STARS

University of Central Florida
STARS

Honors Undergraduate Theses

UCF Theses and Dissertations

2021

The Role of Acculturative Stress in Immigrant Mental Health

Daaman S. Lall
University of Central Florida

Part of the Clinical Psychology Commons

Find similar works at: https://stars.library.ucf.edu/honorstheses

University of Central Florida Libraries http://library.ucf.edu

This Open Access is brought to you for free and open access by the UCF Theses and Dissertations at STARS. It has been accepted for inclusion in Honors Undergraduate Theses by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

Recommended Citation

Lall, Daaman S., "The Role of Acculturative Stress in Immigrant Mental Health" (2021). *Honors Undergraduate Theses*. 902.
https://stars.library.ucf.edu/honorstheses/902

THE ROLE OF ACCULTURATIVE STRESS IN
IMMIGRANT MENTAL HEALTH

by

DAAMAN LALL

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Psychology
in the College of Sciences
and in The Burnett Honors College
at the University of Central Florida
Orlando, Florida

Spring Term
2021

Thesis Chair: Dr. Shahram Ghiasinejad

ABSTRACT

Acculturative stress, the stress that originates from adapting to a new culture, is investigated for its role in immigrant mental health. Prior research shows that acculturative stress is commonly associated with adverse mental health outcomes, but this relationship is not inevitable and depends upon many in-group and individual characteristics. This survey study intended to determine whether the relationship found in the literature exists among UCF undergraduate immigrants and whether new variables can play a role in this relationship. Valid and reliable scales were used to measure acculturative stress, mental health, social support, subjective wellbeing, bicultural integration, and cultural orientation. Inconsistent with predictions, immigrants and nonimmigrants were found to have a similar degree of mental health symptoms. Consistent with previous research, a positive correlation between acculturative stress and mental health symptoms was found. Results also show social support, bicultural integration, and acculturative stress to collectively predict immigrant mental health. Immigrant generation and undergraduate year-in-college were found to play a significant role in the relationships investigated. The application of this research in the context of mental health stigmatization and other immigrant phenomena is discussed. Limitations, possible future research, and clinical implications are also shared to address further gaps in the literature.

DEDICATION

I dedicate this thesis to my mother and father for their unwavering support in all of my

endeavors. They are the inspiration for this research. When faced with social, cultural, and

economic adversity, their resilience has never failed. I commend them in achieving far beyond

all expectations. I thank them for all that they do to give me a limitless opportunity to pursue my

passion.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

INTRODUCTION

Stress is a generalized physiological and psychological state brought about by changes to the environment, which require a process of coping until satisfactory adaptation to the change is achieved (Berry & Kim, 1987). Acculturative stress is the type of stress that results from acculturation, the process by which foreigners adjust to a new culture (Berry & Kim, 1987). The psychological impact of acculturation poses significant risks for the mental health of immigrants and their descendants (Bae, 2019). Investigating the role of acculturative stress in immigrant mental health is crucial to understanding the origin of immigrant mental health symptoms and illnesses. Acculturative stress is understood to be a contextual factor, a variable that can explain partially or fully the differences in how immigrants and nonimmigrants navigate everyday life (Poortinga & Van De Vijver, 1987). This study examines and analyzes this contextual factor and the mental health of college-level U.S. immigrants to understand better the impact of acculturation on immigrant quality of life.

Symptoms of mental health, such as depression and anxiety, frequently originate from the stressors associated with migration and adaptation (Flores et al., 2008). The experience of stress is consistently coupled with the onset of psychological anguish and leads to fluctuations in the body that affect overall health in the short- and long-term (Taylor, 2018). These risks are especially high for racial and ethnic minority immigrants that make up 80 and 56 percent of first- and second-generation immigrants respectively to the United States (Pew Research Center, 2013). Mental health is an important component of quality of life, and measuring it is essential to learning how to improve one's life. As mental health becomes more prioritized across the globe, especially among racial and ethnic minority communities in America, further research into

acculturative stress is a growing necessity to develop better understanding, care, and treatment for immigrants.

The current intersection of migration and mental health is better understood given the context of how immigrants navigate mental illness and utilize mental health services. Language, mental health stigmatization, cultural viewpoints of mental illness, and the fear of negative social repercussions when diagnosed with a mental illness are all examples of barriers that prevent the immigrant utilization of mental healthcare (Salami, Salma, & Hegadoren, 2019). Cultural norms often force immigrants to be avoidant in seeking treatment and to conceal their behavior to conform to society's expectations (Jonnson, 1998; Meershoek, Krumeich, & Vos, 2011). Newly arriving immigrants also contend with seeking employment and navigating a society alien to them (Robert & Gilkinson 2012). These challenges induce additional inattention to mental health concerns and create an economic burden of accessing mental health services. Growth in the inclusivity of services is vital to reducing the barriers which discourage immigrant utilization of mental health services (Heywood, Castelli, & Greenway, 2019). Investigating the role of acculturative stress in immigrant mental health can help inform the necessary healthcare and policy changes to increase inclusivity. Recognizing acculturative stress as a common experience of immigrant lifestyle and as a significant determinant to their mental health can contribute to a normalization of immigrant mental awareness and improvement in their quality of life.

Acculturative Stress and Mental Health

Acculturative stress has been defined as the consequent lowering of mental health status when enduring the process of acculturation (Berry & Kim, 1987). This hints at the inherent association acculturative stress has with mental health in the existing literature. Several studies

have attempted to quantify this relationship and have found acculturative stress to play various roles in its relationship with mental health. One study, utilizing a U.S.-based sample of Asian and Latinx immigrants to analyze the effects of migration trauma, concluded that occurrences of acculturative stress notably increased risk for distress and disorder across refugee groups and non-refugee immigrants (Sangalang et al., 2018). Acculturative stress, in this case, acted as an intermediating variable between the well-understood relationship of trauma and mental illness. Another study utilizing U.S. Latinx immigrants explored the effect of adversity immigrants faced during the phases of migration. Acculturative stress was conclusively considered a contributing factor to adverse mental health outcomes because of its threat to the existence and creation of resources to assist in cultural adaptation (Cooper et al., 2019). In this instance, acculturative stress was considered a barrier for immigrants to access and utilize social resources to cope with acculturation.

In the ongoing investigation of acculturative stress and its relation to mental health, similar findings have been reported in many additional samples across the globe (Bae, 2019; Berry & Sabatier, 2010; Jankowski et al., 2018; Tikhonov et al., 2019; Walker, Wingate, Obasi, & Joiner, 2008). Clearly, mental health issues often arise during acculturation, but existing literature generally suggests that poor mental health outcomes during acculturation are not inevitable and are instead dependent on a variety of ingroup and individual characteristics (Berry & Kim, 1987). Further investigation of the relationship between acculturative stress and mental health can provide further understanding of this relationship in the context of new variables that may play a part in predicting this relationship.

Subjective Wellbeing

For many minority immigrants, the stigmatization of mental illness is typical. Minority immigrants often demonstrate the felt responsibility to manage life stressors independently and "just deal with it". When immigrants are attached to the label of mental illness, it triggers an internalized feeling of shame and an external onset of discrimination and social exclusion (Salami, Salma, & Hegadoren, 2019). The mental health stigma amongst immigrants may suggest that scales intended to measure mental health by the self-reporting of psychological symptoms, like the Brief Symptom Inventory, may offer limited insight into the mental state of immigrants and be less useful as indicators of immigrant quality of life. Measuring how immigrants perceive their wellbeing might account for these deficits and even assist in further analyzing the role of acculturative stress in mental health. Possibly how immigrants perceive their wellbeing may disagree with how they report their psychological symptoms.

Wellbeing is usually evaluated according to feelings about life satisfaction, satisfaction with work, relationships, health, and other vital domains (Diener & Ryan, 2009). Subjective wellbeing is a significant component of quality of life. A growing body of evidence suggests high levels of subjective wellbeing improved life according to health and longevity, work and income, social relations, and societal benefits (Diener & Biswas-Diener, 2008; Lyubomirsky, King, & Diener, 2005). The Warwick-Edinburgh Mental Well-being Scale is a recently developed scale with positively worded statements to evaluate aspects of subjective wellbeing, including optimism and confidence (Tennant et al., 2007). Utilizing this to measure immigrants' personal perception of their wellbeing and comparing it to their self-reported mental health

symptoms can develop a noteworthy discussion of the role of mental health in immigrant quality of life.

Cultural Orientation

Immigrants to the United States are all presented with the challenge of "fitting in" with American society and becoming accustomed to American mainstream culture. Possibly depending on their adaptability, immigrants will orient more towards their own ethnic culture, American culture, or both cultural identities in certain circumstances at different stages in the acculturation process. In a study conducted among college students, effects of acculturative stress were found to be associated with hazardous levels of alcohol use, notably among Hispanic immigrants and less conclusively among Asian immigrants (Jankowski et al., 2018). This study additionally demonstrated that cultural orientation played a moderating role between acculturative stress and hazardous alcohol use. For these immigrant participants, alcohol use levels were low when orientation towards U.S. culture was high and toward heritage culture was low (Jankowski et al., 2018). Adaptation to the host culture, or U.S. culture in this instance, played a significant protective role for immigrants at risk for alcohol abuse. The culture which immigrants orient themselves more towards may explain how and to what degree immigrants experience acculturative stress and its effects. Cultural orientation, in turn, may predict specific mental health symptoms because it lends itself to the flexibility of one's personality and ability to cope with stress.

Bicultural Integration

Migrating to a new country and adapting to a new culture may not entail having to orient more towards one culture or the other but instead finding a balance between or integrating both.

Cultivating a bicultural identity is common for migrants to the United States. Achieving harmony between one's ethnic culture and American culture might be a considerable indicator of positive mental health. One study demonstrated this relationship, showing that the harmony between origin and host cultures predicted a positive mental health outcome for immigrants (Tikhonov et al., 2019). Participants answered questions relating to their American and ethnic identities, the compatibility of their identities, and symptoms of depression and anxiety. The study found that the perceived compatibility of an individual's ethnic and American identities was associated with decreasing depressive and anxiety symptoms. Bicultural harmony was important in understanding the mental health among racial and ethnic minority immigrants. (Tikhonov et al., 2019). Another related study also suggested that the integration of multiple cultures into one's behavior, value system, and identity is associated with psychosocial benefits (Nguyen & Benet-Martínez, 2013). In a sample of five thousand acculturating adolescents across thirteen countries, the strategy of cultural integration was positively associated with both healthy psychological and sociocultural adjustment (Berry et al., 2006). Bicultural integration, like cultural orientation, might lend itself to predicting immigrants' mental health symptoms and further contextualizing its relationship with acculturative stress.

Social Support

Another factor that may facilitate acculturation and predict a more positive mental health status is social support. Social support from friends, family, and significant others can indicate to an immigrant the social compatibility of their cultural identity. The extent to which a society, business, group, or people give space to deviations from the societal or cultural norm has been linked with the level to which individuals feel culturally supported or stigmatized (Côté, 2013).

6

The increased negation of a social space, where diversity is encouraged, and support is provided, allows a positive regulation of one's social identity and cultural identity by extension (Fortin, 2008). For immigrants in the workplace, school, or other social settings, social support may provide relief from acculturative stress and boost mental health. Social support may also enable individuals to integrate their culture into American mainstream culture or be more comfortable orienting towards their own ethnic culture. Social support, bicultural integration, and cultural orientation are therein intertwined and can accordingly contextualize the relationship between acculturative stress and immigrant mental health.

The Current Study

This survey study intended to examine the role of acculturative stress in immigrants' mental health who attend the University of Central Florida (UCF). Four additional variables that may play a role in this relationship are also examined in this study: subjective wellbeing, cultural orientation, bicultural integration, and social support. Demographics such as ethnicity and immigrant generation are also considered to contextualize the predicted relationships further. Being the first attempt to investigate these relationships at UCF, this study examines whether and to what extent previous research findings can be confirmed among UCF students. The student population at UCF is culturally diverse and was expected to be representative of the larger population of college-level immigrants across the United States. The following hypotheses were tested:

- Hypothesis 1: Immigrants will have poorer mental health when compared to nonimmigrants.

- Hypothesis 2: The severity of acculturative stress will positively correlate with the severity of mental health.

- Hypothesis 3: The mental health of immigrants will not have a significant relationship with their subjective wellbeing.

- Hypothesis 4: Measures of cultural orientation, bicultural integration, and social support will significantly correlate with immigrants' mental health.

- Hypothesis 5: Acculturative stress, bicultural integration, and social support collectively will predict mental health among immigrant college students.

METHOD

Participants

This study recruited 305 undergraduate students to participate, 8 of which were excluded due to survey incompletion. Of all participants used ($n = 297$), males and females made up 40.1% and 59.3% respectively of the sample while .7% identified their gender identity under Other. The age of participants ranged from 18 to 63 ($M = 20$, $SD = 4.94$), most were age 18 ($n = 118$) and age 19 ($n = 79$). Caucasians were the most frequent ethnicity (50.2%), followed by Latinx or Hispanic (24.2%), African American (11.1%), Asian (9.8%), Native Hawaiian or Pacific Islander (1.7%), and Other (3%). The participating undergraduates were 56.9% freshmen, 17.2% sophomores, 15.2% juniors, and 10.8% seniors. The majority of the participants (78.8%) came to UCF from high school and 21.2% came from either a 2-year community college or another 4-year university.

Of the participants utilized in this study, 40.7% were first- or second-generation immigrants ($n = 121$) and 59.3% were nonimmigrants ($n = 176$). Out of the 121 immigrants participating, 25 identified as first-generation immigrants who were born and raised in a foreign country (20.7%), 15 were also first-generation immigrants but had little or no memory of the foreign country they were born to (12.4%), and 81 identified as second-generation immigrants meaning they were born in the U.S. but have at least one first-generation parent (66.9%). Ethnicity-wise, 43% of immigrants were Latinx or Hispanic, 21.5% were Asian, 14.9% were Caucasian, 14.9% were African American, 3.3% were Native Hawaiian or Pacific Islander, and 2.4% were Other.

9

Measures

    Acculturative Stress. The 24-Item Social, Attitudinal, Familial, and Environmental or SAFE Acculturation Stress Scale was used to measure acculturative stress based on the four factors suggested by its name. The SAFE scale was developed originally by Padilla and colleagues with 60 items and then shortened by Mena and colleagues to 24 items (Padilla et al., 1985; Mena et al., 1987). The 24 items are statements that might be stressful, and participants respond according to how stressful they find the situation using a 5-point Likert scale (Cronbach's α = .89). Statements include "I have more barriers to overcome than most people" and "many people have stereotypes about my culture or ethnic group and treat me as if they are true" (Mena et al., 1987).

    Mental Health. The Brief Symptom Inventory or BSI was utilized to assess mental health. It is a brief psychological self-report symptom scale. It was developed from the longer SCL-90 and measures the same nine symptom subscales using 53 items: somatization (Cronbach's α = .85), obsessive-compulsive (Cronbach's α = .87), interpersonal sensitivity (Cronbach's α = .79), depression (Cronbach's α = .89), anxiety (Cronbach's α = .86), hostility (Cronbach's α = .78), phobic anxiety (Cronbach's α = .79), paranoid ideation (Cronbach's α = .79), and psychoticism (Cronbach's α = .75) (Derogatis & Melisaratos, 1983). Participants respond to statements using a 5-point Likert scale. The Global Severity Index (GSI), which is the mean score of all 53 items of the BSI, is utilized to quantify the severity of mental health (Cronbach's α = .95). A higher GSI translates to a higher number of symptoms and higher intensity of distress; a lower GSI implicates less symptoms, less distress and better overall mental health.

Subjective Wellbeing. The scale used to measure subjective wellbeing is the Warwick-Edinburgh Mental Well-being Scale or WEMWBS. This scale comprises positively worded items to measure aspects of positive mental health, including positive affect, satisfying interpersonal relationships, and positive functioning. The scale consists of 14 statements, including "I've been feeling optimistic about the future" and "I've been feeling confident," to which participants respond using a 5-point Likert scale (Cronbach's α = .91; Tennant et al., 2007).

Cultural Orientation. The Psychological Acculturation Scale (PAS) was utilized to measure the culture to which participants were more oriented towards. This scale assesses acculturation and cultural preferences with items pertaining to the participant's sense of attachment or belonging within the Anglo-American culture and their respective ethnic culture (Cronbach's α = .85; Tropp et al., 1999). Participants respond using a 5-point Likert-type scale to 10 items based on the culture they orient more towards given statements such as "with which group(s) of people do you feel the most comfortable?" and "in which culture(s) do you feel confident that you know how to act?". If participants felt a question did not apply to them, they were able to respond as such. Nonimmigrants were not measured for cultural orientation.

Bicultural Integration. The Bicultural Identity Integration Scale – Version 2 or BIIS-2 is a 17-item scale used to determine an individual integrates their ethnic and American cultural identities. It measures bicultural integration according to two subscales: cultural harmony vs. conflict (Cronbach's α =.82) and cultural blendedness vs. compartmentalization (Cronbach's α =.72). Participants respond whether they agree or disagree to statements like "I find it easy to balance (my ethnic) and American cultures," using a 5-point Likert-type scale (Huynh, Benet-

Martinez, & Nguyen, 2018; Tikhonov et al., 2019). As they were in the PAS, participants were able to respond with "Not Applicable" if they felt it appropriate. Like cultural orientation, nonimmigrants were also not measured for this variable.

   Social Support. The Multidimensional Scale of Perceived Social Support or MSPSS is a measure of subjectively assessed social support. The measure includes three subscales that address a different source of support: family (Cronbach's α =.87), friends (Cronbach's α =.85), and significant other (Cronbach's α =.91). Participants respond to 12 statements according to whether they agree or disagree using a 7-point Likert-type scale. Example statements are "I get the emotional help and support I need from my family" and "there is a special person in my life who cares about my feelings" (Zimet, Dahlem, Zimet & Farley, 1988).

Procedure

   Upon approval from the Institutional Review Board, this study has utilized the mentioned valid measures to test the hypotheses presented. The full-length questionnaire began with a basic demographic questionnaire asking of age, gender, ethnicity, education level, and immigrant generation. The questionnaire ended with a few control questions not intended for statistical analyses. The survey was completed through the online survey platform, Qualtrics. At any time, individuals could withdraw from the survey without penalty. All participants were recruited through the UCF Psychology Research Participation System, SONA. The SONA participation system generated unique identification numbers for participants to maintain their anonymity. Participating students had the ability to choose from a wide range of available studies being conducted through the university. Students earned course credit for participation and were given

alternative assignments if deciding not to participate. Participant scores were analyzed using

IBM SPSS Statistics.

RESULTS

Preliminary and Descriptive Analyses

All tables can be found in Appendix A. Descriptive statistics, including Cronbach's alpha coefficients for all composite variables, are reported in Table 1. Table 1 also compares the mean scores of all composite variables between immigrants and nonimmigrants. Correlational data among immigrants for all composite variables can be found in the correlation matrix in Table 2. Twelve participants were removed from the analyses because they indicated either the bicultural integration or cultural orientation measure to be nonapplicable (Table 2). In Table 3, the correlation values for all composite variables are grouped by immigrant generation for comparison. The following analyses were conducted to evaluate demographic differences with respect to all composite variables.

Age. A Pearson *r* correlation coefficient calculated between age and participants' Global Severity Index (GSI), the average score of all items from the BSI, revealed no significant correlation, $r(295) = .01$, $p = .920$. Among immigrants, a Pearson *r* correlation found the relationship between age and acculturative stress to be also not significant, $r(119) = .04$, $p = .670$. A series of additional Pearson *r* correlation analyses found age to have no significant correlation with cultural orientation, bicultural integration, subjective wellbeing, or social support among immigrants, $p > .05$.

Gender. According to an independent-samples t-test, females had a significantly higher GSI ($M = 1.96$, $SD = .70$) than males ($M = 1.69$, $SD = .64$), $t(293) = -3.38$, $p = .001$. Among immigrants, no significant gender differences were found in terms of acculturative stress, $t(121) = -0.84$, $p = .400$. There were also no significant gender differences in terms of cultural

14

orientation, bicultural integration, subjective wellbeing, or social support according to additional

t-test analyses conducted among immigrants, $p > .05$.

Ethnicity. A one-way analysis of variance (ANOVA) showed that there were no

significant mental health differences between ethnic groups, $F(5, 291) = 0.91$, $p = .474$. Among

immigrants, a one-way ANOVA revealed no significant ethnic differences in terms of

acculturative stress, $F(5, 115) = 2.23$, $p = .056$. However, Caucasian immigrants were observed

to report notably less acculturative stress ($M = 1.13$, $SD = .76$) than African American

immigrants ($M = 1.80$, $SD = .78$) and Latino or Hispanic immigrants ($M = 1.61$, $SD = .82$). A

series of ANOVA found no significant ethnic differences in cultural orientation, bicultural

integration, subjective wellbeing, or social support among immigrants, $p > .05$.

Undergraduate Level. There was a significant difference observed with respect to

participants' undergraduate level and mental health, $F(3, 293) = 2.68$, $p = .047$. A least

significant difference (LSD) post hoc test revealed that undergraduate freshmen had a

significantly lower GSI ($M =1.76$, $SD =.67$) when compared to sophomores ($M =1.98$, $SD =.71$,

$p = .048$), and juniors ($M =2.03$, $SD =.71$, $p = .021$). Among immigrants, a one-way ANOVA

revealed significant differences in acculturative stress in regard to undergraduate level, $F(3, 117)$

$= 3.16$, $p = .027$. An LSD post hoc test revealed freshmen had a significantly lower SAFE score

($M = 1.32$, $SD = .70$) when compared to juniors ($M = 1.71$, $SD = .77$, $p = .047$) and seniors (M

$= 1.95$, $SD = .85$, $p = .013$). There was also significant between groups differences in terms of

bicultural integration, $F(3, 112) = 3.67$, $p = .014$. The LSD post hoc test revealed that freshman

had significantly higher BIIS-2 scores ($M = 3.83$, $SD = .53$) than sophomores ($M = 3.48$, $SD =$

$.56$, $p = .008$) and juniors ($M = 3.52$, $SD = .57$, $p = .018$). Further one-way analyses of variance

among immigrants revealed no significant undergraduate level differences with regard to cultural orientation, subjective wellbeing, or social support, $p > .05$.

Immigrant Generation. An independent-samples t-test analysis revealed that first-generation immigrants demonstrated a significantly higher level of acculturative stress ($M = 1.80$, $SD = .83$) when compared to second-generation immigrants ($M = 1.37$, $SD = .77$), $t(119) = 2.89$, $p = .005$. Two additional ANOVA revealed a significant difference between immigrant generations in regard to acculturative stress, $F(2, 118) = 4.17$, $p = .018$ and cultural orientation, $F(2, 111) = 9.15$, $p < .001$. Subsequent LSD post hoc analyses showed that first-generation immigrants who were born and raised in a foreign country had a significantly higher SAFE score ($M = 1.83$, $SD = .92$) than second-generation immigrants ($M = 1.37$, $SD = .77$, $p = .012$). Similar analyses found that they also had significantly lower PAS scores ($M = 2.56$, $SD = .54$) than did first-generation immigrants who had little or no memory of the country they were born to ($M = 3.18$, $SD = .40$, $p < .001$) and second-generation immigrants ($M = 3.01$, $SD = .50$, $p < .001$). However, additional t-test analyses indicated that there were no significant differences between first- and second-generation immigrants in mental health, bicultural integration, social support, and subjective wellbeing, $p > .05$.

Main Analyses

These subsequent analyses were conducted to test the five hypotheses proposed in this study. Hypothesis 1 stated immigrants will have poorer mental health when compared to nonimmigrants. An independent-samples t-test analysis was performed to compare the GSI of immigrants and nonimmigrants. The analysis determined that there was not a significant difference in GSI scores between immigrants and nonimmigrants, $t(295) = .50$, $p = .621$. In

further testing, a one-way ANOVA demonstrated that there were no significant differences in mental health symptoms among first-generation immigrants, second-generation immigrants, and nonimmigrants, $F(3, 293) = .48$, $p = .719$.

Hypothesis 2 stated that, among immigrants, the severity of acculturative stress would positively correlate with the severity of mental health. Testing this hypothesis was completed by calculating a Pearson r correlation coefficient using SAFE and BSI scores. Immigrant acculturative stress was found to have a strong positive correlation with their GSI, $r(119) = .54$, $p < .001$, as shown in the correlation matrix in Appendix A, Table 2. This correlation was strongest among first-generation immigrants ($r = .68$, $p < .001$) when compared to second-generation immigrants ($r = .45$, $p < .001$), as shown in Table 3. A Fisher z-transformation found the difference in r values between first- and second-generation immigrants to be not significant, $z = 1.71$, $p = .088$.

Hypothesis 3 says the mental health of immigrants will not have a significant relationship with their subjective wellbeing. A Pearson r correlation coefficient was again calculated to test this hypothesis using immigrants' scores from the BSI and WEMWBS. Inconsistent with hypothesis 3, scores of subjective wellbeing and mental health did show a significant negative correlation (Table 2), $r(119) = -.38$, $p < .001$. Interestingly, the Pearson r correlation coefficient of this relationship was larger among nonimmigrants, $r(174) = -.69$, $p < .001$. Using a Fisher z-transformation, the correlation for nonimmigrants was significantly stronger than that of immigrants, $z = 3.70$, $p < .001$.

Hypothesis 4 states that measures of cultural orientation, bicultural integration, and social support will individually have significant correlations with mental health among

immigrants. Using Pearson r correlation coefficients, as shown in Table 2,the measure of social support was determined to have a significant correlation with the GSI of immigrants, $r(119) = -.34$, $p < .001$. Bicultural integration was also found to have a significant correlation with immigrants' GSI, $r(114) = -.28$, $p = .002$. Cultural orientation $r(113) = .00$, $p = .981$ did not show a significant correlation with immigrants' GSI. This is also the case when immigrants are split by generation (Table 3). Cultural orientation also showed no significant correlation with any of the BSI's nine subscales.

Hypothesis 5 stated that acculturative stress, bicultural integration, and social support collectively will predict mental health among immigrant college students. This hypothesis was tested using a hierarchical multiple regression analysis, the criterion being the GSI of immigrants and predictor variables being their SAFE, BIIS-2, and MSPSS scores (Table 4). In step one, gender and age variables were entered as control variables. In step two, the predictor variables were entered. The results of the regression analysis were consistent with hypothesis 5, wherein 33.8% of variance in immigrants' GSI was explained collectively by their SAFE, BIIS-2, and MSPSS scores, $R^2 = .34$, $F(5,110) = 11.25$, $p <. 001$. Table 4 shows that acculturative stress reached significance, but bicultural integration and social support did not reach significance in the model predicting mental health symptoms. When entered as a stepwise multiple regression (Table 5), variables of gender, age, bicultural integration, and social support were actually removed from the model, and acculturative stress alone was found to be a significant predictor of immigrant mental health, $R^2 = .31$, $F(1,114) = 51.15$, $p < . 001$.

Exploratory Analyses

      The following analyses were conducted to lend supplementary context to the main analyses and highlight findings that may apply to future studies. As mentioned in the hierarchical regression analysis of hypothesis 5, social support did not reach significance when entered alongside acculturative stress (Table 4). Because social support is known to play a positive role in mental health, it was of interest to understand how acculturative stress may play a role in this relationship (Billings, 1982; Cohen, 1985; House, Umberson & Landi, 1988). This led to a mediation analysis using Baron and Kenny's method (1986) to investigate whether acculturative stress among immigrants mediates the relationship between social support (IV) and mental health (DV). Following the four-step procedure, as shown in Table 6, complete mediation is supported, having satisfied all four criteria of the analysis. A Sobel test confirms the indirect effect of social support on immigrant mental health to be significant, $p < .001$.

      In a similar vein, another mediation analysis was conducted treating subjective wellbeing as the independent variable because of its known significance as an indicator of mental health (Keyes & Lopez, 2002; Patalay & Fitzsimmons, 2016). Because the p-value of subjective wellbeing increased from step 1 to step 4 but remained significant, a complete mediation is rejected and a partial mediation is observed, as demonstrated in Table 7. The Sobel test confirms the indirect effect of subjective wellbeing on immigrant mental health to be significant with acculturative stress as a partial mediating variable, $p = .008$.

      In further investigation of the relationship between acculturative stress and mental health, Pearson r correlation coefficients were calculated between acculturative stress and each of the BSI's nine subscales. Immigrants' SAFE scores revealed a significant positive correlation (p <

.001) with each of the nine subscales. The measure of bicultural integration, the BIIS-2, was also explored of its subscales. Using Pearson r correlation coefficients, immigrants' scores on the PAS were found to correlate with the cultural blendedness subscale ($r = .26$ $p = .005$), but did not correlate with the cultural harmony subscale ($r = -.02$ $p = .802$). The harmony subscale was found to correlate positively with social support ($r = .21$, $p = .021$). Significant correlations between these subscales and the BSI, WEMWBS, and SAFE scales were not found. When the MSPSS was divided into its subscales, bicultural integration had a strong correlation with support from friends ($r = .28$, $p = .002$), weaker correlation with support from family ($r = .19$, $p = .038$), and a nonsignificant correlation with support from a significant other ($r = .09$, $p = .348$). Significant correlations between these subscales and other test variables were not found.

DISCUSSION

This study sought to investigate the relationship between acculturative stress and mental health among a new sample of undergraduate students at the University of Central Florida. It also attempted to contextualize this relationship further with the addition of new related variables: subjective wellbeing, social support, bicultural integration, and cultural orientation. The study particularly examined immigrant college students to gain a deeper understanding of the stressors they face and what increases their risk of developing symptoms of mental health. To our knowledge, this is the first study at UCF to consider the role of acculturative stress in mental health. However, acculturative stress and associated variables have been mentioned and investigated in multiple research studies conducted at UCF (Altamarino, 2015; Hammons, 2007; Lefrid, 2019; Negy et al., 2014; Ruiz, 2015). This study is one of few in the literature to broadly discuss the relationship utilizing a multi-symptom inventory alongside a series of related measures.

Because UCF has a large and diverse student body, the sample analyzed in this study is intended to represent a wide array of college-level immigrants attending metropolitan universities across the United States. The immigrants in this study were primarily second-generation, age 18 and 19, undergraduate freshmen and sophomores. On average, they oriented toward both their American and ethnic identities as opposed to one or the other. They also generally found themselves to be harmonizing and blending their American and respective ethnic identities as opposed to having bicultural conflict. Also, immigrants in this study predominantly exhibited mild-to-moderate levels of acculturative stress and mental health symptoms, where many college-level immigrants to the United States likely stand on the spectrum. The research on

21

acculturative stress is predominantly centered around high-risk populations such as refugees and discusses more exceptional topics such as pre- and post-migration trauma (Sangalang et al., 2018; Cooper et al., 2019). This study conversely serves to investigate the more ordinary experience of acculturative stress among the general university student immigrant population.

The analyses conducted in this study are intended to provide a better understanding of the immigrant college-experience in the United States and their experience with acculturative stress as it relates to their mental health and their overall quality of life. Our first hypothesis was not supported because both immigrants and nonimmigrants in this study reported a similar degree of mental health symptoms. Though not significant, immigrants still reported a higher number of mental health symptoms, a lower level of subjective wellbeing, and a lower sense of social support. Cumulatively, this conveys the presence of several compounding mental health risks immigrants may encounter compared to nonimmigrants. This underscores the increased need for more inclusion of immigrants into mental healthcare (Bae, 2019; Hale & Kuperminc, 2021; Hansen et al., 2018). One possible explanation for the lack of support for hypothesis 1 could be that the majority of participating immigrants, being mostly of the second-generation, were raised in the U.S. and faced a comparable environment of stressors and pressures to that of nonimmigrants. However, no statistically significant differences were found between immigrants of the first-generation and nonimmigrants either, which can be due to a limited sample size. This may also hint at the differences between first-generation immigrants who attend college and those who do not. College-educated first-generation immigrants are likely to have higher socioeconomic status, better language acquisition, and more cultural adaptability compared to those not in college. These advantages have been found to reduce the effect of acculturative

stress (Smiljanic, 2017). They also explain why first-generation immigrants in this study share many characteristics with the second-generation and why they may be an inaccurate representation of all first-generation immigrants to the U.S.

The correlation between acculturative stress and mental health was consistent with previous research findings (Jankowski et al., 2018; Tikhonov et al., 2019). In agreement with hypothesis 2, the severity of mental health symptoms increased as acculturative stress increased among immigrants. Though not significantly different, the relationship was strongest among first-generation immigrants when compared to the second-generation. This hints at a pertinent difference in how acculturation is experienced between immigrant generations. However, given that there is no significant difference in mental health, social support, and subjective wellbeing when considering the immigrant generation, the immigrant paradox often found in the literature is not observed in this sample (Marks, Ejesi, & Garcia Coll, 2014). It is often assumed that second-generation immigrants would have more optimal health, development, and achievement outcomes compared to the first-generation. But the immigrant paradox finds that model to be often incorrect mainly because of the increased resilience and adaptability first-generation immigrants tend to exhibit over the second-generation (Alamilla et al., 2020). Though not statistically significant, first-generation immigrants in this study tended to have less favorable social support and mental health outcomes, contrary to the immigrant paradox.

Contrary to hypothesis 3, the mental health and subjective wellbeing of immigrants did have a significant correlation. The results indicated that as subjective wellbeing increased, mental health symptoms decreased. This signifies why measures of wellbeing are regarded as a meaningful indicator of quality of life, wherein high subjective wellbeing correlated with a

decrease in distress and other psychological symptoms (Diener & Biswas-Diener, 2008). It also suggests that immigrants' self-report of mental health symptoms is indeed an accurate reflection of their overall mental state as opposed to this study's initial assumption. It was speculated, because immigrants face immense stigmatization of mental health issues, they would not report an honest outlook of their mental health. Further analyses demonstrated, however, that the relationship of subjective wellbeing and mental health among immigrants was weaker than that of nonimmigrants. This implies that the relationship is less consistent among immigrants and proposes that our initial assumptions may still be valid. Mental health stigmatization for immigrants may often mean concealing significant suffering from psychological symptoms from family members and extended communities (Salami, Salma, & Hegadoren, 2019). Therefore, it is appropriate for this study to consider this assumption and recommend further research.

Hypothesis 4 in this study was supported partially because social support and bicultural integration did correlate significantly with mental health symptoms in immigrants, but cultural orientation did not. Furthermore, cultural orientation did not correlate significantly with any of the nine BSI subscales. It is possible that scores on the PAS did not correlate with mental health because the PAS measures cultural orientation on one dimension as opposed to measuring one's affiliation with their respective ethnic or American identities on two separate dimensions. The PAS assumes that affiliation with one's American identity will decrease their affiliation with their respective ethnic identity and vice versa. However, Immigrants undergoing acculturation have been found to either integrate both cultures, assimilate one culture into the other, separate both cultures, or feel marginalized from both cultures (Berry & Kim, 1987). The PAS does not measure cultural orientation with these four different situations considered. Bicultural integration

conversely does measure the degree to which immigrants integrate or separate their cultural

identities. Because the BIIS-2 measures the extent to which immigrants can harmonize and blend

their cultural identities, a meaningful correlation was found with mental health among

immigrants (Tikhonov et al., 2019). Social support had a significant negative correlation with

mental health symptoms. This means as perceived social support increased, mental health

symptoms decreased. This indicates why social support, like subjective wellbeing, is a relevant

indicator of one's mental state and quality of life. Subjective wellbeing and social support in this

study had an overall resemblance in their association with other composite variables.

In agreement with Hypothesis 5, immigrant mental health is collectively predicted by

acculturative stress, bicultural integration, and social support. This demonstrates that the amount

of acculturative stress immigrants experience, the amount of support from friends and family

they receive, and how well they integrate their ethnic and American identities can collectively

predict their state of mental health. It should be highlighted that acculturative stress alone was a

significant predictor of mental health, though the addition of social support and bicultural

integration did slightly strengthen this relationship. Additionally, acculturative stress was found

to play a mediating role between social support and mental health. When acculturative stress is

low, there is a smaller risk of mental health issues and less need for a coping mechanism such as

social support. When acculturative stress is high, social support may be crucial to deterring

concerns of mental health. Acculturative stress's mediating role between social support and

mental health implies that the amount of acculturative stress one undergoes determines the effect

social support will have on their mental health (Wang, Jin, & Zamudio, 2021). Another coping

mechanism might be having a high propensity to be optimistic and confident or a high level of

subjective wellbeing, which is likely why acculturative stress also played a partial mediating role between subjective wellbeing and mental health (Romero, Carvajal, Valle, & Orduna, 2007).

Limitations and Future Research

The primary limitation of this study is the representativeness of the sample. The majority of participants in this study were undergraduate freshman and sophomore students. If more non-freshmen undergraduate students participated in this study, a more insightful comparison between these groups could be made. Whether more favorable outcomes for freshmen in terms of mental health and acculturative stress still apply across a larger sample is a worthwhile topic of investigation in future studies. It would also be valuable if graduate students, doctoral students, and non-degree seeking students also participated in a similar study, as they were not recruited in this study. In terms of immigrant generation, it would be valuable to conduct a more in-depth intergenerational study investigating the relationships at hand. Understandably, first-generation immigrants notably experienced higher levels of acculturative stress and were oriented more towards their origin culture. Bicultural integration and cultural orientation also played an overall more significant contextual role among second-generation immigrants when compared to the first-generation, as shown in Table 3. The recruitment of more first-generation immigrants would allow a more precise comparison and be highly beneficial to the literature.

Another limitation of this study is as an online survey-based study. It relied only on the self-reporting of participants. This limited our ability to verify the accuracy of the responses. The questionnaires used in this study also present the issue of priming. Priming is a limitation common in survey studies that occurs when exposure to certain information influences how a participant responds. Participants in this study are exposed to the explanation of research in

Appendix C and survey items such as "I get the emotional help and support I need from my family" and "I feel uncomfortable when others make jokes about or put down people of my ethnic background," which likely reveal what is being measured. This may have consequently influenced participants to respond untruthfully by either overstating or understating their response, as prior studies have found (Moss & Lawrence, 1997).

For future research, more longitudinal data analyses are needed to investigate how acculturation affects mental health over time in addition to other variables (Hale & Kuperminc, 2021; Nap et al., 2015; Wang, Jin, & Zamudio, 2020). This study relies solely on correlation data and is therefore limited by its inability to determine the causality of relationships. Longitudinal data has an advantage in tracing the directionality of relationships and in experimentally manipulating developmental variables. These benefits highlight why longitudinal data can better suggest causality over correlation data which lacks both those capabilities. Especially in the analysis of mediation, correlational data lacks the ability to investigate such relationships temporally, which further articulates the necessity of longitudinal studies in the investigation of acculturative stress.

Future studies on acculturative stress and mental health should aim to analyze the general immigrant population more than established higher-risk populations. Poor mental health outcomes are commonplace for immigrants worldwide, regardless of the resilience, adaptability, and resourcefulness they may demonstrate when facing adversity (Bourque, van der Ven, & Malia, 2011). Some regard the mobility of the population to be a leading policy issue of the 21st century. Coordinated approaches to make policies addressing the health implications associated with modern migration are currently lacking (Zimmerman, Kiss, & Hossain, 2011). According to

the Pew Research Center, 93 percent of America's growth in the working-age population between now and 2050 will be accounted for by first-generation immigrants and their children. By then, the nation's population of first- and second-generation immigrants combined may equal more than 160 million people, making them 37 percent of the U.S. population (Pew Research Center, 2013). Therefore, more research to inform how our infrastructures and institutions can be more accommodating and inclusive of immigrants will wholly improve the efficiency and effectiveness of our society.

Clinical Implications

The findings in this study communicate a few implications that may be implemented in practice where immigrants, especially at the college-level, are involved. In administrating counseling services to immigrants, acculturative stress should be understood as a mediating variable between social support, subjective wellbeing, and mental health symptoms. This study demonstrates that immigrants when faced with the stress of acculturation, look to support from friends and family and a sense of inner confidence and optimism to cope in their respective environments. If immigrants are undergoing acculturative stress, it is likely that their cultural orientation and their level of bicultural integration are playing a role in the intensity of that stress and its effect on their mental health or wellbeing. When being evaluated for mental health symptoms, immigrants should be evaluated through an understanding of mental health stigmatization wherein the attached label of mental illness often translates to some deviance from their cultural norm. This penetrates externally as a perceived point of discrimination and social exclusion (Côté et al., 2020).The relationship between how immigrants report their overall wellbeing and report their mental health symptoms should be considered, because the former

may be a mechanism of concealing the latter to avoid stigmatization. When undergraduate immigrants are concerned, their academic year in college and immigrant generation should be considered for their indicative values of mental health and acculturative stress.

Overall, it should be in the interest of educational, healthcare, and governmental institutions to instate programs to reach out to immigrants and streamline their inclusion into society. To combat mental health stigmatization and break down the barriers presented by acculturative stress, outreach programs can help increase immigrant access and utilization to mental healthcare (Cooper et al., 2019; Wang, Jin, & Zamudio, 2020). Considering that social support, bicultural integration, and acculturative stress collectively predict mental health, outreach programs can help immigrants improve in these three aspects. By assisting them to build a sense of social support, integrate better into mainstream culture, and decrease their acculturative stressors, outreach programs can help immigrants achieve a more optimal mental state and higher quality of life.

Conclusion

The results of this study indicate that college-level immigrants do not exhibit a state of mental health that is significantly different from nonimmigrants. Acculturative stress was found to correlate with symptoms of mental health, more so among first-generation immigrants. The subjective wellbeing and mental health of immigrants agree despite mental health stigmatization. Social support and bicultural integration correlated with mental health, while cultural orientation seemed to display little to no relationship. Most notably, this study found the variables of acculturative stress, social support, and bicultural integration to predict collectively mental health symptoms among immigrants. Though, acculturative stress alone was a strong predictor of

mental health. This study also showed several in-group differences in terms of immigrant generation and undergraduates' academic year. This study also found acculturative stress to play a mediating role between social support, subjective wellbeing, and mental health. Demographic limitations, survey limitations, and longitudinal limitations were deliberated, and implications of the study's results for real-world practice were provided. With the utilization of survey analyses and supplemental peer-reviewed research, this study addresses the gaps found in acculturative stress literature. This study aims to inspire future research on immigrant acculturative stress that can inform future policymakers in the healthcare sector, educational sector, and general workplace.

APPENDIX A: TABLES

Table 1

Descriptive Statistics of all Study Variables

Variable (Measure, α)	Possible Range	Total (N=297)		Immigrants (N=121)		Nonimmigrants (N=176)	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Mental Health (BSI, .97)	(1-5)	1.85	.69	1.88	.68	1.84	.70
Acculturative Stress (SAFE, .91)	(0-5)	1.22	.75	1.51	.81	1.01	.63
Subjective Wellbeing (WEMWBS, .93)	(1-5)	3.24	.75	3.14	.73	3.30	.77
Social Support (MSPSS, .93)	(1-7)	5.57	1.20	5.46	1.16	5.64	1.23
Bicultural Integration (BIIS-2, .95)	(0-5)			3.67	.55		
Cultural Orientation (PAS, .94)	(0-5)			2.94	.53		

Note. Only immigrants were measured for Bicultural Integration and Cultural Orientation.

Table 2

Pearson *r* Correlation Matrix of Study Variables Among All Immigrants (*N*=121)

Variable	Mental Health	Accultura-tive Stress	Subjective Wellbeing	Social Support	Bicultural Integration
Acculturative Stress	.54**	-			
Subjective Wellbeing	-.38**	-.26**	-		
Social Support	-.34**	-.45**	.39**	-	
Bicultural Integration (*N*=116)	-.28**	-.50**	.32**	.34**	-
Cultural Orientation (*N*=114)	.01	-.18*	.10	-.07	.19*

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3

Pearson *r* Correlation Matrices Comparing First- and Second-Generation Immigrants

Variable	1	2	3	4	5	6
First-Generation Immigrants						
1. Mental Health	-					
2. Acculturative Stress	.68**	-				
3. Subjective Wellbeing	-.45**	-.28	-			
4. Social Support	-.34*	-.47**	.30	-		
5. Bicultural Integration	-.25	-.34*	.49**	.52**	-	
6. Cultural Orientation	.15	-.02	.05	.17	.10	-
Second-Generation Immigrants						
1. Mental Health	-					
2. Acculturative Stress	.45**	-				
3. Subjective Wellbeing	-.35**	-.27*	-			
4. Social Support	-.32*	-.41**	.46**	-		
5. Bicultural Integration	-.28*	-.56**	.23*	.18	-	
6. Cultural Orientation	-.05	-.24*	.138	-.256*	-.21	-

*. Correlation is significant at the p < .05 level (2-tailed).

**. Correlation is significant at the p < .01 level (2-tailed).

Table 4

Hierarchical Multiple Regression Analysis Predicting Immigrant Mental Health

Variable	R	R^2	ΔR^2	B	$SE\ B$	β	t
Step 1	.17	.03	.03				
Gender				.23	.13	.17	1.78
Age				-.00	.01	-.02	-.27
Step 2	.58	.34	.31				
Acculturative Stress				.42	.08	.50	5.22*
Bicultural Integration				.04	.11	-.13	.33
Social Support				-.08	.05	-.13	-1.46

*. Significant at the p < .001 level (2-tailed).

Table 5

Stepwise Regression Analysis Predicting Immigrant Mental Health

Variable	R	R^2	ΔR^2	B	$SE\ B$	β	t
Step 1	.56	.31	.31				
Acculturative Stress				.47	.07	.56	7.15*

*. Significant at the p < .001 level (2-tailed).

Variables Removed. Gender, Age, Social Support, Bicultural Integration

Table 6

Analysis for Social Support and Mental Health Mediated by Acculturative Stress

Dependent	Independent	B	$SE\ B$	β	t	P
Variables						
Step 1						
Mental Health	Social Support	-.20	.05	-.34	-3.89	$< .001$
Step 2						
Acculturative Stress	Social Support	-.31	.06	-.45	-5.42	$< .001$
Step 3						
Mental Health	Acculturative Stress	.45	.06	.54	7.03	$< .001$
Step 4						
Mental Health	Acculturative Stress	.41	.07	.49	5.71	$< .001$
	Social Support	-.07	.05	-.12	-1.38	.170

Step 1. $F(1, 119) = 15.14$, $p < .001$, $R^2 = .11$

Step 2. $F(1, 119) = 29.38$, $p < .001$, $R^2 = .20$

Step 3. $F(1, 119) = 49.45$, $p < .001$, $R^2 = .29$

Step 4. $F(2, 118) = 25.86$, $p < .001$, $R^2 = .31$

Table 7

Analysis for Subjective Wellbeing and Mental Health Mediated by Acculturative Stress

Variable		*B*	*SE B*	*β*	*t*	*P*
Dependent	Independent					
Step 1						
Mental Health	Subjective Wellbeing	-.35	.08	-.38	-4.48	< .001
Step 2						
Acculturative Stress	Subjective Wellbeing	-.29	.10	-.26	-2.95	.004
Step 3						
Mental Health	Acculturative Stress	.45	.06	.54	7.03	< .001
Step 4						
Mental Health	Acculturative Stress	.40	.06	.48	6.20	< .001
	Subjective Wellbeing	-.24	.07	-.26	-3.34	.001

Step 1. $F(1, 119) = 20.05$, $p < .001$, $R^2 = .14$

Step 2. $F(1, 119) = 8.68$, $p = .004$, $R^2 = .07$

Step 3. $F(1, 119) = 49.45$, $p < .001$, $R^2 = .29$

Step 4. $F(2, 118) = 32.41$, $p < .001$, $R^2 = .36$

APPENDIX B: IRB EXEMPTION DETERMINATION

EXEMPTION DETERMINATION

November 5, 2020

Dear Shahram Ghiasinejad:

On 11/5/2020, the IRB determined the following submission to be human subjects research that is exempt from regulation:
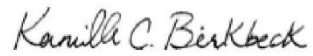
Type of Review:	Initial Study
Title:	The Role of Acculturative Stress in Immigrant Mental Health
Investigator:	Shahram Ghiasinejad
IRB ID:	STUDY00002323
Funding:	None
Grant ID:	None
Documents Reviewed:	• Acculturative Stress Survey .docx, Category: Survey / Questionnaire; • IRB Ghiasinejad 2323 HRP-254-FORM Explanation of Research (1).pdf, Category: Consent Form; • IRB Ghiasinejad 2323 HRP-255-FORM - Request for Exemption.docx, Category: IRB Protocol;

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please submit a modification request to the IRB. Guidance on submitting Modifications and Administrative Check-in are detailed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

Due to current COVID-19 restrictions, in-person research is not permitted to begin unless you are able to follow the COVID-19 Human Subject Research (HSR) Standard Safety Plan with permission from your Dean of Research or submitted your Study-Specific Safety Plan and received IRB and EH&S approval. Be sure to monitor correspondence from the Office of Research, as they will communicate when restrictions are lifted, and all in-person research can resume.

Page 1 of 2

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Kamille C. Birkbeck

Kamille Birkbeck
Designated Reviewer

APPENDIX C: EXPLANATION OF RESEARCH

EXPLANATION OF RESEARCH

Title of Project: The Role of Acculturative Stress in Immigrant Mental Health
Principal Investigator: Dr. Shahram Ghiasinejad
Other Investigators: Daaman Lall
Faculty Supervisor: Dr. Shahram Ghiasinejad

You are being invited to take part in a research study. Whether you take part is up to you.

The purpose of this research is to examine acculturative stress, the stress associated with adapting to a new culture, and its role in the mental health of immigrants attending the University of Central Florida.

This survey contains questions that may cause you to reflect on past emotional events. If answering these questions has caused you to experience any kind of distress or made you feel uncomfortable in any way, please contact the UCF Counseling and Psychological Services at (407) 823-2811 or National Suicide Prevention Lifeline at 1-800-273-8255.

As a participant, you will be required to complete each question carefully and truthfully. To complete the survey and receive full credit for your response, an answer to each question is required. You can complete the online survey from any location with internet access. No identifiable private information will be collected in this questionnaire.

The expected duration of this survey is under 30 minutes.

There is no direct compensation for taking part in this study. It is possible, however, that extra/research credit may be offered for your participation, but this benefit is at the discretion of your instructor. Upon completion, you will be awarded SONA credits which may be used as extra/research credit in previously approved psychology courses. If you choose not to participate, you may notify your instructor and ask for an alternative assignment of equal effort for equal credit. There will be no penalty.

Your participation in this study is voluntary. You are free to withdraw your consent and discontinue participation in this study at any time without prejudice or penalty. Your decision to participate or not participate in this study will in no way affect your relationship with UCF, including continued enrollment, grades, employment or your relationship with the individuals who may have an interest in this study.

You must be 18 years of age or older, speak the English language, and reside in the United States of America to take part in this research study.

If you have any questions, concerns, or complaints please contact Daaman Lall, Undergraduate Student, Psychology Major by email at daamanlall@knights.ucf.edu or Dr. Shahram Ghiasinejad, Faculty Supervisor, Department of Psychology at shahram.ghiasinejad@ucf.edu.

IRB contact about your rights in this study or to report a complaint: If you have questions about your rights as a research participant, or have concerns about the conduct of this study, please contact Institutional Review Board (IRB), University of Central Florida, Office of Research, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901, or email irb@ucf.edu.

APPENDIX D: SURVEY ITEMS

Demographic Questionnaire

What is your age?

    A. _____

What gender do you identify as?

    A. Male
    B. Female
    C. _____

Please specify your ethnicity.

    A. Caucasian
    B. African American
    C. Latino or Hispanic
    D. Asian
    E. Native American
    F. Native Hawaiian or Pacific Islander
    G. Other: _____

Please specify your college grade level.

    A. Undergraduate Freshman
    B. Undergraduate Sophomore
    C. Undergraduate Junior
    D. Undergraduate Senior
    E. Graduate/Professional Student
    F. Non-degree seeking

Are you an immigrant or the child of an immigrant? Choose the option which best applies to you.

    A. Yes, I am a first-generation immigrant (I was born and raised in a foreign country)
    B. Yes, I am a first-generation immigrant, but I have little or no memory of the foreign country I was born in.
    C. Yes, I am a second-generation immigrant (One or both of my parents were born and/or raised in a foreign country and I was born in the U.S.)
    D. No

MSPSS

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

1 = Very Strongly Disagree
2 = Strongly Disagree
3 = Mildly Disagree
4 = Neutral
5 = Mildly Agree
6 = Strongly Agree
7 = Very Strongly Agree

1. There is a special person who is around me when I am in need.

2. There is a special person with whom I can share my joys and sorrows.

3. My family really tries to help me.

4. I get the emotional help and support I need from my family.

5. I have a special person who is a real source of comfort to me.

6. My friends really try to help me.

7. I can count on my friends when things go wrong.

8. I can talk about my problems with my family.

9. I have friends with whom I can share my joys and sorrows.

10. There is a special person in my life who cares about my feelings.

11. My family is willing to help me make decisions.

12. I can talk about my problems with my friends.

PAS

Choose 0-5.
0 = Not Applicable
1 = Only (my ethnicity)
2 = Mostly (my ethnicity)
3 = Both
4 = Mostly Anglo/American
5 = Only Anglo/American

1. With which group(s) of people do you feel you share most of your beliefs and values?
2. With which group(s) of people do you feel you have the most in common?
3. With which group(s) of people do you feel the most comfortable?
4. In your opinion, which group(s) of people best understands your ideas (your way of thinking)?
5. Which culture(s) do you feel proud to be a part of?
6. In which culture(s) do you know how things are done and feel that you can do them easily?
7. In which culture(s) do you feel confident that you know how to act?
8. In your opinion, which group(s) of people do you understand best?
9. In which culture(s) do you know what is expected of a person in various situations?
10. Which culture(s) do you know the most about the history, traditions, and customs, and so forth?

BIIS-2

Fill in the blank with your Ethnicity. Choose 0-5.

0 = Not Applicable
1 = Strongly Disagree
2 = Disagree
3 = Not Sure
4 = Agree
5 = Strongly Agree

Cultural harmony vs. conflict
1. I find it easy to harmonize _____ and American cultures.
2. I rarely feel conflicted about being bicultural.
3. I find it easy to balance both _____ and American cultures.
4. I do not feel trapped between the _____ and American cultures.
5. I feel torn between _____ and American cultures. (reverse-coded)
6. Being bicultural means having two cultural forces pulling on me at the same time. (reverse-coded)
7. I feel that my _____ and American cultures are incompatible. (reverse-coded)
8. I feel conflicted between the American and _____ ways of doing things. (reverse-coded)
9. I feel like someone moving between two cultures. (reverse-coded)
10. I feel caught between the _____ and American cultures. (reverse-coded)

Cultural blendedness vs. compartmentalization
11. I cannot ignore the _____ or American side of me.
12. I feel _____ and American at the same time.
13. I relate better to a combined _____-American culture than to _____ or American culture alone.
14. I feel _____-American.
15. I feel part of a combined culture.
16. I do not blend my _____ and American cultures. (reverse-coded)
17. I keep _____ and American cultures separate. (reverse-coded)

SAFE

Below are a number of statements that might be seen as stressful. For each statement that you have experienced, choose one of the following numbers (1, 2, 3, 4, or 5), according to how stressful you find the situation.

If the statement does not apply to you, circle number 0: Have Not Experienced.

0 = HAVE NOT EXPERIENCED
1 = NOT AT ALL STRESSFUL
2 = SOMEWHAT STRESSFUL
3 = MODERATELY STRESSFUL
4 = VERY STRESSFUL
5 = EXTREMELY STRESSFUL

1. I feel uncomfortable when others make jokes about or put down people of my ethnic background.
2. I have more barriers to overcome than most people.
3. It bothers me that family members I am close to do not understand my new values.
4. Close family members have different expectations about my future than I do.
5. It is hard to express to my friends how I really feel.
6. My family does not want me to move away but I would like to.
7. It bothers me to think that so many people use drugs.
8. It bothers me that I cannot be with my family.
9. In looking for a good job, I sometimes feel that my ethnicity is a limitation.
10. I don't have any close friends.
11. Many people have stereotypes about my culture or ethnic group and treat me as if they are true.
12. I don't feel at home.
13. People think I am unsociable when in fact I have trouble communicating in English.
14. I often feel that people actively try to stop me from advancing.
15. It bothers me when people pressure me to become part of the main culture.
16. I often feel ignored by people who are supposed to assist me.
17. Because I am different, I do not get the credit for the work I do.
18. It bothers me that I have an accent.
19. Loosening the ties with my country is difficult.
20. I often think about my cultural background.
21. Because of my ethnic background, I feel that others often exclude me from participating in their activities.
22. It is difficult for me to "show off" my family.
23. People look down upon me if I practice customs of my culture.
24. I have trouble understanding others when they speak.

BSI

Below is a list of problems people sometimes have. Read each one carefully and choose the number that best describes **HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY.**

1	2	3	4	5
Not at all	**A little bit**	**Moderately**	**Quite a bit**	**Extremely**

DURING THE PAST 7 DAYS, how much were you distressed by:

1. Nervousness or shakiness inside
2. Faintness or dizziness
3. The idea that someone else can control your thoughts
4. Feeling others are to blame for most of your troubles
5. Trouble remembering things
6. Feeling easily annoyed or irritated
7. Pains in the heart or chest
8. Feeling afraid in open spaces
9. Thoughts of ending your life

DURING THE PAST 7 DAYS, how much were you distressed by:

10. Feeling that most people cannot be trusted
11. Poor appetite
12. Suddenly scared for no reason
13. Temper outbursts that you could not control
14. Feeling lonely even when you are with people
15. Feeling blocked in getting things done
16. Feeling lonely
17. Feeling blue
18. Feeling no interest in things

DURING THE PAST 7 DAYS, how much were you distressed by:

19. Feeling fearful
20. Your feelings being easily hurt
21. Feeling that people are unfriendly or dislike you
22. Feeling inferior to others
23. Nausea or upset stomach
24. Feeling that you are watched or talked about by others
25. Trouble falling asleep
26. Having to check and double check what you do
27. Difficulty making decisions

DURING THE PAST 7 DAYS, how much were you distressed by:

28. Feeling afraid to travel on buses, subways, or trains
29. Trouble getting your breath
30. Hot or cold spells
31. Having to avoid certain things, places, or activities because they frighten you
32. Your mind going blank
33. Numbness or tingling in parts of your body
34. The idea that you should be punished for your sins
35. Feeling hopeless about the future
36. Trouble concentrating

DURING THE PAST 7 DAYS, how much were you distressed by:

37. Feeling weak in parts of your body
38. Feeling tense or keyed up
39. Thoughts of death or dying
40. Having urges to beat, injure, or harm someone
41. Having urges to break or smash things
42. Feeling very self-conscious with others
43. Feeling uneasy in crowds
44. Never feeling close to another person
45. Spells of terror or panic

DURING THE PAST 7 DAYS, how much were you distressed by:

46. Getting into frequent arguments
47. Feeling nervous when you are left alone
48. Others not giving you proper credit for your achievements
49. Feeling so restless you couldn't sit still
50. Feelings of worthlessness
51. Feeling that people will take advantage of you if you let them
52. Feeling of guilt
53. The idea that something is wrong with your mind

WEMWBS

Below are some statements about feelings and thoughts. Please circle the box that best describes your experience of each over the last 2 weeks.

1 = NONE OF THE TIME
2 = RARELY
3 = SOME OF THE TIME
4 = OFTEN
5 = ALL OF THE TIME

1. I've been feeling optimistic about the future.
2. I've been feeling useful
3. I've been feeling relaxed
4. I've been feeling interested in other people
5. I've had energy to spare
6. I've been dealing with problems well
7. I've been thinking clearly
8. I've been feeling good about myself
9. I've been feeling close to other people
10. I've been feeling confident
11. I've been able to make up my own mind about things
12. I've been feeling loved
13. I've been interested in new things
14. I've been feeling cheerful

Control Questions (Exit Questionnaire)

Acculturative stress refers to the stress associated with acculturation or having to adapt to a new culture. While living in the United States, this might be the stress of having to adapt to American mainstream culture. Answer the following questions regarding acculturative stress.

Do you feel like acculturative stress negatively affects your ability to be optimistic, have high self-esteem, and/or maintain interpersonal relationships?
   A. Yes
   B. No
   C. Maybe
   D. Not Sure
   E. Not Applicable

Do you feel like acculturative stress contributes to any feelings of anxiety or depression you may have?
   A. Yes
   B. No
   C. Maybe
   D. Not Sure
   E. Not Applicable

Do you feel like acculturative stress negatively affects your mental health or wellbeing?
   A. Yes
   B. No
   C. Maybe
   D. Not Sure
   E. Not Applicable

Do you see mental health as an important part of overall health?
   A. Yes
   B. No
   C. Maybe
   D. Not Sure
   E. Not Applicable

Do you feel as if NOT adhering to American mainstream culture prevents you from utilizing or receiving proper healthcare?
   A. Yes
   B. No
   C. Maybe
   D. Not Sure
   E. Not Applicable

REFERENCES

Alamilla, S. G., Barney, B. J., Small, R., Wang, S. C., Schwartz, S. J., Donovan, R. A., & Lewis, C. (2020). Explaining the Immigrant Paradox: The Influence of Acculturation, Enculturation, and Acculturative Stress on Problematic Alcohol Consumption. *Behavioral Medicine*, 46(1), 21–33. https://doi.org/10.1080/08964289.2018.1539945

Altamirano, E. (2015). Depression: An Investigation of the Risk Factors Associated with High Depressive Symptoms Among the Latino Immigrant Population. *HIM 1990-2015*. 1693. https://stars.library.ucf.edu/honorstheses1990-2015/1693

Bae, S. M. (2019). The relationship between bicultural identity, acculturative stress, and psychological well-being in multicultural adolescents: Verification using multivariate latent growth modelling. *Stress & Health: Journal of the International Society for the Investigation of Stress*, *36*(1), 51–58. https://doi.org/10.1002/smi.2912

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative Studies of Acculturative Stress. *International Migration Review*, 21(3), 491–511. https://doi.org/10.1177/019791838702100303

Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). *Immigrant youth in cultural transition: Acculturation, identity, and adaptation across national contexts.* Lawrence Erlbaum Associates Publishers.

Berry, J. W., & Sabatier, C. (2010). Acculturation, discrimination, and adaptation among second

    generation immigrant youth in Montreal and Paris. *International Journal of Intercultural*

    Relations, *34*(3), 191–207. https://doi.org/10.1016/j.ijintrel.2009.11.007

Billings, A. G., & Moos, R. H. (1982). Social support and functioning among community and

    clinical groups: A panel model. *Journal of Behavioral Medicine*, 5(3), 295–311.

    https://doi.org/10.1007/BF00846157

Bourque, F., van der Ven, E., & Malla, A. (2011). A meta-analysis of the risk for psychotic

    disorders among first- and second-generation immigrants. *Psychological medicine*, 41(5),

    897–910. https://doi.org/10.1017/S0033291710001406

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering

    hypothesis. *Psychological Bulletin, 98*(2), 310–357. https://doi.org/10.1037/0033-

    2909.98.2.310

Cooper, D. K., Bachem, R., Meentken, M. G., Aceves, L., & Perez Barrios, A. G. (2019).

    Cumulative lifetime adversity and depression among a national sample of US Latinx

    immigrants: Within-group differences in risk and protective factors using data from the

    HCHS/SOL sociocultural ancillary study. *Journal of Latinx Psychology*.

    https://doi.org/10.1037/lat0000145.supp

Côté, D. (2013). Intercultural communication in health care: challenges and solutions in work

    rehabilitation practices and training: a comprehensive review. *Disability and*

    Rehabilitation, *35*(2), 153–163. https://doi.org/10.3109/09638288.2012.687034

Côté, D., Dubé, J., Gravel, S., Gratton, D., & White, B. W. (2020). Cumulative stigma among

    injured immigrant workers: A qualitative exploratory study in Montreal (Quebec,

Canada). *Disability and Rehabilitation: An International, Multidisciplinary Journal*, 42(8), 1153–1166. https://doi.org/10.1080/09638288.2018.1517281

Derogatis, L. R., & Melisaratos, N. (1983). The Brief Symptom Inventory: An introductory report. *Psychological Medicine*, *13*(3), 595–605. https://doi.org/10.1017/S0033291700048017

Diener, E., & Biswas-Diener, R. (2008). *Happiness: Unlocking the mysteries of psychological wealth*. John Wiley & Sons.

Diener, E*., & Ryan, K. (2009*). Subjective Well-Being: A General Overview. *South African Journal of Psychology*, 39(4), 391–406. https://doi.org/10.1177/008124630903900402

Flores, E., Tschann, J. M., Dimas, J. M., Bachen, E. A., Pasch, L. A., & de Groat, C. L. (2008). Perceived discrimination, perceived stress, and mental and physical health among Mexican-origin adults. *Hispanic Journal of Behavioral Sciences*, 30, 401–424. http://dx.doi.org/10.1177/0739986308323056

Fortin, S. (2008). The pediatric clinic as negotiated social space. *Anthropology & Medicine*, *15*(3), 175–187. https://doi.org/10.1080/13648470802355491

Hale, K. E., & Kuperminc, G. (2021). The Associations Between Multiple Dimensions of Acculturation and Psychological Distress Among Latinx Youth From Immigrant Families. *Youth & Society*, 53(2), 342–368. https://doi.org/10.1177/0044118X19898698

Hammons, M. (2007). The Importance Of Addressing Acculturative Stress In Marital Therapy With Hispanic American Women. *Electronic Theses and Dissertations, 2004-2019*. 3192. https://stars.library.ucf.edu/etd/3192

Hansen, Hardaye R., Yuliya Shneyderman, Gloria S. McNamara, and Lisa Grace. (2018).

    Assessing Acculturative Stress of International Students at a U.S. Community College.

    Journal of International Students, 8(1), 215. doi:10.5281/zenodo.1134293.

Heywood, A. E., Castelli, F., & Greenaway, C. (2019). Migration Health: Highlights from

    Inaugural International Society of Travel Medicine (ISTM) Conference on Migration

    Health. *Current Infectious Disease Report*, *21*(12). https://doi.org/10.1007/s11908-019-

    0705-6

House, J. S., Umberson, D., & Landis, K. R. (1988). Structures and Processes of Social

    Support. *Annual Review of Sociology*, *14*(1), 293.

    https://doi.org/10.1146/annurev.so.14.080188.001453

Huynh, Q.-L., Benet-Martínez, V., & Nguyen, A.-M. D. (2018). Measuring variations in

    bicultural identity across U.S. ethnic and generational groups: Development and

    validation of the Bicultural Identity Integration Scale—Version 2 (BIIS-2). *Psychological*

    Assessment, 30(12), 1581–1596. https://doi.org/10.1037/pas0000606

Jankowski, P. J., Meca, A., Lui, P. P., & Zamboanga, B. L. (2018, May 17). Religiousness and

    Acculturation as Moderators of the Association Linking Acculturative Stress to Levels of

    Hazardous Alcohol Use in College Students. *Psychology of Religion and Spirituality.*

    http://dx.doi.org/10.1037/rel0000185

Jonsson, T. B. (1998). Institutionalized strategies in face-to-face encounters: focus on immigrant

    clients. *Scandinavian Journal of Social Welfare*, *7*(1), 27. https://doi.org/10.1111/j.1468-

    2397.1998.tb00272.x

Keyes, C. L. M., & Lopez, S. J. (2002). Toward a science of mental health: Positive directions in

    diagnosis and interventions. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive*

    psychology, 1, 45-59. Oxford University Press.

Lefrid, M. (2019). Acculturation and workplace inclusion among immigrant restaurant workers:

    a study of organizational behavior in hospitality. *Electronic Theses and Dissertations,*

    2004-2019. 6814. https://stars.library.ucf.edu/etd/6814

Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does

    happiness lead to success? *Psychological bulletin*, *131*(6), 803.

Marks, A.K., Ejesi, K. and García Coll, C. (2014). Understanding the U.S. Immigrant Paradox in

    Childhood and Adolescence. *Child Development Perspectives*, 8(2), 59 -64.

    https://doi.org/10.1111/cdep.12071

Meershoek, A., Krumeich, A., & Vos, R. (2011). The construction of ethnic differences in work

    incapacity risks: Analysing ordering practices of physicians in the Netherlands. *Social*

    Science & Medicine, *72*(1), 15–22. https://doi.org/10.1016/j.socscimed.2010.10.022

Moss., S. E., & Lawrence, K. G. (1997). The Effects of Priming on the Self-Reporting of

    Perceived Stressors and Strains. *Journal of Organizational Behavior*, 18(4), 393–403.

Nap, A., van Loon, A., Peen, J., van Schaik, D. J., Beekman, A. T., & Dekker, J. J. (2015). The

    influence of acculturation on mental health and specialized mental healthcare for non-

    western migrants. *International Journal of Social Psychiatry*, 61(6), 530–538.

    https://doi.org/10.1177/0020764014561307

Negy, C., Reig-Ferrer, A., Gaborit, M. *et al.* (2014). Psychological Homelessness and

    Enculturative Stress among US-Deported Salvadorans: A Preliminary Study with a Novel

Approach. *J Immigrant Minority Health,* 16, 1278–1283 https://doi.org/10.1007/s10903-014-0006-y

Nguyen, A.-M. D., & Benet-Martínez, V. (2013). Biculturalism and Adjustment: A Meta-Analysis. *Journal of Cross-Cultural Psychology*, 44(1), 122–159. https://doi.org/10.1177/0022022111435097

Patalay, P., & Fitzsimons, E. (2016). Correlates of Mental Illness and Wellbeing in Children: Are They the Same? Results From the UK Millennium Cohort Study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 55(9), 771–783. https://doi.org/10.1016/j.jaac.2016.05.019

Pew Research Center. (2013, February 7). Second-Generation Americans: A Portrait of the Adult Children of Immigrants. Retrieved from https://www.pewsocialtrends.org/2013/02/07/second-generation-americans/

Poortinga, Y. H., & Van De Vijver, F. J. R. (1987). Explaining Cross-Cultural Differences: Bias Analysis and Beyond. *Journal of Cross-Cultural Psychology*, 18(3), 259–282. https://doi.org/10.1177/0022002187018003001

Robert, A. & Gilkinson, T. (2012). Mental health and wellbeing of recent immigrants in Canada: Evidence from the longitudinal survey of immigrants to Canada. Retrieved from https://www.canada.ca/content/dam/ircc/migration/ircc/english/pdf/research-stats/mental-health.pdf

Romero, A. J., Carvajal, S. C., Valle, F., & Orduna, M. (2007). Adolescent Bicultural Stress and Its Impact on Mental Well-Being among Latinos, Asian Americans, and European

Americans. *Journal of Community Psychology*, 35(4), 519–534.

http://dx.doi.org/10.1002/jcop.20162

Ruiz, V. (2015). Attitudes Toward Diversity and Life in the U.S. Held By Children of Hispanic

Immigrants: Do Their Parents Play a Role?. *HIM 1990-2015*. 1884.

https://stars.library.ucf.edu/honorstheses1990-2015/1884

Salami, B., Salma, J., & Hegadoren, K. (2019). Access and utilization of mental health services

for immigrants and refugees: Perspectives of immigrant service providers. *International*

Journal of Mental Health Nursing, 28(1), 152–161. https://doi.org/10.1111/inm.12512

Sandhu, D. S., & Asrabadi, B. R. (1994). Development of an acculturative stress scale for

international students: Preliminary findings. *Psychological Reports*, 75(1), 435.

https://doi.org/10.2466/pr0.1994.75.1.435

Sangalang, C. C., Becerra, D., Mitchell, F. M., Lechuga-Peña, S., Lopez, K., & Kim, I. (2019).

Trauma, Post-Migration Stress, and Mental Health: A Comparative Analysis of Refugees

and Immigrants in the United States. *Journal of Immigrant & Minority Health*, 21(5),

909–919. https://doi.org/10.1007/s10903-018-0826-2

Smiljanic, I. (2017). The Role of Attachment, Travel Experiences and English Proficiency in

International Students' Acculturative Stress and Depressive Symptoms. *Journal of*

International Students, 7(2), 188–203.

Taylor, S. E. (2018). *Health Psychology* (10th ed.). New York, NY: McGraw-Hill Education.

Tennant, R., Hiller, L., Fishwick, R. et al (2007). The Warwick-Edinburgh Mental Well-being

Scale (WEMWBS): development and UK validation. *Health Qual Life Outcomes* **5,** 63.

https://doi.org/10.1186/1477-7525-5-63

Tikhonov, A. A., Espinosa, A., Huynh, Q.-L., & Anglin, D. M. (2019). Bicultural identity

    harmony and American identity are associated with positive mental health in US racial

    and ethnic minority immigrants. *Cultural Diversity and Ethnic Minority*

    Psychology, *25*(4), 494–504. https://doi.org/10.1037/cdp0000268

Tropp, L. R., Erkut, S., Coll, C. G., Alarcón, O., & Vázquez García, H. A. (1999). Psychological

    acculturation: development of a new measure for Puerto Ricans on the U.S.

Walker, R. L., Wingate, L. R., Obasi, E. M., & Joiner, T. E., Jr. (2008). An empirical

    investigation of acculturative stress and ethnic identity as moderators for depression and

    suicidal ideation in college students. *Cultural Diversity and Ethnic Minority*

    Psychology, *14*(1), 75–82. https://doi.org/10.1037/1099-9809.14.1.75

Wang, C. D. C., Jin, L., & Zamudio, G. (2021). Adult Attachment, Personality Factors, Social

    Support, and Acculturative Stress of International Students. *International Journal for the*

    Advancement of Counselling, 43(1), 31. https://doi.org/10.1007/s10447-020-09417-7

Zimet, G.D., Dahlem, N.W., Zimet, S.G. & Farley, G.K. (1988). The Multidimensional Scale of

    Perceived Social Support. Journal of Personality Assessment, 52, 30-41.

Zimmerman, C., Kiss, L., Hossain, M. (2011). Migration and Health: A Framework for 21st

    Century Policy-Making. *PLoS Med,* 8(5), e1001034.

    https://doi.org/10.1371/journal.pmed.1001034