This review demonstrated a strong and pervasive link between acculturative stress and the social characteristic of immigrants and their families among first generation immigrants.

Acculturative stress among first generation immigrants cannot be fully understood without taking in consideration the environmental and US climate contexts that shape and sustain them while residing in the new country. Environmental factors like exposure to racism and discrimination, dissatisfaction with post-migration experiences regarding community safety and happiness with the decision to move to the US significantly correlated with acculturative stress in this review (Bekteshi & van Hook, 2015; Bekteshi et al., 2016; Dawson & Panchanadeswaran, 2010; Negy, Schwartz, & Reig-Ferre, 2009). Approximately, 50 percent of Hispanics have experienced discrimination and unfair treatment because of their race and ethnicity (Pew Research Center, 2016). Haitians immigrants have faced discrimination as alleged bringers of

disease and “boat people” as well as discrimination related to their ethnicity, culture, and skin color (Stepick 1992; Stepick & Swartz, 1998). Migrants’ experience of discrimination may become internalized and lead to mental health disorders such as anxiety and depression (Gomez, Miranda, & Polanco, 2011). Fear of deportation and documentation/legal status are also important US climate factors that propagate acculturative stressors for both Haitian and Hispanic first-generation migrants. Documentation, residency and legal status are significant source of prolonged acculturative stress and uncertainty regarding legal status and the hovering fear of deportation can contribute significant stress and mental health issues among immigrants (Arbona et al., 2010). For instance, the dissolution of the Temporary Protected Status (TPS) and Deferred Action for Childhood Arrivals (DACA) has contributed to significant psychological distress for immigrants and their children as they face threat of deportation (Roche, Vaquera, White & Rivera, 2018). It is plausible to hypothesize that US climate context and legal factors are important contributors to acculturative stress for first generation immigrants.

The relationship between level of acculturative stressors and health outcomes is complex and multidimensional. Results of this analysis indicated that acculturative stress significantly affects the lives of many Latino and Haitian immigrants. Overall, our findings suggest that higher acculturative stress is correlated with negative mental health outcomes such as increased depressive symptoms, suicidality, increased anxiety, and psychotic-like experiences. The findings of this review support the notion that the pressures and demands associated with being an immigrant in the US and living in an environment that often devalues one’s ethnic group increases the likelihood of experiencing mental health problems. Those with greater acculturative stress reported more symptoms of depression. Past research posits that many factors are associated with the risk for the development of depression among immigrants, which include low

socioeconomic status, linguistic barriers, limited social network, racial or ethnic discrimination, and acculturation (Morales et al., 2002; Finch & Vega, 2003). In some combination, these factors constitute the notion of acculturative stress, which is increasingly posited as a risk factor for depression in immigrants. Higher acculturative stress was associated with poorer psychological functioning and higher levels of anxiety. Parental support, social support, and active coping provided buffers to the relationship between acculturative stress and anxiety (Finch & Vega, 2003). The acculturative stress model posits that perceiving a situation as being threatening or beyond one's coping resources causes stress and leads to negative health affect (Berry, 2003). Pressures to assimilate, lack of intercultural competence, or discrimination are perceived as exceeding one's ability to cope, which may then lead to a subjective perception of stress and negative emotional states such as anxiety, psychotic like experiences and depression.

Limitations and Future Directions

The generalizability of the main findings to the broader Hispanic and Haitian population is difficult and constitutes an issue. Because Hispanics/Latinos are a heterogeneous group, aggregating data across subgroups is another limitation, because this procedure may overlook patterns and characteristics that may be evident to a specific country of origin. Another limitation of this review was that the vast majority of articles included were cross-sectional and quantitative in nature. Understanding acculturative stress and stressors and the mental health of migrants require longitudinal data analysis and the identification and recruitment of a cohort to be followed over time (Edberg, Cleary, & Vyas, 2011). These approaches encompass a large number of data items, and because of likely attrition in longitudinal studies, large sample sizes and high participation rates will be necessary (Tsai & Burns, 2015). This is likely to be challenging because migrant populations, including Haitian and Hispanic, find it difficult to

cooperate in such research because of fear and lack of trust. Nonetheless, these challenges can be overcome; it has certainly been done before.

All articles included in this review were quantitative in design because the search did not reveal any qualitative studies that examined acculturative stress among the two populations of interest. While the benefits of quantitative studies are enormous and may be preferred among social science researchers; qualitative and mixed method studies are a must to better comprehend complex phenomenon such as acculturation and migration stress (Creswell & Creswell, 2005). Researchers are encouraged to use qualitative methods to give a voice to the populations being studied instead of just only filling out predetermined response categories in standardized questionnaires. Neither method is sufficient by itself to capture the acculturative stress trends and mechanisms among Haitian and Hispanic immigrants and combination of both methods will results in a more robust analysis of the set of interrelated constructs in their social and structural context (Creswell & Creswell, 2005). Finally, both macro- and micro-level factors interact with each migrant to yield quite different mental and physical responses to migration-related stress across individuals; however, mainly the micro-level factors are assessed in the literature. Assessment of macro-level factors may benefit treatment planning and intervention by providing a nuanced depiction of the various acculturative stressors that may challenge Haitian and Hispanic immigrants.

Additionally, this review could not contribute any evidence related to many predictors and correlates of acculturative stress for first generation Haitian immigrants because there are limited studies in the literature. To bridge this gap, prospective studies will need to shift their population focus to include Haitian immigrants. While both the number of Haitian and Hispanic immigrants is growing, Haitian immigrants remain largely invisible in mental health research.

Until recently, there was little attention given to understanding the acculturative stressors, migration experiences and mental health of Haitian immigrants. Since the events of the 2010 earthquake, several studies have examined the mental health of Haitians post-earthquake (Wagenaar et al., 2012; Messiah et al., 2014; Rasmussen et al., 2015); however, the majority of these studies focused on Haitians living in Haiti, not the migrating and acculturating group of Haitians living in various cities in the US. An influencing factor is that Haitian migrants' status and growth has been overshadowed by the larger growth of Hispanic immigrants (especially those from Mexico and Latin America). Furthermore, it is also difficult to ascertain the mental health concerns specifically attributable to Haitian migrants, since they are often categorized as black because of skin color, not as a separate ethnic group. Although, Hispanic and Haitian immigrants may have similar settlement experiences in regard to discrimination, anti-immigrant sentiments, loss of social status and networks, employment difficulties, and language barriers (just to name a few), Haitian immigrants' acculturative stress experiences and mental health are further compounded by their triple minorities status (foreigner, black, and Creole speaking) (Stepick, 1992; Remy, 1996). Thus, this paper also emphasizes the need to examine stress associated with the acculturation and migration process among Haitian immigrants to bridge the current knowledge gap.

For states like Florida and New York, where most Haitian migrants reside, the urgency to better understand their mental health is even more evident. Haitians were one of the most mistreated groups of migrants in the US and continue to experience unique difficulties in finding acceptance. The heaviest burden of mental illness often falls upon those who are socially marginalized, disenfranchised, or oppressed (Besthorn & Saleebey, 2003). Since Haitian migrants form a considerable and essential group in the US, future studies are encouraged to

strive to better understand the factors or determinants that operate together as a dynamic system over time to shape Haitian migrant mental health, especially through their broader socioeconomic and political context of development. To impact health policies and interventions and assist clinicians to truly prevent and diagnose mental illness in Haitian immigrants, researchers must first understand the core issues that may propagate mental disorder among Haitian migrants like acculturative stress and migration-related stress. This is where I hope to make the greatest contribution to the literature. The collection of data that centers on the pre, during and post migration domains will ultimately be necessary in order to plan, implement, and evaluate appropriate mental health promotion and intervention programs for Haitian migrants.

Conclusion

Despite these limitations, this review is of significance for the identification of the prevalent predictors and correlates of acculturative stress among first generation Hispanic and Haitian immigrants. Numerous factors contributing to acculturative stress and mental illness for first generation immigrants were identified. However, these contributing factors likely do not operate as distinct factors, but in a co-occurring and interactive fashion with respect to the health of the Haitian and Hispanic population. Furthermore, the limitations identified serve as area of focus for future research. The results of this study point to the need to consider designing more rigorous studies among all major subgroup of migrants to better understand the relationship between determinants of health, immigration, and stress. This literature review provides evidence that experiences of acculturative stress are culturally specific, and thus, should be uniquely studied for migrant groups. Additionally, this review ultimately gives researchers, scientists, and policy-makers a view of significant factors associated with acculturative stress and mental health outcomes, which may help the direction of health promotion/health prevention programs and

policies that can reduce mental health disparities and mitigate the impact of stress among first generation immigrants.

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Table 1. Acculturative Stress Literature Review

Authors, date	Study Design	Sample	Acculturative Stress (AS) measures	Main Findings
Arbona et al., 2010	Cross sectional	416 Latino immigrants	Spanish version of the Hispanic Stress Inventory–Immigrant form (HSI-I)	Family separation, deficient mastery of the English language, fear of deportation and advocating for traditional values contributed to extrafamilial AS (EAS). Fear of deportation only significant predictor of intrafamilial AS.
Bekteshi & van Hook, 2015	Cross-sectional	639 Latina immigrants	NLAAS (2002) rated their level of agreement with 6 statements	Higher AS: U.S. climate context; financial constraints), global context (9/11 impact), and family/culture conflict. Lower AS: happiness with the U.S. move and years in the U.S and English skills and age.
Bekteshi, van Hook, & Matthew, 2015	Cross-sectional	639 Latina immigrants and 118 Puerto Rican–born women	NLAAS statements excluding the discrimination measure	Racial discrimination had the strongest effect on AS, followed by English skills, difficulties visiting family abroad, and age at immigration. Racial discrimination and financial constraints positively correlated with psychological distress.

Table 1. (Continued)

Authors, date	Study Design	Sample	Acculturative Stress (AS) measures	Main Findings
Bekteshi et al., 2016	Cross-sectional	630 Latina immigrants	NLAAS (2002) rated their level of agreement with 6 statements	With all Latinas subgroup mixed, the strongest potentiates to AS were family-cultural conflict and racial/ethnic discrimination, followed by difficulties visiting family abroad, financial constraint, level of religious participation and 9/11 impact. Among all the significant contributors of psychological distress, AS had the lowest coefficient.
Belizaire, & Fuertes 2011	Cross sectional	155 Haitian immigrants	The 24-item SAFE Acculturative Stress Scale	Anxiety attachment and maladaptive coping were significant positive predictors of acculturative stress correlation matrix. Participants tended to experience more acculturative stress.
Concha, Sanchez, De La Ro-sa, Villar, 2013	Prospective study (respondent-driven sampling)	527 recent Latino immigrants	Spanish version of the Hispanic Stress Inventory–Immigrant form (HSI-I)	Lack of pre-immigration friend, emotional/information, and children support contribute to AS. Increased levels of support from parents are associated with more AS.

Table 1. (Continued)

Authors, date	Study Design	Sample	Acculturative Stress (AS) measures	Main Findings
Conway et al., 2007	Cross-sectional	Puerto Ricans in New Haven N=109	Hispanic Stress Inventory (HSI)-only 20 items to New Haven participants only	Comorbid lifetime psychiatric disorder associated with AS. High level of AS: individuals with SUD, more likely to have co-occurring psychiatric disorder and mood disorders.
Dawson & Panchanadeswaran, 2010	Cross-sectional	283 immigrant Dominican adults	Spanish version of the Hispanic Stress Inventory–Immigrant form (HSI-I)	Experiences of all forms of discrimination were very highly correlated with AS levels. After controlling for seven covariates, discrimination accounted for 35% of the variance in AS.
DeVylder et. al., 2013	Cross sectional	2434 immigrants	NLAAS instrument 10 interview questions	AS correlated with hearing voices in Latino immigrants. Compared to Asians immigrants, Latinos experienced greater AS and prevalence of PLE.
Dillon, De La Rosa, & Ibanez, 2013	Prospective study (respondent-driven sampling)	405 recent Latino immigrants	Immigration Stress subscale of the Hispanic Stress Inventory Scale– Immigrant Version	Less AS associated with family members in U.S., having more pre/post immigration family cohesion. More AS correlated with +age, undocumented, less education, less English language competence. Reduction in family cohesion with time spent in the US was associated with AS.

Table 1. (Continued)

Authors, date	Study Design	Sample	Acculturative Stress (AS) measures	Main Findings
Hovey, 2000a	Cross-sectional Convenience sampling	114 adult Mexican immigrants.	SAFE Acculturative Stress Scale	Acculturative stress was the strongest predictor of depression and accounted for 29% of the variance in depression. AS significantly predicted suicidal ideation.
Hovey, 2000b	Cross-sectional	78 Central American immigrants	SAFE Acculturative Stress Scale	High AS correlated with high levels of depression. High AS, elevated levels of depression, and ineffective social support were significantly associated with high levels of suicidal ideation.
Hovey & Magaña, 2000	Cross-sectional	45 Mexican migrant farmworkers	SAFE Acculturative Stress Scale	High AS was associated with high levels of anxiety and depression. AS significant predictor of anxiety in multiple regression model ($B=.59$, $p<.0001$).
Miranda & Matheny, 2000	Random Sampling	197 Latinos	SAFE	Coping resources effectiveness emerged as the strongest predictor of AS, followed by acculturation, language use, family cohesion and length of residence in the US, respectively.

Table 1. (Continued)

Authors, date	Study Design	Sample	Acculturative Stress (AS) measures	Main Findings
Ibanez et al., 2015	Prospective study (respondent-driven sampling)	527 recent Latino immigrants	Immigration Stress subscale of the Hispanic Stress Inventory Scale– Immigrant Version	Increased AS was associated with decreased family cohesion (FC). Significant interaction effect between AS and time on FC: FC decreases less over time for those who experience more acculturative stress.
Jagers & MacNeil, 2015	Secondary data analysis of NLAAS (cross sectional)	581 Immigrant Latinos	Eight-item scale from the Mexican-American Prevalence and Services Survey	Acculturative stress had a direct impact on both dissonant acculturation and depressive symptoms among those who migrated at a young age. AS predicted discrimination.
Kiang et al., 2010	Cross sectional	150 Latino immigrants	The Societal, Attitudinal, Familial, and Environmental Acculturative (SAFE) Stress Scale	Acculturative stress was related to greater depression, but only when immigrants were newly arrived. For comorbidity (anxiety and depression), for every 1-unit increase in acculturative stress the odds of meeting caseness increased by 4.0%.

Table 1. (Continued)

Authors, date	Study Design	Sample	Acculturative Stress (AS) measures	Main Findings
Kim, Hogge & Salvisburg, 2014	Cross-sectional	171 first generation Mexican immigrant adults	36 items Multidimensional Acculturative Stress Inventory	ABAS and MBAS were negatively related to psychological well-being. Self-esteem moderated the relationship between two types of AS and psychological well-being. Ethnic identity exacerbated the negative effect of acculturative stress on psychological well-being.
Negy, Schwartz & Reig-Ferrer, 2009	Cross-sectional	112 Latino/Hispanic immigrant	21-item Societal, Attitudinal, Familial, and Environmental Acculturative (SAFE) Stress Scale.	Post-migration experiences (all 4 constructs) predicted AS. Greater difficulty in communication resulted in higher AS. Violated expectation between pre and post migration resulted in higher AS.
Nicolas, DeSilva, Prater, & Bronkoski, 2009	Cross sectional	134 Haitian immigrants	The 24-item SAFE Stress Scale.	A significant, positive relationship between depression and AS. Haitian women were more likely to present with higher level of depression than their male counterparts.
Nicolas & Smith, 2013	Cross sectional	79 Haitian immigrant women	The 24-item Societal, Attitudinal, Familial, and Environmental Acculturative (SAFE) Stress Scale.	Higher reporting of enjoyment in life was associated with lower acculturative stress. No significant relationship between AS and depression.

Table 1. (Continued)

Authors, date	Study Design	Sample	Acculturative Stress (AS) measures	Main Findings
Salas-Wright et al., 2015	Cross-sectional	1630 Hispanic immigrant from NLAAS	Nine dichotomous items from the His-panic Stress Inventory (HIS) and the Mexican American Prevalence and Services Study	Identified four distinct profiles of AS, including “Low AS” (38.40%); “Social and Linguistic Stress” (32.27%); “AS, No Fear of Deportation” (20.06%); and “AS, Fear of Deportation” (9.26%). Hispanic immigrants experiencing AS were more than 3.5 times more likely to meet DSM criteria for generalized anxiety disorder as compared with those experiencing relatively low levels of AS. Members of this group may be more likely to experience major depressive disorder.
Sanchez, Dillon, De La Rosa , 2015	Cross sectional	415 recent Latino immigrants	Spanish version of the Hispanic Stress Inventory–Immigrant form (HSI-I)	No significant associations between AS and alcohol use. Higher AS correlated with increased rates of both positive and negative religious coping. Female/undocumented participants reported more AS.

Table 1. (Continued)

Authors, date	Study Design	Sample	Acculturative Stress (AS) measures	Main Findings
Sarmiento & Cardemil, 2009	Cross sectional	40 Latino couples	Multidimensional Acculturative Stress Inventory (MASI)	High AS scores associated with depression scores for both men and women. AS moderated the relationship between family functioning and depression in woman but not men.

CHAPTER THREE:
MIGRATION-RELATED STRESS AND DEPRESSION AMONG FIRST GENERATION
HAITIAN IMMIGRANTS IN FLORIDA

Abstract

Previous studies, while limited, document high levels of depression among Haitian migrants, and postulate that migration-related stress may play a significant role. Recognizing, appropriately treating depression, and meeting the mental health needs of the growing number of Haitians migrants continue to pose a challenge because of differences in culture, beliefs, idiom of distress, expression of depression and specific stressors associated with migration. The primary aims of this study included: 1) to identify demographic factors associated with depression, 2) to identify demographic factors associated with migration-related stress, and 3) to examine the relationship between migration-related stress and depression, and the extent to which this relationship is modified by other factors, through the lens of the stress process model. This cross-sectional descriptive study used purposive sampling methods to recruit 76 first generation Haitian migrants living in the southeast region of Florida. Descriptive statistics, ANOVA, chi-square, Pearson correlations and multiple linear regressions were utilized to assess migration-related stress (Demands of Immigration), depression (Center for Epidemiological Studies Depression (CESD) and Zanmi Lasante Depression Symptom Inventory (ZLDSI)) and demographic variables. Findings showed a strong positive linear relationship between migration-related stress and depression (CESD ($r = .606, p < .000$) and ZLDSI ($r = .624, p < .000$)) and between CESD and ZLDSI ($r = .738, p < .000$). Migration-related stress was significantly associated with, age, age at migration, English language fluency, and number of children. Migration-related stress remained the strongest predictor of depression when controlling for all other significant predictors of depression (CESD: gender, income, education, and direct 2010 earthquake impact; ZLDSI: in Haiti for 2010 earthquake and moving to the US during first visit). Being in Haiti during the 2010 earthquake moderated the relationship between migration-related stress and depression (ZLDSI), showing an amplifying effect for depression between migration-related stress and earthquake exposure. When diagnosing and treating depression, clinicians and nurses should consider both the unique migration stressors and risk factors Haitian migrants may face, and the ethnic differences in their expression of depression. The use of culturally appropriate and validated instruments is instrumental to better capture depression among Haitians.

Introduction

The United States (US) is currently the home of the largest Haitian migrant population worldwide (Schulz & Batalova, 2017). In the US, more than 70% of all Haitian immigrants reside in just two states, Florida and New York (Schulz & Batalova, 2017). Camarota (2010) reported that about 46% of Haitian immigrants living in the US lived in Florida in 2008 and that number has only grown since. Major causes of migration for Haitians include economic disparity, family reunification, natural disasters, forced migration, globalization, safety and changes in migration policies (Bilham, 2010; Gage, & Hutchinson, 2006; Trouillot, 1990; Saint-Jean & Crandall, 2005; Stepick & Swartz, 1998). While Haitian migrants constitute one of the most vulnerable population groups in this country, they continue to be a significant part of the population expansion of the US, especially in Florida, where Haitian immigrants remain underrepresented in mental health research. Haitian immigrants have frequently endured significant exposure to poverty, violence, trauma, death, abuse, loss, political disorder, and devastations from natural disaster, all of which make this population extremely vulnerable to mental illness, such as depression (Bilham, 2010; Gage & Hutchinson, 2006; Trouillot, 1990; Saint-Jean & Crandall, 2005; Stepick & Swartz, 1998). This manuscript defines depression as a serious mental illness that negatively affects thought, actions and feelings (American Psychiatric Association, 2013). Empirical research is needed to better understand depression and its contributing factors among this population. Thus, the present study aimed to determine among Haitian immigrants' factors associated with migration-related stress and depression as separate constructs, the relationship between migration-related stress and depression in this population, and to what extent this relationship is modified by demographic variables.

Depression

While Blacks are less likely to suffer from depression in comparison to Whites, Blacks are less likely to get diagnosed and receive treatment and are more likely to suffer from the chronic and severe forms of depression (Alegria et al., 2008; Akincigil et al., 2012). Important differences in depression may exist between diverse Black ethnic groups; however, this distinction is rarely considered in mental health research. Moreover, immigrants are also more likely to suffer from depression while in the US, than those who remain in their native countries (Breslau et al., 2011; Cuadrado, Tabernero, & Briones, 2014; Kalibatseva & Leong, 2010). Haitian immigrants, the population of interest in this study, are often categorized broadly as Blacks in health research simply because of skin color, rather than as a separate ethnic group, making it difficult to ascertain the mental health needs of this population. Many Haitians in Haiti (even prior to migration) struggle with depression, and this number has only escalated since events of the 2010 earthquake and ensuing cholera epidemic (Allen, Leyva, Hilaire, Reich, & Martinez, 2016; Bell, 2001). For example, in 258 hospital patients in Haiti, remarkably, 54% met the criteria for major depression (Martsof, 2004) and about 64% of respondents showed moderate/severe depression in another cross-sectional study in Haiti (Wagenaar, Hagaman, Kaiser, McLean, & Kohrt, 2012). Furthermore, upon their arrival, Haitian immigrants experience significant risk factors for depression, while facing stressors associated with their skin color, minority status, social standing, language barriers, social stigma, and cultural beliefs and practices that differ from the mainstream culture (Allen et al., 2016; Saint & Crandall, 2005; Stepick & Swartz, 1998).

Past studies have demonstrated that Haitian migrants are at increased risk of depression while living in the US (Nicolas et al., 2007; Nicolas & Smith, 2013). Depression in the Haitian

community is rather difficult to assess because Haitians do not often express nor present clinically with symptoms of depression as defined by conventional DSM-V criteria, or in the manners often described in Westernized literature (Nicolas et al., 2007). With respect to this definitional incongruence, three distinct characteristics of depression were identified that are specific to Haitian women: *douleur de corps* (pain in the body), *soulagement par Dieu*, (relief through God), *lutte sans victoire* (fighting a winless battle) (Nicolas et al., 2007). Other specific cultural idioms of distress associated with depression among the Haitian population include *de la la* (low energy), *kè sere* (constricted heart), and *kalkile twòp* (thinking too much) (Rasmussen et al., 2015). While some diseases may have universal characteristics, illnesses such as depression, which are based on self-report of a range of symptoms, are not universally defined and are intricately connected within their social, cultural, and environmental context.

Migration-related Stress

In the context of depression, migration-related stress is a concern because multiple, intense stressors have been shown to precede the onset of major depressive episodes in a number of studies (Hammen, 2005; Gillespie, Whitfield, Williams, Heath, & Martin, 2005; Kendler, Karkowski, & Prescott, 1999). In addition, Black immigrants experience greater level of migration-related stress compared to White immigrants (Rogers-Sirin, 2013). Migration-related stress can be defined as the psychosocial stress faced by immigrants as a result of difficulties/stressors experienced during the migration process (Torres, 2010; Torres & Wallace, 2013). Post-migration stressors are often incorporated in the immigrant health literature within the construct of acculturative stress, implying erroneously that these stressors are mainly attributed to one's level of acculturation (Torres & Wallace, 2013). Thus, this manuscript refers to the more boundless term migration-related stress.

While Haitian immigrants may regularly experience other forms of stress (e.g. life event stress, general daily stress, relocation stress), migration-related stress is a unique additional stressor that immigrants are more vulnerable to and do not cope as well with over time compared to natives (Cuadrado, Tabernero, & Briones, 2014). Past studies have compared the rate of depression among immigrants of color (e.g. Latinos, Asians) living in the US with their native counterparts and found higher levels of depression among the immigrant population and speculated that acculturative stress may be a significant factor in this difference (Breslau et al., 2011; Kalibatseva & Leong, 2011). More than 20 years of evidence (Cano et al., 2015; Driscoll & Torres, 2013; Hovey & Magaña, 2000; Jagers & MacNeil, 2015; Mui & Kang, 2006; Park & Rubin, 2012; Polanco-Roman & Miranda, 2013; Potochnick & Perreira, 2010; Torres, 2010; Xu & Chi, 2013) has demonstrated that higher migration-related stress is associated with higher depression symptom severity; however, only two studies focused on the Haitian population (Nicolas & Smith, 2013; Nicolas, Desilva, Prater, & Bronkoski, 2009). A significant positive correlation was found between acculturative stress and depression among Haitian immigrants; nevertheless, in this study, acculturative stress was a secondary outcome and no moderating factors were assessed (Nicolas, et al., 2009). In the second study, no significant association was observed between acculturative stress and depression, perhaps due to missing responses and lack of normality for the Revised Center for Epidemiologic Studies Depression Scale (Nicolas & Smith, 2013) with this population. In light of these conflicting results and limited evidence base to date, the present study aimed to expand the breadth of knowledge about the mental health experience and status of Haitian immigrants in Florida.

The Stress Process Model

Pearlin and colleagues (1981) developed the stress process model, which articulates that when examining stress, three major conceptual domains should be explored: the sources of stress, the mediators and/or moderators of stress, and the manifestations of stress. The stress process framework has been applied principally to studies of depression and other mental health problems (Pearlin & Bierman, 2013). According to the stress process model, migration may be described as a life event because it is an acute phenomenon with pre-determined onset and termination; however, adapting to the socioeconomic, cultural, environmental, political changes inherent in the migration process is a lifelong process with no termination point. Pearlin reported that some life events may exert their influences through a life strain context; thus, resulting on the convergence of both life events and chronic strains to produce stress (Pearlin et al., 1981). Pearlin further indicated that life events might formulate new strains or aggravate existing strains, serving as “potent antecedents” (1981). For instance, new strains such as language barriers may result in discrimination, employment difficulties, and limited access to services including health care.

Another important facet of the stress process model is the pervasive influences exercised by socioeconomic and environmental factors and the unequal distribution of stressors (Pearlin & Bierman, 2013). Individuals differ significantly in the ways and extent to which they are affected by sources of stress. Efforts to explain these differences are embedded in the examination of mediators or moderators capable of influencing the effects of stressors on mental health. As such, the present study also focused on demographic moderators of the relationship between migration-related stress and depression. Given the wide range of responses to stress (cellular, organ-specific, physiological, emotional, biochemical, particular diseases and

psychological), all approaches to studying manifestations of stress are vital to understanding the stress process, however, in the present study, we limited our inquiry to a single global indicator of stress, e.g. depression.

The Present Study

Through the lens of the stress process model, this cross-sectional study examined the relationship between migration-related stress and depression among first generation Haitian immigrants. As referenced above, Haitian immigrants are understudied and underrepresented in mental health research at large. As this population continues to grow in Florida, more knowledge is needed in order to effectively treat depression as well as plan, intervene and promote mental health well-being among Haitian immigrants. In this study, migration functions as the source of stress, demographic variables serve as potential moderators of stress, and lastly, depression acts as a manifestation of stress. This study addressed the following specific aims among Haitian immigrants: **Aim 1:** to identify demographic factors associated with migration-related stress; **Aim 2:** to identify demographic factors associated with depression; **Aim 3:** to examine the relationship between migration-related stress and depression overall and the extent to which this relationship is modified by other factors.

Methods

Procedures

Data were collected for approximately three months in the southeast region of Florida. Purposive sampling methods such as venue-based sampling, snowball sampling, and convenience sampling, were employed to reach Haitian migrants. Potential participants were initially recruited from churches, Haitian organizations, Haitian restaurants, barbershops and businesses. Referrals were obtained from study participants who identified friends and family

members that met the study's inclusion criteria (below). Participants met the following inclusion criteria: 1) first generation Haitian immigrant, 2) English and/or Creole speaking, 3) adult 18 years old or older who have lived in the US for six months or more, 4) able to read and/or write. Individuals who only spoke Creole but were unable to write or read Creole were also eligible because the PI read the instructions, asked the questions orally, and inputted their responses into the questionnaires on their behalf. Operationally, first generation Haitian immigrants were defined as any individual who was born, raised and lived in Haiti for at least 12 years, before moving to the US. Several studies identified that with respect to normal psychosocial development, 12 years of age was a critical transitional period from childhood to adolescence that helped to determine high levels of stress (Jagers & MacNeil, 2015; Mena, Padilla, & Maldonado, 1987). Eight participants who were born in the US but moved to Haiti before the age of one to be raised, were denied participation in this study. Participants were compensated with a \$10 gift card for their participation. Approval was obtained from the Institutional Review Board (IRB) of the University of South Florida (USF).

Measures

Demographic. Demographic information included age, gender, race/ethnicity, marital status, educational level, employment status, number of children, region of birth in Haiti, length of time in the U.S., age at arrival, English language frequency, health insurance status, documentation status, 2010 earthquake exposure (if migrated after the earthquake), occupation/profession, income level, and religion. ***Depression.*** Depression was measured using the Center for Epidemiological Studies Depression Scale (CESD) (Radloff, 1977) and the Zanmi Lasante Depression Symptom Inventory (ZLDSI) (Rasmussen et al., 2015). The CESD is a 20-item measure designed to determine depressive symptoms in community-based samples.

Reliability estimates for the CESD are high, ranging from .84 to .92. Test-retest reliability and convergent, discriminant and predictive validity on the CESD are all satisfactory (Orme, Reis, & Herz, 1986; Radloff, 1977). Past studies have reported high internal consistency ($\alpha=.85-.90$) with Haitian migrants (Nicolas, Desilva, Prater, & Bronkoski, 2009) and with other ethnic minorities/migrants (Hovey, 2000; Hovey & Magaña, 2000). Cut-off point for major depression is 16 or higher, with a sensitivity of 79% and a specificity of 75% (Blank, Gruman, & Robinson, 2004). ZLDSI is a 13-item, four-point, screening instrument in Creole developed to measure depression among Haitians by inquiring whether respondents have experienced a list of symptoms (culturally bound idioms Haitians use when discussing emotional distress) in the prior 15 days. Four response options were provided: “di tou (not at all)”, pandan kek jou (1-5 jou) (somedays (1-5 days)); plis pase yon semen (6-9 jou) (more than one week (6-9 days)); preske chak jou (10-15 jou) (almost every day (10-15 days)). The range of scores is between 0 and 39. This scale has shown moderate levels of predictive accuracy with a sensitivity of 85.4% and a specificity of 50.9% (Rasmussen et al., 2015). Internal reliability consistency was high ($\alpha=.89$).

Migration-related Stress. The Demands of Immigration Scale (DIS) measures different aspects of migration-specific stress (Aroian, Norris, Tran, & Schappler-Morris, 1998). The DIS has six content domains: 1) language (perceived barriers in communication); 2) loss (emotional attachment to people, places, and experience in home country, and a sense of loss after immigration); 3) not at home (feelings of not being at home in the host country); 4) novelty (difficulties in dealing with new situations and in acquiring new skills in a new country); 5) discrimination (not being treated equally to native-born people, and feelings of being an outsider); and 6) occupation (pertaining to disadvantages in the job market). To date, results of the DIS has not been reported among Haitian immigrants; therefore, the factor structure,

reliability, and validity need to be established with this population. Responses from this 23 item four-point Likert- scale are: not at all upset or not applicable (0), a little upset (1), more than a little upset (2) and very upset (3). The range of scores is between 0- 69; a score of 0-23 indicates a mild level of distress, a score of 24-46 indicates a moderate level of distress, and a score of 47-69 indicates a high level of distress (Aroian et al., 1998).

Translation Procedures for Measures

All measures were available in both English and Creole. Participants (sample described below) were given the choice to complete questionnaires in their preferred language. Instruments that were currently only available in English (DIS and CESD) were translated into Creole, and the instrument only available in Creole (ZLDSI) was translated to English using the Functional Assessment of Chronic Illness Therapy (FACIT) guidelines (Eremenco, Cella, & Arnold, 2005). Per FACIT guidelines, two independent translators completed forward translation for the DIS and ZLDSI. A third independent translator reviewed and reconciled the two forward translations by resolving discrepancies and creating an improved, final version of the forward translation. Forward translators were first generation Haitian immigrants fluent in both written and spoken English and Creole, with Creole as their primary language. Reconciled forward translated questionnaires were then back-translated blindly by an individual of Haitian descent fluent in both languages. The FACIT guidelines recommend assessment of translation equivalence by having questionnaire developers review the back-translation for discrepancies from the source version. While this was impossible for the ZLDSI, the DIS back-translation was sent to the developer to be reviewed. For the CESD, forward and backward translations were completed by Nova Southeastern University students and a professional translator from Miami (Denis, Rose, Kleier, & Eglintine, 2016). Three independent reviewers examined all reconciled forward

translated version and back translation of the DIS, ZLDSI and CESD, providing comments and alternative translations if required. Independent reviewers were first generation Haitian immigrants, fluent in both written and spoken English/Creole, with a bachelor's degree or higher in a healthcare field and were not involved in the forward/backward translation procedures. To examine the quality and meaning equivalence of the translation, 12 participants completed the DIS in both languages, and nine participants completed the ZLDSI and CESD in both languages. Participants who completed the questionnaires in both languages were required to complete the Creole questionnaires first, then the English questionnaires after 10-15 minutes. This approach was based on the notion that if a questionnaire is properly translated and maintains meaning equivalence, participants will provide homologous responses to questions in either language (Robichaud-Ekstrand, Haccoun, & Millette, 1994).

Data Analysis

Preliminary analyses were conducted to assess the assumption of normality, linearity and homoscedasticity for all continuous variables. Descriptive analyses were conducted to describe the sample including means for continuous variables and percentages for categorical variables. Pearson correlation coefficients between the English and Creole version of all measures were calculated, and as well as reliability estimates by use of Cronbach alpha coefficients. To initially examine factors associated with migration-related stress and depression, continuous scores of the migration-related stress and depression measures were grouped into tertiles. For assessment of continuous factors (predictors), mean scores were compared across tertiles of migration-related stress or depression by use of analysis of variance and a one degree of freedom test of linear trend. For categorical variables, proportions within tertiles were compared by chi-square analysis and the Mantel-Haenzsel test of trend. The strength of the relationship between the migration-

related stress measure and the two measures of depression was estimated by Pearson correlation coefficients. Finally, multiple linear regression models were fit to identify factors independently associated with the two measures of depression. A bivariate model was first fit examining the relationship between stress and depression. Using forward stepwise regression (at $p < 0.15$), factors independently associated with depression, excluding the measure of migration-related stress, were identified (Model 1). A second model was then fit adding the measure of migration-related stress (Model 2). Assessment of potential effect modifiers of the relationship between migration-related stress and depression was evaluated by use of stratified analyses and interaction terms in the multiple regression models.

Results

Participants

Participants were 76 first generation Haitian immigrants living in Florida. Approximately 57% of participants were women, 49% were between 20 and 35 years of age, and 26% were between 51 and 65 years of age. About 75% of participants identified themselves as Haitian, 20% identified themselves as Haitian-American, and four percent identified as black. Participants were born from a variety of regions/departments in Haiti ranging from Port-au-Prince (42%), Cap-Haitian (12%), Artibonite (5%), Jeremie (4%), Lagonave (4%) to St. Marc (4%). Forty-six percent arrived in the US between the ages of 12-18 and eighty percent moved to the US during their first visit to the country. Average length of time in the US was 17 years with a minimum of six months and a maximum of 45 years. Approximately 41% percent of participants were married. About 68 percent of participants preferred to speak Creole most of the time, in comparison to 20 percent who preferred to speak English. Eight percent of participants indicated that language preferences depended on the situational context and with whom they

were communicating. Most participants were employed (68%), with a household income below \$26,000 (43%) or below \$52,000 (36%). Profession varied widely and ranged from nurses, college students, sales associates, housekeepers, accountants and teachers, just to name a few. Forty-three percent of participants had a bachelor’s degree or higher. The majority of participants had health insurance (78%) and were US citizens (66%). The majority of participants moved to the US before the 2010 earthquake (73%), and 36% reported being directly affected by the 2010 earthquake.

Reliability of Translated Questionnaires

All three translated questionnaires had a high positive correlation with the original questionnaires (Table 1); therefore, English only and Creole only responses were combined into a single dataset for analysis. Cronbach alpha reliability estimates for the total score of DIS English and Creole questionnaires were ($\alpha = 0.937$) and ($\alpha = 0.932$), respectively. For the CESD English and Creole depression instrument, Cronbach alpha reliability estimates were 0.893 and 0.926, respectively. For the ZLDSI English and Creole instrument, Cronbach alpha reliability estimates were 0.926 and .890 respectively.

Table 1.

Correlation between translated and original instrument

	DIS Creole	CESD Creole	ZLDSI Creole
DIS English (N=12)	.979**		
CESD English (N=9)		.983**	
ZLDSI English (N=9)			.987**

Note: ** $p < .001$.

Factors Associated with Migration-related Stress

In univariate analyses, migration-related stress was significantly associated with, age, age at migration, English language fluency, and number of children (Table 2). Gender and direct impact from the 2010 earthquake were marginally associated with migration-related stress. First generation Haitian migrants who were older, women, migrated after the age of 18, spoke little to no English, had more children and were directly affected by the 2010 earthquake were more likely to experience higher migration stress scores.

Characteristic	Total	a. Lower (0 to 11)	b. Middle (12 to 32)	c. Upper (33 to 62)	p-value (trend)
	(N=76)	(N=24)	(N=25)	(N=27)	
Age, mean, SD	41.0, 16.0	35.6, 15.5	41.0, 16.0	45.6, 15.7	0.0262
Age at migration, %					
12-18yrs	44.7	70.8	40.0	25.9	0.0015
19 and up	55.3	29.2	60.0	74.1	
Gender, %					
Female	56.6	41.7	60.0	66.7	0.0766
Male	43.4	58.3	40.0	33.3	
Citizenship status, %					
Citizen	65.8	70.8	56.0	70.4	0.9938
Not citizen	34.2	29.2	44.0	29.6	
Marital status, %					
Married	40.8	33.3	40.0	48.1	0.2846
Not married	59.2	66.7	60.0	51.9	
Education, %					
Below Bachelor's degree	56.6	58.3	48.0	63.0	0.7144
Bachelor's degree or higher	43.4	41.7	52.0	37.0	
Frequency of English spoken at home, %					
Rarely	22.4	12.5	24.0	29.6	0.0385
Sometimes	14.5	8.3	8.0	25.9	
Often	39.5	50.0	44.0	25.9	
All the time	23.7	29.2	24.0	18.5	

Characteristic	Total	a. Lower (0 to 11)	b. Middle (12 to 32)	c. Upper (33 to 62)	p-value (trend)
	(N=76)	(N=24)	(N=25)	(N=27)	
Employment Status, %					
No	25.0	16.7	28.0	29.6	0.2959
Yes	75.0	83.3	72.0	70.4	
Total household income, %					
Less than \$26,000	44.7	32.4	32.4	35.3	0.561
More than \$26,000	46.1	37.1	34.3	28.6	
Health Insurance status, %					
No	23.7	16.7	28.0	25.9	0.4533
Yes	76.3	83.3	72.0	74.1	
In Haiti when the 2010 Earthquake hit, %					
No	72.4	79.2	56.0	81.5	0.7963
Yes	27.6	20.8	44.0	18.5	
Directly affected by the 2010 Earthquake, %					
No	64.5	70.8	76.0	48.1	0.0842
Yes	35.5	29.2	24.0	51.9	
# years living in the U.S., mean, SD	16.7, 11.4	15.4, 9.4	15.3, 12.4	19.1, 12.0	0.2531
# of children, mean, SD	1.9, 2.2	1.1, 1.8	2.1, 2.2	2.3, 2.4	0.0442

Factors Associated with Depression

Characteristic	Total	a. Lower (0 to 6)	b. Middle (7 to 18)	c. Upper (19 to 44)	p-value (trend)
	(N=76)	(N=23)	(N=25)	(N=28)	
Age, mean, SD	41.0, 16.0	40.4, 15.9	42.8, 17.8	39.8, 14.9	0.8811
Age at migration, %					
12-18yrs	44.7	56.5	40.0	39.3	0.2344
19 and up	55.3	43.5	60.0	60.7	

Table 3a. (Continued)					
Characteristic	Total	a. Lower (0 to 6)	b. Middle (7 to 18)	c. Upper (19 to 44)	p-value (trend)
	(N=76)	(N=23)	(N=25)	(N=28)	
Gender, %					
Female	56.6	43.5	48.0	75.0	0.0214
Male	43.4	56.5	52.0	25.0	
Citizenship status, %					
Citizen	65.8	73.9	68.0	57.1	0.207
Not citizen	34.2	26.1	32.0	42.9	
Marital status, %					
Married	40.8	43.5	52.0	28.6	0.2513
Not married	59.2	56.5	48.0	71.4	
Education, %					
Below Bachelor's degree	56.6	30.4	72.0	64.3	0.0214
Bachelor's degree or higher	43.4	69.6	28.0	35.7	
Frequency of English spoken at home, %					
Rarely	22.4	8.7	24.0	32.1	0.1441
Sometimes	14.5	17.4	16.0	10.7	
Often	39.5	47.8	36.0	35.7	
All the time	23.7	26.1	24.0	21.4	
Employment status, %					
No	25.0	30.4	24.0	21.4	0.4684
Yes	75.0	69.6	76.0	78.6	
Total household income, %					
Less than \$26,000	44.7	20.6	35.3	44.1	0.077
More than \$26,000	46.1	40	31.4	28.6	
Health Insurance status, %					
No	23.7	26.1	20.0	25.0	0.9518
Yes	76.3	73.9	80.0	75.0	
In Haiti when 2010 Earthquake hit, %					
No	72.4	82.6	80.0	57.1	0.0389
Yes	27.6	17.4	20.0	42.9	
Directly affected by 2010 Earthquake, %					
No	64.5	69.6	80.0	46.4	0.0696
Yes	35.5	30.4	20.0	53.6	

Table 3a. (Continued)

Characteristic	Total	a. Lower (0 to 6)	b. Middle (7 to 18)	c. Upper (19 to 44)	p-value (trend)
	(N=76)	(N=23)	(N=25)	(N=28)	
# of years living in the U.S., mean, SD	16.7, 11.4	17.7, 10.0	17.6, 12.7	15.0, 11.4	0.4067
# of children, mean, SD	1.9, 2.2	1.1, 1.5	2.3, 2.7	2.1, 2.2	0.1312
Migration-related stress sum scores mean, SD	24.1, 15.8	15.5, 12.4	19.6, 13.2	35.1, 14.3	<.0001

In univariate analyses, factors associated with higher levels of depression, as measured by the CESD, included female gender, lower level of education, and being in Haiti during the 2010 earthquake (Table 3a). Lower income level and reported direct impact from the 2010 earthquake were marginally associated with higher levels of depression.

Table 3b.

Characteristics of Study Population by Tertile of Depression (ZLDSI) Scores

Characteristic	Total	a. Lower (0 to 4)	b. Middle (5 to 11)	c. Upper (12 to 37)	p-value (trend)
	(N=76)	(N=25)	(N=25)	(N=26)	
Age, mean, SD	41.0, 16.0	40.2, 15.2	40.4, 18.6	42.2, 14.7	0.6628
Age at migration, %					
12-18yrs	44.7	52.0	48.0	34.6	0.2134
19 and up	55.3	48.0	52.0	65.4	
Gender, %					
Female	56.6	44.0	52.0	73.1	0.0369
Male	43.4	56.0	48.0	26.9	
Identity, %					
Black	3.9	12.0	0.0	0.0	0.1438
African American	1.3	0.0	4.0	0.0	
Haitian American	19.7	12.0	28.0	19.2	
Haitian	75.0	76.0	68.0	80.8	
Citizenship status, %					
Citizen	65.8	76.0	64.0	57.7	0.172
Not citizen	34.2	24.0	36.0	42.3	

Table 3b. (Continued)					
Characteristic	Total	a. Lower (0 to 4)	b. Middle (5 to 11)	c. Upper (12 to 37)	p-value (trend)
	(N=76)	(N=25)	(N=25)	(N=26)	
Marital status, %					
Married	40.8	48.0	36.0	38.5	0.4955
Not married	59.2	52.0	64.0	61.5	
Education, %					
Below Bachelor's degree	56.6	48.0	56.0	65.4	0.2133
Bachelor's degree or higher	43.4	52.0	44.0	34.6	
Frequency of English spoken at home, %					
Rarely	22.4	8.0	28.0	30.8	0.1009
Sometimes	14.5	16.0	8.0	19.2	
Often	39.5	44.0	56.0	19.2	
All the time	23.7	32.0	8.0	30.8	
Employment status, %					
No	25.0	24.0	28.0	23.1	0.936
Yes	75.0	76.0	72.0	76.9	
Total household income, %					
Less than \$26,000	44.7	20.6	47.1	32.4	0.231
More than \$26,000	46.1	42.9	25.7	31.4	
Health Insurance status, %					
No	23.7	20.0	20.0	30.8	0.3659
Yes	76.3	80.0	80.0	69.2	
Immigration status, %					
Permanent resident	27.0	17.4	24.0	38.5	0.0751
TPS	4.1	0.0	8.0	3.8	
U.S. Citizen	67.6	82.6	64.0	57.7	
Other (refugee, asylum, U-visa, etc)	1.4	0.0	4.0	0.0	
In Haiti when the 2010 Earthquake hit, %					
No	72.4	84.0	72.0	61.5	0.075
Yes	27.6	16.0	28.0	38.5	

Characteristic	Total	a. Lower (0 to 4)	b. Middle (5 to 11)	c. Upper (12 to 37)	p-value (trend)
	(N=76)	(N=25)	(N=25)	(N=26)	
Directly affected by the 2010 Earthquake, %					
No	64.5	72.0	72.0	50.0	0.1008
Yes	35.5	28.0	28.0	50.0	
# of years living in the U.S., mean, SD	16.7, 11.4	17.3, 9.1	17.3, 12.9	15.5, 12.1	0.5625
# of children, mean, SD	1.9, 2.2	1.3, 1.7	1.9, 2.6	2.4, 2.3	0.077
Migration-related stress sum scores mean, SD	24.1, 15.8	13.1, 11.1	22.1, 13.3	36.5, 13.2	<.0001

In univariate analyses, female gender was associated with higher levels of depression, as measured by the ZLDSI (Table 3b). In addition, there were non-significant trends of the following factors being associated with higher levels of depression on the ZLDSI: being in Haiti during the 2010 earthquake, reporting direct impact from the 2010 earthquake, immigration status (permanent resident), and higher number of children.

Association Between Migration-related Stress and Depression

First generation Haitian immigrants in this study reported moderate level of migration-related stress with a mean score of 24 (SD = 15.7), and low-moderate depression scores on both the CESD (M = 15, SD = 11) and the ZLDSI (M = 9.9, SD = 8.6). Forty percent of participants from this sample scored greater than 16 on the CESD, meeting criteria for clinical depression. Participants in the upper tertile of depression scores reported significantly higher scores of migration-related stress ($p < .0001$). Migration-related stress had a strong positive correlation with both measures of depression: CESD ($r = .606, p < .0001$) and ZLDSI ($r = .624, p < .0001$) (Figure 1). A linear regression model similarly demonstrated that migration related stress was strongly associated with depression, as measured by the CESD [$R^2 = .367, R^2_{adj.} = .357, F(1,$

74) = 42.86, $p < .0001$] and the ZLDSI [$R^2 = .389$, $R^2_{adj.} = .381$, $F(1, 74) = 47.136$, $p < .0001$].

These regression models estimated that migration-related stress accounted for 36% and 38% of the variance in depression scores, respectively. Pearson correlation also showed a strong significant positive association between the CESD and ZLDSI ($r = .738$, $p < .0001$).

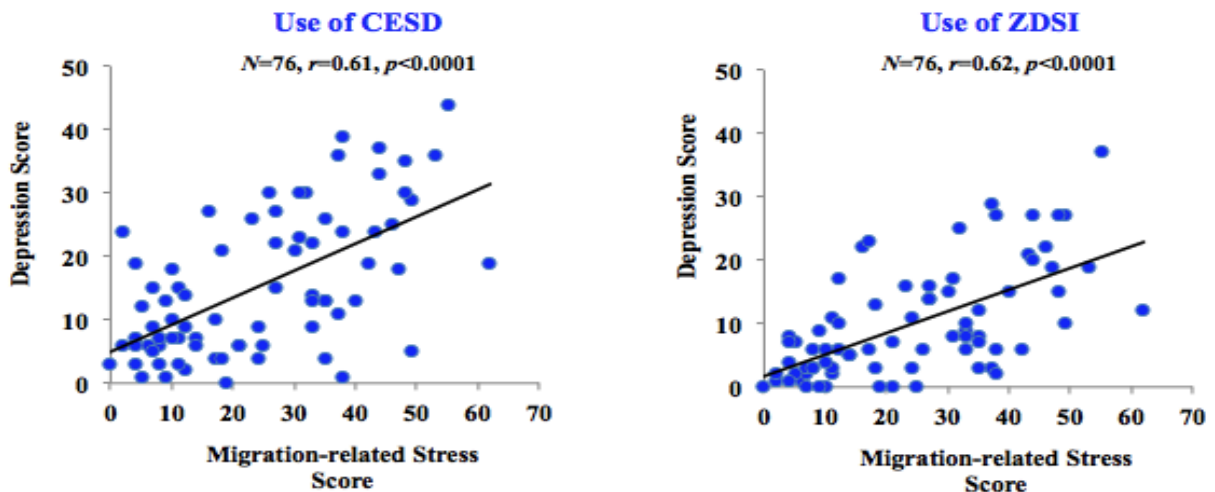


Figure 1. Correlation between migration-related stress and depression

Predictors of Depression

In forward stepwise multiple linear regression that excluded consideration of migration-related stress (Table 4, Model 1), female gender ($B = -5.45$, $p < 0.05$), and self-reported earthquake impact ($B = 5.68$, $p < 0.05$) were independently associated with higher CESD scores. Having less than a bachelor's degree education ($B = -4.88$, $p = 0.07$) was marginally associated with higher CESD scores. Although not statistically significant, annual household income of less than \$26,000 ($B = -3.46$, $p = 0.19$) was also associated with higher CESD scores. This model explained 19.4% of the variation in CESD scores. When migration-related stress was added to the model (Table 4, Model 2), it was strongly and independently associated with scores on the CESD ($B = 4.08$, $p < 0.01$). The addition of migration-related stress resulted in a much higher R^2

value with 49.4% of the variation in CESD scores explained. This high influence of migration-related stress was evident when comparing the standardized beta coefficients (β). In that regard, migration related stress was clearly the strongest predictor of CESD scores, and notably, gender was no longer independently associated with CESD scores.

Table 4.

Regression Analysis for Variables Predicting Depression (CESD)

Variable	Bivariate			Model 1			Model 2		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Migration-related stress	.426	.065	.606**				.408	.065	.573**
Gender (male)				5.45	2.474	.243*	2.23	2.01	.100
Education (< Bachelor's degree)				-4.88	2.683	-.217	-5.40	2.119	-.241*
Reported earthquake impact (No)				5.68	2.670	.237*	4.376	2.117	.182*
Household Income (< \$26,000)				-3.46	2.653	-.155	-1.248	2.122	-.056
<i>Adj. R</i> ²			.358			.194			.498
<i>F</i>						5.100**			14.514**

Note: Dummy variables were created for income (greater than \$26,000 or less than \$26,000) and education (Bachelor's degree or higher vs. lower than a bachelor's degree). Information in parentheses indicate 0 value. * $p < .05$. ** $p < .01$.

In forward stepwise multiple linear regression that did not include consideration of migration related stress (Table 5, Model 1), being in Haiti during the earthquake ($B = -7.37$, $p < 0.05$) relocating to the U.S. during the first visit ($B = 4.13$, $p = 0.06$) and interaction between stress and earthquake ($B = .528$, $p < 0.01$) were independently associated with higher ZLDSI scores. This model explained 26.7% of the variance in ZLDSI scores. When migration-related stress was added to the model (Table 5, Model 2), it was strongly and independently associated with ZLDSI scores ($B = .288$, $p < .01$). The inclusion of migration-related stress resulted in a

much greater R^2 value, with 48.6% of the variation in ZLDSI scores explained. Migration-related stress was the strongest predictor of ZLDSI scores, as evident when comparing the standardized beta coefficients (β). Notably, being in Haiti during the 2010 was no longer an independently associated with ZLDSI scores.

Table 5.

Regression Analysis for Variables Predicting Depression (ZLDSI)

Variable	Bivariate			Model 1			Model 2		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Migration-related stress	.341	.050	.624**				.288	.051	.528**
In Haiti during earthquake				-7.37	3.367	-.385*	-.407	3.078	.021
Relocating to the US during first visit				4.127	2.175	.192 ⁺	4.069	1.821	.189*
Stress X Haiti earthquake				.528	.115	.799**	.239	.109	.362*
<i>Adj. R²</i>			.381			.267		.486	
<i>F</i>					10.083**			18.721**	

Note: * $p < .05$. ** $p < .001$. ⁺ $p = .06$.

Moderation Between Migration-related Stress and Depression

In forward stepwise linear regression (Table 5, Model 2), presence at the 2010 earthquake moderated the relationship between migration-related stress and ZLDSI scores, as evident by the significant interaction between migration-related stress and earthquake presence ($B = .239$, $p < .05$) and loss of earthquake presence on ZLDSI scores. The interaction term “migration-related stress x earthquake presence” increased the variance between migration-related stress and ZLDSI scores by 3.3% ($p = .035$). The interaction showed an amplifying effect for depression between migration-related stress and being in Haiti during the 2010 earthquake (Table 6). In

detail, for migrants with low migration-related stress, being in Haiti during the earthquake had minimal impact on depression scores; however, for migrants with high migration-related stress, being in Haiti during the earthquake considerably increased ZLDSI scores.

Table 6.

Interaction between migration-related stress and being in the 2010 earthquake in relation to ZLDSI scores

	Low migration-related stress (<=23)	High migration related stress (>23)
In Haiti during the earthquake	N= 9 (M = 6.33, SD = 6.56)	N=12 (M = 18.25, SD = 7.60)
Not in Haiti during the earthquake	N= 29 (M = 5.55, SD = 5.77)	N=26 (M=12.20, SD =8.99)

Discussion

This exploratory study aimed to identify factors associated with migration-related stress and depression and to subsequently examine the relationship between migration-related stress and depression, and which factors may moderate this relationship among first generation Haitian migrants living in Florida. Our findings shed light on the mental health of Haitian migrants and risk factors long implicated in migration-related stress and depression. Moreover, the findings support the stress process model’s emphasis on the interconnection between source of stress, moderators of stress and manifestation of stress.

Importance of Migration-related Stress

Consistent with the literature, higher levels of migration-related stress were reported among Haitian migrants who were older, migrated to the US after the age of 19, had lower English language fluency and more children (Belizaire & Fuertes, 2011; Bekteshi, van Hook & Matthew, 2015; Jagers & MacNeil, 2015). Previous research with Haitian immigrants found

that those who spoke English well experienced less stress after migration (Belizaire et al., 2011). Immigrants with lower English proficiency may be at higher risk for migration-related stress and more vulnerable to mental illness such as depression. Furthermore, individuals between 33-62 years of age and those who migrated to the US after 18 years of age experienced greater migration-related stress. These findings are consistent with past empirical findings (Jagers & MacNeil, 2015) and suggest that older Haitians and those who migrated to the US after the age of 18, may face more difficulties as they adapt and assimilate into a foreign culture, increasing their risk for elevated migration-related stress and subsequent mental illness like depression.

Few studies have examined the association between migration-related stress and number of children. However, the results of this study suggest that Haitian migrants with more children may experience more migration-related stress. Migration-related stress was a significant predictor of depression when depression was measured with both the CESD and ZLDSI and the direction and magnitude of the relationship were similar for both scales. In other words, as migration-related stressors increased so did the risk for depression. This finding is consistent with previous research showing a strong positive linear relationship between migration-related stress and depression (Torres, 2010; Xu & Chi, 2013). In addition, in all regression analyses, migration-related stress remained the strongest predictor of depression when all other factors were controlled for; a testament to the significance of migration-related stress as a risk factor for depression among migrants.

Depression Among First Generation Haitian Migrants

Given the differences observed in the expression of depression among Haitians, this study used both the standardized CESD scale and a culturally sensitive/competent depression scale developed in Haiti (ZLDSI). Findings showed a strong positive correlation between the two

measures of depression, demonstrating their similarity in capturing depression among our sample and providing support for concurrent validity. However, results from our regression models showed that both measures may capture depression in a somewhat different manner. Consistent with previous studies that have reported higher prevalence of depression among women (Nicolas et al., 2009; Sarmiento & Cardemil, 2009), this study found gender differences for both measures of depression, specifically, women reported higher scores of depression. Given the strong correlation between both measures of depression, it is surprising that gender was the only demographic factor that was significantly associated with both measures of depression and that other demographic factors that correlated with each measure were different. Results showed that four demographic factors long implicated as important circumstances for the variability in depression were associated with depression measured with CESD: education, income, presence at the 2010 earthquake and direct impact from the 2010 earthquake. Having a bachelor's degree or higher and an income of \$26,000 or more was associated with lower depression scores for Haitian migrants. These findings are consistent with previous research showing that, among Hispanic immigrants meeting financial expectations, having a higher mean household income was significantly associated with less migration-related stress and diminished risk for depression (Salas-Wright, Robles, Vaughn, Córdova, & Pérez-Figueroa, 2015).

Past studies have showed both exposure to and direct impact from the 2010 earthquake significantly increased the prevalence of depression among Haitians living in Haiti and abroad (Messiah et al., 2014); thus, providing support for our results showing that being in Haiti during the 2010 earthquake and being directly affected by the 2010 earthquake was associated with depression. For instance, 45% of Haitian immigrants in Miami that were directly exposed to the 2010 earthquake showed symptoms of major depression, while 24% of Haitian migrants with

indirect earthquake exposure showed symptoms of major depression (Messiah et al., 2014). Although immigrants that were in Haiti during the 2010 earthquake had significantly higher scores on the CESD depression scale, regression analyses showed that being directly affected by the earthquake was a stronger predictor of depression. Surprisingly, this was not the case for the ZLDSI depression instrument. For the ZLDSI depression scale, being in Haiti during the earthquake was a stronger predictor of depression and this factor significantly moderated the relationship between migration-related stress and depression. Results suggest that Haitian migrants may be more susceptible to the mental health impact of being in the 2010 earthquake when they experienced significantly higher levels of migration-related stress. This study also found that moving to the US during the first visit was a significant predictor of depression among Haitian migrants. This is of importance because migrants may be more likely to experience more stress and increased susceptibility to depression when moving to a country without any prior knowledge and exposure to the culture, language and overall infrastructure. Visits to the US prior to relocation may prove helpful in showing migrants how to adapt and navigate in their new environment.

Limitations and Future Directions

Despite the breadth of knowledge generated by this study, generalizability is a concern, so the results must be interpreted with caution. The sample was a group of first generation migrants living in Florida; therefore, this study may not be representative of the overall Haitian migrant population in the US. The small sample size limited the power of the statistical analyses, preventing the examination of all factors associated with depression and migration-related stress. Furthermore, social desirability bias may have been introduced with the use of self-report questionnaires and a cross-sectional approach limited causal inferences.

Research about the mental health of first generation Haitian immigrants is quite limited. Therefore, the knowledge generated from this study may aid in the adaptation and development of depression screening tools that are more culturally sensitive and consider the unique pre/post migration stressors/risk factors, as well as promote diagnostic tools and treatment options that are better aligned with Haitian migrants' mental health needs and beliefs. Future studies should strive to obtain a more nationally representative sample of Haitian migrants and a larger sample size. Additionally, future studies should aim to design improved methods (e.g. longitudinal) for capturing the factors most imperative to the understanding of depression mechanisms.

Expanding and shifting the boundaries of public health and mental health research to include all the possible dynamics that may affect depression, and analyzing their additive, interactive and independent effect will enhance our understanding of mental health disparities among the Haitian population and will promote more effective intervention and implementation of policy solutions that are consistent with major findings. Moreover, health care providers should consider the unique migration stressors and risk factors Haitian migrants face before leaving Haiti and while adapting to life in the US. This is of utmost importance when developing educational programs to assist migrants with best strategies to cope and gain support without internalizing their stress. Health care providers should work with Haitian migrants in identifying migration-related stressors and enact measures to prevent and mitigate depression.

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CHAPTER FOUR:

**AN IN-DEPTH LOOK AT MIGRATION-RELATED STRESS AND STRESSORS
FROM THE PERSPECTIVES OF FIRST GENERATION HAITIAN MIGRANTS IN
FLORIDA: A MIXED METHOD APPROACH**

Abstract

Migration-related stress, experienced to a greater degree and with more susceptibility among first generation immigrants, can have a significant impact on the lives, mental health, and well-being of immigrants. This mixed method sequential explanatory study aimed to provide an in-depth understanding of migration-related stress among first generation Haitian migrants and to determine which stressors were most impactful in their lives while adapting to life in the US. From the 76 Haitian immigrants who completed the quantitative phase of the study, eight participants with high migration-related stress (operationalized using the Demands of Immigration Scale) scores completed in-depth interviews to gain a deeper understand of their post-migration experiences. In-depth interviews were guided by a semi-structure qualitative questionnaire and interview guide developed by the investigator and audio-recorded with participant's consent. Descriptive analyses, frequencies, Pearson correlations and multiple linear regression were used to analyze quantitative data and a double-coding analytic approach was employed with transcribed interviews. While factors associated with migration-related stress included older age, rarely speaking English at home, higher number of children, and marginally significant suggestions of female gender and being directly affected by the 2010 earthquake; only gender ($\beta = -.280, p = .011$) and English language frequency ($\beta = -.264, p = .017$) emerged as significant predictors of migration-related stress. Findings from the in-depth interviews revealed five migration-related stressors to be of most significance to the development of mental illness among Haitian migrants: language barriers, financial strains, loss of social networks, family conflicts and exposure to discrimination and stigma. Moreover, findings provided information to explain why Haitian migrants found each high-ranking migration-related stressor stressful. By distinguishing the factors that are most stressful and have the greatest potential to influence mental illness among Haitian migrants, we have identified the areas where aid and preventive efforts should be directed.

Introduction

Centuries of hardship and turmoil have led many Haitians to seek refuge elsewhere, especially in Florida, the home of the largest Haitian migrant population in the United States (US) (Schulz & Batalova, 2017). While Haitian migrants constitute one of the most vulnerable populations in this country; it remains heterogeneous in regard to culture, ethnicity, language, religion, reasons for migrating, migration experiences and many other characteristics. Despite these differences, the stress of migrating and adapting to a new country, including migration-related stressors experienced post-migration may be similar among Haitian immigrants.

Migration can have both positive and destabilizing effects on Haitian migrants. Migration entails separating from ones' family and friends, learning a new language and culture, and the possibility of working and living in unfavorable conditions; it alters both the human and nonhuman components of their environment and ways of living (Messiah et al., 2014; Schenker, Castañeda, & Rodriguez-Lainz, 2014). In the host country, Haitian migrants may encounter unfamiliar landscapes, climates, behaviors, cultures, foods, beliefs/practices, health patterns, health care access, and language that may ultimately contribute to significant stress (Nicolas & Smith, 2013). As the population of Haitian immigrants increases, it has become more apparent that a critical need exists for research that assesses fundamental post-migration changes that contribute to heightened levels of stress. Therefore, the present study aims to provide answers about factors that may predict migration-related stress and determine which migration-related stressors are of most significance in mental health for Haitian migrants with high scores of migration-related stress. We provide an overview of migration-related stress, migration-related stressors and the theoretical framework that guides this study in the next section.

Migration-related Stress

Researchers continue to strive to understand the process of migration and its influence on migrants' lives, as it has been a significant construct in either enhancing or dampening migrants' physical and mental health in the US (Hovey, 2000; Medina-Inojosa, Jean, Cortes-Bergoderi, & Lopez-Jimenez, 2014; Torres & Wallace, 2013). Of utmost importance in the migration process is the stress experienced by migrants as a direct and/or indirect consequence of migrating and acculturating to a foreign country. To describe the distinctive stressors of immigration, several terms have been coined including culture shock (Oberg, 1960) acculturative stress (Berry, 1997), acculturation-related stress (Cervantes, Padilla, Napper, & Goldbach, 2013), migration-related stress (Al-Baldawi, 2002), and immigration related stress (Torres & Wallace, 2012). Torres (2010) defined migration-related stress as the overwhelming psychological difficulties faced by immigrants during the migration and acculturation process that are not easily conquered. Migration-related stress, experienced to a greater degree and with more susceptibility among first generation immigrants, can have a significant impact on the lives, mental health, and well-being of immigrants. Evidence supports that the migration and acculturation process necessitates a certain level of stress that arise because of a cultural gap and conflict between the native and the new host culture (Berry, 2003; Lueck & Wilson, 2011).

When considering the life-course of migration, immigrants go through three phases of health transition: the period before migration, the period during the migration processes itself, and the period after migration (Schenker, Castaneda, & Rodriguez-Lainz, 2014). Migration and stressors related to migration begin when individuals make the decision voluntarily or are forced, to leave their native countries (Rack, 1993; Schenker et al., 2014) and may persist throughout the post-migration lifespan for many migrants. Migration-related stress has been linked with quality

of life, fatalistic thinking, decreased self-efficacy and self-esteem, substance abuse, psychosomatic and mood problems, depression, low social interest, and suicidal ideation (Arbona et al., 2010; Belizaire, & Fuertes, 2011; Berry & Kim, 1988; Finch & Vega, 2003; Hovey & King, 1996; Hovey, 2000).

Prior to arriving to the US, Haitian immigrants have endured significant exposure to poverty, violence, trauma, death, abuse, loss, political disorder, and devastations from natural disaster that make this population extremely vulnerable to mental health disorders like depression (Gage & Hutchinson, 2006; Martsof, 2004; Wagenaar, Hagaman, Kaiser, McLean, & Kohrt, 2012; Trouillot, 1990). Furthermore, upon their arrival, Haitians face even more challenges as persons of color, who speak a foreign language, and carry cultural beliefs and practices different from the mainstream culture (Allen, Leyva, Hilaire, Reich, & Martinez, 2016; Saint-Jean & Crandall, 2005; Stepick, 1992; Stepick, & Swartz, 1998). Subsequently, as immigrants adjust to life in the US, they must cope with the loss of friends and family, loss of wages and social status, learning an unfamiliar language and culture discrimination, racial stereotyping, restrictive immigration policies, unfamiliar/unsafe neighborhoods, dangerous working conditions, gender role differences, and lack of health care access (Belizaire, & Fuertes, 2011; Fawzi et al., 2009; Nicolas, Arntz, Hirsch, & Schmiedigen, 2009; Nicolas et al., 2007; Nicolas & Smith, 2013; Orozco, & Burgess, 2011). Many of the aforementioned post migration factors constitute important concerns that have been associated with migration-related stress among Hispanic and Asians migrants, highlighting a considerable gap in the literature for Haitian migrants.

Theoretical Underpinnings

Pearlin's Stress Process Model (1981) and Caplan's conceptual analysis (2007) were the driven force of this study. The stress process model recommends analyzing three domains when studying stress: the sources of stress, the mediators and/or moderators of stress, and the manifestations of stress. However, this study is concerned primarily with identifying social, cultural, environmental and economic conditions that stand as sources of migration-related stress, hence what this study refers to as migration-related stressors. Pearlin conceptualized stressors as "the external circumstances that challenge or obstruct" while stress denotes internal maladjustments that arise from stressors (Pearlin & Bierman, 2013). Pearlin refined the original 1981 stress process model to include the concept of stress proliferation during source of stress considerations (Pearlin, Aneshensel, LeBlanc, 1997; Pearlin & Bierman, 2013). Pearlin articulated that stress may proliferate from interactions with the social environment, anticipatory negative events, aging and life course-shifts, via a contagion effect where individuals experience stress as a result of a close family's stressful experience (lateral proliferation), or via a spillover effect where secondary stressors arise from primary stressors (Pearlin, Aneshensel, LeBlanc, 1997; Pearlin & Bierman, 2013). The stress proliferation paradigm draws attention to a series of stressors along the life-course continuum, instead of a single stressor at one point in time.

While Pearlin provides a broader conceptual guide to the study of stress and health, Caplan presents a much narrow point of focus centered on the most influential migration-related stressors identified by the literature among migrants. Caplan (2007) identified three major types of stressors post migration among Latino immigrants: (1) instrumental/ environmental stressors (e.g. employment, access to health care, language); (2) social/interpersonal stressors (e.g. reestablishment of sources of family and social support); (3) and societal stressors (e.g.

discrimination). The dimensions of stressors uncovered by Caplan reflect the structural elements that contribute to a greater extent to migration-related stress among migrants. Structural factors associated with migrant health rely on assessing the macro-level social, environmental and economic issues that impact their health. While it can be rather difficult to change majority of the structural barriers that migrants face post-migration, it is imperative that we understand how they contribute to migration-related stress, which many Haitian migrants endure while living in the US.

The Present Study

The present study uses a multidimensional approach to better understand Haitian migrants' experiences of migration-related stress. In this context, this study examines migration-related stress at the individual level and also considers the broader fundamental forces such social, economic, and environmental factors that impact migration-related stress. The complexities of life before, during and after migration have forced researchers to move beyond a one-dimensional view of stress and mental health. Previous studies in the Haitian population used quantitative methods only and did not attempt to identify the stressors that contributed the most to migration-related stress nor did they attempt to identify changes between pre and post migration life that Haitians immigrants found to be most stressful. Thus, to bridge the current knowledge gap, this study used a mixed methods approach to examine migration-related stress among Haitian immigrants in Florida. This approach allowed the use of different measures of migration-related stress through quantitative and qualitative data, which complement each other to provide an in-depth understanding of migration-related stress and migration-related stressors. This study addresses the following specific aims: 1) to identify factors associated with migration-related stress 2) and to provide in depth overview of the most significant migration-related

stressors experienced by first generation Haitian migrants with high scores of migration-related stresses.

Methods

Procedures

Data for this manuscript were derived from a sequential mixed methods study where quantitative data was collected first and analyzed (Fanfan, Rodriguez, Groer, and Kip, in preparation, 2018), followed by completion of qualitative data. Below is a brief description of the sample, the sampling design, procedures, and the measures for the quantitative phase of this study. The methodological approach for the quantitative aspect of the study was fully described in Fanfan, Rodriguez, Groer, and Kip, (in preparation, 2018).

Seventy-six first generation Haitian migrants were recruited from Florida through three purposive sampling methods: venue-based sampling, snowball sampling, and convenience sampling. Participants met the following inclusion criteria for the all phase of the study: 1) first generation Haitian immigrants who spent at least 12 years in Haiti before moving to the US, 2) English and/or Creole speaking, 3) adults 18 years old or older who have lived in the US for six months or more, 4) able to read and/or write English or Creole or able understand Creole verbally. Participants were compensated with a \$10 gift card for participation in the quantitative phase of the study.

Consented participants who already completed the quantitative phase of this study, and had high migration-related stress scores (criteria for high migration-related stress: > 25 on the Demands of Immigration Scale; DIS) were eligible for the qualitative phase of the study. Participants who expressed interest were contacted by phone or email to complete the in-depth interviews in their preferred meeting location (home, office, anywhere private). All interviews

were completed in English, although participants used Creole idioms occasionally. From the total sample, 18 individuals were eligible to participate in the qualitative phase of the study. However as of today, only eight participants completed the interviews, which lasted from 30 minutes to 75 minutes, and audio-recorded with participants' consent. Participants were compensated with a \$20 gift card. Approval was obtained from the Institutional Review Board (IRB) of the University of South Florida (USF).

Measures

Data pertinent to this study were collected with the Demands of Immigration Scale (DIS) and the Migration-related Stress Qualitative Questionnaire. In addition, demographic data were collected to facilitate description of the sample. To establish validity, this study employed methodological triangulation, as evident by the use of both quantitative and qualitative measures.

Demographic. Demographic data collected from study participants included: age, gender, race/ethnicity, marital status, educational level, employment status, number of children, region of birth in Haiti, length of time in the US, age at arrival, English language frequency, health insurance status, documentation status, occupation/profession, income level, and religion. In addition, participants reported about their 2010 earthquake exposure (if migrated after the earthquake).

Migration-related Stress. The (DIS) measures different aspects of migration-specific stress (Aroian, Norris, Tran, & Schappler-Morris, 1998). The DIS has six content domains: 1) language (perceived barriers in communication); 2) loss (emotional attachment to people, places, and experience in home country, and a sense of loss after immigration); 3) not at home (feelings of not being at home in the host country); 4) novelty (difficulties in dealing with new situations and in acquiring new skills in a new country); 5) discrimination (not being treated equally to

native-born people, and feelings of being an outsider); and 6) occupation (pertained to disadvantages in the job market). The range of scores is between 0- 69; a score of 0-23 signifies mild level of distress, a score of 24-46 signifies moderate level of distress and a score of 47-69 signifies high level of distress (Aroian et al., 1998).

Migration-related stress qualitative questionnaire. A semi-structure qualitative questionnaire and interview guide was developed by the investigator, which encompassed all the dimensions of migration-related stress found in the literature as well as specific population factors such as the 2010 earthquake, and pre-migration trauma/experiences. The semi-structure questionnaire consisted of two parts: a ranking questionnaire and list of open-ended questions with prompts. Based on the three dimensions of stressors identified by Caplan (2007), participants were asked to rank each stressor under each dimension from most stressful to least stressful. Interviews began by a series of open-ended questions about migration-related stress, then were guided by participant's responses on the ranking system to better ascertain why factors chosen were stressful. This approach allowed the investigator to gauge consistencies between answers provided during open ended questions and the ranking system. The interview was divided into five sections which are outlined in Table 1.

Table 1.***Interview Questionnaire Sections***

Dimension	Subdimension
Experience of migration-related stress	changes in stress factors post-migration, reaction to stress and coping mechanisms
Environmental/Instrumental	Financial, education, language barriers, neighborhood characteristics, health care access, employment status
Social/Interpersonal	loss of social networks, family conflict, loss of social status, changing gender role, intergenerational conflicts
Societal	discrimination, stigma, legal status, political/ historical
Coping/stress relief resources	living in a Haitian enclave, family cohesion, religion/spirituality

Data Analysis

Descriptive analyses were used to describe the sample. Frequencies were used to rank migration-related stressors. Pearson correlations and multiple linear regression models were fit to identify factors that are independently associated with migration-related stress. Interviews were completed in English, audio-recorded and transcribed verbatim. This study used a double-coding analytic approach. Apriori codes derived from the literature and the migration-related stress sub-dimensions identified by Caplan (2007) and incorporated within the interview guide facilitated the initial coding process (see Table 1). In addition, in vivo line-by-line analysis (inductive analytic approach) of the transcribed interviews was employed for new codes and themes that arose from the narrative. Section one and five of the interview guide allowed the investigator to begin and conclude the interview using an inductive approach with open-ended questions to guide the development of topics and theme unrestricted by the ranking system based on pre-determined themes. Sections two, three, and four of the interview guide were overly

focused on the factors identified as most stressful during the ranking. For sample questions, please refer to Table 2.

Table 2.	
<i>Sample Questions</i>	
Dimension	Sub-dimension
Experience of migration-related stress	Is stress a word you grew up using in your vocabulary? Since you have moved to the US what has been the most stressful for you? What is different here in the US that has made your life stressful that was not present when you lived in Haiti?
Environmental/Instrumental	You said that language barriers were the most difficult for you and contributed to your stress after migrating to the US tell me more about that. How have your finances changed since relocating to the US?
Social/Interpersonal	You said that family conflicts (problems/dispute) were the most difficult (or very difficult) for you and contributed to your stress after migrating to the US tell me more about that
Societal	You said that discrimination/stigma was the most difficult (or very difficult) for you and contributed to your stress after migrating to the US Tell me more about that.
Coping/stress relief resources	Do you seek anyone for help when you are stressed? How does living in a community with a lot of other Haitians like Little Haiti reduces or increases stress related to language barriers and cultural cohesion? How so? How do your spiritual/religious beliefs help you manage stress?

Results

Quantitative: Migration-related Stress

From the 76 first generation Haitian immigrants in this study, majority were women, US citizens between 20-35 years old, single/never married, who arrived in the US after the age of 18, had a household income lower than \$26,000, were currently employed and reported moderate levels of migration-related stress with a mean score of 24 (SD = 15.7). In univariate analyses, factors associated with higher migration-related stress included female gender, older, older age at

migration, and having lower English language fluency. In a multiple linear regression, only English language frequency ($\beta = -.264, p = .017$) and gender ($\beta = -.280, p = .011$) were independently associated with migration-related stress scores and accounted for 15% of the observed variance.

Qualitative: Migration-related Stress and Stressors

Descriptive

A total of eight participants completed the in-depth interviews, six women and two men. All participants reported moderate to severe levels of distress with average DIS scores of 45.38 (SD = 11.87) signifying severe migration-related stress. Migration-related stress scores ranged from 31 (minimum) to 62 (maximum). Age ranged from 25-57 years old, six participants were born in Port-au-Prince and two were born in Cap-Haitian. The majority of the participants (6) were 18 or younger when they migrated to the US and spoke English often or all the time. All participants were employed, three had an associate degree, four had a bachelor's degree and one completed some high school. Length of time living in the US for this sample ranged from six to 37 years. Six participants were citizens and were not in Haiti during the earthquake. The subset of participants in the qualitative phase of this study had significantly higher scores on all DIS subscales, compared to the average scores for the total sample. Mean scores for DIS subscales were: loss (M = 9.0), novelty (M = 6.0), occupation (M = 7.50), language (M = 5.75), discrimination (M = 9.75), and not at home (M = 7.38).

Overall Experience of Migration-related Stress

Half of the participants indicated that stress was not a word used in their everyday vocabulary when growing up in Haiti and when used, it mainly referred to being bothered by someone or something minor. Participants made the distinction between the word: *estress*

(stress) and *strese* (worried), stating that *strese* was used most frequently in their vocabulary. For instance, one participant stated “Yeah, *strese*, yes it is, we talk about, but it is not deep like in America every day, it’s stressful but in Haiti, it has to be like a big, big problem and you like man, I am stressed”. Since moving to the US, the following factors were found to be most stressful: discrimination, culture shock, the school system, language barriers, financial growth/issues, lack of support/help, living with strangers and unknown family members, and shift in priorities.

Participants indicated that several concerns that were never present while living in Haiti played a significant role in their stress post-migration. Concerns such as discrimination, stigma/prejudice about being Haitians, living in a big community, increased diversity, faster living pace, and the language differences emerged as significant stressors that elevated migration-related stress, while differences in the school system and increased opportunity to gain a better education and financial freedom were factors that ameliorated migration-related stress among Haitian migrants. For instance, one participant stated this about discrimination,

One thing that made my life stressful was discrimination because in Haiti we do not have discrimination. We do have class issues like people who have more money are more acceptable and stuff like that. The discrimination is so deep. That’s something I never experienced until I got here.

Another participant expressed this about the community and diversity,

I feel like the big community because in Haiti it’s much smaller and everybody knows everybody. You never know how to really react because there’s so much diversity. In Haiti, everybody’s black so there’s not an issue.

Majority of the participants indicated elevated stress after moving to the US because they did not have the needed help, support and knowledge. In addition, priorities shifted in regards to responsibilities and societal pressures. One participant articulated,

In Haiti, nobody cares about your hair, nobody cares about how you get dress, nobody cares about what you eat, it's like nobody cares about things like that, everybody's worried about living. Live, get through the day, and that's it.

Many participants indicated changes in physical and mental reactions to stress after moving to the US. One participant expressed having chest pain, stomachache and ulcers from severe migration-related stress. Another participant experienced insomnia, anxiety and increased frequency of panic attacks, and confirmed that this was a direct consequence from the stress of living in the US. While experiencing high levels of migration-related stress after recently moving to the US, two participants experienced severe depression; one attempted to commit suicide and was hospitalized for a week and another participant strongly considered committing suicide.

Instrumental/Environmental Stressors: Language Barriers

From the ranking of the aforementioned six instrumental/environmental stressors (see Table 1), language barriers emerged as the most stressful factor post migration. Findings revealed several aspects of language barriers were stressful for Haitian migrants. Participants indicated that as a result of language barriers they were often unable to communicate with others, experienced reduced self-esteem and confidence with increasing pressure to learn English at a fast pace.

Table 3.

Most stressful instrumental/environmental stressors

Stressors	Frequency	Percent	Valid Percent	Cumulative Percent
Employment Status	1	12.5	12.5	12.5
Financial	3	37.5	37.5	50.0
Language Barriers	4	50.0	50.0	100.0
Total	8	100.0	100.0	

Haitian migrants indicated significant difficulties and stress in communicating with others when they could not speak English. It was challenging for others to understand them because they used the wrong terms to convey their message, pronounced the words inappropriately, or had an accent that misconstrued word clarity. For instance, one participant expressed the theme in this way,

You might say something and others interpret it differently and it is not because what you say is wrong but because of the pronunciation. Here you say something someone just perceive it differently because they hear it differently

Furthermore, Haitian migrants were often afraid to speak to others due to fear of being ridiculed or making a mistake. This theme was articulated by one participant in this way,

Even though you may know how to say something you're always scared that you're not gonna say it right because some people are so rude the way they correct you.

Being ridiculed or mistreated for inappropriately speaking English or speaking with a Creole accent resulted in low self-esteem and reduced confidence in the ability to learn and speak the language. As one participant explained,

When you're learning a language and then you make a mistake and somebody starts laughing, it makes you feel like gosh am I that bad and you don't feel motivated to actually try again or at least speak it.

Low self-esteem and confidence left some Haitian migrants frustrated and angry from the inability to make people around them understand their feelings, thoughts and point of view in English. Others experienced significant social isolation because of their limited English fluency. One participant went so far to describe their inadequate English proficiency as a disability stating the following,

I would say for someone who doesn't speak the language, you're a disabled person in a way, you're not physically disabled but you're disable because you cannot do stuff that you want to do. That's why I feel like I have to learn the language as soon as possible.

As echoed by the participant above, several other Haitian migrants indicated feeling significant pressure to learn English very fast in order to properly communicate, make friends, meet new people, seek employment, succeed in school or to just simply navigate their activities of daily living. As one migrant explained "It is hard when you cannot express yourself cause language is everything".

Instrumental/Environmental Stressors: Financial

Among study participants, financial challenges were and remain a significant migration-related stressor. Some participants found it difficult to choose which was the most stressful factor between language barriers and finances and felt that both were equally as stressful. Some participants indicated being less stressed in Haiti in regard to financial stability because either they were working, or their parents were working. Furthermore, Haiti was less stressful because there were fewer bills to be paid and often participants had more financial support from family and friends. For instance, one participant explained that in Haiti they bought their land with a one-time payment and did not have to pay monthly mortgages. After moving to the US, financial burdens became much more stressful because participants could not continue the same career or

employment they previously held in Haiti and often had to start over. One participant conveyed this theme by saying,

From living as a nurse in Haiti, coming here you start at level you would never have thought. I embraced it, but it was stressful.

Adults that migrated to the US before the age of 18 expressed having fewer financial concerns personally; however, they often indirectly suffered from the financial burdens experienced by their parents. One participant echoed this theme by stating,

I didn't have much financial barriers as a kid but with my parents I can see my mom for example she had her own business when she was in Haiti, but now she's working for a person and her hours get cut like all the time and then she's talking about them and those financial issues turn to be on you the kid, you are not responsible but you know you have to help your parents out and all that add up.

On the other hand, some participants expressed experiencing more financial stability and greater employment opportunities in the US. One participant expressed this,

...finance changed because more money even though like more bills and you spend more but at least you are able to do certain thing, you are not like rich, but at least the money comes, you are able to have a decent life, a cleaner life and things are like more accessible. Thing is, it is better than living in Haiti, where a lot of time people don't have job, especially my mom she was working but I wouldn't have access to work because it would have been very very hard for me to get a job in Haiti while I was still in school. But here I have the ability to work and go to school, and be able to take care of myself

However, their stress did not diminish because of the degree of responsibilities and financial obligations to families in Haiti and the US. One participant had this to say,

The reason why is more difficult even though my mom was making more money here than in Haiti, was with all the bills that she had to pay and family in Haiti too; you make the money but it's like you didn't make it because you pretty much make it and you just pay bills with it.

Participants indicated that financial obligations back in Haiti could be challenging especially when they were experiencing financial burdens themselves, compounded by low salaries.

Participants stated that they had to learn when to say no so that family did not take advantage of

them and ensured that when monies were sent to Haiti, it was for a valid reason. Furthermore, participants indicated feeling a sense of pride, happiness and diminished guilt when they were able to fulfill their remittance obligations. One participant articulated this theme in this way,

Every time I send them money I feel good because I know they are good. I can breathe better here. I can take myself out, and not feeling guilty. I can buy myself something, and not feeling guilty because I know they are good, they are not in misery over there or like struggling.

Social/ Interpersonal Stressors: Family Conflict

Table 4.

Most Stressful Social/Interpersonal Stressor

Stressors	Frequency	Percent	Cumulative Percent
Family Conflict	4	50.0	12.5
Loss of Social Networks	2	25.0	75.0
Loss of Social Status	2	25.0	100.0
Total	8	100.0	

Among the five social and interpersonal stressors identified by Caplan, family conflicts emerged as one of the highest ranked contributors of migration-related stress. Experiences of family conflict were ranked as a factor that resulted in the most amount of stress post-migration. Participants expressed significant stress from living with family members they did not know or never met. Several participants expressed meeting their stepsiblings and stepparents for the first time when they moved in to live with them after migrating to the US. They indicated that it was a challenge to get along with family members that they often considered strangers with different ideals, values and belief systems. One participant articulated this theme in this manner,

Family conflict was stressful simply because I was thinking about living with a stranger, my step dad, and he is very different from my dad, because of like how they see life, my dad is more like lay back, chill, cool and everything and my step dad is a real typical

Haitian with a lot of point of views completely different and narrow, so it becomes an issue,

Another participant had this to say about family conflict,

Even in Haiti, my dad was here but he was not here. He got here when I was really young so my aunt kinda raised me. Like my dad is like a very typical Haitian guy. It's like his way or the highway. If he says something, he doesn't care about your opinion, or like whatever he says go. And he's like screaming at people, he's like very tough and I didn't really like that. I didn't grow up with a male figure when I grew up so dealing with him was kinda stressful. And there was my step-mom, I have nightmares about this lady until this day. I didn't like here at all.

Furthermore, participants highlighted their inability to express their concerns or speak up because the family member they were now living with, although a stranger, may have been the same individual who sponsored their residence or visa application. As such, they felt that they had to accept any treatment directed their way because they felt a sense of obligation and debt for the sponsorship and facilitation of their entry to the US. Furthermore, participants indicated having little choice in the matter, often leaving them powerless. Participants also expressed observing increasing conflicts and disputes between their parents, sometimes even involving them, the children in the parents' issues. One participant expressed this theme this way,

When I was living with my aunt and grandma we had had conflicts, but not to the extent of when I came here where it was like bickering everyday between my mom and dad to the point where they had to separate. Those kind of things, it's like everyday whether, it's about the kids, whether it's about money, whether it's about whatever it is, it's something. I experienced family conflict before like I said, its family, there's always gonna be some fighting but not to that extent. And that kinda make you rethink twice about like maybe I shouldn't have come to the US, maybe I was better off in Haiti and those kinda make it stressful staying here.

Social/ Interpersonal Stressors: Loss of Social Networks

Table 5.

Second Highest Most Stressful Social/ Interpersonal Stressors

Stressors	Frequency	Percent	Cumulative Percent
Changing Gender Roles	1	12.5	12.5
Family Conflict	2	25.0	37.5
Intergenerational Conflicts	1	12.5	50.0
Loss of Social Networks	3	37.5	87.5
Loss of Social Status	1	12.5	100.0
Total	8	100.0	

Loss of social networks were ranked as the second highest factor that resulted in the most amount of stress post-migration. Haitian migrants indicated being stressed about losing their family and friends and leaving them behind in Haiti. They expressed that in Haiti, they often resided with plenty of family members and lived in close-knit neighborhoods where everyone knew each other and interacted. Furthermore, participants expressed that family members spent more time with each other when they were in Haiti. Participants expressed the importance of family and the sense of belonging to a community where you could often rely on neighbors, friends and family in times of need. For instance, one participant expressed this

I feel, like my mom she had more time to take you places, you know have fun with you but here, she works all the time and you have to schedule your time with her.

Another participant echoed this theme in this manner,

There was a lot of us in the house, sometimes we had like 9 to 10 of them in the house like I said I always lived with a lot of people. We have struggled together, when it's good time too, we enjoy the good time together and all that. But when I got here, it was only me and my little brother and then my step dad who was like a stranger to us and my mom who was always working so it was just like coming from a happy big house to a very sad life.

After moving to the US, they complained of feeling isolated, and experiencing difficulties in finding the time and means to communicate with those left behind in Haiti and making new friends in the US. Participants also highlighted that maintaining contact with family and friends from Haiti became less difficult with the invention of social media platforms like WhatsApp, Facebook and MySpace. However, not all Haitian may have access to these platforms or the means to use them. This was reflected in this participant's comment,

When I came here, I didn't have a lot of friend. I still have to like, see who I could click with because a lot of time I cannot be part of the conversation because first of all I don't understand what they're talking about. A lot of kids here they just speaking English, they are not speaking creole, so you're lost, you are pretty much lost, so how are you going to have a conversation with them. And the way I see life too was not the same as them. So at that time, cell phone was not as like it is now, you have WhatsApp, you have Facebook now. You have all that stuff to communicate with your friends, it was not easy like that when I just got here, so I just started all over.

In addition to difficulties in communicating and interacting with family and friends in Haiti, participants expressed significant stress and challenges making new friends in the US and meeting people they could trust. These challenges were further compounded by limited English fluency that impeded dialogue and limited friendship and relationship development to other Haitians only. One participant had this to say,

... my friends, they were Haitians just like me, so they spoke the language, but it was hard to make friends with people outside of the culture, but it was easy with Haitian people.

Participants also expressed the notion that individuals living in the US who were not raised in Haiti would not be able to understand their views, values and beliefs systems. Another participant echoed this theme in this manner,

...making new friends, it was stressful making new friend because a lot of time people here don't understand you, they will say that you're weird or you're crazy that's two things people in America will tell you so a lot of time, they just don't understand you and making friends that was hard for me to find someone in the same situation,

However, some participants indicated that making friends with Haitians was also difficult. They expressed that second or third generation Haitian migrants or Haitian migrants that moved to the US at a very young age, and have spent majority of their lives in the US or were born in the US, often did not speak a lot of Creole (or in some cases refused to speak Creole) or did not acknowledge that they were Haitians or of Haitian descent; thus, making forming relationships or making connections challenging.

...but a lot of them were not too cool with because they would not speak a lot of creole, they wouldn't say themselves they're Haitian, they were more into American life than Haitian and it was hard for me to relate to them or be friend with them, we didn't have a lot to talk about.

Another participant echoed this theme in saying,

I attended a school that had like 85% Haitians, they speak good creole, the only time they will speak creole to you is when they need money or something.

Moreover, participants indicated that it became harder to connect with childhood friends or family members in Haiti, with more time spent in the US as they acculturated and adopted a more Western lifestyle. For instance, they expressed a primary language shift with more time in the US with English becoming their primary language and losing fluency in their native language. One participant articulated this theme in this manner,

Number one thing I lost, were my friends, they speak French and I speak English now, the conversation was lacking, things were different.

Finally, participants expressed that with the loss of their social networks after moving to the US, came the loss of their support system, which resulted in significant suffering that negatively impacted their stress and mental health and resulted in social isolation. Furthermore, they expressed that sometimes family or friends in the US were going through their own challenges and did not want to or could not provide assistance when it was needed. More than one participant described either them or their parents getting kicked out of family or friends house

after moving to the US. One participant explained their story describing how they went from a life of financial prosperity with great family support to a life where they experienced homelessness, malnutrition, and exposure to violence as a direct result of an attempted rape and murder, and illness (both mental and physical). Below I briefly describe some of the participants' experiences,

Spent a long time in the hospital because of an infection, for at least six weeks, no one visited me for more than six weeks. During that hospital stay, I was kicked out of my home and my stuff were dropped off at a friend house, but they put them outside and all got damage from rain and had to throw away everything. When I came out of the hospital, I didn't know where I was going. I spent some time at a friend house, a few weeks under the bridge in Nebraska before I went to my sister house in Miami.

Participants expressed undergoing a change in personality as a consequence of losing their social networks and social isolation experienced while living in the US, especially during the early years after migration. For example, participants asserted being outspoken, extrovert, and outgoing when they were in Haiti; however, language barriers and lack of social networks forced many of them to revert to being antisocial, shy, and a loner. One participant stated this,

I'm more comfortable when I'm in Haiti to talk to someone and to make jokes but here huh worse. People call me antisocial all the time, at work, at my church, you don't talk to nobody and I'm like yeah, I'm sorry. I don't.

Societal stressors: Discrimination/Stigma

Table 6.

Most Stressful Societal Stressors

Stressor	Frequency	Percent	Cumulative Percent
Discrimination/stigma	8	100.0	100.0
Legal status	0		
Political/ historical forces	0		

Every participant interviewed ranked experiences of discrimination and stigma as the most stressful societal stressor encountered post migration. Participants indicated experiencing different forms of discrimination, which included racial discrimination, discrimination in regard to their Haitian descent and cultural stigma from what has been portrayed in the media and cultural myths. Not only did participants complain of being discriminated against for being black but for also being Haitian. Participant expressed witnessing increasing evidence of overt discrimination against Haitian immigrants in the past few years. One participant articulated this in this way,

That's the reason why I say that this was a big stress because it's not the fact that you were just black but it's the fact you are Haitian. And that in itself carries a toll.

In addition to experiencing discrimination for being black and Haitian, participants expressed that increasingly anti-immigrant attitudes played an important role in their stress. One participant expressed this,

I feel like it is both, it's double your problem. First, you're already an immigrant that a lot of people think, ohh you're an immigrant you're taking our job, you're taking our money, you're taking everything. Meanwhile a lot of them don't understand that immigrants are doing jobs a lot of them wouldn't do and immigrant is part of the economy for this country and a lot of people don't understand that. So especially, a lot of them too, they don't like the fact that you have an accent. They feel that you should not have an accent from somewhere else and be in the country. So being black on top of it, it doubles your problem. So that make them see you like worse because they feel like your country is so bad and that's why you're here. That's why you're at my house now, because it's so bad where you're from that's why you're here. Why are you even here, pretty much?

Participants expressed that Haitians were viewed as the inferior population among other Black/Caribbean migrant subgroups. One participant described getting bullied and fighting back in high school for being Haitian,

I mean you fight in school in Haiti, just because you're being turbulent, your friends don't like my friends, we go fighting. Coming here I'm fighting because I am Haitian. I am not fighting because I don't like this guy as a person. I am just fighting because ohh my god this guy is Haitian. You inherit every stigma that has been created upon Haitian.

Negative views and stereotypes continually have significant impact on Haitian migrants even forcing some to question their self-worth and value as human being even going as far to wishing that they weren't Haitians sometimes. One participant had this to say,

In Haiti you never had to question your worth as a black person, but here in the US for the first I have encountered those discussions. So those kinds of things make you think about you as a second-class citizen in the US

Participants articulated that Haiti's portrayal in the media has resulted in many negative stereotypes that members of society have generalized to all Haitians. Furthermore, as Haiti is one of the poorest countries in the world, participants express that there is the assumption that life in Haiti is horrendous for all, and every Haitian would jump at the opportunity to move to the US if given the chance. Several participants expressed as adolescent and young children, they had very little control in the decision to move to the US, and they simply followed their parent's wishes. Contrary to the media's distortions, they confirmed that life in Haiti can be fun, peaceful and comfortable, and that not every Haitian wished to leave that life behind. They affirmed that the media's primary focus on the negative aspect of life in Haiti (e.g. violence, poverty) has not been helpful. One participant expressed this theme in this manner,

They think of Haiti, they think criminals, or they think you're in the street, or voodoo, that's one thing that always pops up. Some of them they think that you're in Haiti where your life was so bad that you felt the need to transfer to a different country, but I was comfortable in my country. I didn't ask, if I had to choose, I'd prefer to be back in my country versus being here. We met this Dominican Republic guy and because we were Haitians, his first comment was ohh I know how you guys love coming to the US to the other side. And I'm like what? They keep assuming that because we are Haitians and all the things they see in the media that we had such a bad life.

Coping/Stress Relief Resources

Participants expressed experiencing less stress when living in a community that contained

a lot of Haitians. Living in a Haitian enclave, like Little Haiti, provided migrants with the necessary support, guidance and access to knowledge to manage their daily lives. This participant had this to say,

I would say they reduced stress instead of putting more stress. The reason I would say reduced stress because a lot of times like Haitians when they know something, like the good ones, they would tell you this and this job is hiring, this is what you need, they pretty much guide you. And if you're dealing with a problem and they know someone that can help out, they will tell you hey I had this lawyer, I have this person, or I was dealing with that too and this is how I handled it. A lot of times, they can be really useful and that brings the amount of stress down because a lot of problems for immigrants is not because the resources are not there, it's more because they don't know because of the language, because of what they don't know about the country, so they don't know what resources and where to go to get it. But when you have someone else who speaks the same language as you, who knows what's going on, that give you more like and make you at ease because you know like well I know where to go and I know what to do even though I'm dealing with that problem, so it can bring less stress having like a Haitian community around.

Furthermore, participants articulated gaining a sense of belonging and a way to reconnect with the culture, the food, the music and the Haitian community. For some, ethnic enclaves like Little Haiti provided access to resources that could not be found elsewhere in Florida. One participant had this to say about her mom after moving her to Tampa.

but my mom I would say she benefited from that, she liked that. Even until now when she's in Tampa she doesn't like it, there's not a lot of Haitian around, you can't find Jitneys.

However, one participant brought to light one of the potential downfalls of living and growing up in an ethnic enclave like Little Haiti. Participant expressed that while living in Little Haiti, they were less motivated to learn English because they experienced less pressure to learn the language and at Miami Edison high school (predominantly attended by Haitians), many classes were taught in Creole. As a result of this, participant articulated experiencing significant difficulties in learning the language, having a heavier Haitian accent when speaking English, and a decreased motivation to branch out of their Little Haiti comfort zones, which significantly impacted pursuit

of higher education and upward mobility. Another stress relief factor for Haitian migrants included family cohesion. One participant articulated this about why family cohesion reduced their stress

it's the only way you feel like you are back home for a bit, nostalgia, nostalgia is real, being here with family resembled a little bit like home especially if you don't have the green card to go back and in forth

Participants in this sample rarely sought help when stressed. When asked about help seeking behaviors, one participant had this to say.

No I don't. That's one thing we don't really do in the culture, is you know go and speak to someone about your emotional stuff or whatever you're dealing with.

Only one participant indicated using mental health services when manifestations of stress grew severe. Negative coping strategies practiced by Haitian migrants included keeping busy with work or other activities, so they are forced not to face their issues, avoiding certain stressful situations (avoidant coping) and over-indulgence in coffee and/or alcohol (even going so far to describe a daily cycle of alcohol (to combat insomnia) and coffee (to stay up during the day)).

One participant had this to say,

If I know something is stressing me, I try to stay away. Like if I go somewhere and that things are allowing me to be stressed more, I just don't do it anymore. So kinda in a way I don't face my problems, but I avoid so I don't stress about it.

Cultural norms, mistrust, fear of being a burden to others were cited as rationale for not seeking help, professional or otherwise. Positive coping activities included reading, exercising, meditating, doing arts and crafts, going to church and spirituality.

Discussion

This mixed method sequential explanatory study aimed to provide an in-depth understanding of migration-related stress among Haitian migrants and to determine which stressors were most impactful in their life while adapting to life in the US. Overall, findings

support the significance of migration-related stress in the Haitian population and pinpoints the most stressful environmental, social, economic factors post migration. This study not only quantified the degree of migration-related stress; but, also explained migration-related stressors through Haitian migrants' personal perspectives (i.e. explanatory model); thus, giving a voice to a minority population rarely represented in mental health research. Furthermore, this provided a glimpse of coping mechanisms and stress relief approaches employed by Haitian migrants.

Migration-related stress was significantly higher among migrants who were women, older, moved to the US after the age of 18, and with limited English proficiency. However, multiple linear regressions showed that only gender and English language skills significantly predicted migration-related stress. Consistent with previous research with Haitian migrants and other migrant subgroups, women reported higher level of stress in relation to the migration and acculturation process (Aranda, Castaneda, Lee, & Sobel, 2001). English language skills have been shown to be a significant stressor for migrants and past studies demonstrated that migrants with language barriers experienced significant stress and reported poorer health (Ding & Hargraves, 2008).

This study was able to shed light about the “what, how, and why” of migration-related stress among first generation Haitian migrants with high levels of migration-related stress. It is not just important to know that Haitian migrants experienced high degrees of migration-related stress; but it is also significant to determine what aspect of migration-related stress was most stressful. As a construct, migration-related stress consists of a list of stressors supported by findings from the literature (Caplan, 2007). However, prior studies that focused on quantitative measures of migration-related stress only, failed to identify which aspect of migration-stress was

most relevant to mental health and why; thus, highlighting the consequential contribution of this study to the migrant stress literature.

Findings from in-depth interviews provided supplementary evidence of the impact of language barriers. Language barriers were ranked as one of the most stressful migration stressors among first generation Haitian migrants. Consistent with previous studies with Hispanic and Haitian migrants (Rodriguez et al., 2002; Saint-Jean & Crandall, 2005; Sanchez et al., 2015), Haitian migrants expressed experiencing difficulties communicating with others, feared getting ridiculed or making mistakes when attempting to speak English, experienced lower confidence and self-esteem when unable to make others understand them and significant pressure to learn English at an accelerated pace. Furthermore, inability to speak English for Haitian migrants made it extremely difficult to navigate their activities of daily living, gain employment, succeed in their education and maintain social networks. Through the lens of the stress process model, language barriers served as primary stressors, which gave rise to many secondary stressors, as aforementioned, providing affirmation of the spillover effect of stress proliferation. Consistent with previous research on Latino migrants (Lueck & Wilson, 2011), this study uncovered linguistic integration for Haitian migrants, defined as a set of social requirements and propositions that enforce the acquisition of the dominant English language. Since the ability to communicate in English is linked with success in adjusting to life in the US, limited command of English, a fundamental migration-related stressor, may curtail many opportunities for migrants, leading to significant stress and increased risk for mental illness.

Financial status was one of the highest ranked migration-related stressors in this study. Contextual factors that attributed to financial stress for Haitian migrants included vocational and career readjustment, difficulties in obtaining employment due to language barriers, and greater

financial demands and requirements. Findings also showed the positive financial impact of migrating to the US through increased opportunity for employment, higher education, greater pay and financial stability. Findings from this study support research showing greater migration-related stress among migrants unable to meet economic expectations (Yeh & Inose, 2003; Poyzrali, Kavanaugh, Baker, & Al-Timimi, 2004). Financial strain in the country of immigration has been linked to depression and anxiety among migrants (Lindert, von Ehrenstein, Priebe, Mielck, & Brähler, 2009).

In line with previous studies highlighting the impact of losing social networks after leaving one's native country, loss of social networks was ranked as one of the most stressful social/interpersonal migration factors. Reasons attributed to the stress associated with lack of social networks included loss of close knit relationship with family and friends, loss of a support system, difficulty communicating with family in Haiti, less time to spend with family with increasing obligations in the US, difficulty making friends in the US and social isolation. Previous studies with the Hispanic population found that separation from family, absence of pre-immigration friends and difficulties visiting family abroad to be significant predictors of migration-related stress (Bekteshi & van Hook, 2015; Bekteshi et al., 2016; Concha et al., 2013).

Family conflicts also emerged as one of the most stressful migration-related stress factors. Family conflicts occurred as a result of living with stranger or unfamiliar family members such as stepsiblings, differences in views and beliefs propagated conflict, and increasing disputes between parents. Prior research among Latino migrants found family dysfunction and conflicts were associated with higher migration-related stress. Nicolas, DeSilva, Prater, and Bronkoski (2009) found a significant correlation between empathic family stress (defined as stress and worry experienced in response to family members' problems), migration-

related stress and depression among Haitian immigrants. Even with a strong desire to be around family, a dramatic shift in regular face to face contact with family members was documented; 60-80% of participants from this study indicated seeing their family about once a month after moving to the US (Nicolas, DeSilva, Prater, & Bronkoski, 2009). With respect to our stress process framework, findings provide evidence of lateral stress proliferation among Haitians migrants, highlighting the impact of conflicts with close family members in the realm of stress.

Discrimination materialized as a pervasive migration-related stressor in this study. Haitian migrants experienced stress related to being discriminated against for being black, Haitian and immigrants. Furthermore, negative cultural stigma and stereotypes and the media's portrayal of Haiti has had long-lasting impact on Haitian migrants. Consistent with previous studies, Haitians immigrants have faced discrimination as "boat people" as well as discrimination related to their ethnicity, culture, and skin color (Stepick 1992; Stepick & Swartz, 1998). Discrimination was found as one of the biggest differences between life in Haiti and life in the US among Haitian migrants with high migration-related stress. Being a target of discrimination is a profound emotional and stressful experience with the potential to proliferate into significant mental illness, thus making discrimination too important a factor to ignore when considering mental health of Haitian migrants.

Limitations and Future Directions

Despite the empirical contributions of this study, results must be interpreted with caution. Findings are not generalizable to the broader Haitian migrant population living in US, and are only representative of Haitian migrants living in Florida. Furthermore, since in-depth interviews were only completed with participants who experienced high levels of migration-related stress, qualitative findings may only be reflective of Haitian migrants with extreme levels of stress and

not Haitian migrants with low-to moderate migration-related stress. Additional concerns included the small sample size and the potential for several biases, which included social desirability bias and selective memory. During in-depth interviews, when describing past experiences, participants may not have fully remembered what occurred, making it difficult to verify self-reported data.

In spite of the aforementioned limitations, this study provided in-depth insight regarding the most important migration-related stressors for Haitian migrants. Future studies should consider examining migration-related stressors from a more heterogeneous group of Haitian migrants with a wide range of stress scores to obtain an even more comprehensive picture of migration-related stress and mental health. Future studies should consider a more representative sample and collect data from Haitian migrant nationwide. This study identified stressors most likely to elicit migration-related stress and determined their relative magnitude for Haitian migrants. Results can be used to enhance Haitians' post migration experiences, tailor counseling programs and modify assessment strategies used among this population to determine source of stress and subsequent manifestations of stress. By distinguishing the factors that are most stressful and have the greatest potential to influence mental illness among Haitian migrants, we have identified the areas where aid and preventive efforts should be directed.

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CHAPTER FIVE:

CONCLUSION

Conflict, environmental disasters, economic necessity, and the pursuit of “a better life” or the “American Dream” will continue to drive a steady rate of Haitian migrants to the US and abroad (Castaneda et al., 2015; Sanon Mohammed, & McCullagh 2014). Migration, whether voluntary or involuntary, entails many changes. Adaptation into a new country and ways of life can be challenging. Every individual responds in different ways to the ordeal that often accompanies cross-border migration. While migrants may influence the host culture, experience and past studies have demonstrated that the host culture has a profound impact on migrant health, culture, and mental well-being (Castañeda 2010; Castañeda et al. 2014).

With the ongoing upsurge of immigrants in the US, the lives, health and well-being of immigrants have become the source of great political debate, public health concern and research focus. The health of immigrants represents a multi-faceted problem with complex interrelating variables. Everyone, including Haitian immigrants, will need healthcare eventually. Therefore, the health determinants and associated mental health outcomes of immigrants, if not addressed, may prove to be a public health threat with global relevance. Researchers are asked to see the big picture by rethinking the public health and social scientific understanding of stress and depression so that we can focus attention on the multifaceted interactions that occur among the health of a community, while considering the political and economic structures, and the encompassing physical and social environment.

Research indicates that Haitian migrants are at a high risk for depression while living in the US because of a greater propensity for discrimination, a greater exposure to stress and societal pressures, and greater mental health strains (Allen et al., 2015; Nicolas et al., 2007; Nicolas et al., 2009). Furthermore, unfavorable social forces such as poverty and oppressive social relationship, stress Haitian migrants, weaken their defenses and expose them to mental illness. The protective nature of high levels of social support may be able to buffer some of these deleterious effects. However, living in an environment that often devalues one's ethnic group and skin color, in addition to the pressures and demands associated with being an immigrant can impact mental health and health outcomes. Over time, loss of native culture, adoption of poor health behaviors and longer periods of stress duration may be contributing both additively and/or multiplicatively to poorer mental health among Haitian immigrants.

Overview of Key Findings

Results from this dissertation research provide valuable information important to all health care providers involved in the care of Haitian migrants. In addition, findings from this study can be utilized to educate and increase mental health awareness among Haitian immigrants currently living in US and future generations of Haitian migrants. While all findings from this dissertation research are important, below a brief overview of key findings that represent the take home message of this study is provided.

The literature review identified distinctive migration and acculturation related stressors and subsequent impact on mental health outcomes among first generation Haitian and Hispanic. Among first generation Haitian immigrants, correlates of acculturative stress included English language proficiency, contentment with life in the US, inadequate coping, relational anxiety, and

depression. Of most importance, this review highlighted the knowledge gap in the literature for Haitian migrants and where future studies, like this dissertation research, should be directed.

Findings shed light on the mental health of Haitian migrants and risk factors long implicated in migration-related stress and depression, but in other migrant populations. In this study, factors associated with migration-related stress included older age, rarely speaking English at home, higher number of children, and marginally significant suggestions of female gender and being directly affected by the 2010 earthquake. However, gender and English language fluency were the only significant predictors of migration-related stress. There was a strong positive linear relationship between migration-related stress and depression. Consistent with decades of research demonstrating the pervasiveness of migration-related stress in the mental health of migrants, migration-related stress was the strongest predictor of depression, regardless of how depression was measured.

This study provided evidence of concurrent validity for the ZLDSI depression measure with a significant strong positive correlation between CESD and ZLDSI, demonstrating that the ZLDSI is indeed measuring the same construct as the well-established CESD depression measure. Despite the strong correlation between both depression measures, different demographic factors loaded on each depression measure, showing that they may capture depression somewhat differently. This variation may be embedded in the inherent differences in culture, health beliefs, idioms of expression, and to a certain degree, differences in the way Haitian migrants understand and express symptoms of depression. It is also important to note that more socioeconomic factors such as education and income were significantly associated with the CESD, while past experiences like the 2010 earthquake and prior visits to the US were factors significantly associated with the ZLDSI. Furthermore, being in Haiti during the 2010

earthquake moderated the relationship between migration-related stress and depression, showing an amplifying effect for depression between earthquake exposure and migration-related stress.

Additionally, this study accentuated new factors, not previously considered in past research, but important to mental illness of migrants nonetheless. This study found that moving to the US during the first visit was a significant predictor of depression (ZLDSI) among Haitian migrants. This is of importance because migrants may be more likely to experience more stress and increased susceptibility to depression when moving to a country without any prior knowledge and exposure to the culture, language and overall infrastructure. This also highlights a noteworthy point of consideration with respect to depression risk factors when assessing depression among migrants because moving to the US during the first visit may involve insurmountable challenges. Resources and a positive support system can serve as significant protective factors in this instance.

By using a mixed method approach, this study shed light about the “what, how, and why” of migration-related stress among first generation Haitian migrants with high levels of migration-related stress. Language barriers, financial strains, loss of social networks, family conflicts and exposure to discrimination and stigma were the most significant and highest-ranking migration-related stressors. These findings were consistent with more than 20 years of previous literature on migrants showing these five factors to be of utmost importance to migrant’s mental health (Cano et al., 2015; Driscoll & Torres, 2013; Hovey & Magaña, 2000; Jagers & MacNeil, 2015; Mui & Kang, 2006; Park & Rubin, 2012; Polanco-Roman & Miranda, 2013; Potochnick & Perreira, 2010; Torres, 2010; Xu & Chi, 2013).

Mental Health Implications

By distinguishing the factors that are most stressful and have the greatest potential to

influence mental illness among Haitian migrants, we have identified the areas where aid and preventive efforts should be directed. Results can be used to enhance Haitians' post migration experiences, tailor counseling programs and modify assessment strategies used to determine source of stress and subsequent manifestations of stress. The vulnerabilities and the mental health care needs of immigrants, including Haitians, are not adequately addressed. There exist behavioral, cultural and structural factors that affect the health status of Haitian immigrants in the US (Castañeda et al. 2014). Additionally, many other variables such as socioeconomic status, previous habits in the native country and policy environments are left uncharted (Castañeda, 2010; Castañeda et al., 2014). Very little is known about the mental health needs of Haitian immigrants. However, based on personal experiences and the degree of trauma experienced by Haitians before moving to the US, one can infer that many Haitians in Haiti and the US are most likely suffering from post-traumatic stress disorder, depression or many other numbers of psychiatric conditions as a result of exposure to trauma, poverty, natural disasters, and much more. As supported by this dissertation research and previous studies, the way depression is labeled, understood or experienced by this population is different from the diagnostic criteria in Western medicine; thus, development and application of a culturally sensitive/competent Haitian depression measure and screening tool is paramount. Moreover, clinicians are asked to consider the unique pre/post migration stressors/risk factors and ensure that diagnostic tools and treatment options are better aligned with Haitian migrant's mental health needs and beliefs.

Implications for Nursing

By providing a nuanced depiction of the link between depression and migration stress, results from this study may help to determine the best strategies for screening, prevention and interventions for mental health disorders in the Haitian immigrant population, thereby making a

significant contribution to nursing care. Nurses are in a pivotal position to screen and assess for depression, communicate changes in emotional/behavioral status and offer support and education to Haitian immigrants. However, effective planning and delivery of evidence based and culturally salient mental health care for diverse immigrant population in the US as well as adequate resources remains a major challenge for nurses. In order for nurses to advocate and provide appropriate mental health care to the growing number of Haitian immigrants that have been and will be their patients, they must gain a deeper understanding and knowledge of inherent factors that changes the picture and expression of depression for Haitians. This requires an understanding of the Haitian culture, their sociopolitical history in Haiti and US, their lived experiences, pre, during and post migration stressors, idioms of emotional distress, health beliefs, and views about mental health and treatment, just to name a few. Kleinman, Eisenberg, and Good (1978) used the term ‘explanatory models’ to explain patients’ thoughts concerning their illness, (its cause, timing, effects, mechanism, severity, duration, treatments and prognosis). Kleinman and colleagues highlighted the importance of understanding illness from the patients’ perspectives in order to match the health services offered and the population receiving the care. Findings from this study will allow nurses to be better prepared and educated in order to provide the most informed, culturally appropriate care for Haitian immigrants suffering from depression and migration-related stress. Nurses are uniquely positioned to advance knowledge about migration-related stress and depression and reduce mental health disparities observed among Haitian immigrants since they are often on the front lines of psychological care.

Directions for Future Research

The complexities of the issues surrounding migration, health status and mental health have resulted in the need of a multidisciplinary approach to combat this challenge. The urgency

and importance of these mental health concerns, especially regarding stress and depression, ask researchers to expand their efforts through five steps: listening differently, teaching differently, democratizing knowledge production, translating ourselves, and writing differently (Willen et al., 2011). Additionally, the literature implores the public and policymakers to accept Haitian immigrants as deserving and contributing members of the society.

Investigators should shift their population focus to include Haitian immigrants in order to bridge remaining research gaps and consider a more representative sample and collect longitudinal data from Haitian migrants nationwide. As the population of immigrants increases, it has become more and more apparent to society, policymakers, and researchers that there is a need for accurate, reliable, timely, and valid research that analyzes migrant's mental health and health disparities. Analyzing the mental health of migrants require both quantitative and qualitative approaches (Schenker et al., 2014). Nevertheless, most studies that focus on migrant health are cross-sectional, which does not allow for temporality and cause and effect assessment. Longitudinal studies would be ideal in this population; however, Haitian migrants are hard to reach, mobile, and reluctant to participate in research, rendering epidemiological studies very difficult. Additionally, there exists a limited amount of data sources that collect information on migrants and when data is collected it is often feeble and unreliable (Schenker et al., 2014). The current system in place inadequately monitors migrants. Every database collects data on a different set of variables, creating many little data sources that are incomplete. Ultimately, this provides a limited and often biased view of migrants' health outcomes (Schenker et al., 2014), including Haitians.

The unique health needs of Haitian migrants should inform research methodology. To improve the health of migrants, we must analyze and understand them. There are distinctive

challenges that are not easily conquered when working with Haitian migrants. Therefore, adjustments in research methodology may be needed. The characteristics of Haitian migrants should be taken into consideration as well. All immigrants, including Haitians are a heterogeneous group of the population that has a “complex background of hybrid cultures” (Schenker et al., 2014, p. 20). Furthermore, multifaceted and interrelated environmental, social and cultural factors of the host country and country of origin greatly impact their health behaviors and health outcomes. To address the limitations discussed earlier, several strategies are recommended when conducting research with migrants, which include the following: (1) harmonizing the definitions and statistics of migration; (2) disseminating and analyzing available data; (3) adding migration related questions to existing data systems; (4) addressing low frequency or rare population by combining data by region, using exact statistics, oversampling and using specialized sampling methods targeted to migrants; (5) utilizing qualitative methodologies and/or mixed method approach; (6) training personnel on cultural awareness, safety issues, and language; (7) developing and validating data collection instruments; (8) comparing and contrasting migrants and non-migrants; (9) addressing ethical issues; and (9) using multilevel theoretical frameworks and multidisciplinary research teams (Schenker et al., 2014). The importance of these implications far exceeds the concern for the limitations that are present and the associated variables, especially given that these studies are feasible within certain strategies.

A more vigorous theoretical schema that concentrates in the shift and expansion of stress paradigms to include all the possible migration-related stressors that may affect depression and analyze their additive, interactive and independent effect should be considered. Finally, researchers are encouraged to take a stand and take a lead in public and policy conversations

surrounding migrant health (Willen et al., 2011), as they are in a great position to rally for a change, contribute to the breadth of empirical research and improve the health of immigrants living in the US now and in the coming years.

Conclusion

Since Haitian migrants form a considerable and essential group in Florida, I encourage future policymakers to meet their mental health needs by providing better access to health care services and culturally competent care. It is important that health care providers recognize Haitian migrants as a vulnerable population that needs targeted interventions for improving health care access and utilization. Since access improves if health care services become better aligned with migrant's needs and resources, it is important to know both the migrant's perspectives as well as the health system's response. To accomplish this goal, we must first understand the factors or determinants that operate together as a dynamic system over time to shape Haitian migrant's mental health. Furthermore, many of the factors influencing migrants' health status and utilization of healthcare services have to do with their social circumstances; hence, it is also important to understand Haitian migrant health through their broader socioeconomic and political context of development.

For the time being and for many years into the future, the US will continue to be a popular option for Haitian emigration. Haitians will continue to leave everything behind, even when experiencing a great deal of fear and uncertainty. They will travel with little resources; with no idea of the problems they could face during their travel and assimilation period in the US just hoping they will be safer than they were in their home country. Haiti's infrastructure and economy is still weak and attempting to develop. However, this group will always be vulnerable to American policies, society, and pressures. As I write this manuscript, many Haitian migrants

face uncertainties about the future and are experiencing considerable stress with respect to fear of deportation now and in the near future as a result of the discontinuation of TPS. Illegal immigrants are considered underserving and have no right to health care. Although all immigrants, whether documented or undocumented, contributes to the social and economic welfare of the US, many refuses to recognize illegal immigrants as complete social beings that are deserving (Castañeda 2010; Castañeda et al. 2014). This issue not only results in negative consequences for illegal immigrants, but also profoundly affects individuals that are part of mixed status families (Willen et al., 2011). Difficulties are not likely to get better for Haitian migrants. As Haitian migrants continue to encounter restricting immigration policies, it will very likely have major implications for Haitians, both citizens/residents of the US and abroad in their home country. Who knows what this will mean in the landscape of healthcare and the attention that will be brought towards Haitian mental health, if any attention is paid to them at all. What is certain is that stressors will persist for the Haitian population and diaspora in the US, with special care and recommendations to be considered for this vulnerable minority group.

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APPENDICES

Appendix A: IRB Approval Letters



RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX(813)974-7091

10/9/2017

Dany Fanfan
College of Nursing
15455 Plantation Oaks Dr.
Tampa, FL 33647

RE: Expedited Approval for Initial Review

IRB#: Pro00031494

Title: The Role of Migration-related Stress in Depression Among Haitian Immigrants in Florida:
A Mixed Method Sequential Explanatory Approach

Study Approval Period: 10/8/2017 to 10/8/2018

Dear Ms. Fanfan:

On 10/8/2017, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents contained within, including those outlined below.

Approved Item(s):

Protocol Document(s):

[Protocol Version #1](#)

Consent/Assent Document(s)*:

[Consent Form .pdf](#)

[Consent without signature](#) *waiver granted

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent documents are valid until the consent document is amended and approved. Verbal consent is not stamped.

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

(6) Collection of data from voice, video, digital, or image recordings made for research purposes.

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45CFR46.117(c) which states that an IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either: (1) That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or (2) That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context. For verbal consent only.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,



Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board



RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-7091

9/28/2018

Dany Fanfan, MS
College of Nursing
Tampa, FL 33647

RE: Expedited Approval for Continuing Review

IRB#: CR1_Pro00031494

Title: The Role of Migration-related Stress in Depression Among Haitian Immigrants in Florida:
A Mixed Method Sequential Explanatory Approach

Study Approval Period: 10/8/2018 to 10/8/2019

Dear Ms. Fanfan:

On 9/24/2018, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents contained within including those outlined below.

Approved Item(s):

Protocol Document(s):

[Protocol Version #2, Clean, 3/15/2018](#)

Consent/Assent Document(s)*:

[Creole Consent Form, Version 2, 3/15/2018, Clean.pdf](#)

[English Consent Form, Version 2, Clean, 3/16/2018.pdf](#)

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab on the main study's workspace. Please note, these consent/assent document(s) are valid until they are amended and approved.

The IRB determined that your study qualified for expedited review based on federal expedited category number(s):

(6) Collection of data from voice, video, digital, or image recordings made for research purposes.

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural

beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with USF HRPP policies and procedures and as approved by the USF IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) business days.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

A handwritten signature in black ink, appearing to read "Kristen Salomon", with a horizontal line extending to the right.

Kristen Salomon, Ph.D., Chairperson
USF Institutional Review Board

Appendix B: Consent Forms

Study ID:Ame3_Pro00031494 Date Approved: 4/17/2018



Informed Consent to Participate in Research Involving Minimal Risk

Pro # 00031494

You are being asked to take part in a research study. Research studies include only people who choose to take part. This document is called an informed consent form. Please read this information carefully and take your time making your decision. Ask the researcher or study staff to discuss this consent form with you, please ask him/her to explain any words or information you do not clearly understand. We encourage you to talk with your family and friends before you decide to take part in this research study]. The nature of the study, risks, inconveniences, discomforts, and other important information about the study are listed below.

We are asking you to take part in a research study called:

The Role of Migration-related Stress in Depression Among Haitian Immigrants in Florida: A Mixed Method Sequential Explanatory Approach

The person who is in charge of this research study is Dany Fanfan, RN, MSN. This person is called the Principal Investigator. However, other research staff may be involved and can act on behalf of the person in charge. She is being guided in this research by Dr. Carmen Rodriguez, PhD, ANP-BC, AOCN and Dr. Maureen Groer, PhD, RN, FAAN.

The research will be conducted at the College of Nursing at University of South Florida.

Purpose of the study

The purpose of this study is to examine the relationship between migration-related stress and depression and determine which migration related stressors have the most impact on depression among Haitians immigrants living in Florida.

Why are you being asked to take part?

We are asking you to take part in this research study because you are a first generation Haitian immigrant adults 18 years old or older who has lived in the U.S. for six months or more. In this study, first generation Haitian immigrants are defined as any individual who was born, raised and lived in Haiti for at least 12 years, then moved to live in the U.S.

Study Procedures:

If you take part in this study, you will be asked to:

- To fill out a one-time demographic questionnaire to collect information such as age, gender, race/ethnicity, marital status, educational level, employment status, number of children, region of birth in Haiti, length of time in the U.S., age at arrival, frequency of speaking English at home, documentation status, 2010 earthquake exposure (if migrated after the earthquake), occupation/profession, income level, religion and more.
- To fill out questionnaires about depression and stress in English and/or Creole. You will be asked to fill out each questionnaire once. It should take about 15-20 minutes to complete all the questionnaires.
- The questionnaire completion aspect of this study can take place at your preferred location, which can be your home, a private office, a community center, a library and more.
- Once you are done with the questionnaire, you will be asked whether you would be willing to participate in an in-depth interview if you are chosen.
- You may be asked to participate in an in-depth one-on-one interview about stressors since migration to the U.S. This interview will be audio-recorded with your permission and may last 60 minutes. Only the research team will have access to the tape and the tape will be stored in a password-protected server. This interview will take place in a private setting chosen by the participants. If you do not wish to be audio-recorded, you can still participate in the interview, the interviewer will just take notes during the interview instead.

Do you agree to be audiotaped during the interview?

Yes _____ No _____

Total Number of Participants

About 100 individuals will take part in this study at USF.

Alternatives / Voluntary Participation / Withdrawal

You do not have to participate in this research study. You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

Benefits

We are unsure if you will receive any benefits by taking part in this research study. Participants may enjoy their experiences and receive a feeling of satisfaction from knowing that they are contributing to the advancement of knowledge in an important scientific area. Furthermore, results of this study will be made available to the Haitian community and Haitian organizations. We anticipate that this study will contribute to an increased understanding of stress, and changes in migration-related factors in relation to depression among Haitian immigrants living in Florida.

Risks or Discomfort

This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. It is possible that participants may experience feelings of distress when answering questions concerning stressors and symptoms of depression. The PI will help participants manage these feelings if they occur, take a break or postpone the interview if necessary.

Participants will be provided with resources/information to locate the mental help resources in their community, if they ever wish to do so.

Compensation

You will be compensated with a \$10 gift card if you agree to participate in this study and agree to complete all the questionnaires for the study. You will be compensated an additional \$20 gift card if you are chosen for an in-depth interview. If you withdraw for any reason from the study before completion, you will be paid for the study phase completed.

Costs

It will not cost you anything to take part in the study.

Privacy and Confidentiality

We will keep your study records private and confidential. Certain people may need to see your study records. Anyone who looks at your records must keep them confidential. These individuals include:

- The research team, including the Principal Investigator, study coordinator, research nurses, faculty, and all other research staff.
- Certain government and university people who need to know more about the study, and individuals who provide oversight to ensure that we are doing the study in the right way.
- The USF Institutional Review Board (IRB) and related staff who have oversight responsibilities for this study, including staff in USF Research Integrity and Compliance USF Office of Research and Innovation and other USF offices who oversee this research.

We may publish what we learn from this study. If we do, we will not include your name. We will not publish anything that would let people know who you are.

You can get the answers to your questions, concerns, or complaints

If you have any questions, concerns or complaints about this study, or experience an unanticipated problem, call Dany Fanfan at 305-608-2700.

If you have questions about your rights as a participant in this study, or have complaints, concerns or issues you want to discuss with someone outside the research, call the USF IRB at (813) 974-5638 or contact by email at RSCH-IRB@usf.edu.

Consent to Take Part in this Research Study

I freely give my consent to take part in this study. I understand that by signing this form I am agreeing to take part in research. I have received a copy of this form to take with me.

Signature of Person Taking Part in Study

Date

Printed Name of Person Taking Part in Study

Statement of Person Obtaining Informed Consent

I have carefully explained to the person taking part in the study what he or she can expect from their participation. I confirm that this research subject speaks the language that was used to explain this research and is receiving an informed consent form in their primary language. This research subject has provided legally effective informed consent.

Signature of Person obtaining Informed Consent

Date

Printed Name of Person Obtaining Informed Consent



Fòm Konsantman Pou Patrisipe Nan Rechèch Ki Pa Gen Anpil Risk Ladan'l

Pro # 00031494

Nap mande ou pou ou patrisipe nan yon etid rechèch. Etid rechèch sa a se pou moun ki vle patrisipe ladan'l. Fòm sa a ap mande ou pèmisyon pou ou patrisipe nan rechèch sa a. Tanpri, li enfòmasyon sa a avèk anpil atansyon epi pran tan ou anvan ou pran yon desizyon. Mande moun kap travay nan rechèch sa a pou li diskite fòm konsantman sa a avèk ou, mande moun sa yo pou yo eksplike ou si ou ta gen you bagay ou pa konprann. Ou ka mande eksplikasyon pou tout mo ou pa konprann. Nou enkouraje ou pale avèk fanmi ou epi zanmi ou anvan ou dakò pou ou patrisipe nan etid rechèch sa a. Nou pral eksplike ki jan de rechèch nap fè, ki risk oubyen ki sa ki gen ladan'l, ki enkonvenyan ak malèz sa ka lakòz, ak lòt enfòmasyon enpòtan sou rechèch sa a ou dwe konnen.

Nou envite ou pou ou patrisipe nan you etid rechèch ki rele:

Wòl estrès demenajman oubyen migrasyon ka genyen sou depresyon pou imigran Ayisyen nan Florida

Moun ki responsab rechèch sa a se Dany Fanfan RN, MSN. Moun sa rele Envestigatè Prensipal. Men, gen lòt moun kap travay nan rechèch la ki ka ajè pou moun ki an chaj la. Nan rechèch sa a, Dr. Carmen Rodriguez, PhD, ANP-BC, AOCN and Dr. Maureen Groer, PhD, RN, FAAN la pou bay konsèy.

Rechèch la pral fèt nan Kolèj pou Enfimye nan University of South Florida (USF).

Objektif etid rechèch la

Objektif etid rechèch sa a se (1) pou ede pi byen konprann rapò estrès demenajman oubyen migrasyon genyen ak depresyon e (2) ki estrès demenajman migrasyon ki ajè pi plis sou depresyon pou imigran Ayisyen kap viv nan Florida.

Poukisa nap mande ou pou ou patrisipe?

Nap mande ou patrisipe nan etid rechèch sa paske ou se yon premye jenerasyon imigran Ayisyen, e ou se you moun ki genyen plis ke 18 an e ap viv nan peyi Etazini pou plis ke 6 mwa. Nan etid rechèch sa, premye jenerasyon imigran Ayisyen vle di kenpòt moun ki fèt, leve ak viv an Ayiti pou plis ke 12 zan anvan you te vinn viv nan Etazini.

Kòman etid rechèch sa a ap fèt:

Si ou patisipe nan etid rechèch sa, nap mande:

- Pou ou ranpli yon kesyonè demografik yon sèl fwa pou kolekte enfòmasyon tankou laj, sèks, ras / etnisite, si ou marye, nivo edikasyon, sitiyasyon travay, kantite timoun, kote ou fèt an Ayiti, konbyen ane wap viv nan peyi Etazini, laj ou rive nan peyi Etazini, konbyen fwa ou pale Anglè nan kay ou, estati dokiman ou, si ou te an Ayiti lè tranbleman de tè 2010 la te pase a, okipasyon / pwofesyon ou, konbyen kòb ou fè, relijyon ak plis enfòmasyon.
- Pou ou ranpli yon kesyonè sou depresyon ak estrès an Anglè oswa Kreyòl. Nap mande ou pou ranpli kesyonè sa a yon sèl fwa. Sa ka pran ou apeprè 15-20 minit pou ranpli tout kesyonè yo.
- Ou ka ranpli kesyonè yo kenpòt kote ou vle, lakay ou, nan yon biwo prive, yon libreri, yon sant kominotè oubyen lòt kote ke ou chwazi .
- Lè ou fini ranpli kesyonè ya, nap mande ou si ou vle patisipe nan yon entèvyou si nou ta chwazi ou kòm patisipan.
- Nou ka mande ou pou ou patisipe nan yon entèvyou apwofondi avèk investigatè prensipal la pou pale de bagay ki ka bay ou estrès aprè ou kite Ayiti pou vinn viv nan peyi Etazini. Nou ap anrejistre entèvyou sa a avèk pèmasyon ou epi li ka dire 60 minit. Se sèlman ekip rechèch la kap genyen aksè a anrejistreman yo e nap mete e sere enfòmasyon ou sou yon aparèy ki byen pwoteje. Entèvyou sa a pral pran plas nan yon anviwònman prive ke patisipan an chwazi. Si ou pa vle nou anrejistre entèvyou a, ou ka toujou patisipe, nap jis pran nòt pandan entèvyou a.

Eske ou dakò pou yo anrejistre entèvyou an?

Wi _____ Non _____

Kantite moun kap patisipe

Yon afè de 100 moun pral patisipe nan etid rechèch la nan USF.

Lòt opsyon / Patisipasyon Volontè / Sispann patisipasyon

Ou pa oblije patisipe nan etid rechèch sa a. Ou ta dwe sèlman patisipe nan etid sa a si ou patisipe kòm volontè. Ou pa ta dwe santi okenn presyon pou ou patisipe nan etid rechèch sa a. Ou lib pou ou patisipe nan rechèch sa a oswa retire tèt ou nenpòt ki lè. Pap gen okenn penalite oswa ou pap pèdi benefis nou dwe ou si ou sispann patisipe nan etid sa a.

Benefis

Nou pa sèten si wap resevwa okenn avantaj si ou patisipe nan etid rechèch sa a. Patisipan ka jwi eksperyans yo epi ka resevwa yon santiman de satisfaksyon nan konnen ke yap kontribye nan avansman konesans nan yon zòn syantifik enpòtan. Anplis de sa, rezilta etid sa a pral disponib pou kominote Ayisyen an ak òganizasyon Ayisyen. Nan mitan imigran Ayisyen kap viv nan Florida, nou prevwa ke etid rechèch sa a pral kontribye e pèmèt konprann pi byen relasyon ki genyen ant depresyon avèk estrès, epi relasyon ant depresyon avèk chanjman ki vini lè yon moun demenaje soti Ayiti. .

Risk oswa Malèz

Pa'p genyen anpil risk nan rechèch sa. Sa vle di ke risk ki asosye avèk etid sa a se menm avèk sa ou fè fas a yo chak jou. Li posib ke patisipan yo ka genyen santiman de detrès lè yo reponn kesyon konsènan

estrès ak sentòm depresyon. Envestigatè prensipal la ap ede patisipan yo jere santiman sa yo si yo ta rive, ou gen dwa pran yon ti repo oswa ranvwaye entèvyou a si sa ta nesèsè. Nap bay patisipan yo lis / enfòmasyon pou jwenn èd mantal nan kominote yo, si yo ta vle fè sa.

Konpansasyon/Kado

Wap resevwa kòm konpansasyon/kado yon kat \$10 si ou dakò pou ou patisipe nan etid rechèch sa epi si ou dakò pou ou konplete/ranpli tout kesyonè yo pou etid la. Wap resevwa kòm rekonpans/kado yon lòt kat \$20 si nou chwazi ou pou yon entèvyou apwofondi. Si ou pa vle patisipe pou nenpòt ki rezon, epi ou vle soti nan etid rechèch la anvan ou fini, nap peye oubyen ba ou kado pou pati nan etid la ou fini an.

Depans

Li pap koute ou anyen pou patisipe nan etid rechèch la.

Enfòmasyon prive ak konfidansyalite

Nou pral kenbe dosye rechèch ou prive e konfidansyèl. Sèten moun ka bezwen wè dosye etid rechèch ou yo. Nenpòt ki moun ki wè dosye yo selon la lwa ap kenbe enfòmasyon yo konfidansyèl. Moun sa yo se:

- Moun kap fè etid la, chèf etid la, moun kap koòdone etid la, enfimyè, profesè ak tout lòt moun kap travay nan rechèch la
- Moun nan leta ak moun nan lekòl la, moun ki vle konnen plis, enspektè ki beswen wè si etid rechèch la byen fèt.
- USF Institutional Review Board (IRB) ak lòt moun ki la pou veye si tout bagay te fèt byen.

Nou ka ekri atik sou sa nou apran nan etid la. Si sa fèt, nou pap site non pyès moun, nou papibliye anyen ki ka fè lot moun rekonèt ki moun ou ye.

Ou ka jwenn repons pou kesyon ou yo, enkyetid, oswa plent

Si ou genyen nenpòt kesyon, si ou genyen yon bagay kap trakase ou, oubyen nenpòt dout ou ta genyen nan lespri sou eske etid sa a serye, rele Dany Fanfan nan 305-608-2700.

Si ou genyen you kesyon sou dwa ou, oswa yon bagay ou panse ki pa byen, ou vle pale de sa ak you moun ki pa nan etid la rele USF IRB nan (813) 974- 5638 oswa RSCH-IRB@usf.edu.

Fòm Konsantman Pou Patisipe Nan Rechèch Etid

Mwen bay konsantman mwen pou mwen patisipe nan etid sa a. Mwen konprann ke si mwen siyen fòm sa a mwen dakò pou'm patisipe nan rechèch la. Mwen te resevwa yon kopi fòm sa a poum pran avè'm.

Siyati moun kap patisipe nan etid

Dat

Ekri/Enprime non moun kap patisipe nan etid la

Deklarasyon moun kap resevwa konsantman an

Mwen te pran anpil atansyon ak tanm poum eksplike moun kap patisipe nan rechèch etid la poum di li kisa li ka atann de patisipasyon li. Mwen konfime ke patisipan rechèch sa a pale lang ki te itilize poum eksplike rechèch sa a epi li resevwa yon fòm konsantman nan lang prensipal li. Patisipan oubyen sijè rechèch sa a te bay konsantman ki legal ak efikas.

Siyati moun kap pran konsantman an

Dat

Ekri/Enprime non moun kap pran konsantman an