Acculturation, Psychological Well-Being and Substance Use Behaviors in Asian Indian Americans

Sonia Y. Amin

Western Michigan University, sonia_waves@yahoo.com

Follow this and additional works at: https://scholarworks.wmich.edu/dissertations

Part of the Counseling Psychology Commons, Multicultural Psychology Commons, and the Substance Abuse and Addiction Commons

Recommended Citation
Amin, Sonia Y., "Acculturation, Psychological Well-Being and Substance Use Behaviors in Asian Indian Americans" (2020). Dissertations. 3671.
https://scholarworks.wmich.edu/dissertations/3671

This Dissertation-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Dissertations by an authorized administrator of ScholarWorks at WMU. For more information, please contact wmu-scholarworks@wmich.edu.
ACCULTURATION, PSYCHOLOGICAL WELL-BEING AND SUBSTANCE USE BEHAVIORS IN ASIAN INDIAN AMERICANS

by

Sonia Y. Amin

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

Doctoral Committee:

Joseph R. Morris, Ph.D., Chair
Mary Z. Anderson, Ph.D.
Chien-Juh Gu, Ph.D.
ACCULTURATION, PSYCHOLOGICAL WELL-BEING AND SUBSTANCE USE BEHAVIORS IN ASIAN INDIAN AMERICANS

Sonia Y. Amin, Ph.D.
Western Michigan University, 2020

The American population is becoming more diversified with increases in the number of immigrants and refugees entering the country. These new Americans bring distinct cultural values, traditions, and worldviews. With this diversity, an important need has arisen to better understand the interplay of culture, physical, and mental health concerns that affect specific racial and ethnic populations. This increase in knowledge and awareness will aid in the development and provision of culturally-sensitive mental health services. The stress of immigration and the multifaceted sociocultural and psychological adaptations involved in adjusting to living in a new country with a Eurocentric dominant culture can affect the psychological well-being of immigrants (Abouguendia & Noels, 2001; Tummala-Narra, Deshpande, & Kaur, 2016). The existent scholarship demonstrates that immigrants may seek to migrate to the United States for better economical and educational opportunities, but also experience multifaceted challenges that can impact their relationships, psychological well-being, coping strategies, and overall health (Gibson, 2001; Farver, Bhadha, & Narang, 2002; Oppedal, Roysamb, & Sam, 2004). Previous research has also indicated that increased substance use is linked to decreased psychological well-being (Gong, Takeuchi, Agbayani-Siewert, & Tacata, 2003). The present study builds on previous scholarship that examines the acculturation experiences of Asian immigrants and the Asian American population. Thus, the purpose of this study was to examine acculturation experiences, psychological well-being, and substance use
behaviors in the Asian Indian population living in the United States. Differences between these three variables were assessed across generation status and length of residency.

One hundred and twenty-two participants who identified as Asian Indian, between the ages of 18 to 60, and currently living in the United States participated in this study. Participants were recruited from Asian American and South Asian American email lists and Asian Indian community centers. The instruments used in this study included: demographic questionnaire, Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987), Scale for Psychological Well-Being (SPWB; Ryff, 1989), Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente & Grant, 1993), and Drug Abuse Screening Test (DAST; Skinner, 1982). Primary analyses were conducted via linear regression analyses, multivariate tests of variance, and hierarchical regression analyses. The findings from the study indicated that increases in alcohol use is associated with increases in psychological well-being. The results also suggested that decreases in psychological well-being may be linked with increases in the level of acculturation of Asian Indian Americans. Interpretation of findings, study limitations, clinical implications, and future directions are further explored in the discussion section.
Copyright by
Sonia Y. Amin
2020
ACKNOWLEDGEMENTS

The very fact that I am writing this acknowledgement section is almost miraculous to me. I never had much faith in my abilities nor did I ever think that the dream I dreamed when I was 16, would someday come to fruition. Writing this dissertation has been a long and challenging journey. Although this is a research and writing project, the process taught me far more than the words and research findings in this document. I learned more about life experiences, relationships, mentorship, and community while writing this dissertation than I did about writing and research. There have been so many people that have inspired and motivated me when the tasks seemed daunting, who spread joy and light when it felt like an endless tunnel, and shown me community when I needed it the most. Thank you to everyone who has helped me get here.

Mum: Thank you for reminding me that while my passion for helping others fuels me; that I need to offer the same kindness and compassion to myself. Your unwavering support even if it may have deviated from the paths that others saw for me has meant so much to me. You take in my fire, my fury, my passion, and my highs and lows with such compassion, and saw before anyone else, that my “quiet” was not absent of strength, courage, or voice but rather a lasting fire that needed to be cultivated, supported, and nourished to sustain.

Papa: Thank you for believing in me and my potential when nobody else did. You had faith in me even when I did not have that for myself. When the world seemed to tell me, you are not smart enough or hardworking enough, you helped me realize what was inside of me all along. That other people’s stereotyped judgments about me did not reflect who I am as a person. That unwavering faith has shown me light even in moments where the journey seemed arduous.
Brandon and Breezie: I don’t know if you both know how much your friendship has meant to me throughout the doctoral program. Whether it was bonding over food, venting sessions, celebrating joys and accomplishments, statistical mayhem, or frustrations and disappointments in the program, your support, encouragement, warmth, and laughter through challenging times has been nourishment to my soul. I am so excited for the world to witness your talents! Scholars, I have no doubt that you are going to do wonders!

Kiet: Thank you for your statistical wisdom, encouragement, and our weekly Saturday dissertation workdays. When I was distracted by other projects, you reminded and motivated me to finish this dissertation. I also appreciate you for being a sounding board to all my exciting ideas but also reminder that not all projects have been to taken up at once.

Cal Internship/Fellowship Cohort: Liz, Helen, Lisa, Andrea, Danny, Jason, Derrick! You showed me what true community, authenticity, vulnerability, support, passion for social justice advocacy, and genuine friendship can look like, which helped me feel grounded writing this dissertation.

Shout out to Kamille, I look forward to more collaborations!

Adisa, Kusha, & Claytie, I found mentorship when I least expected it but when I really needed it. Thank you!

South Asian community organizations: Thank you so much for your willingness to spread the information about my study to individuals in your communities.
Acknowledgments — Continued

When I started working on this dissertation, I thought this would be my biggest and only contribution to research and ultimately my most prized accomplishment. I now see that I am still an infant and in that sense only at the beginning of my journey. It is my hope that more scholars will transcend deeper (far beyond this tiny offering) into understanding the crucial emotional and mental health needs of our racial and ethnic minority populations, without the erasure of their cultural identities and sociopolitical challenges, and in turn will strive towards creating tangible and holistic interventions that support the well-being of our diverse populations. I have met so many incredible folks during my internship and post-doctoral year, and have been so appreciative of them reminding me that we need to look beyond academic credentials and into our souls, into our ancestral stories, journeys, and intergenerational traumas, into our unhealed wounds, and engage and practice in the same compassion, kindness, and healing we attempt to offer our clients. The past decade has helped me realize that I am not liberated nor are my people. I will not be liberated until the caste and class oppressed as well as other marginalized communities within the larger South Asian diaspora are liberated from the oppressive frameworks that dictate their livelihood. Further, our liberation is also tied into the liberation of Black people, whose debt we owe with the privileges we are afforded. Until Black lives are humanized, protected, and we break the chains of intergenerational trauma and systemic oppression; racial and social justice cannot and will not be complete. There is much work to be done to dismantle anti-Black racism and White supremacist structures, continued learning and unlearning to do, and the cultivation of love of all people. This dissertation is a symbol of the journey I am yet to traverse and hope to inspire others to do the same.

Sonia Y. Amin
TABLE OF CONTENTS

ACKNOWLEDGEMENTS ................................................................. ii
LIST OF TABLES ................................................................. x

CHAPTER

I. INTRODUCTION ................................................................. 1
  Asian Indian Immigration History ............................................. 3
    First Wave of Asian Indian Immigration .................................. 3
    Second Wave of Asian Indian Immigration ............................... 5
    Third Wave of Asian Indian Immigration ................................ 6
    Generation Status ............................................................ 8
  Theoretical Framework ......................................................... 8
  Mental Health and Stigma ...................................................... 12
  Statement of the Problem ..................................................... 14
    Significance of the Research ................................................. 14
  Research Questions ........................................................... 16
  Research Hypotheses ........................................................ 17
  Definition of Terms .......................................................... 18
  Outline for the Remainder of the Dissertation .......................... 22

II. REVIEW OF RELATED LITERATURE ..................................... 23
  Historical Cultural Context of India ...................................... 23
    Cultural Caste System ...................................................... 23
    Collectivistic Culture Asian Indian Family Systems and Values ....... 26
### Table of Contents—Continued

#### CHAPTER

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>27</td>
</tr>
<tr>
<td>Religion</td>
<td>27</td>
</tr>
<tr>
<td>Education</td>
<td>28</td>
</tr>
<tr>
<td>Acculturation Research and Asian Indian Americans</td>
<td>28</td>
</tr>
<tr>
<td>Nuclear versus Extended Family Values</td>
<td>29</td>
</tr>
<tr>
<td>Previous Immigration Experiences</td>
<td>31</td>
</tr>
<tr>
<td>Asian Acculturation Measures</td>
<td>32</td>
</tr>
<tr>
<td>Psychological Well-Being in Asian Americans</td>
<td>33</td>
</tr>
<tr>
<td>Definition and Conceptualization of Psychological Well-Being</td>
<td>34</td>
</tr>
<tr>
<td>Acculturation, Psychological Well-Being, and Mental Health in Asian</td>
<td>36</td>
</tr>
<tr>
<td>Acculturative Stress and Psychological Well-Being in Asian Americans</td>
<td>38</td>
</tr>
<tr>
<td>Asian Indians and Psychological Functioning</td>
<td>39</td>
</tr>
<tr>
<td>Substance Use and Asian American Populations</td>
<td>42</td>
</tr>
<tr>
<td>Substance Use Among Specific Asian American Groups</td>
<td>44</td>
</tr>
<tr>
<td>Substance Use and Asian Indians</td>
<td>45</td>
</tr>
<tr>
<td>Substance Use Measures</td>
<td>46</td>
</tr>
<tr>
<td>Summary</td>
<td>47</td>
</tr>
</tbody>
</table>

#### III. METHOD

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>49</td>
</tr>
<tr>
<td>Procedures</td>
<td>54</td>
</tr>
<tr>
<td>Measures</td>
<td>55</td>
</tr>
</tbody>
</table>
Table of Contents—Continued

CHAPTER

Demographic Questionnaire.......................................................................................... 55
Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA).................................... 56
Ryff’s Scale for Psychological Well-Being (SPWB)..................................................... 58
Alcohol Use Disorders Identification Test (AUDIT)..................................................... 60
Drug Abuse Screening Test (DAST-10)......................................................................... 62
Research Design............................................................................................................ 63
Statistical Analysis........................................................................................................ 64
  Research Question 1.................................................................................................... 64
  Research Question 2.................................................................................................... 65
  Research Question 3.................................................................................................... 66
  Research Question 4.................................................................................................... 67
Limitations..................................................................................................................... 68

IV. RESULTS................................................................................................................ 69
Preliminary Data Analyses.............................................................................................. 70
  Power Analysis............................................................................................................. 70
  Descriptive Statistics.................................................................................................. 71
  Reliability..................................................................................................................... 72
  Assumptions............................................................................................................... 72
CHAPTER

Research Question 1: What is the relationship between acculturation and psychological well-being among Asian Indian Americans? ................................. 74

Research Question 2: Are there significant mean differences in the AUDIT scores, DAST scores and SPWB scores between first-generation/immigrants, 1.5 generation, and second generation and above? ................................................. 75

Research Question 3: Are the relationships between psychological well being with alcohol use and drug use, moderated by acculturation? ........................................ 76

Research Question 4: Are the relationships between acculturation with alcohol use, drug use and psychological well-being moderated by length of residency? ................. 80

Post Hoc Analyses ........................................................................................................ 84

Correlations of Psychological Well-Being Dimensions ................................................. 84

MANOVA with Generation Status and Six Dimensions of Psychological Well-Being ........................................................................................................ 86

V. DISCUSSION .................................................................................................................. 89

Purpose of Study ............................................................................................................. 89

Interpretation of Findings ................................................................................................ 91

Participants ..................................................................................................................... 91

Potential Influences on Data .......................................................................................... 92

Hypothesis 1 .................................................................................................................... 92

Hypothesis 2 .................................................................................................................... 95

Hypothesis 3 .................................................................................................................... 96

Hypothesis 4 .................................................................................................................... 99

Summary ........................................................................................................................ 99

Limitations ....................................................................................................................... 100
Table of Contents—Continued

CHAPTER

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Implications</td>
<td>103</td>
</tr>
<tr>
<td>Future Research Recommendations</td>
<td>106</td>
</tr>
<tr>
<td>Mediating Variables</td>
<td>107</td>
</tr>
<tr>
<td>Asian Indian LGBTQ+ Communities</td>
<td>107</td>
</tr>
<tr>
<td>Religious Diversity</td>
<td>108</td>
</tr>
<tr>
<td>Mixed Methods Design</td>
<td>108</td>
</tr>
<tr>
<td>Generation Status</td>
<td>109</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>110</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>129</td>
</tr>
<tr>
<td>A. Informed Consent</td>
<td>129</td>
</tr>
<tr>
<td>B. HSIRB Approval Letters</td>
<td>132</td>
</tr>
<tr>
<td>C. Recruitment Email Script</td>
<td>135</td>
</tr>
<tr>
<td>D. Recruitment Flyer</td>
<td>137</td>
</tr>
<tr>
<td>E. Demographic Questionnaire</td>
<td>139</td>
</tr>
<tr>
<td>F. Suinn Lew Asian Self-Identity Acculturation Scale (SL-ASIA)</td>
<td>142</td>
</tr>
<tr>
<td>F. Ryff’s Scale for Psychological Well-Being (SPWB)</td>
<td>151</td>
</tr>
<tr>
<td>G. Alcohol Use Disorders Identification Test (AUDIT)</td>
<td>156</td>
</tr>
<tr>
<td>H. Drug Abuse Screening Test (DAST-10)</td>
<td>160</td>
</tr>
</tbody>
</table>
LIST OF TABLES

1. Participant Demographic Characteristics ................................................................. 52
2. Descriptive Statistics of Study Variables ................................................................. 71
3. Correlations for Study Variables .............................................................................. 72
4. Regression Coefficients of Acculturation Predicting Psychological Well-Being .... 74
5. Multivariate Analysis of Variance for Generation Status ........................................ 76
6. Regression Results of Psychological Well-Being Predicting Alcohol Use ........... 78
7. Regression Results for Psychological Well-Being Predicting Drug Use ............... 80
8. Regression Results for Potential Moderation Effects of Length of Residency and Acculturation Predicting Psychological Well-Being .................................................. 81
9. Regression Results for Potential Moderation Effects of Length of Residency and Acculturation on Alcohol Use Behaviors ................................................................. 83
10. Regression Results for Potential Moderation Effects of Length of Residency on Acculturation and Drug Use Behaviors ............................................................... 84
11. Correlations between Alcohol and Drug with Psychological Well-Being Scales ................................................................................................................................. 85
12. Correlations between Generation Status, Years in the U.S., and Acculturation with Six Scales of Psychological Well-Being ......................................................... 86
13. Follow-Up Univariate Analysis of Variance for Generation Status and Dimensions of Psychological Well-Being ................................................................. 87
14. Descriptive Results for Generation Status and Dimensions of Psychological Well-Being .................................................................................................................. 88
CHAPTER I

INTRODUCTION

The United States has been a country that has brought together individuals who have descended from various sub-continents with diverse cultures, traditions, religious backgrounds, and values. As more immigrants and new groups of individuals arrive in the United States; it is critical that we attempt to build more awareness and health-care environments that are culturally-sensitive and adaptive to the needs of diverse populations. In order to do this, it is important that we conduct research that examines specific sub-groups so that we do not treat ethnic and minority groups as homogeneous.

The Asian American population is the fastest growing racial and ethnic minority group in the United States (Ramakrishnan & Ahmad, 2014). The Asian American population has more than doubled (from 11.9 million to 22.2 million) between 2000 and 2017 (Pew Research Center, 2017; US Census Bureau, 2017). Asian Americans (e.g., Chinese, Filipino, Indian, and Vietnamese) currently comprise 5.8% of the total American population (Pew Research Center, 2017). However, the U.S. Census Bureau (Office of Minority Health [OMH], 2006) and Pew Research Center (Pew Research Center, 2017) have predicted that the Asian American population will continue to increase and become the largest immigrant group in the United States. They estimate that Asian Americans will constitute 38% of the total American population by the year 2055 (Pew Research Center, 2017). This is the fastest increase of any major racial and ethnic minority group (Pew Research Center, 2017).

Although, there is a general tendency to view and treat Asian Americans as a monolithic group; there are over fifty distinct Asian American groups and subgroups (Atkinson, Morten, & Sue, 1998; Navsaria, 2008; Sue & Sue, 1995; Yagalla, Hoerr, Song, Enas, & Garg, 1996). Asian
Americans, whether they are immigrants or U.S born comprise of a wide array of diversity with regards to ethnicity, religion, cultural values, languages, and many other cultural differences (Navsaria, 2008; Sue & Sue, 1995; Yagalla et al., 1996). Asian Americans, depending on their national origin, also have different immigration patterns and histories in the United States. These cultural, historical, and immigration differences and patterns are important to distinguish among Asian Americans because their mental health predictors will be different which may result in different interventions (Navsaria, 2008).

Asian Indians or Indian Americans are of Indian ancestry. Asian Indians are represented under the more general category of Asian Americans (AA) or Asian American and Pacific Islanders (AAPI) (Office of Minority Health [OMH], 2006; Ramakrishan & Ahmad, 2014; Zong & Batalova, 2016). There are times when Asian Indians are also referred to as South Asians which describes individuals originating from various countries from the South Asian subcontinent (e.g., India, Pakistan, Sri Lanka, Bangladesh, and Nepal) and also because historically many of these countries were one region. In terms of geographical location, India is the seventh largest country in the world and has the largest population with 1.19 billion people (Pew Research Center, 2018). India is also one of the largest democracies in the world (Baggett et al., 2009; Misra, 2013). Asian Indian Americans make up 20% (3.982 million) of the total Asian American population. The above number includes Asian Indians and Asian Americans who are authorized immigrants of the United States. However, Pew Research Center (2017) reported that Asian Americans make up 13.8 % of the 10.5 million unauthorized immigrant population in the United States. Of these, Asian Indians are estimated to constitute 525,000 of unauthorized immigrants (i.e not legally authorized to reside in the United States). Asian Indian Americans are the second largest and fastest growing Asian American immigrant group after

Despite the steady increase of Asian Indian immigration, current literature on Asian American health does not adequately address the mental health needs of Asian Indians. Existing literature on health behaviors and chronic diseases indicates an increase in behavioral risk factors (e.g., ingestion of foods with high fat content and more animal products, increase in sedentary lifestyle), biological risk factors (e.g., diabetes, obesity, hypertension), and mental health risk factors (e.g., stress produced from immigration experiences and cultural adaptation) that result when people immigrate to countries that have different cultural norms and lifestyles (Bhugra, 2004, p. 245; Rogler, 1989; South Asian Public Health Association [SAPHA], 2002). A review of existing literature revealed a number of research studies focused on sub-groups within the larger Asian American group such as Chinese-Americans, Japanese-Americans, and Filipino-Americans. However, other Asian American subgroups such as Asian Indians have not been extensively researched (Durvusula & Mylvaganam, 1994; Misra, 2011; Navsaria, 2008; Uba, 2002).

**Asian Indian Immigration History**

**First Wave of Asian Indian Immigration**

Asian Indian immigration history has occurred in three distinct waves (Das, 2002). Each of the three immigration waves has brought different groups of Asian Indian immigrants to the United States (Bhatia & Ram, 2004; Bhatia, 2007; Das, 2002; Gonzales, 1986). Therefore, there
are differences even among Asian Indian immigrants that are shaped by their unique immigration histories (Bhatia, 2007; Das, 2002). Asian Indian Americans trace their ancestry to the Indian subcontinent. The first wave of Asian Indian immigration occurred between 1904 to 1917 (Bhatia, 2007; Das, 2002; Hing, 1993). The estimated number of Asian Indians that arrived to the United States during this time was 13,607 (Das, 2002). These Asian Indian immigrants arrived from the state of Punjab in India (Tewari & Alvarez, 2009). This was around the time when Punjab was struggling with managing their over-population crisis which had resulted in land disputes and lack of available resources for all citizens (Bhatia, 2007). Asian Indian immigrants from the Punjab region sought to immigrate to the United States with the expectation that they would be able to overcome poverty, acquire better housing and economic resources (Das, 2002; Tewari & Alvarez, 2009). They hoped that this in turn would help them send money to support their families back home (Das, 2002; Tewari & Alvarez, 2009). These early Asian Indian immigrants became laborers on saw mills, farms, and railroads in the Pacific Northwest region of the United States (Nagra, 2005; Tewari & Alvarez, 2009). Increases in Asian Indian immigration during this time resulted in racial tension with European Americans, who were distressed that Asian Indian immigrants were taking over their employment opportunities because they accepted lower wages and lower paying jobs than them (Nagra, 2005; Tewari & Alvarez, 2009). The racial tension also manifested due to Asian Indians stark differences from the dominant White European culture exhibited through their non-western cultural values and traditions as well as their physical appearances with regards to their turban, unshaven beards and hair, and physical attire, characteristic of individuals from Punjab who practiced Sikhism. Asian Indians (also collectively termed as South Asians) due to their cultural and physical differences and acceptance of lower wages became the least desirable race of immigrants (Kitano & Daniels,
The prejudice against Asian Indian immigrants also resulted in hate crimes (Gutierrez, 1996; Tewari & Alvarez, 2009). In one instance of a hate crime, five hundred European Americans attacked Asian Indian immigrants which subsequently led many of them to immigrate to Canada (Gutierrez, 1996; Kitano & Daniels, 1995; Tewari & Alvarez, 2009). There have been other instances of hate crimes targeting the Asian Indian population such as the dotbuster gang, in reference to the dot or “bindi” that Asian Indians wear on their forehead in the 1980s (Gutierrez, 1996; Marriott, 1987; Tewari & Alvarez, 2009; Takaki, 1995).

In 1917, Asian Americans were not allowed to immigrate to the United States if they could not pass the literacy test. Furthermore, political strategies and intentional racial hostility to exclude South Asians decreased their immigration rates to the United States (Tewari & Alvarez, 2009). The racial categorization of South Asian Americans during the first half of the 20th century was also inconsistent (Hing, 1993; Takaki, 1998; Tewari & Alvarez, 2009). From 1910 to 1920, South Asians were included in the Caucasian category which allowed naturalization. However, South Asian naturalization did not result in the permission of selling, leasing, or ownership of land and encompassed other restrictions as well (Hing, 1993). Therefore, the racial categorization of South Asians as Caucasian did not translate to equal status with White people.

**Second Wave of Asian Indian Immigration**

The second wave of immigration occurred between 1923 to 1946 (Das, 2002). The conflict and discrepancies around the racial categorization of South Asians having an unequal status to Whites was further established in 1923, with the United States versus Bhagat Singh Thind Supreme Court case (Das, 2002; Takaki, 1995; Tewari & Alvarez, 2009). Bhagat Singh Thind was a native of Punjab who had immigrated to the United States in 1913. Bhagat Singh
Thind was employed at a lumber mill in Oregon in order to be able to pay for tuition at the University of California-Berkeley and then joined the United States army in 1917. After being honorably discharged from the army, Bhagat Singh Thind applied for citizenship which was approved by the district court but rejected by the bureau of naturalization (Takaki, 1995). The case was then submitted to the United States Supreme Court in 1923, where the court ruled that South Asian Americans were non-White and that citizenship was only for “free white persons.” Thus, the Supreme Court decision negated the status of naturalized South Asian citizens. As a result, many Asian Indians who were already naturalized citizens had their citizenship rescinded (Takaki, 1995; Tewari & Alvarez, 2009). Many South Asians, including Asian Indians, living in the United States, were either deported back to India or voluntarily emigrated to India (Das, 2002).

**Third Wave of Asian Indian Immigration**

South Asian Americans advocated for U.S. citizenship during World War II when the United States was trying to build an alliance with India against Germany and Japan (Tewari & Alvarez, 2009). The United States Congress passed the Luce-Celler bill in 1946 which allowed for naturalization and allowed wives and children of the naturalized immigrants to enter the United States (Das, 2002; Takaki, 1995; Tewari & Alvarez, 2009). The Immigration Act of 1965 allowed more Asian Indians to immigrate to the United States through a quota system. This wave of Asian Indian immigrants were significantly different from the initial Punjab Sikh laborers (Bhatia, 2007). Many of these Asian Indians came from other larger cities in India such as Mumbai and Calcutta. They also immigrated with advanced professional degrees pursuing careers in the science, medical and academic fields (Das, 2002; Bhatia, 2007).
The past few decades has witnessed similar patterns of Asian Indians immigration to the United States (Ibrahim, Ohsini & Sandhu, 1997; Misra, 2013). It has brought highly skilled Asian Indian professionals (e.g., engineers, scientists, and physicians) to the United States (Bhatia, 2007; Ibrahim, Ohsini & Sandhu, 1997). The majority of the Asian Indian immigrant population in the United States entered within the last 30 years (Misra, 2013; Ruy, Young, & Kwak, 2002). Statistics provided by the Pew Research Center (2017) revealed that approximately one third of the Asian Indian population in the United States arrived in the past twelve years and 11% were born in the United States. Several Asian Indians come to the United States as international students who later apply for an immigrant status once they have fulfilled their educational requirements. Other Asian Indians immigrated to the United States as professionals with undergraduate or professional degrees seeking employment opportunities (Das & Kemp, 1997; Sodowsky & Carey, 1987). Other reasons for immigration to the United States have been found to be the following (a) reunification with family members, (b) to be able to provide educational opportunities for family members or children, and (c) the pursuit of economic advancement within their professional fields (Misra, 2013). Although, the majority of Asian Indians immigrated to the United States from India, there are some Asian Indians who arrived from other countries such as the United Kingdom, Canada, Mauritius, South Africa, and countries in Malaysia and Singapore (Misra, 2013).

The most recent wave of Asian Indian immigration was not without its own share of discrimination, racial profiling, and prejudice. The hate crimes and racial profiling of South Asians (including Asian Indians) as terrorists and illegal immigrants came after the September 11, 2001 terrorist attacks on the World Trade Center in New York (Tewari & Alvarez, 2009).
This perception of South Asians as “terrorists” continues to be a narrative that many still hold about this population regardless of socioeconomic status and academic achievements.

**Generation Status**

Given the different immigration patterns, Asian Indians currently residing in the United States may be at different generational levels, immigrant/first generation, 1.5 generation, second generation, or above. A first-generation individual is an immigrant who was born in their native country and immigrated to a new county as an adult. Individuals who immigrate to a new country between five to sixteen years old tend to be categorized as 1.5 generation, and are often referred to as the “in-between” group (Benyamin, 2018). A second generation person is someone who was born in the new country who has at-least one immigrant parent or moved to the country before the age of six (Van Ours & Veenman, 2003). Existent scholarship has revealed that there may be significant differences in the experiences of first, second, and 1.5 generation immigrants (Benyamin, 2018).

**Theoretical Framework of the Study**

Each country has a set of unique cultural traditions, values, norms, and beliefs. Within each country, there may be diversity of religion, values, and beliefs but a unifying thread of some shared values. While some countries may be similar to one another; others may be completely different. Thus, it is inevitable that when an individual or a group of people from one country immigrate to another; there native country’s culture may not match the dominant culture of their new host country. Trimble (2002) stated that when different cultural groups arrive into a new culture; they experience changes where conflict can be one outcome. These conflicts may manifest due to differences between heritage culture and dominant cultural norms, familial conflicts as families immigrating together may adopt different methods of adjustment, or at
systemic levels (Berry, 2003; 2005; Gibson, 2001; Trimble, 2002). Immigrants may also experience an increase in mental health concerns and engage in increased alcohol and substance use (Tummala-Narra, Deshpande,& Kaur, 2016). While people from different cultures have been coming into contact for centuries; researchers have recently started to examine this process to better understand the experiences of ethnic and racial minorities as they immigrate to new countries and navigate different cultures and societies (Trimble, 2002; Tummala-Narra et al., 2016).

Acculturation is defined as the changes that occur as a result of continuous, first-hand contact between one or more cultural groups (Berry, 1997; 2003; 2005; Krishnan & Berry, 1992). The earlier models of acculturation perceived the process as unidimensional. These models proposed that an individual or group of people move from a heritage-cultural orientation to a transitional state and then progress to an acculturated stage (Lee, Sabal, & Frongillo, 2013; Spindler & Spindler, 1967). In this model, the changes are expected to occur in a linear fashion whereby an individual moves away from their heritage culture to completely adopt the new dominant culture (Trimble, 2002). Acculturation (now known as assimilation in this model) may not occur if an individual or group have not internalized the dominant culture (Gordon, 1964).

Recent researchers have found that the unidimensional model of acculturation has a narrow lens that does not capture the complexity of acculturation (Cuellar, Arnold, & Maldonado, 1995; Lee, Sabal, & Frongillo, 2013; Trimble, 2002). They posited that acculturation is not a linear process and thus is not a process that has one final outcome (Lee, Sabal, & Frongillo, 2013; Trimble, 2002). Research has shown that unidimensional models fail to account for the complexity and comprehensive acculturation experiences and appears to promote assimilation (Lee, Sabal, & Frongillo, 2013). Acculturation is now viewed as a multidimensional process
that occurs at the individual and group level as a result of continuous contact with a new dominant culture (Berry, 1997; 2003; 2005). This model holds that individuals may retain and internalize varying degrees of their heritage culture as well as the new mainstream culture. Furthermore, individuals may adjust and adapt in different ways when interacting with the new dominant culture (Sodowsky, Lai, & Plake, 1991). There is consensus among modern day researchers that the bidimensional model of acculturation demonstrates the flexibility and multi-layered strategies that are involved in the acculturative process (Berry, 2003; Phinney, 2010).

When an immigrant, particularly, those whose sociocultural identities and cultures vary significantly from the dominant culture; there are several different adjustments that one might need to make in order to adjust to living in the new country. Berry (1997) theorized that immigrants adopt one of the following four acculturation strategies whilst adjusting to a new, dominant culture (a) marginalization, (b) separation, (c) integration, or (d) assimilation. A marginalization strategy is said to be used when an individual is unable to accept or adjust to the new, dominant culture but also rejects their own heritage culture (Berry, 1997; Lee et al., 2013). Individuals who fully adopt the dominant culture and reject their heritage culture are referred to as using the assimilation strategy (Berry, 1997). A separation strategy results when an individual rejects the host culture while retaining their heritage cultural values (Berry, 1997). Finally, an individual who selects aspects of both their heritage and host culture in order to navigate society is someone who is using an integration strategy (Berry, 1997). Berry’s acculturation model is bidirectional and attempts to explain the types of adaptations involved in biculturalism (Berry, 1997; Frey & Roysircar, 2004). The conceptual framework for this study will be based on Berry’s bidimensional acculturation model. Berry’s (1997) definition of acculturation is still relevant today in understanding the experiences of immigrants. Recent literature on
acculturation and psychological processes has indicated that integration is the most adaptive acculturative strategy (Berry, Kim, Minde, & Mok, 1987; Berry, 1997; Farver, Bhadha, & Narang, 2002; Tewari & Alvarez, 2009).

Results from various studies have demonstrated that different factors influence acculturation strategies such as: (a) status and power, (b) educational and occupational achievements, (c) social class and ethnic membership in community, (d) relationships with those in the same ethnic group, (e) knowledge of Western culture or English proficiency, (f) reasons for immigration, and (g) contextual and structural influences in society (Berry & Kim, Gibson, 2001). Furthermore, individual traits and personality characteristics and cultural awareness may also influence acculturation experiences (Cuellar, Arnold, & Maldonado, 1995).

The individual and/or group of people experience changes that occur at the individual, psychological, and sociocultural level as a result of navigating and attempting to adapt to the new, host culture (Berry, 1997; 2003; Graves, 1967). Psychological changes occur due to the alterations in an individual’s perception towards acculturation (Graves, 1967; Phinney, 2003). Psychological distress and mental health concerns (e.g., depression, substance use, suicidal ideation) may manifest due to the challenges and stress associated with acculturation (Abouguendia & Noels, 2001; Bhugra, 2004, p. 245; Tummala-Nara et al., 2016). This is often referred to as acculturative stress due to the challenges associated with adjusting to the different sociocultural norms, political climate, discrimination, and different familial structures in the new culture or in this context, new country (Tewari & Alvarez, 2009).

Sociocultural changes occur as a result of the interactions and relationships between each of the cultures. These adjustments might mean changing or adjusting one’s indigenous way of interacting with other people and forming relationships. Oppedal et al. (2004) posited that
acculturation is a “developmental process towards gaining competence within the sociocultural environment of one’s ethnic group and that of the mainstream society” (p. 469). As immigrants arrive in the United States; they experience acculturation as a result of attempting to navigate a new, dominant host culture and their own heritage culture. Cultural adaptation can be enormous among Asian immigrants because of the wide range of differences between Asian cultures and American culture, religion, politics, lifestyle, values, and work ethics (Berry, 1997; 2003; Tewari & Alvarez, 2009). While, the bi-dimensional model of acculturation has been accepted as a more useful model to explain the experiences of acculturation; it has been criticized for not including the dynamic interactions that can occur when immigrants come into contact with the mainstream culture. The bidimensional models have been criticized as they fail to account for the process of construction and re-construction of cultural identities as a result of interaction with the mainstream culture (Trimble, 2002). The societal and institutional reception of immigrants can often impact an immigrant’s experiences as well (e.g., welcoming, prejudiced, or discriminatory).

**Mental Health and Stigma**

Deep-ingrained beliefs and stigma about mental illness contribute not only to the low utilization rates of mental health services but also to the lack of recognition and acknowledgement of mental illness (Atkinson & Gim, 1989; Kitano & Daniels, 1995). A large proportion of the Asian Indian population perceive having a mental illness as shameful, a failure to cope with life’s challenges, and as bringing shame and dishonour to their families (Atkinson & Gim, 1989; Kitano & Daniels, 1995; Leung, Cheung, & Tsui, 2011). As a result, many Asian Indians adopt silence and secrecy around mental illnesses (Sue & Morishima, 1982). Asian Indians fear disclosing if they or someone in their family have a mental illness due to the
expectation of rejection or their family being looked down upon by Asian Indian society (Leung et al., 2011). A consequence of this stigma is that an Asian Indian individual with a mental illness may not feel like they can approach or talk to their families about their mental health struggles. Thus, the notion of approaching an “outsider” to disclose what would be considered personal experiences may not be acceptable to them or their families (Sue, 1994). Furthermore, many Asian Indians who do seek mental health services may not disclose that they are seeking therapy to their family members. An added struggle to acknowledging and seeking services for mental health concerns is due to the internalization of the model minority myth (Tummala-Nara, Deshpande, & Kaur, 2016). Asian Indians and Asian Americans are often characterized by their high educational achievements and economic success which often leads to Asians internalizing the concept of the model minority (Tummala-Nara et al., 2016). As a result, acknowledging mental illness may make Asian Indian individuals feel like they are not living up to this “image.” Asian Indians may also think that being diagnosed with a mental illness may take away from their collective successes as a racial or ethnic minority group and in turn make them feel like they are not worthy of being immigrants in the United States.

Traditionally, Asian Indians have viewed the mind, body, and soul as interrelated systems and perceived any disruptions in this system as causes of illness. While newer generations of Asian Indians may not subscribe to ancient Asian Indian concepts of wellness, they may still have ingrained variations of these notions of physical and mental illness. Thus, mental health is not often a concept that Asian Indians consider as separate to physical and/ or medical concerns. As a result, many Asian Indians may present with physical manifestations of their symptoms which are more acceptable to them than acknowledging the psychological nature of their concerns.
Statement of the Problem

The mental health concerns of the Asian Indian population that includes culture-specific understanding of psychological well-being, clinical presentations, immigration experiences, culturally-sensitive treatment models, and barriers to treatment are not extensively researched (Durusula & Mylvaganam, 1994; Chandra, Arora, Mehta, Asnaani, & Radhakrishnan, 2016). This is alarming because recent data from the National Latino and Asian American Study (NLAAS) has found that Asian Americans have a 17.30 % overall lifetime rate of developing a psychiatric disorder and 9.19 % chance of developing a psychiatric disorder in any given year. However, Asian Americans are three times less likely to utilize mental health services than White Americans (Spencer, Chen, Gee, Fabian, & Takeuchi, 2010). The review of recent immigration trends in the United States demonstrate that the Asian Indian population has rapidly and steadily increased since the past few decades (Pew Research Center, 2017). The literature base has underscored the importance of factoring in the specific sociocultural and political experiences of various racial and ethnic sub-groups in developing treatment interventions because the experiences and needs of populations differ on various systemic and sociopolitical levels. Therefore, it is critical to understand the specific mental health needs of the Asian Indian population as this group continues to grow in numbers in the United States. This information will help foster cultural and clinical competence in mental health professionals and serve as resources for educators training future psychology or counseling practitioners.

Significance of Research

Acculturation has an effect on psychological, sociocultural, and emotional functioning in immigrants (Berry, 2003; Hans, 2001). Furthermore, acculturation can negatively affect immigrants because of the stress and psycho-social challenges involved in immigration
experiences and cultural adjustment (Bhadha & Narang, 2002; Chang & Kwon, 2014; Hans, 2001; Tewari & Alvarez, 2009). The majority of the literature has focused on psychological distress but has not focused on factors that promote or negatively impact psychological well-being. Moreover, there is limited literature that has evaluated experiences of acculturation and psychological well-being in Asian Indian Americans. This study will also be particularly useful in understanding the relationship between acculturation experiences and its impact on psychological well-being and resulting alcohol and substance use behaviors in Asian Indian Americans. Asian Indians in the United States may have unique differences across generation status and length of residency due to when they or their parents arrived to the country. The results obtained from this study will aid mental health professionals better understand the influences of acculturation on psychological well-being and substance use behaviors in the Asian Indian American population.
Research Questions

1. What is the relationship between acculturation and psychological well-being among Asian Indian Americans?

2. Are there significant mean differences in alcohol use, drug use, and psychological well-being between first-generation/immigrants, 1.5 generation, and second generation and above?

3. Are the relationships between psychological well being with alcohol use and drug use, moderated by acculturation?
   a. Does acculturation moderate the relationship between psychological well-being and alcohol use?
   b. Does acculturation moderate the relationship between psychological well-being and drug use?

4. Are the relationships between acculturation with alcohol use, drug use, and psychological well being moderated by length of residency?
   a. Does length of residency moderate the relationship between the independent variable, acculturation and the dependent variable, psychological well-being?
   b. Does length of residency moderate the relationship between the independent variable, acculturation and the dependent variable, alcohol use?
   c. Does length of residency moderate the relationship between the independent variable, acculturation and drug use?
Research Hypotheses

1. It is expected that acculturation will be a negative predictor of psychological well-being among Asian Indians residing in the United States.

2. It is expected that Asian Indians who are immigrants/first-generation will have higher mean scores on the psychological well-being measure (SPWB) than 1.5 generation and second generation and above and that immigrants/first-generation will have lower mean scores on the measures of alcohol use (AUDIT) and drug use (DAST) than 1.5 generations and second generation and above.

3. It is expected that acculturation will moderate the relationship between psychological well-being with drug and alcohol use.
   
   a. It is expected that psychological well-being will be a negative predictor of alcohol use and that acculturation will moderate this relationship.
   
   b. It is expected that psychological well-being will be a negative predictor of drug use and that acculturation will moderate this relationship.

4. It is hypothesized that length of residency in the United States will moderate relationships among acculturation, alcohol use, drug use, and psychological well-being.
   
   a. It is expected that there will be negative relationship between acculturation and psychological well-being, that will be moderated by length of residency.
   
   b. It is expected that there will be a positive relationship between acculturation and alcohol use, moderated by length of residency.
   
   c. It is hypothesized that there will be positive relationship between acculturation and drug use, moderated by length of residency.
Definition of Terms

This section entails specific terms that are used throughout this dissertation. The terms below are used throughout the dissertation but are organized here for simplicity and to serve as a quick reference guide. Further, the religions defined are not meant to be a thorough description of the tenets but rather as a simplistic definition that need to read further for a complete understanding.

Acculturation is defined as changes that occur as a result of continuous, first-hand contact between one or more cultural groups (Berry, 1997). For the purpose of this study, acculturation will be referred to as the sociocultural and psychological changes that occur as a result of an Asian Indian person immigrating to the United States.

Acculturative Stress is theorized to occur as a result of the sociocultural, physical, and psychological changes associated with adjusting to a new culture (Wang & Kim, 2013). Acculturative stress can trigger anxiety, depression, bicultural identity conflicts, social isolation, and increased psychosomatic symptoms (Mejia & McCarthy, 2010).

Aryans can be traced back to a prehistoric Iran. Aryans were considered to have invaded Northern India around 1,500 BC after the Indus Valley civilization was developed. There is some debate about whether the Aryans led to the collapse of the Indus Valley civilization or whether helped stabilize after the collapse of the civilization (Sullivan, K., 2017).

Asian Indians or Indian Americans are of Indian ancestry. Asian Indians are represented under the more general category of Asian Americans (AA) or Asian American and Pacific Islanders (AAPI) (Office of Minority Health [OMH], 2006; Ramakrishan & Ahmad, 2014; Zong & Batalova, 2016).
Caste System is a type of social stratification that is characterized by a set of traits or features, which in this dissertation, will be referred to as the Brahmanical caste system practiced in India (Freitas, 2006).

Castes are the smallest subdivision of society that has all components of the caste system (Freitas, 2006).

Collectivistic cultures are cultures that emphasize values around group cohesion and harmony in decision-making and interactions. People from collectivistic cultures tend to perceive the community as higher than any one individual (Hofstede et al., 2010, p.92).

Colonialism is a type of control which involves the suppression of a group of people by another; over the territory and/or behavior of other groups. In this dissertation, colonialism will be referred to as the British colonial power that was used to impose culture and customs onto the colonized (Butt, 2013).

Cultural Values are a set of ideals, beliefs, values, and principles that define a community.

Generation status can be categorized as follows (a) first-generation (immigrant) individuals in the United States are those who are born and raised outside of the United States, whose parents were also born and raised in another country, (b) 1.5 generation individuals are those who immigrated to the United States as children or as adolescents, (c) second generation individuals are born and raised in the United States, with one or both parents born outside of the United States, and (d) third generation and above generations refer to individuals who are born and raised in the United States as well as their parents and their grandparents, or their great grandparents immigrated to the United States.
Hinduism is the world's third largest and one of the oldest religions. Hinduism more than a religion is a way of life where beliefs center around living life with the embodiment of the following values (a) karma, consequences of good or bad deeds (b) dharma, sense of duty (c) artha, success, and (d) eternal soul and the process of reaching self-realization or increased awareness, which is the ultimate goal (Rao & Paranjpe, 2016). Hinduism also has concepts of polytheism, the practice of worshiping multiple Gods, and reincarnation (Oman, 2019).

Immigration refers to an individual or group of people moving to a new country for permanent residency.

Individualistic cultures tend to focus on the self and immediate families. There is more focus on autonomy in decision-making, choice, and personal growth (Tredinnick & Fowers, 1999).

Islam is an Abrahamic, monotheistic religion that is a way of life that includes metaphysical and materialistic dimensions. The word Islam refers to surrender, submission to Allah and commitment to peace (Hodge, 2005). Muslims who practice Islam follow Allah’s teachings (shari’a), which guide all aspects of life, and those practicing it follow it because of the belief in God’s goodness and compassion (Hodge, 2005).

Jainism is a non-theistic religion that was founded in India in the 6th century BC by the Jina Vardhamana Mahavira. The religion is said to have formed as a reaction against the teachings of orthodox Brahmanism (Agnihotri & Agnihotri, 2017). The Jain religion teaches redemption by striving for perfection through successive lives, and non-injury to living creatures (e.g. may be vegetarian) (Agnihotri & Agnihotri, 2017).

Joint families are families that comprise of two or more generations of families living together which can include (siblings and their families as well as their parents, cousins).
Mainstream Culture/Dominant Culture/Host Society in this context will be referred to as Western-centered, U.S. cultural norms and values.

Mental Health Professionals are people who have received graduate education in the field of psychology, counseling, social work, and/ or other fields that either conduct research or clinical work with people who have mental health concerns.

Psychological well-being is defined as the subjective perception of an individual’s sense of their psychological well-being. In the present study, psychological well-being will be referred by Ryff’s (Ryff, 1989) framework of psychological well-being that consists of six dimensions (a) personal growth, (b) autonomy, (c) environmental mastery, (d) positive relationships with others, (e) purpose in life, and (f) self-acceptance.

Racial Hostility refers to prejudice and biases that are rooted in negative perceptions of a particular race that result in hostile behavior or actions towards that group of people.

Sikhism is a monotheistic religion that is founded on striving for equality among people and values service to human-beings (Agnihotri & Agnihotri, 2017). Individuals practicing Sikhism maintain five articles of faith which consist of (a) kes (long, uncut hair), (b) kara (steel bracelet), (c) kanga (wooden comb), (d) kirpan (small sword, and (e) kachera (soldier-shorts) (Agnihotri & Agnihotri, 2017).

South Asia includes countries such as: India, Bhutan, Afghanistan, Maldives, Nepal, Bangladesh, Pakistan, and Sri Lanka in the Asian continent. Asian Indians and South Asians may be used interchangeably as many Asian Indians may self-identity as South Asian.

Turban is a type of cloth that is traditionally worn on the head, commonly associated with Sikh individuals (dastār).
Outline for the Remainder of the Dissertation

Chapter two provides an overview of the literature on acculturation and models that have been used to explain acculturation processes for immigrants. The second chapter will also provide a review of related literature on acculturation, psychological well-being, and substance use behaviors in the Asian American population at large and also within the Asian Indian population in the United States.

Chapter three entails a description of the participants who completed the study, procedures to recruit participants, and the instruments that were used in the study. This section also includes a discussion about the psychometric properties of the instruments as well as strengths and limitations, selection criteria for subjects, procedures for data collection methods, research design and statistical analysis methods.

Chapter four presents results from the data analysis of the four research questions.

Chapter five entails a discussion of the results reported in chapter four and will also include discussion on limitations of the study, clinical implications, and future research directions.
CHAPTER II

REVIEW OF RELATED LITERATURE

Historical Cultural Context of India

Individuals of Asian Indian descent have very distinct and diverse cultural backgrounds and cannot be homogenized as a group. There are various cultural subgroups in India that differ in primary languages, religions, cultural caste backgrounds, and regional differences. However, it is essential to understand the dominant cultural framework and values of the Asian Indian population in order to contextualize how this shapes immigration and acculturation experiences.

Cultural Caste System

The word caste originates from a Latin word that is defined as “chaste” (Kapoor, 2007). In this context, chaste is defined as something that is pure (Dube, 1955; Dube, 1996). Caste has different connotations based on culture and country of origin. The caste system defined here is referencing a rigid form of hierarchical social stratification that assigns human value based on the assumed supremacy of some groups against the presumed inferiority of other groups (Szczepanski, 2018; Wilkerson, 2020). The caste system was derived from social hierarchical systems that can be traced back to approximately 1000 B.C. and still affects the lives of a billion people in India and across South Asia (Kapoor, 2007; Szczepanski, 2018).

Ancient Indian society, informed through Brahmanical ideologies, comprised a ranking system where groups of people were separated based on their inherited occupations (Atal, 1968). These separate occupational groups were called varnas and those who inherited an occupational group were called jatis (Dube, 1996; Kapoor, 2007; Szczepanski, 2018). This simple definition of the caste system hides how powerfully intertwined it is with socioeconomic class, power, marriage, and politics in Indian society (Atal, 1968; Dube 1955). There are four primary groups
in the cultural caste system in India which are Brahmın (priests), Kshatriya (warriors and royalty), Vaishya (farmers, traders, and artisans), and Shudra (tenant farmers and servants).

There is a fifth caste which consists of people who are believed to be “below” and born outside of the caste system and hence considered casteless (Ambedkar, 1948; Kapoor, 2007; Szczepanski, 2018). This group was categorized as the “untouchables” because the jobs that were assigned to them involved cleaning sewage, funerals (cemetery), working with animal skins and jobs that were not considered “respectable.” There are different theories of how this group of people came to be considered “untouchables” (Ambedkar, 1948). Brahmins who are at the top of the caste system were viewed as personifying purity and esteem while Dalit people (untouchables) were seen as representing impurity and thereby not worthy of respect due to their work (Szczepanski, 2018). Members of this group named themselves “Dalit” in the 1930’s which is defined as broken or oppressed (Szczepanski, 2018). The nature of the caste system is that there are no visible physical differences that can be used to differentiate people from different castes (Ambedkar, 1948; Kapoor, 2007). Individuals were born into, worked, married, and died within their “castes” and as such there was no social mobility (Szczepanki, 2018). Further, while the caste system originated within Brahmanical ideologies, many other religions may also culturally practice “casteism” even if not formally sanctioned by their respective religions. The practice of caste segregation continues to maintain economic and social inequalities as well as physical violence and oppression of Dalit and indigenous communities in India, and other countries in South Asia (Singh, 2020). The caste system has often been compared with the White supremacist systems of racism and oppression of Black people in the United States (Soundararajan & Hossain, 2020; Wilkerson, 2020). In fact, Dalit communities advocacy and
resistance movements have often been inspired from Black liberation movements (Soundararajan & Hossain, 2020).

The cultural caste system has somewhat changed but has not vanquished and still maintains social and political inequalities and oppression of Dalit communities in India (Singh, 2020). This historical context is important when trying to understand the Asian Indian population arriving into the United States. Asian Indians may not only bring their racial minority status to the United States but also bring with them complicated experiences of power and privilege (upper caste) or oppression (lower caste, religious minorities). Asian Indians who have immigrated to the United States may experience the modern cultural caste system in other ways as well. Many Asian Indians may use the caste system to identify themselves with those who belong to the same caste or village (Szczepanski, 2018). Another way the cultural caste system continues to exist is in gender norms (Dube, 1996; Kapoor, 2007). There continues to be an expectation of different rules when it comes to sex and relationships among men and women, that is based on binary, hetero-normative gender roles (Dube 1996; Kapoor, 2007). Furthermore, within Asian Indian immigrant communities, those who identify as Dalit or lower-caste may bring with them an added history of intergenerational trauma and oppression that may exacerbate with the stress of immigration, racial and caste discrimination, and navigating a new dominant culture. The cultural caste system may also uphold roots in occupational categorization and financial stability. Thus, higher esteem may be ascribed to occupations such as medicine or engineering while careers in the arts or factories may not be seen with the same value, and is inherently viewed with the caste lens. This is also reflected when Asian Indian families consider an Asian Indian’s caste background for marriage proposals or alliances. The embedded caste system within Asian Indian communities may also explain the separation and accepted racism of
other communities of color. Thus, the concept of the cultural caste system is important because it is embedded into the very fabric of Asian Indian, dominant cultural norms.

**Collectivistic Culture, Asian Indian Family Systems and Values**

Traditionally, Asian Indian cultures have been embedded in collectivistic roots that has informed their decision-making, family structures, and lifestyle choices. Collectivistic cultures center their values around family cohesion and harmony, cooperation, and conformity versus western individualistic culture that is characterized by autonomy, personal development, decision-making, and achievement (Chadda & Deb, 2013). Asian Indian families typically include their extended families as their immediate families (Das & Kemp, 1997). Some Asian Indian families live in joint families which may comprise of three or more generations (Chadda & Deb, 2013; Das & Kemp, 1997; Segal, 1991). It is important to note that in this culture, collectivistic decision-making is informed hierarchically. Emphasis is placed on respecting, honoring, and caring for elders. As a result, older family members permission, advice, and guidance on major life decisions or lifestyle choices are sought prior to making decisions (Chadda & Deb, 2013). These decisions can include matrimonial alliances, social relationships, educational and career choices, as well as financial dilemmas. Asian Indians value having stable, harmonious, loyal, and close knit family units versus individuality, privacy, and personal space (Segal, 1991). As an example, an older Asian Indian family member may ask a younger family member what might seem like intrusive personal questions to those outside of the culture (e.g., regarding dating, marriage, living in a joint family versus individually or in a nuclear family). Thus, that person may see it as their right to be able to ask these questions to those younger than them. Having said this, the past few decades have shown varying levels of adherence to these family values and structures (Chadda & Deb, 2013). Thus, Asian Indian immigrants may exhibit
varying levels of adoption of their heritage culture, collectivistic and family values, that could differ across generational level (Chadda & Deb, 2013).

**Language**

India recognizes thirty-three major languages and many other variations of languages and dialects (Das, 2002; Kurian-Philip, 2007). There are 28 different provinces of India and Asian Indians typically speak different languages based on their native province. Hindi is the national language of India. However, Asian Indians tend to also have a higher level of English fluency than some other Asian countries due to the history of British and Portuguese colonization (Ibrahim, Ohnishi, & Sandhu, 1997; Kurian & Ghosh, 1983; Leonard-Spark & Saran, 1980). According to the Census of India, there are 90 million Indians who are fluent in English as a second or third language (Misra, Patel, Davies, & Russo, 2000). Asian Indian individuals first language tends to be their indigenous language such as Gujarati, Assamese, Oriya, Urdu, Punjabi, Sindhi, Marathi, Bengali, Kannada, Tamil, and Malayalam (Misra et al., 2000).

**Religion**

There is tremendous religious diversity in India. While Hinduism is practiced by the majority of Asian Indians, other religions practiced include Sikhism, Buddhism, Zoroastrianism, Islam, Christianity, and Jainism. There are several other indigenous religions or sub-religions that are also practiced in India. Similar to the cultural caste system, Asian Indians may use their religion to separate and distinguish themselves from other Asian Indians, and there could be historical roots of privilege and oppression that influence religious minority communities. The most prominent conflict tends to be among Hindu and Muslim identified Asian Indians due to a long inter-religious conflict-ridden history. Thus, some may even prohibit their family members from marrying people from other religious and caste backgrounds.
Education

Asian Indians who immigrate to the United States tend to have high educational achievements. A study in the United States showed that 86% of Asian Indians have a bachelor’s degree compared to 28% of other Americans and 44% of all Asian American groups. Approximately 40% of all Asian Indians living in the United States have a masters, doctorate, or some professional degree, which is five times the United States national average (Misra et al., 2010). The high-achieving and upwardly mobile trends of Asian Indians as a group has led to them being characterized by their economic success. The economic success has in turn led to the perception that Asian Indians do not experience psychological and medical concerns (Masood, Okasaki, & Takeuchi, 2009).

Acculturation Research and Asian Indian Americans

Asian Indian immigrants arrive to the United States with their own cultural values, beliefs, traditions, and socialization which is distinctly different from western American society and culture. An Asian Indian individual’s process of transition and adjustment to the United States may have significant differences from East Asian immigrants. For example, due to the British colonization history in India, many Asian Indians may already be fluent in English prior to immigrating to the United States. English fluency appears to be found in the majority of Asian Indians immigrating to the United States (Bhatia, 2007). This is an example of why it is important to examine the acculturation experiences of sub-groups within the Asian American population.

There is extensive literature that examines the experiences of acculturation in the Asian American population. However, the majority of this research examines the acculturation patterns of East Asian Americans (Navsaria, 2008; Uba, 2002). There are limited studies that
specifically examine the acculturation experiences of Asian Indians. In these research studies, specific factors have been found to influence an Asian Indian person’s ability to acculturate or adjust to the majority U.S. culture. Some of these factors have been found to be related to family, religion, and education (Sodowsky & Carey, 1987). The influence of religion, cultural values, and roles in life are significant in an Asian Indian individual’s life. Many Asian Indians engage in religious practices, traditions, and beliefs originating from their heritage culture that are significantly different from that of western ideologies or that may be familiar to the majority U.S. culture (Durvasula & Mylvaganam, 1994; Sodowsky & Carey, 1987). As a result, their religious practices, places of worship, or religious holidays may not be recognized by their schools, workplaces, and society.

**Nuclear versus Extended Family Values**

Asian Indian family structures and values are also different from U.S. cultural norms. Asian Indians typically include their extended family as part of their immediate family which could include parents, grandparents, siblings, aunts, uncles, and cousins. Depending on the geographical region, financial means, and proximity of relatives, extended family may also be living together in the same home. Asian Indians are often expected to maintain close relationships with their extended family members throughout their lifetime and hence may find it difficult if not all of their family resides in the United States (Chadda & Deb, 2013; Das & Kemp, 1997; Santisteban & Mitrani, 2002; Segal, 1991). It is often the norm to seek guidance, advise, and permission from older family members to make important life decisions such as marriage, career choice, housing, and financial decisions (Santisteban & Mitrani, 2002; Sodowsky & Carey, 1987). An expectation is that individuals will seek family support when experiencing challenging or difficult situations (Sodowsky & Carey, 1987). Extended family members may
have ascribed leadership roles where their advice and perspective is valued and respected the most. For example, an Asian Indian woman may be married to an Asian Indian male where the husband’s mother is considered the head of the household (Santisteban & Mitrani, 2002). As a result, her mother-in-law may be highly involved in decision-making and providing guidance and direction on expected behaviors and duties towards her husband, his family members, and in society (Santisteban & Mitrani, 2002; Sodowsky & Carey, 1987). Given the importance of these family values and extended family members; conflicts may arise between nuclear and extended families as Asian Indians acculturate into the majority U.S. culture. The majority U.S. cultural framework values and centers the nuclear family as the primary and may perceive the involvement of extended family members as “dysfunctional” (Santisteban & Mitrani, 2002). Thus, Asian Indian individuals at various acculturation levels and generational-status may experience conflicts between their heritage cultural values and dominant cultural values.

Asian Indians as a result of the length of residence in the United States (i.e. immigrant versus first-generation versus second-generation) may experience different levels of acculturation across different generations in their families. Thus, a second-generation Asian Indian may have adopted more mainstream/western cultural norms and values than an Asian Indian immigrant. These differences are particularly influential when they occur within families as they can result in feelings of alienation and bicultural identity conflicts (Navsaria, 2008).

Ghosh (2007) examined the experiences of 106 Asian Indians between the ages of 21 to 30 years. The results revealed that the length of residence in the United States was linked with conflicts within families. Ghosh (2007) found that those had lived longer in the United States had more conflicts with their families with regards to career choices and marriage. The rationale behind these conflicts is that the longer one has lived in the United States, the more acculturated
they become, and thus more cultural differences arise within families between Asian Indian elders who are immigrants versus their children who may be 1.5 generation.

On the other hand, cultural values around close family and social relationships appear to still play a role in the experiences of Asian Indians in the United States. Nandi (1980) in a study found that Asian Indians who did not have close family and social relationships with ethnic group members experienced social isolation. The participants reported that the vast differences in American culture, few interactions with non-ethnic group members, and lack of family and friends in the United States contributed to feelings of alienation. The Asian Indian participants also identified positive elements of moving to the United States such as increased autonomy, better equitable pay, and higher educational and employment opportunities (Nandi, 1980). However, some of the Asian Indian participants had plans to move back to India in the future and few were undecided about their future (Nandi, 1980). Thus, while it appears that Asian Indians across generations may experience increased conflicts due to different levels of adoption of heritage cultural values and U.S. cultural values; that without close family relationships and ties to ethnic group members, they may experience social isolation and feel alienated.

**Previous Immigration Experiences**

Research has shown that previous exposure to American culture and past immigration experiences can influence acculturation processes for Asian Indians. Thus, Asian Indians may differ in their adjustment levels based on prior immigration and/ or experiences of having to adjust to new environments or dominant cultural norms. Garimella (2008) studied acculturation processes of 15 Asian Indian American adults via interviews. Previous exposure to American culture and past immigration experiences influenced Asian Indian Americans early experiences of adjusting to U.S. culture (Garimella, 2008). As previously described, Asian Indians are
heterogeneous as a group and as a result have differences in religion, native languages, and traditions. Leonhard-Spark et al., (1980) found that these differences may influence their level of acculturation. The results also showed that Asian Indian families retained strong cultural identities even as they adjusted to the U.S. culture.

**Asian Acculturation Measures**

Acculturation is a complex construct to measure because of its’ multidimensional nature. Different measures have been created based upon the conceptualization of acculturation. This has been problematic because it has led to inconsistent findings in the research. Researchers have proposed that a multidimensional measure would be more useful to examine acculturation because it would allow for more nuanced information about immigrants experiences (Trimble, 2002). The most commonly used measurement of acculturation in Asian immigrants is the Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987). The SL-ASIA is a 26 item, multiple choice self-report measure (Suinn et al.,1987) that was adapted from the Acculturation Rating Scale for Mexican Americans. The SL-ASIA items are constructed using a Likert rating scale whereby 1 (High Asian orientation) to 5 (high Western orientation). The questions are grouped into the following categories (a) language, (b) identity, (c) friendship choice, (d) behaviors, (e) geographical region history, and (f) attitudes (Suinn Lew et al., 1992). The last five questions are not used in the total acculturation score because they were incorporated as theoretically-based questions to examine values, behaviors, and identity (Suinn et al., 1992; Liu et al., 1999). The SL-ASIA is used to assess whether an individual is highly traditional or highly assimilated in their acculturation strategies.

The initial study that examined the SL-ASIA comprised of 82 participants from two different universities in the United States. Of the participants, 54 were female and 28 were male,
with a mean age of 19-years old (Suinn et al., 1987). The participants were administered the SL-ASIA, demographic questionnaire, career survey, mathematics anxiety and computer anxiety test. The researchers found that the SL-ASIA was related to generational status, where they grew up, and self-rating (Suinn et al., 1987). Hsueh, Garcini, Zhou, Malcarne, and Klonoff (2015) examined 14 previous studies that utilized the SL-ASIA instrument and found that most studies consisted of Chinese, Korean, or Vietnamese participants. While, the SL-ASIA has not been used widely with other Asian American populations, including the Asian Indians, it is a measure that examines multiple aspects of acculturation that may apply to a wide range of ethnic sub-groups within the Asian American population. The SL-ASIA’s limited research on Asian Indians and other sub-groups within the Asian American diaspora warrants more research.

**Psychological Well-Being and Asian Americans**

Previous research has shown that persistent issues surrounding cultural adaptation are linked with mental health concerns (Organista, Organista & Kurasaki, 2002). Rogler, Cortes, and Malgadi (1991) posited that the psycho-social changes involved in adjusting to a new environment and culture can add pressure to an individual’s psychological well-being. Cultural attributes (e.g., values, beliefs, traditions, religion) and immigration experiences are two important factors that could affect the mental health of Asian Indian Americans (Chandra, Arora, Mehta, Asnaani, & Radhakrishnan, 2016; Tewari & Alvarez, 2009). Recent research has shown that the pathoplastic effects (psychopathology and personality) of culture can influence the manifestation of psychiatric symptomatology, diagnosis, and treatment (Chang & Kwon, 2014). Furthermore, an individual’s cultural background can shape the manifestation of mental health concerns and help-seeking behaviors. In terms of immigration, research has shown that acculturation experiences can be a stressful and complex process that can elicit a range of feeling,
including loss and grief. Asian Indian Americans are likely to experience acculturative stress as a result of immigration (Bhadha & Narang, 2002; Chang & Kwon, 2014; Tewari & Alvarez, 2009).

Social factors (i.e. relationships with friends, family, coworkers) and psychological assets (sense of calm and coping skills) are important factors that influence an individual’s level of adjustment into a new culture. In terms of mental illness and substance abuse, Asian Americans in general are underrepresented in the literature (Smokowski, Ferdon, & Stroupe, 2009). Specifically, there is limited literature on Asian Indians and mental illness. Of this research, the constructs that are examined are psychological distress, depression, and/or other specific mental health concerns. Psychological well-being is a construct that has not been extensively researched in the Asian Indian population in the United States.

**Definition and Conceptualization of Psychological Well-Being**

Well-being is often perceived as an aspect of overall mental health. Mental health often includes self-esteem, emotional regulation, having fulfilling, meaningful, and mutuality in relationships, and psychological well-being (Provencher & Keyes, 2011; Scheid & Horwitz, 1999). Researchers have examined two types of well-being: subjective well-being or hedonic well-being and psychological well-being or eudemonic well-being (Ryan & Deci, 2001).

Subjective well-being is characterized as having three dimensions that comprise of a positive self assessment of emotions and thoughts about their life, positive affect, and low negative affect (Mohsen, 2019). On the other hand, psychological well-being places emphasis on purpose, self-realization, and optimal psychological functioning (Mohsen, 2019; Ryan & Deci, 2001). Psychological well-being has also been referred to as positive mental health, which includes thoughts, feelings, and behaviors that are involved in leading a good life (Provencher & Keyes,
Researchers have often characterized psychological well-being as a multidimensional construct because it may capture both dimensions (Mohsen, 2019). Shin, Han, and Kim (2007) defined psychological well-being as the emotional level of distress (e.g., depression, anxiety etc) and behavioral concerns (e.g., self-efficacy and coping). They further described psychological well-being as a positive trait of emotional and social development which promotes and sustains optimal mental health (Shin et al., 2007). Psychological well-being is an individual’s subjective assessment of their own lives (Zaikian, 2009). Ryff’s multidimensional model of psychological well-being is one of the most widely known assessments of psychological well-being. Ryff’s scale includes theories by Jung (1933), Maslow (1968), Rogers (1961) and other theories to form the theorized dimensions of psychological well-being (Ryff, 1989). Ryff’s scale of psychological well-being examines six dimensions of psychological functioning (a) purpose in life, (b) personal growth, (c) environmental mastery, (d) autonomy, (e) positive relations with others, and (f) self-acceptance (Ryff, 1989). The purpose in life scale examines whether an individual has goals and finds their lives and activities meaningful (Ryff, 1989). The personal growth dimension examines an individual’s sense of continued growth, openness to new experiences, learning from their past behaviors and realization of one’s own potential (Ryff, 1989). Environmental mastery assesses whether an individual is able to navigate and control situations and opportunities in their lives that match with their personal needs and values (Ryff, 1989). Autonomy refers to an individual’s ability to think and make decisions based upon their own needs, values, and standards (Ryff, 1989). Positive relations with others scale examines whether an individual can exhibit empathy and care for the well-being of others and is able to develop trusting, intimate, and affectionate relationships with others (Ryff, 1989). Finally, self-acceptance looks at whether an individual is able to identify and accept their own good and bad
traits, has a positive attitude towards themselves, and has positive feelings about their past events (Ryff, 1989). Measures of psychological well-being are measured from the individual perspective and not from any other external sources. Psychological well-being can be a predictor of mental health concerns, and is an important area to consider to better serve the growing needs of the Asian Indian and immigrant population.

Acculturation, Psychological Well-Being, and Mental Health in Asian Americans

Most of the research on psychological well-being focuses on Asian Americans as a whole (or particularly on East Asian Americans) and the few existing studies focus on South Asians (not differentiating among specific populations). Research has found that there is a link between psychological well-being and acculturation experiences. However, there is no consensus among researchers on whether acculturation has harmful or positive effects on psychological well-being (Hwang, Chun, Takeuchi, Myers, & Siddarth, 2005; Takeuchi et al., 1998, 2007; Wang & Kim, 2013). These findings have particularly emerged among epidemiological studies that utilize proxy assessments of acculturation (e.g., generational level, length of residence) and standardized clinical interviews (Hwang et al., 2005; Takeuchi et al., 1998, 2007).

Hwang et al. (2005) found that the age of immigration played a role in Chinese-Americans likelihood of developing depression. This study consisted of 1,747 Chinese American participants between the ages of 18 and 65, who were residing in the Los Angeles area. Hwang et al. (2005) discovered that Chinese Americans who immigrated at younger ages, had a higher likelihood of developing depression than those who immigrated at older ages. However, they found that the longer an individual resided in the United States; the onset of depression decreased. Takeuchi et al. (1998) used the same participant pool of 1,747 Chinese American participants to examine acculturation and mental illness patterns in Chinese Americans. They
found that Chinese-American women who were more acculturated (e.g., language use, interactions with individuals with the same ethnicity and different ethnicity, and food preferences) were twice more likely to develop depression than men. There were no gender differences in the experiences of depression within less acculturated Chinese Americans.

Another study by Takeuchi et al. (2007) found that Asian American women who were born in the United States had higher percentages of lifetime depression and anxiety rates than those who were immigrants. However, Asian American men who had higher English fluency had a lower lifetime prevalence of depression and anxiety. These research findings suggest the existence of gender and generational differences in the relationship between acculturation and psychological well-being but the findings and direction has been inconsistent (Hwang et al., 2005; Takeuchi et al., 1998, 2007). Research shows that measures that assess age of immigration or generational status could be potential risk factors for mental illness. However, other measures that assess English fluency may buffer against mental health concerns.

Hwang and Ting (2008) studied behavioral and value levels of acculturation and its relationship to mental health. They recruited 107 Asian American college students to participate in the study. Hwang and Ting (2008) found that those who were connected to U.S. culture to a higher level had lower levels of psychological distress and depressive symptoms. However, they found that native culture was not significantly related to psychological well-being. Wang and Mallinckrodt (2006) found similar findings in a study of 104 Chinese international undergraduate and graduate students in the United States. Higher identification of U.S. culture with regards to behavioral and value dimensions was found to be related to lower levels of psychological distress.
Acculturative Stress and Psychological Well-Being in Asian Americans

Acculturative stress has been found to be an important risk factor for reduced levels of psychological well-being (Berry, Kim, Minde, & Mok, 1987). Acculturative stress can be caused by difficulties associated with language barriers, discrimination, racism, inter-generational family conflicts, and challenges adjusting to work environments (Hwang & Ting, 2008). Some research has found that low levels of acculturation to U.S. culture is linked with higher states of acculturative stress. This is reflected in a study by Shim and Schwartz (2007) who examined the experiences of 118 Korean Americans. Korean Americans who had resided in the United States for a shorter duration, identified less with mainstream culture and more with their heritage culture, were more likely to experience acculturative stress. A higher degree of acculturative stress is linked with reduced psychological well-being.

Hwang and Ting (2008) assessed whether acculturative stress mediated the relationship between acculturation and psychological well-being. They found that acculturative stress increased as acculturation decreased. Higher psychological distress was then linked with a higher prevalence of clinical depression (Hwang & Ting, 2008). These results seem to suggest that higher identification with U.S. culture in Asian American adults is a more important factor in maintaining psychological well-being than maintaining heritage culture.

However, research on Asian American youth have found the opposite to the above findings on Asian American adults. This is evidenced in a study by Kim, Gonzales, Stroh, and Wang (2006) that consisted of Korean American, Chinese American, and Japanese American parents and adolescents. The authors found that adolescents who identified less with their heritage culture indicated more depressive symptoms than their parents. On the other hand, parents who identified less with U.S. culture had more depressive symptoms (Kim et al., 2006).
These findings show that psychological well-being is mediated by different factors such as gender, age of immigration, and generation status.

**Asian Indians and Psychological Functioning**

Saroop (2003) studied the relationship between psychological symptoms and acculturation strategies in a sample of 120, second generation Asian Indian young adults living in the United States. Saroop (2003) used the Acculturation Beliefs Inventory to study acculturation strategies and the Brief Symptom Inventory to assess psychological symptoms. The results revealed that Asian Indian participants who reported using the marginalized strategy reported higher anxiety than those who used integrated or assimilated strategies (Saroop, 2003).

Previous research has shown that the stress from acculturation can play a role in family difficulties, social isolation, psychosomatic symptoms, anxiety, identity-related concerns, and mental health concerns. Prabhughate (2010) examined a group of 331 South Asian individuals through South Asian community organizations. The results revealed that stress from acculturation is linked with depressive and anxiety symptoms in South Asian individuals. A study by Mui and Kang (2006) found similar findings in their study of Asian immigrant elders (Filipino, Vietnamese, Indian, Chinese, and Japanese). In a study by Navasaria (2008) that examined acculturation and resilience in a sample of 190 Asian Indian residing in the United States, immigration experiences were linked with the manifestation of psychological concerns. Navsaria (2008) indicated that the stress produced from immigration experiences could make Asian Indians susceptible to mental health concerns such as posttraumatic stress disorder, substance use, and suicide.

Farver, Bhadha, and Narang (2001) assessed psychological functioning in Asian Indian adolescents. Eight-five Asian Indian adolescents and their parents participated in this study. The
demographic breakdown of these Asian Indian adolescents was 40.5% Hindu, 36.9% Sikh, 17.1% Zoroastrian, 1.8% Muslim, and 3.6% Jain. This was a quantitative study where participants were administered the Bicultural Involvement Questionnaire. The results showed that adolescent girls experienced a greater degree of marginalization than adolescent boys. Biologically male adolescents were more integrated into the collectivistic-interdependence aspect of their culture.

Rastogi et al. (2014) examined common patterns and concerns of South Asian clients who sought mental health services. The variables that were assessed during this study were generational differences, gender issues, preferences for decision-making, and abuse. This was a qualitative study that consisted of focus groups. Twenty-nine clinicians were recruited for this study. The results revealed that South Asian clients were more likely to present with physical symptoms, view depression as a social or moral dilemma and as a negative reaction to a bad situation.

The importance of family support for Asian Indians is reflected in a study by Masood, Okazaki, and Takeuchi (2009) that examined the mental health experiences of South Asian Americans. They looked at prevalence estimates of a major psychiatric disorder and also examined gender differences in the mental health status of South Asian Americans. There were 164 participants recruited for this study. Masood et al. (2009) found that South Asians had decreased mood and anxiety disorders in a year than other Asian Americans. With regards to gender differences in psychological distress, they found that women reported higher distress when they lacked extended family support. On the other hand, South Asian male participants reported higher distress as a result of bicultural conflicts within their families and having lower social status in their communities (Masood et al., 2009). These results show that psychological
distress is linked with an Asian Indian person’s sense of well-being and that cultural conflicts that might arise due to acculturation may also pose a threat to well-being.

Another study by Dasgupta (1998) reflects similar results of psychological distress being linked with cultural conflicts in families. Dasgupta (1998) studied the experiences of anxiety in forty-six Asian Indian immigrant parents and their U.S. born college age children. The results showed that mothers and daughters who experienced conflicts with regards to daughters endorsing nontraditional dating and independent values had higher levels of anxiety (Dasgupta, 1998).

Review of the existent literature has revealed inconsistent patterns on the relationship between acculturation and psychological well-being. Furthermore, it appears that the type of acculturation measure influences the findings. For example, sociological studies that used proximal measures of acculturation found that Asian Americans who immigrated at a younger age or have higher generational level have greater risk for psychological maladjustment (Wang & Kim, 2013). However, psychological studies that have used value and behavioral dimensions of acculturation have found that low levels of acculturation are linked with higher psychological distress. Also, acculturative stressors appear to be age-specific whereby the importance of native versus U.S. orientation is not the same for adolescents and adults (Wang & Kim, 2013). Another limitation of the existent literature is that most of the research has focused on East Asian Americans which makes it difficult to generalize the findings to the Asian Indian population because of the cultural differences between these culturally distinct groups. For example, English fluency is higher among Asian Indians than East Asian Americans due to British colonization in India. Therefore, this may not be a factor that influences their psychological well-being as compared to East-Asian American adults in the Takeuchi et al. (2007) study.
Substance Use and Asian American Populations

There was limited literature that examined substance use behaviors among the Asian American population. One of the most common reasons that is cited in the literature is the assumption that substance use among Asian Americans is not a problem. This assumption has been based on results from some national surveys that have found Asian Americans to have low substance abuse prevalence rates than other ethnic or racial groups. These findings serve to further portray Asian Americans as a model minority. These beliefs combined with the stigma related to substance abuse in Asian American communities has further solidified these assumptions. However, recent research has shown an increase in substance abuse prevalence rates which has become an important concern among Asian American populations (Moloney, Hunt, & Evans, 2008; Harachi, Catalano, Kim, & Choi, 2001; Ja & Aoki, 1993). The research that does exist is outdated as the demographics and immigration patterns have changed since the past few decades. Furthermore, the generation that was surveyed in most of the research studies has changed and evolved due to the constant changes in immigration trends.

Additionally, Asian American Pacific Islanders (AAPI) are not included in large surveys of adolescent substance use, such as the National Household Survey on Drug Abuse (NHSDA). The NHSDA is sponsored by the Substance Abuse and Mental Health Services Administration and Monitoring the Future Study (MTF). There are a few surveys that include Asian American samples which will be reviewed. The limitation of these studies is that they overlook the heterogeneity within the Asian American population. This limitation is a disservice to the research field because Asian Americans/Asian American Pacific Islanders consist of over 60 separate racial and ethnic subgroups (Sue, 1987). The existing research show inconsistent patterns related to substance use behaviors among Asian Americans.
Skager and Austin (1993) conducted the sixth statewide survey of alcohol and drug use among California middle school students. The students were in grades 7, 9, and 11 recruited from 117 public and 11 private schools statewide between 1995 and 1996 (Skager & Austin, 1993). Harachi et al. (2001) conducted a review of the surveys to look at frequency, initiation, risk, and protective factors in substance use among Asian American youth. Harachi et al. (2001) found that Asian American Pacific Islander (AAPI) youth have lower rates of substance use as compared to other racial and ethnic groups. This is evidenced from the data obtained through the Minority Youth Health Project which showed that 37.62% of Asian American youth responded “yes” to the question “have you ever drank alcohol?” which was lower when compared to 43.78% of White American youth and 49.54% of African American youth (Harachi et al., 2001).

Harachi et al. (2001) also found that AAPI youth reported a lower rate of binge drinking (5.7%) when compared to White Americans (6%) and African Americans (10%). However, these results were not consistent across categories in the surveys. For instance, Asian American youth reported slightly higher rates of smoking cigarettes (36.3%) than White Americans (33.3%) but lower than African Americans (40.2%). Asian American youth were also found to have a higher history of crack or cocaine use (1.9%) than White Americans (1.3%) and African Americans (0.9%). Furthermore, Asian American youth were found to have equal or higher rates than African Americans of alcohol use behaviors (11%), heavy alcohol use in the last two weeks (14%), LSD use (3%), and amphetamine use (4%) in the past six months (Harachi et al., 2001; Lee, Law, Eo, & Oliver, 2003). These results suggested that while Asian American youth may have an overall lower rate of Alcohol consumption, they may consume more alcohol when they do drink alcohol (Lee et al., 2003). There was no breakdown of the sub-groups within the Asian
American category in the California survey and therefore it is difficult to look at within subgroup differences (Harachi et al., 2001).

**Substance Use Among Specific Asian American Groups**

Chi, Lubben, and Kitano (1988) studied alcohol use behaviors in 230 Filipino-American adults. They found gender differences in drinking behaviors, where 50% of Filipino American women did not drink alcohol but 80% of Filipino men engaged in alcohol use. The social factors that appeared to influence drinking behavior was religious service (Chi et al., 1989).

Chi, Luben, & Kitano (1989) examined patterns of alcohol use behaviors among 298 Chinese-American, 295 Japanese-American, and 280 Korean-American participants residing in Los Angeles. Heavy alcohol use patterns was found in all three Asian American sub groups. Of the three groups, Japanese-Americans were found to have the highest rates of heavy alcohol use whilst Chinese-Americans reported the lowest heavy alcohol use (Chi et al., 1989). Korean-American participants found it important when their parents consumed alcohol while for Japanese-American and Chinese-Americans, friends who drank alcohol influenced drinking behavior (Chi et al., 1989). This suggested that alcohol use in families and/ or social relationships influence alcohol use patterns in Asian Americans.

Gong, Takeuchi, Agbayani-Siewert, and Tacata (2003) examined the ways in which acculturation, psychological distress, and alcohol use were influenced by the effects of ethnic identity and religiosity in Filipino immigrants. Data obtained from 1,796 Filipino American participants showed that Filipino-American men had higher alcohol dependence than Filipino-American women (Gong et al., 2003). Furthermore, participants who experienced marital problems showed higher levels of alcohol dependence (Gong et al., 2003).
**Substance Use and Asian Indians**

Most of the research on alcohol and/or substance use has focused on East Asian or Filipino American populations. There were relatively few studies that examined substance use in South Asian, particularly Asian Indian populations. One explanation of the lack of research or reports on alcohol and/or substance use behaviors on the Asian Indian population might be explained as a result of the importance placed on family prestige, status, and values. Asian Indian individuals might not feel comfortable sharing drinking or substance-related behaviors in fear of how they might be perceived by family or societal members. Furthermore, western culture has higher levels of acceptance across genders with regards to alcohol and substance use behaviors. Bhattacharya (1998) stated that Asian Indians may engage in substance use as a way to cope with bicultural conflicts within families. Bhattacharya (1998) suggested that a structural model rooted in systems theory better explains the experiences of Asian Indian Americans. Bhattacharya (1998) used this structural model to demonstrate the link between the challenges of adjusting to two distinct cultures. Furthermore, the author stated that adolescent substance use may be used as a way to cope with conflicts with families as a result of acculturation processes. The different acculturation strategies often determine the level of acceptance and/or rejection of their heritage culture which create conflicts across generations in families. Bhattacharya (1998) particularly focused on socio-demographic characteristics, familial, and peer relationships as well as psychological, cultural, and ecological factors that influence inclination towards using substances. This structural model is particularly useful when examining Rastogi and Wadhwa’s (2006) case study. They conducted a case study which involved an Asian Indian family that was seeking family therapy services. The Asian Indian family consisted of the father, mother, and their two children. The Asian Indian parents had sought family therapy after finding out that
their teenage son had been engaging in alcohol and substance use. Simultaneously, they had discovered that their daughter had marijuana in her room. This resulted in the parents feeling as though they had failed as parents and created conflicts between the parents and children. Rastogi and Wadhwa (2006) hypothesized that gender, cultural and religious values, acculturation levels, and identity issues all contribute to substance use among Asian Indians. This case study is a good example of the cultural conflicts that might occur in Asian Indian families across generations as a result of varying levels of adoption of mainstream U.S. culture when it comes to drinking and substance-related behaviors. The limitation of this study was that it only used one case study as a mode of analysis which made it difficult to generalize to the rest of the Asian Indian population in the United States. Overall, while there is literature that examines acculturation and drinking and substance use in the wider Asian American population; there is limited research that examines the link between acculturation and alcohol and substance-related problems.

Substance Use Measures

Researchers have developed several measures to examine alcohol and substance-related behaviors. The high stigma and shame associated with substance use in the Asian Indian population can make it challenging to find measures that can appropriately assess these behaviors while taking into account the barriers and challenges in the accuracy of these self-report measures. In this regard, short screening measures can be useful tools. The Alcohol Use Disorders Identification Test (AUDIT), developed by the World Health Organization (WHO) is one of the most commonly utilized screening tests. The AUDIT is a 10-item test that examines the extent of drinking behaviors or hazardous use, symptoms of dependence, and harmful use. The AUDIT instrument has been examined with patients with severe mental illnesses,
schizophrenic patients, Aboriginal and Torres Strait Islanders, and adolescent samples (Chung et al., 2000; Schlesinger et al., 2007). AUDIT scores have been used to determine alcohol related physical disorders and social problems as well (Conigrave, Saunders, & Reznik, 1995).

Another screening tool that is used to assess substance-related behaviors is called the Drug Abuse Screening Test (DAST). The DAST is a 10-item screening instrument that was designed by Skinner (1982) to assess drug abuse problems (Skinner, 1982). The items on the DAST refer to drug use events in the past 12 months (Cocco & Carey, 1998). The Drug Abuse Screening Test (DAST) has been studied with psychiatric outpatient populations (Carey, Carey, & Chandra, 2003; Maisto, Carey, Carey, Gordon, & Gleason, 2000), adolescents (Martino, Grilo, & Fehon, 2000), clinical samples of drug and alcohol abuse patients (Gavin, Ross, & Skinner, 1989), Narcotic users (Salstone, Halliwell, & Kranzler, 1991) and women (Saltstone et al., 1994).

**Summary**

Asian Indian Americans are shaped by their immigration patterns and histories as well as by their distinct cultural values and traditions. When examining the acculturation experiences of Asian Indians, it is important to consider how (a) caste system (Dube, 1955; Kapoor, 2007), (b) family values (Dasgupta, 1988; Das & Kemp, 1997; Segal, 1991), (c) collectivistic orientation (Das & Kemp, 1997; Segal, 1991), (d) educational background (Ibrahim, Ohnishi, & Sandhu, 1997), (e) English proficiency (Misra et al., 2010), and (d) religious diversity, may play a role in the level of immigration stress in this population. Asian Indian immigrants may have immigrated to the United States with different psychosocial stressors that may shape their acculturation experiences in different ways. The stress of immigration and navigating and adapting to a new, dominant culture can influence psychological well-being, family relationships, and stress levels (Berry, 2005; Bhadha & Narang, 2002; Chang & Kwon, 2014; Hans, 2001).
conforming to the host culture, immigrants tend to lose the protective factors associated with their native culture (Moloney et al., 2008).

Existing research has inconsistent findings with regards to the influences of level of acculturation and psychological well-being. Some indicate that high acculturation is linked with increased psychological well-being but other research contradicts these findings (Hwang et al., 2005; Takeuchi et al., 1998, 2007; Wang & Kim, 2013). These findings are further limited by the narrow scope due to the monolithic treatment of the Asian American population in research and focus on pathology and psychological distress versus psychological well-being. The existing literature on Asian Indians have several limiting factors which include (a) convenience-based sampling, (b) dissertations with small sample sizes, and (c) studies that have been done three to four decades ago. Further, there is next to no research on substance use behaviors in the Asian Indian population. The present study addresses these limitations and aims to increase scholarship on acculturation, psychological well-being, and substance use behaviors in the Asian Indian American population. The results from this study will help mental health professionals better understand how acculturation influences the psychological well-being and substance use behaviors in the Asian Indian population in the United States.
CHAPTER III

METHOD

The purpose of this study was to examine acculturation experiences, psychological well-being and substance use behaviors of Asian Indians residing in the United States. In this chapter, the methods used to conduct and analyze the data obtained in this study will be discussed. The sections in this chapter will describe the following (a) participants, (b) procedures, (c) measures, (d) research design, (e) statistical analyses, and (f) limitations.

Participants

Two hundred and one respondents clicked on the survey and accessed the informed consent page. Participants were screened for inclusion based on study criteria and data were also assessed for missing values. When the data indicated that a participant had discontinued the survey after responding to the demographic questionnaire and had not completed the other surveys, the cases were removed from the final analysis. Participants who did not identify as Asian Indian or were outside of the age range were also removed from the analysis. Seventy-nine participants completed some part of the study (i.e. clicked on the informed consent, responded to demographic questions, responded to the SL-ASIA items) but did not complete the entire study. Of these seventy-nine participants, thirty-five participants had missing responses on all of the items on the SL-ASIA, SPWB, AUDIT, and DAST scales. All seventy-nine participants were excluded from the analyses. The total number of participants in the study was 122.

With regards to demographic characteristics, 88 identified as female/woman (72.1 %) and 34 as male/man (27.9 %) participants completed the study. The participants ages ranged from 18 to 60 years old, with a mean age of 33 years ($M = 33.26$, $Mdn = 31$, $SD = 10.20$). With regards
to generation status, the mode was first-generation, as most participants self-identified as first-generation. Forty-nine participants (40.2%) identified as immigrant, 43 participants (35.2%) identified as first-generation, nine participants (7.4%) identified as 1.5 generation, 18 participants identified as second generation (14.8%), and two participants (1.6%) identified as third-generation. For analysis purposes, participants who indicated that they are immigrant and first-generation statuses were combined as one category due to reflecting the same generation status. Participants who identified as second-generation and third-generation were also grouped into one category. The majority of participants identified as Hindu (57.4%), six participants (4.9%) indicated they are Sikh, fifteen participants (12.3%) identified as Christian, four participants (3.3%) as Muslim, one (0.8%) identified as Jain, and twenty-six participants (21.3%) identified as other.

The majority of participants reported that one or both parent’s birth country was India but there was geographical diversity in the city or state of their parent’s birth place in India. The cities or states in India that were reported as one or both participant’s parents birth-place were the following: Bombay, Gujarat, Punjab, Bhopal, Bangalore, Kashmir, Kerala, and Tamil Nadu. With regards to participants who reported that one or both parent’s birth country was the United States, most did not identify the state. Of those who reported which state in the United States that one or both parent’s were born in, New York, Colorado, and California were cited. There were also a number of participants who reported that neither India nor the United States as one or both of their parent’s birth country. Some of these countries were Singapore, Brazil, Pakistan, Bangladesh, Korea, Zimbabwe, and African countries.

With regards to sexual orientation, one hundred and ten participants (90.2%) identified as heterosexual, five participants (4.1%) indicated they are bisexual, three participants identified as
gay (2.5%), and four participants (3.3%) identified as other. Almost all participants (99.2%) reported having good English fluency and as either being born and raised in the United States or having lived in the United States for at-least 10 to 15 years. Participants were recruited from different geographical regions in the United States. See Table 1 for the full range of demographic characteristics of the participants in the study.
<table>
<thead>
<tr>
<th>Categorical Variables</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female/Feminine/Woman</td>
<td>88</td>
<td>72.1</td>
</tr>
<tr>
<td>Male</td>
<td>34</td>
<td>27.9</td>
</tr>
<tr>
<td><strong>Sexual Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>110</td>
<td>90.2</td>
</tr>
<tr>
<td>Bisexual</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>Gay</td>
<td>3</td>
<td>2.5</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hindu</td>
<td>70</td>
<td>57.4</td>
</tr>
<tr>
<td>Sikh</td>
<td>6</td>
<td>4.9</td>
</tr>
<tr>
<td>Christian</td>
<td>15</td>
<td>12.3</td>
</tr>
<tr>
<td>Muslim</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>Jain</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Other</td>
<td>26</td>
<td>21.3</td>
</tr>
<tr>
<td><strong>Relationship Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>52</td>
<td>42.6</td>
</tr>
<tr>
<td>Married</td>
<td>60</td>
<td>49.2</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>7.4</td>
</tr>
</tbody>
</table>
Table 1—Continued

<table>
<thead>
<tr>
<th>Categorical Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immigrant/First Generation</td>
<td>92</td>
<td>76</td>
</tr>
<tr>
<td>1.5 Generation</td>
<td>9</td>
<td>7.4</td>
</tr>
<tr>
<td>Second/Third Generation</td>
<td>20</td>
<td>16.5</td>
</tr>
<tr>
<td>Language Abilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>121</td>
<td>99.2</td>
</tr>
<tr>
<td>Okay</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Residency Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citizen</td>
<td>99</td>
<td>81.1</td>
</tr>
<tr>
<td>Permanent Resident</td>
<td>11</td>
<td>9.0</td>
</tr>
<tr>
<td>H1 Visa</td>
<td>3</td>
<td>2.5</td>
</tr>
<tr>
<td>Student Visa</td>
<td>7</td>
<td>5.7</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Years in the US</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1 years</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>2-5 years</td>
<td>7</td>
<td>5.7</td>
</tr>
<tr>
<td>5-10 years</td>
<td>10</td>
<td>8.2</td>
</tr>
<tr>
<td>10-15 years</td>
<td>42</td>
<td>34.4</td>
</tr>
<tr>
<td>Born and raised</td>
<td>61</td>
<td>50.0</td>
</tr>
</tbody>
</table>
Procedures

The study received approval from Western Michigan University’s Human Subjects Institutional Review Board (HSIRB) under the exempt category of review in October, 2018. The study received HSIRB approval to extend the study for another year on October, 2019. Data for this study was collected via an online survey, hosted by Qualtrics, which was approved by the HSIRB. Several different methods were employed to recruit participants for this study. The information about this research study was emailed to the Asian American Psychological Association (AAPA) and Division of South Asian Americans (DoSAA) email lists. South Asian community organizations (e.g., different religious organizations, mental health organizations, and community centers) were contacted to pass on information about the study to their community members. Community organizations in different, Asian-populous geographical regions in the United States were targeted (e.g., San Francisco Bay area, New Jersey, New York, Michigan, and Chicago) in an attempt to have a more diverse group of Asian Indian participants. Information about the study was also posted on social media websites such as Facebook and Reddit to reach Asian Indian Americans across different demographics. Recruitment for the study occurred between July 2019 to February 2020. An example of the study recruitment email and recruitment flyer are shown in Appendix D and E. The email constituted an introduction and contact information for the student researcher, general information and significance of the study, and a clickable link to have access to the online survey. Participants who were interested in participating in the study had access to information about the study, student researcher contact information and an online link via community organizations, email lists, or social media posts which led them to the informed consent. The first page of the online survey comprised of the informed consent document that described (a) confidentiality and privacy of data collection, (b)
Purpose of the study, (c) approximate time to complete surveys, (d) student researcher and principal investigator contact information, (d) risks and benefits of participation, and (e) discontinuation of the study. If participants consented to participate in the study and clicked on the next page, they were able to respond to the questions and discontinue at any point in time. Participants were asked to enter their email address at the end of the surveys if they were interested in the optional participation in a random drawing of one $25 Amazon Gift card. All of the email addresses were kept confidential and not shared with anyone other than the researcher. All email addresses were deleted prior to examining and analyzing the data obtained in the study. There was also a comment box at the end of the survey where participants could post their questions, concerns, or reactions of participating in the study that was only visible to the researcher. The completion of the study ranged from 15 to 25 minutes.

**Measures**

There were five measures used in this study to examine the acculturation experiences, psychological well-being, alcohol use, and drug use behaviors in the Asian Indian sample. These measures were: (a) demographic questionnaire, (b) Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987), (c) Scale for Psychological Well-Being (SPWB; Ryff, 1989), (d) Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente & Grant, 1993), and (e) Drug Abuse Screening Test (DAST; Skinner, 1982).

**Demographic Questionnaire**

The demographic questionnaire was developed by the researcher in an attempt to examine different demographic characteristics of the Asian Indian participants that participated in the study. Descriptive statistics can provide useful information about the demographics of a
sample. It allows for more nuanced understanding when analyzing the results of the study and can help determine generalizability of the study findings. The utility of the demographic questionnaire in this study is that it allowed for the examination of any differences in the experiences of Asian Indians who differed across certain demographic characteristics such as age, sexual orientation, religion, and other variables. Participant demographics were examined with a ten-item questionnaire. Items on the demographic questionnaire included open-ended questions about age, gender identity and geographical country of origin or parent’s birth country. The demographic questionnaire also asked questions about how participants identified their sexual orientation, religious affiliation, relationship status, language proficiency, number of years residing in the United States, generation status, and residency status (H-1B visa, student visa, permanent resident, citizen). See Appendix D for the full list of questions.

**Suinn-Lew Asian Self-Identity Acculturation Scale**

The Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987) is the most widely used instrument to assess acculturation in Asian Americans. The SL-ASIA is used to assess whether an individual is highly traditional or highly assimilated in their use of acculturation strategies. Research on the SL-ASIA instrument has shown that five areas influence acculturation strategies which are: (a) food preferences, (b) generation status, (c) acceptance of ethnic identity, (d) cultural preferences, and (e) interactions with members of ethnic group (Suinn et al., 1987). The SL-ASIA instrument is utilized to examine many behavioral components of acculturation rather than the cognitive aspects or attitudes of acculturation.

The SL-ASIA scale consists of 26-items in a multiple-choice format. The SL-ASIA scale comprises questions related to the experiences of Asian Americans residing in the United States
which includes: language use, ethnic identity, personal preferences, friendships, and generational status (Suinn et al., 1987). The SL-ASIA scale was slightly modified in this study so that it can be used more specifically to examine the experiences of the Asian Indian population. This modification was a result of feedback from Asian Indian researchers in the field that identified that Asian Indians, particularly those who are older may not resonate with terms such as Oriental, Asian, or Asian American and instead would identify more with Indian, Asian Indian, and Indian-American descriptors. Thus, the SL-ASIA scale was modified to change “Oriental” to “Indian” and Asian American or Asian to Indian-American or Indian. These changes were made because Asian Indians do not identify with the term “Oriental” nor do they typically identify themselves as “Asian.” These changes do not modify the nature of the question nor the scoring of each item. The responses of the first 21-items are summed to produce a total score. A final acculturation score is calculated by then dividing the total value by 21. The last five questions are not included in the calculation of the acculturation score because these questions were intended for categorical information purposes (Suinn et al., 1987). Responses are rated using a Likert scale where scores can range from 1.00 (low acculturation) to 5.00 (high acculturation). The SL-ASIA was found to have strong reliability estimate in this study ($\alpha = .87$).

The SL-ASIA scale was selected because it has several advantages over other measures of acculturation. One important aspect is that the SL-ASIA is a multidimensional scale which allows for a more nuanced report of acculturation experiences than proxy measures (Choi & Harachi, 2002; Okazaki & Goto, 2001; Suinn et al., 1994; Zane & Mak, 2002). The second reason is that the SL-ASIA has good psychometric properties (Ponterotto et al., 1998; Suinn et al., 1987; Suinn et al., 1992; Zane & Mak, 2002). The internal consistency reliability estimates ranged from .88 to .91 (Suinn et al., 1987; Suinn, Ahuna, & Khoo, 1992). In terms of concurrent
validity, the SL-ASIA was found to have statistically significant correlations with the following: total number of years attending school in the United States \( (r = .61) \), age entering school in the United States \( (r = .60) \), years residing in the United States \( (r = .56) \), age entering the United States \( (r = -.49) \), and years living in a non-Asian neighborhood \( (r = .41) \) (Suinn et al., 1992; Zane & Mak, 2002). Criterion validity estimates were obtained for generational level, length of residence, and self-rating (Suinn et al., 1987; Zane & Mak, 2002). Factorial validity showed loadings on reading, writing, and cultural preference (41.5% of variance), ethnic interaction (10.7% of variance), affinity for ethnic identity and pride (6.6% of variance), generational identity (5.9% of variance), and food preference (5.0% of the variance) (Suinn et al., 1992; Zane & Mak, 2002).

**Ryff’s Scale of Psychological Well-Being**

The Scale of Psychological Well-Being (SPWB; Ryff, 1989) is a measure of psychological well-being that examines six dimensions of eudemonic well-being. These six dimensions of psychological well-being consist of (a) positive relationships with others, (b) self-acceptance, (c) purpose in life, (d) autonomy, (e) environmental mastery, and (f) personal growth. The positive relationships with others dimension refers to having trusting relationships with other people (Ryff, 1989). The self-acceptance dimension is defined as having a positive attitude and general acceptance of the self and past experiences (Ryff, 1989). The autonomy dimension consists of attitudes of self-determination and independence in decision-making and behaviors (Ryff, 1989). The environmental mastery dimension examines an individual’s sense of control over their own daily life activities and tasks (Ryff, 1989). The purpose in life dimension refers to the sense of purpose and meaning in one’s life (Ryff, 1989). The personal growth dimension is defined as an individual’s motivation to develop their abilities and capacities (Ryff; 1989).
Responses on each item are rated using a 6-point Likert scale that range from 1 (strongly disagree), 2 (moderately disagree), 3 (slightly disagree), 4 (slightly agree), 5 (moderately agree) and 6 (strongly agree). Examples of items on the questionnaire are: “my decisions are not usually influenced by what everyone else is doing” and “maintaining close relationships has been difficult and frustrating for me.” Higher scores on each of the six dimensions suggest higher levels of psychological well-being on that scale. Items are reverse-scored on negatively scored items because high scores indicate higher self-ratings on each dimension (Ryff, 1989). The SPWB has four validated versions which are the 84-items (14 items per scale), 54-items (9 items per scale), 42-items (7 items per scale), and 18-items (3 items per scale). The Cronbach’s alpha for SPWB calculated for this study was strong (α = .93).

The 42-item SWPB was selected for this study because previous studies have shown good internal consistency for the measure which ranged from .86 to .93 over a six-week period (Dierendonck et al., 2004; Ryff, 1989; Springer & Hauser, 2002). The test-retest reliability coefficients were as follows: self-acceptance (r = .85), positive relationships with other people (r = .83), autonomy (r = .88), environmental mastery (r = .81), purpose in life (r = .82), and personal growth (r = .81). A number of researchers, including Dierendonck et al. (2008), Kafka and Kozma (2002), Springer and Hauser (2006), and Springer et al. (2006) have examined Ryff’s Scale of Psychological Well-Being. Some studies supported a six-factor model whilst others supported a 3-factor model. High factor correlations were found on several studies (Dierendonck et al., 2004; Springer & Hauser, 2002).

The Scale of Psychological Well-Being (SPWB) has been used with different populations that includes adolescents and older populations (Burton, 2006; Clayman, 2005; Lawler-Row & Piferi, 2006). The scale has also been translated into different languages (Chang, 2006; Cheng &
Chan, 2005). Jibeen and Khalid (2010) utilized the Ryff Scale of Psychological Well-Being to examine predictors of psychological well-being in 308 Pakistani immigrants living in Canada. The results showed that acculturative stress negatively affected psychological functioning. They found that immigrants who experienced high acculturative stress were more likely to experience depression, anxiety, sleeping difficulties, and/or somatic complaints (Jibeen & Khalid, 2010). Participants who experienced more acculturative stress had lower scores on self-acceptance, positive relations with others, autonomy, environmental mastery, purpose of life, and personal growth on the scale of psychological well-being (Jibeen & Khalid, 2010).

Having asserted the importance of assessing different dimensions of psychological well-being; it is important to consider that the constructs of psychological well-being used in this study are defined and developed by western researchers. There is no literature that illustrates how Asian Indians define psychological well-being. The Ryff’s Scale of Psychological Well-Being (Ryff, 1989) has been used with various populations but it might pose some limitations due to the differences between Asian Indian and western cultural frameworks. Thus, the findings in this study should be viewed with the consideration of psychological well-being as a western definition. While Ryff’s Scale of psychological well-being has not been well researched in the Asian Indian population in the U.S; it has been extensively studied in a wide range of populations. Thus, the SPWB was still considered to be an instrument that would provide accurate, reliable, and useful information with regards to the psychological well-being in the Asian Indian population.

**Alcohol Use Disorders Identification Test (AUDIT)**

The Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) is a 10-item screening instrument that was developed by the World
The AUDIT screens for alcohol-related behaviors (Saunders et al., 1993). The instrument is designed to measure three components of alcohol abuse: alcohol consumption, alcohol dependence, and alcohol related problems. Thus, the AUDIT has questions related to how many drinks containing alcohol individuals have in a week or a month, how many alcoholic beverages are consumed in any one occasion, and questions around alcohol-dependence (Babor, De La Fuente, Saunders, & Grant, 1989). Questions 1, 2 and 3 on the AUDIT assess for hazardous alcohol use, questions 4, 5, and 6 assess for dependence symptoms, and 7, 8, 9, and 10 look at harmful alcohol use (Barbor et al., 1989). The possible responses for questions 1 through 8 on the AUDIT range from 0, 1, 2, 3, and 4. On question nine and ten of the AUDIT, the possible responses range from 0, 2, and 4. A total score is calculated for the AUDIT whereby the range of possible scores are from 0 to 40, where a score of 0 indicates that the individual has no problems with alcohol or alcohol-dependence. Per the World Health Organization (WHO), a score of 1 to 7 on the AUDIT suggests alcohol use is in the low-risk range, scores between 8 to 14 indicate harmful alcohol use, and scores of 15 or higher suggest the likelihood of alcohol-dependence (Babor et al., 1989).

In this study, reliability estimates using Cronbach’s alpha for the AUDIT were found to be strong ($\alpha = .91$). Previous research has also found internal reliability estimates to range from .80 to .94 (Allen, Litten, Fertig, & Babor; 1997; Shields & Caruso, 2003). Test-retest reliability coefficients have been found to be $r = .88$ (Daeppen, Yersin, Landry, Pecoud, & Decrey, 2000). Construct validity of the AUDIT have shown scores that range from moderate to high correlations when compared with other self-report alcohol screening instruments (Allen et al., 1997). Previous research has found the AUDIT to load on three factors. However, recent research findings have shown that it supports a two-factor solution of alcohol consumption and
alcohol-related problems (Doyle, Donovan, & Kivlahan, 2007). Researchers have examined the psychometric properties of the AUDIT in different populations and settings such as: inpatient settings, rural and urban communities, emergency room patients, unemployed individuals, and college students (Reinert & Allen, 2002).

Alcohol Use Disorders Identification Test (AUDIT) has also been examined with patients with severe mental illnesses (Chung et al., 2000) and schizophrenic patients, Aboriginal and Torres Strait Islanders, individuals from low socioeconomic backgrounds (Babor et al., 1989), and university students and adolescents (Babor et al., 1989; Chung et al., 2000; Schlesinger et al., 2007). The AUDIT scores have also been used to determine alcohol related physical disorders and social problems (Conigrave, Saunders, & Reznik, 1995).

**Drug Abuse Screening Test (DAST)**

Drug Abuse Screening Test (DAST; Skinner, 1982) is a 10-item screening instrument that was designed to assess drug abuse problems (Skinner, 1982). The items on the DAST refer to drug use events in the past 12 months (Cocco & Carey, 1998). Responses on each item answered “yes” are scored one point and responses on each item answered “no” are scored 0, except for question 3 where a “no” response receives 1 point. A total score is calculated by adding the scores on all items. The interpretation of scores is as follows: 0 is rated as no problems, 1-2 low level, 3-5 moderate level, 6-8 substantial level, and 9-10 severe level.

Internal consistency reliability has been found to have a Cronbach’s alpha = .95 (Skinner, 1982). In this study, the DAST reliability estimates were consistent with previous studies that have found strong reliability estimates for the measure (α = .87). The scores have high correlations with frequency of drug use for a variety of substances such as: cannabis, barbiturates, amphetamines, and opiates (Appleby et al., 1997). Staley and El-Guebaly (1990) performed a
factor analysis of the DAST which revealed five factors: (a) self-identification of a drug concern, (b) serious social outcomes of drug use, (c) help-seeking behavior for drug abuse, (d) illegal drug-related behaviors, and (e) difficulties with drug use.

The Drug Abuse Screening Test (DAST) has been studied with psychiatric outpatient populations (Maisto et al., 2000), adolescents (Martino, Grilo, & Fehon, 2000), clinical samples of drug and alcohol abuse patients (Gavin et al., 1989) and women samples (Saltstone et al., 1994).

**Research Design**

A non-experimental, descriptive survey methodology design was utilized in this study in order to examine the relationships between acculturation, psychological well-being, alcohol use and drug use behaviors in the Asian Indian population in the United States. Survey methodology was selected due to the several advantages of using this design. Fowler (2014) stated that self-administered procedures have advantages over interview and other experimental design formats because the participant does not need to directly admit a socially undesirable behavior or negatively-valued characteristic. This factor was considered as an important influence in the decision-making around the research design because as stated in the literature, Asian Indians tend to not prefer to disclose substance-related behaviors and mental health concerns due to feelings of shame, discomfort and stigma. Thus, a self-administered survey design was a preferred method as it allowed for anonymity of the participants answering questions about their psychological well-being, alcohol and drug use behaviors. Other utilities of self-administered online survey designs include the ability to reach more representative samples (Fowler, 2014), easier administration as the surveys can be administered in-person or remotely (DeFranzo, 2012), data accuracy (Fowler, 2014), and increased accessibility.
**Statistical Analysis**

Several statistical analyses were performed in this study, with the results reported in Chapter IV (Results). The first analysis involved examining the demographic information reported by participants. This was completed to examine the differences in the demographics of the participants and to describe the characteristics of the sample used in this study. The second series of analyses involved conducting preliminary analyses to examine the reliability estimates of all the measures used in the study, which were all in the strong range and assessing for violations of test assumptions.

**Research Question 1**

What is the relationship between acculturation and psychological well-being among Asian Indian Americans?

The first hypothesis for this study stated that it would be expected that acculturation (SL-ASIA) will be a negative predictor of psychological well-being (SPWB). The first research question was analyzed using a linear regression analysis to assess the relationship between the total scores on the SL-ASIA and the SPWB measure. Regression analysis is a type of statistical method that is used when the researcher intends to examine the relationship between predictor(s) (independent variable) and an outcome (dependent variable) (Wampold & Fruend, 1987). Regression analyses are used to examine how much of the predictor variable explains a portion of the variance (change) in the outcome variable (Grimm & Yarnold, 2009; Wampold & Fruend, 1987).
Research Question 2

Are there significant mean differences in the AUDIT scores, DAST scores and SPWB scores between immigrants, 1.5 generations, and 2 generations and above?

The second hypothesis stated that Asian Indians who are immigrants/first-generation will have higher mean scores on the psychological well-being measure (SPWB) than 1.5 generation and that immigrants/first-generation will have higher mean scores on the psychological well-being measure than second generation and third generation individuals. It was also hypothesized that immigrants/first-generation will have lower mean scores on the measures of alcohol use (AUDIT) and drug use (DAST) than 1.5 generations and immigrants will also have lower mean scores than on the alcohol use (AUDIT) and drug use (DAST) measures than second generation and third-generation individuals.

A multivariate analysis of variance (MANOVA) test was conducted where generation status (independent variable) was tested on three dependent variables, psychological well-being (SPWB), alcohol use (AUDIT), and drug use (DAST) measures. MANOVA analyses test for the differences in two or more vectors of means (Katz, 1999). MANOVA analyses allow for the ability to take all of the dependent variables into account instead of just one dependent variable at a time (Katz, 1999). MANOVA tests in some cases can be more useful than running several ANOVA tests because it takes into consideration correlations between response variables which can provide nuanced data (Katz, 1999). MANOVA tests also reduce the chance of making a Type I error than running several ANOVA tests (French & Poulsen, n.d; Katz, 1999). This is why a MANOVA analysis was selected to test the second hypothesis as it would allow for the ability to assess differences in generation status across psychological well-being (SPWB), alcohol use (AUDIT), and drug use (DAST).
**Research Question 3**

Are the relationships between psychological well-being with alcohol use and drug use, moderated by acculturation?

The third research question for this study had two sub-hypotheses which stated that (a) it is expected that psychological well-being (SPWB) will be a negative predictor of alcohol use (AUDIT) and acculturation (SL-ASIA) will moderate this relationship and (b) it is expected that psychological well-being (SPWB) will be a negative predictor of drug use (DAST) and that acculturation (SL-ASIA) will moderate this relationship. The moderation analysis to test hypothesis three was conducted using Tabachnick and Fidell (2013) guidelines. There are three steps in Tabachnick and Fidell’s (2013) guidelines (1) the first step of the model includes adding the predictor variable to the regression model (if the predictor variable is significant, proceed to the next step in the analysis), (2) the second step in the analysis involves adding the moderator variable as a predictor to the regression model (if the moderator variable is significant, proceed to the next step in the analysis), and (3) the third step of the analysis involves adding an interaction term as a predictor to the regression model. The interaction term is created by centering the predictor and moderator variables and taking their product, which produces a grand mean. The third step was completed using Andrew Hayes (2013) PROCESS program. The results from the last step reveal whether or not the interaction term is significant and if it is significant, this indicates that there is evidence for a moderation effect which can be shown visually via plots.

The first step of the first analysis involved conducting a regression analysis to examine whether there was a statistically significant relationship between the total scores on the psychological well-being (SPWB) and alcohol use (AUDIT) measure. The second step was to
add the moderator variable, acculturation (SL-ASIA) to the model to assess whether the moderator variable accounted for a significant portion of the variance. The second analysis followed the same steps whereby regression analysis was performed to examine whether there was a statistically significant relationship between the psychological well-being (SPWB) and drug use (DAST) measures. The second step involved adding the moderator variable, acculturation (SL-ASIA) to the regression model to determine whether the SL-ASIA variable accounted for a significant amount of variance in the model and thus warrants further analysis to determine moderation effects.

**Research Question 4**

Are the relationships between acculturation with alcohol use, drug use and psychological well being moderated by the length of residency?

The fourth hypothesis predicted that the length of residency in the United States (i.e. how long someone has been living in the United States) will moderate the relationships among acculturation (SL-ASIA), psychological well-being (SPWB), alcohol use (AUDIT), and drug use (DAST). Hypothesis four was examined using the same moderation analysis guidelines and procedures indicated by Tabachnick and Fidell (2013). The first step involved conducting a regression analysis to examine whether there were statistically significant relationships between SL-ASIA and AUDIT, SL-ASIA and DAST, and SL-ASIA and SPWB. If the above relationships were statistically significant, the moderator variable (length of residency) was added to the model. The third step was only completed if there was indication of potential significant moderating effects.
**Limitations**

There are a few limitations that should be considered regarding the methodology used in this study. The first limitation was related to the study employing only self-report measures. Survey methods have limitations in that it may not provide rich information about a wide range of subjective experiences. However, important features of quantitative research studies are accuracy and reliability as it allows researchers to quantify large amounts of data into simplified forms. All the instruments utilized in this study had strong validity and reliability estimates. A second limitation was related to some of the measures, i.e. psychological well-being measure used in the study. These could be viewed as limitations because measures such as the scale of psychological well-being have been validated and designed from a Eurocentric, western framework which may not address the experiences of individuals who are bicultural and have different cultural contexts. However, the SPWB instrument has been studied in a wide range of populations and provides a reliable measure of well-being.
CHAPTER IV

RESULTS

This study aimed to examine whether acculturation experiences were linked with psychological well-being, alcohol use and substance use behaviors in the Asian Indian population living in the United States. The objective of assessing the data through inferential statistical analyses was to understand the following: (a) the demographic characteristics of the participants, (b) reliability estimates of the variables (SL-ASIA, SPWB, AUDIT, and DAST), (c) the relationship between the total scores on psychological well-being (SPWB) and acculturation (SL-ASIA), (d) differences in mean scores among psychological well-being (SPWB), alcohol use (AUDIT) and drug use (DAST) across generation statuses, (e) the moderating effect of acculturation on the relationship between psychological well-being (SPWB) and alcohol use (AUDIT) and the relationship between psychological well-being (SPWB) and substance use (DAST), (f) moderating influence of length residence in the United States on the relationships between acculturation (SL-ASIA) and psychological well-being (SPWB), acculturation (SL-ASIA) and alcohol use (AUDIT) and acculturation (SL-ASIA) and drug use (DAST), (g) post-hoc analyses that examine the correlations of each of the six dimensions of psychological well-being (SPWB) with acculturation (SL-ASIA), alcohol use (AUDIT), and drug use (DAST), and (h) post-hoc MANOVA analyses that examine generation status across each of the six dimensions of psychological well-being (SPWB). With the exception of the post-hoc analyses, all main analyses will utilize total scores of the measures.

The first step was to run preliminary analyses, including reliability and descriptive statistics. The second step was to conduct linear regression analyses after assessing for any violations of regression assumptions. Cohen’s (1977) guidelines were utilized to determine the
significance of effect sizes, which states the following, small effect size = .20, medium effect size = .50, and large effect sizes are typically >.80. All statistical analyses were completed using IBM SPSS Statistics software, version 26.0. These results are discussed below.

**Preliminary Data Analyses**

**Power Analysis**

A power analysis was conducted to determine the sample size needed for the proposed analysis. The power analysis was completed using G*Power Software where all the predictor variables were added to estimate the sample size needed for statistical significance. The alpha level was set at .05. The power analysis determined that the sample size needed to be 120 for statistical significance. Participants were screened for inclusion based on study criteria and data were also assessed for missing values. When the data indicated that a participant had discontinued the survey after responding to the demographic questionnaire and not the other surveys, the cases were removed from the final analysis. Participants who did not identify as Asian Indian or were outside of the age range were also removed from the analysis. Seventy-nine participants completed some part of the study (i.e. clicked on the informed consent, responded to demographic questions, responded to the SL-ASIA items) but did not complete the entire study. Of these seventy-nine participants, thirty-five participants had missing responses on all of the items on the SL-ASIA, SPWB, AUDIT, and DAST scales. All seventy-nine participants were excluded from the analyses. The total number of participants included in the analyses was 122, which met the sample size needed for statistical significance per apriori power analysis.
Descriptive Statistics

Means, standard deviations, kurtosis, and skewness values for each variable are presented in Table 2. The total scores will be used in all of the main analyses. Scores on the SL-ASIA ranged from 1.71 to 4.76 ($M = 3.02$, $SD = 0.56$). These results show that participants reported a wide range of acculturation levels and that 50% or more identify as bicultural. SPWB scores ranged from 2.48 to 5.76 ($M = 4.30$, $SD = 0.69$). Thus, the overall sample revealed a higher than average sense of psychological well-being with the majority reporting strong psychological well-being. Scores on the AUDIT ranged from 0.31 to 10.00 ($M = 4.17$, $SD = 3.46$) and scores on the DAST ranged from 1.00 to 5.00 ($M = 4.20$, $SD = 1.30$). Most participants reported at-least some alcohol use while over 76% reported no drug use. See Table 3 for the correlations between study variables.

Table 2

Descriptive Statistics of Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>$M$</th>
<th>$SD$</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation Status</td>
<td>1</td>
<td>5</td>
<td>1.93</td>
<td>1.06</td>
<td>.93</td>
<td>-.21</td>
</tr>
<tr>
<td>Length of Residency</td>
<td>1</td>
<td>5</td>
<td>4.23</td>
<td>0.97</td>
<td>-1.34</td>
<td>1.47</td>
</tr>
<tr>
<td>Acculturation</td>
<td>1.71</td>
<td>4.76</td>
<td>3.01</td>
<td>0.57</td>
<td>.08</td>
<td>-.18</td>
</tr>
<tr>
<td>Psychological Well-Being</td>
<td>2.30</td>
<td>5.78</td>
<td>4.30</td>
<td>0.69</td>
<td>-.36</td>
<td>-.16</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td>0.26</td>
<td>1.00</td>
<td>0.77</td>
<td>0.20</td>
<td>.80</td>
<td>-.86</td>
</tr>
<tr>
<td>Drug Use</td>
<td>0.50</td>
<td>1.00</td>
<td>0.94</td>
<td>0.13</td>
<td>-1.37</td>
<td>.49</td>
</tr>
</tbody>
</table>

Note. $N = 122$; Generation Status (1 = immigrant, 2 = first generation, 3 = 1.5 generation, 4 = 2 generation, and 5 = third generation); Mode = 2, first-generation; Length of Residency (1 = 0-1 years, 5 = born and raised); Median = 5, born and raised; Acculturation (1 = least acculturated, 5 = most acculturated), Psychological Well-Being (1 = low score, 6 = high score).
Table 3

Correlations for Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Length of Residency in US</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Generation Status</td>
<td>.34*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Alcohol Use</td>
<td>.06</td>
<td>.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Drug Use</td>
<td>-.01</td>
<td>-.01</td>
<td></td>
<td>-.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Psychological Well-Being</td>
<td>.13</td>
<td>.04</td>
<td>.27*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Acculturation</td>
<td>.59**</td>
<td>.42**</td>
<td>-.04</td>
<td>-.14</td>
<td>-.02</td>
<td></td>
</tr>
</tbody>
</table>

Note. * p < .05. ** p < .01. *** p < .001.

Reliability

Cronbach’s alpha coefficients of reliability were calculated for each scale using the sample of Asian Indian participants (N = 122). The reliability analyses were conducted for each instrument used in this study. These reliabilities were as follows: SPWB (α = .93), SL-ASIA (α = .87), AUDIT (α = .91), and DAST (α = .87), indicating strong reliability estimates for all of the measures. All scale scores had strong reliabilities. These interpretations are based on George and Mallery’s (2003) interpretation of alpha coefficients.

Assumptions

Prior to conducting statistical analyses to test the four hypotheses, the data were examined to determine whether the assumptions for conducting linear regression analyses were met. These assumptions include (a) normal distribution of variables, (b) homoscedasticity, (c) linear relationship between independent and dependent variables, and (d) independence of...
observations (Hahs-Vaughn & Lomax, 2012). The assumption of linearity and homoscedasticity were determined by examining histograms and scatter-plots of standardized residuals against predicted residual values. The analysis of the data did not indicate violations of the assumptions of normality or linearity. There were no violations of homoscedasticity as the data were randomly scattered around the center. No concerns of multicollinearity were found in the data.

Mahalanobis distance test (Tabachnick & Fidell, 2013) was used for analyses involving linear regression in order to detect outliers. Outliers were detected through this method. The univariate method was also employed to visually inspect outliers in the data set. The univariate method involves examining box plots and per Tukey (1977), outliers are values in the data set that fall far from the central point. Box plots revealed no outliers in the scores of the SL-ASIA and SPWB measures. However, eight univariate outliers were detected in both the AUDIT and DAST measures. Square-root and log10 transformations were both applied to the AUDIT and DAST scores. The method that was found to be the most effective of dealing with the outliers in the AUDIT and DAST measures was to transform the scores using the following formula 1/alcohol use variable and 1/drug use variable. These transformed variables were also used in all of the subsequent analyses. This significantly reduced the outliers in the data. The analysis involving the AUDIT and DAST scores were also run with all the outliers removed to compare with the transformed variables. Rather than removing the outliers in the data set, the AUDIT and DAST scores were transformed as it was determined that outliers can provide valuable information and also did not significantly reduce the sample size. Per Grimm and Yarnold (2009), moderate violations of assumptions are not significant issues. All variables were found to have acceptable values of skewness and kurtosis based on Tabachnick and Fidell (2013)
guidelines of -1.5 to +1.5 range. The results of the main analyses are presented in the following sections.

Research Question 1: What is the relationship between acculturation and psychological well-being among Asian Indian Americans?

The first hypothesis stated that it is expected that acculturation (SL-ASIA) will be a negative predictor of psychological well-being (SPWB). To test this hypothesis, a linear regression analysis was conducted between the dependent variable, psychological well-being (SPWB) and the independent variable, acculturation (SL-ASIA). Regression analysis revealed that acculturation did not significantly predict psychological well-being, \( F(1, 120) = .06, p = .809 \) (see Table 4). Acculturation did not account for a significant portion of the variance in the model, \( R^2 \) for the model was .00 and adjusted \( R^2 = -.01, p = .809 \). These results showed that the hypothesis was not supported as acculturation (SL-ASIA) was not found to significantly predict psychological well-being (SPWB). Table 4 displays the unstandardized regression coefficients (\( B \)), standard error, and standardized regression coefficients (\( \beta \)) for each variable.

Table 4

<table>
<thead>
<tr>
<th>Variable</th>
<th>( B )</th>
<th>( \beta )</th>
<th>( SE )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.38</td>
<td>.35</td>
<td>&lt; .001</td>
<td></td>
</tr>
<tr>
<td>Acculturation</td>
<td>-.03</td>
<td>-.02</td>
<td>.11</td>
<td>.809</td>
</tr>
</tbody>
</table>

*Note. * \( p < .05. ** p < .01. *** p < .001.**
Research Question 2: Are there significant mean differences in the AUDIT scores, DAST scores and SPWB scores between first-generation/immigrants, 1.5 generation, and second generation and above?

The second hypothesis stated that Asian Indians who are immigrants/first-generation will have higher mean scores on the psychological well-being measure (SPWB) than 1.5 generation; immigrants/first-generation will have higher mean scores on the psychological well-being (SPWB) measure than second and third generation individuals. It was also hypothesized that immigrants/first-generation will have lower mean scores on the measures of alcohol use (AUDIT) and drug use (DAST) than 1.5 generations; first-generation/immigrants will have lower mean scores on the alcohol use (AUDIT) and drug use (DAST) measures than second generation and third generation individuals.

A multivariate analysis of variance (MANOVA) was conducted to examine mean score differences in generation status for psychological well-being (SPWB), alcohol use (AUDIT), and drug use (DAST). Generation status was grouped into three categories, first-generation or immigrant, 1.5 generation, and second-and third-generation. The results of the three-group MANOVA comparing generation status (i.e. immigrant, first-generation, 1.5 generation, second generation, and third generation) on mean score differences in psychological well-being (SPWB), alcohol use (AUDIT), and drug use (DAST) was not statistically significant. The multivariate main effect for generations status, based on Wilk’s $\lambda$ multivariate test of significance was $F(6, 234) = 1.56, p = .163, R^2 = .003$. Observed power in this case was .59 and partial $\eta^2 = .04$. Results for this MANOVA are summarized in Table 5.
Table 5

Multivariate Analysis of Variance for Generation Status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>ηp²</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological</td>
<td>.76</td>
<td>1.61</td>
<td>2</td>
<td>.204</td>
<td>.03</td>
<td>.34</td>
</tr>
<tr>
<td>Well-Being</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol Use</td>
<td>.05</td>
<td>1.17</td>
<td>2</td>
<td>.315</td>
<td>.02</td>
<td>.25</td>
</tr>
<tr>
<td>Drug Use</td>
<td>.002</td>
<td>.19</td>
<td>2</td>
<td>.826</td>
<td>.003</td>
<td>.08</td>
</tr>
</tbody>
</table>

Note. Statistical significance level set at p ≤ .01.

Examination of the total scores of psychological well-being (SPWB), alcohol use (AUDIT) and drug use (DAST) revealed similar patterns across generation status. For psychological well-being, first-generation/immigrants (M = 4.27, SD = .66), 1.5 generation (M = 4.07, SD = .76), and second/third generation (M = 4.51, SD = .78) had similar scores. Similar patterns were observed across generation status for the scores on the AUDIT, first-generation/immigrant (M = .77, SD = .20), 1.5 generation (M = .66, SD = .27), and second/third generation (M = .76, SD = .25) and scores on the DAST, first-generation/immigrant (M = .87 , SD = .11), 1.5 generation (M = .89 , SD = .06 ), and second/third generation (M = .86, SD = .09).

Research Question 3: Are the relationships between psychological well being with alcohol use and drug use, moderated by acculturation?

a. Does acculturation moderate the relationship between psychological well-being and alcohol use?

b. Does acculturation moderate the relationship between psychological well-being and drug use?

The third hypotheses stated that (a) psychological well-being (SPWB) will be a negative predictor of alcohol use (AUDIT), which will be moderated by acculturation (SL-ASIA) and (b) psychological well-being (SPWB) will be a negative predictor of drug use (DAST), which will
be moderated by acculturation (SL-ASIA). This analysis was conducted following Tabachnick and Fidell (2013) guidelines of conducting moderation analyses. In the first step of the model, the predictor variable was added to the regression model. If the predictor variable was significant, the analysis proceeded to the next step. In the second step of the analysis, the moderator variable was added as a predictor to the regression model. If the moderator variable was significant, the analysis proceeded to the next step. In the final step of the analysis, an interaction term was added as a predictor to the regression model. The interaction term is created by centering the predictor and moderator variables and taking their product which produces a grand mean (Tabachnick & Fidell, 2013). This final step in the analysis will reflect whether or not an interaction term is significant and if it is, then there is evidence for a moderation effect.

A multiple regression analysis was conducted to examine whether acculturation (SL-ASIA) moderated the association between psychological well-being (SPWB) and alcohol use behaviors (AUDIT). Psychological well-being (SPWB) accounted for a significant amount of the variance in alcohol use (AUDIT), $\Delta R^2 = .10, p = .001, \Delta F(1, 121) = 12.64, p = .001$. The second step in the analysis was to add acculturation (SL-ASIA) as a predictor to the model. Acculturation (SL-ASIA) accounted for some of the variance in alcohol use, $\Delta R^2 = .06, p = .006, \Delta F(1, 120) = 7.79, p = <.001$. Next, the interaction term between acculturation (SL-ASIA) and psychological well-being (SPWB) was added to the regression model, which did not account for a significant portion of the variance, $\Delta R^2 = .004, \Delta F(1, 122) = .55, p = .4598$. These results showed that there is no significant moderation effect between acculturation (SL-ASIA) and psychological well-being (SPWB) on alcohol use behaviors (AUDIT) in this Asian Indian
sample. See Table 6 for the unstandardized regression coefficients ($B$), intercept, and standardized regression coefficients ($\beta$) for each variable.

### Table 6

**Regression Results of Psychological Well-Being Predicting Alcohol Use**

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>95% CI for $B$</th>
<th>$SE B$</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LL</td>
<td>UL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.36**</td>
<td>.13</td>
<td>.59</td>
<td>.12</td>
<td>.10</td>
<td>.10**</td>
</tr>
<tr>
<td>Psychological Well-Being</td>
<td>.01**</td>
<td>.04</td>
<td>.15</td>
<td>.03</td>
<td>.31**</td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.15</td>
</tr>
<tr>
<td>Constant</td>
<td>.63**</td>
<td>.34</td>
<td>.93</td>
<td>.15</td>
<td></td>
<td>.06**</td>
</tr>
<tr>
<td>Psychological Well-Being</td>
<td>.09***</td>
<td>.04</td>
<td>.14</td>
<td>.03</td>
<td>.30***</td>
<td></td>
</tr>
<tr>
<td>Acculturation</td>
<td>-.09**</td>
<td>-.33</td>
<td>.39</td>
<td>.03</td>
<td>-.24**</td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.19</td>
</tr>
<tr>
<td>Constant</td>
<td>.78**</td>
<td>.74</td>
<td>.81</td>
<td>.02</td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>Psychological Well-Being</td>
<td>.10**</td>
<td>.05</td>
<td>.15</td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acculturation</td>
<td>-.10</td>
<td>-.16</td>
<td>-.04</td>
<td>.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>-.03</td>
<td>-.11</td>
<td>.05</td>
<td>.04</td>
<td>-.24</td>
<td></td>
</tr>
</tbody>
</table>

*Note. CI = confidence interval; LL = lower limit; UL = upper limit.*

* $p < .05$. ** $p < .01$. *** $p < .001$.

A multiple regression analysis was conducted to examine whether acculturation moderates the relationship between psychological well-being (SPWB) and drug use behaviors (DAST). The first step included testing whether psychological well-being (SPWB) predicted
drug use (DAST). Psychological well-being (SPWB) was found to account for a significant amount of the variance in drug use (DAST), $\Delta R^2 = .08, p = .001, \Delta F(1, 121) = 10.74, p = .001$. Psychological well-being accounted for 8.2% of the variance in the model, $R^2 = .08$ and adjusted $R^2 = .07, p = .001$.

In the second step, acculturation (SL-ASIA) was added as a predictor in the model. Acculturation (SL-ASIA) did not account for a significant portion of the variance in drug use, $\Delta R^2 = .001, p = .784, \Delta F(1, 120) = 5.37, p = .784$. Therefore, the interaction term between psychological well-being (SPWB) and acculturation (SL-ASIA) was not added to the regression model. Step two was not significant and hence we do not interpret steps beyond this and for this reason an interaction term between psychological well-being (SPWB) and acculturation (SL-ASIA) was not added to the model. Overall, the results showed that acculturation (SL-ASIA) does not moderate the relationship between psychological well-being (SPWB) and drug use (DAST) or the relationship between psychological well-being (SPWB) and alcohol use (AUDIT). See Table 7 for the unstandardized regression coefficients ($B$), intercept, and standardized regression coefficients ($\beta$) for each variable.
Table 7
Regression Results for Psychological Well-Being Predicting Drug Use

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>95% CI for $B$</th>
<th>$SE$</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LL</td>
<td>UL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.68***</td>
<td>.51</td>
<td>.82</td>
<td>.08</td>
<td></td>
<td>.08**</td>
</tr>
<tr>
<td>Psychological Well-Being</td>
<td>.04**</td>
<td>.02</td>
<td>.07</td>
<td>.01</td>
<td>.29**</td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.08</td>
<td>.001</td>
</tr>
<tr>
<td>Constant</td>
<td>.67</td>
<td>.51</td>
<td>.82</td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological Well-Being</td>
<td>.04**</td>
<td>.02</td>
<td>.07</td>
<td>.02</td>
<td>.29**</td>
<td></td>
</tr>
<tr>
<td>Acculturation</td>
<td>.01</td>
<td>-.03</td>
<td>.04</td>
<td>.02</td>
<td>.02</td>
<td></td>
</tr>
</tbody>
</table>

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Research Question 4: Are the relationships between acculturation with alcohol use, drug use and psychological well-being moderated by length of residency?

a. Does length of residency moderate the relationship between the independent variable, acculturation (SL-ASIA) and the dependent variable, psychological well-being (SPWB)?

b. Does length of residency moderate the relationship between the independent variable, acculturation (SL-ASIA) and the dependent variable, alcohol use (AUDIT)?

c. Does length of residency moderate the relationship between the independent variable, acculturation (SL-ASIA) and drug use (DAST)?

The fourth hypothesis stated that the length of residency in the United States will moderate the following relationships (a) negative relationship between acculturation (SL-ASIA) and psychological well-being (SPWB), (b) positive relationship between acculturation (SL-ASIA) and
and alcohol use (AUDIT), and (c) positive relationship between acculturation (SL-ASIA) and drug use (DAST).

The first regression analysis was conducted to examine whether length of residency moderates the relationship between acculturation (SL-ASIA) and psychological well-being (SPWB). The first step of the analysis included examining whether acculturation (SL-ASIA) scores predicted psychological well-being (SPWB). Acculturation (SL-ASIA) was not found to account for a significant amount of the variance in psychological well-being (SPWB), \( \Delta R^2 = .001, p = .743, \Delta F(1, 119) = .11, p = .743 \). Since, acculturation (SL-ASIA) did not significantly predict psychological well-being (SPWB), length of residency was not added as a predictor to the regression model. Thus, the second step was not completed as acculturation (SL-ASIA) did not significantly predict psychological well-being (SPWB). See Table 8 for the unstandardized regression coefficients (\( B \)), intercept, and standardized regression coefficients (\( \beta \)).

**Table 8**

*Regression Results for Potential Moderation Effects of Length of Residency and Acculturation Predicting Psychological Well-Being*

<table>
<thead>
<tr>
<th>Variable</th>
<th>( B )</th>
<th>95% CI for ( B )</th>
<th>( SE )</th>
<th>( \beta )</th>
<th>( R^2 )</th>
<th>( \Delta R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.001</td>
</tr>
<tr>
<td>Constant</td>
<td>4.42***</td>
<td>3.73</td>
<td>5.10</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acculturation</td>
<td>-0.04</td>
<td>-0.26</td>
<td>.19</td>
<td>.11</td>
<td>-0.03</td>
<td></td>
</tr>
</tbody>
</table>

*Note. CI = confidence interval; LL = lower limit; UL = upper limit.*

* * p < .05. ** p < .01. *** p < .001.

The second multiple regression analysis was conducted to examine whether length of residency moderates the relationship between acculturation (SL-ASIA) and alcohol use (AUDIT). The first step of the analysis involved testing whether acculturation (SL-ASIA) predicted alcohol
use (AUDIT). Acculturation (SL-ASIA) accounted for a significant amount of the variance in alcohol use (AUDIT), $\Delta R^2 = .06, p = .009, \Delta F(1, 119) = 7.15, p = .009$. The second step in the analysis was to add length of residency as a predictor to the model. Length of residency accounted for some variance in the regression model, $\Delta R^2 = .05, p = .01, \Delta F(1, 118) = 7.05, p = .001$. Next, the interaction term between length of residency and psychological well-being (SPWB) was added to the regression model, which did not account for a significant portion of the variance, $\Delta R^2 = .002, p = .1228, \Delta F(1, 117) = 2.42, p = .1228$. These results showed that length of residency does not have moderation effects on the relationship between acculturation (SL-ASIA) and alcohol-use (AUDIT). See Table 9 for the unstandardized regression coefficients ($B$), intercept, and standardized regression coefficients ($\beta$).
Table 9

Regression Results for Potential Moderation Effects of Length of Residency on Acculturation and Alcohol Use Behaviors

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>95% CI for B</th>
<th>SE B</th>
<th>β</th>
<th>R²</th>
<th>ΔR²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LL</td>
<td>UL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.03**</td>
<td>.83</td>
<td>1.24</td>
<td>.10</td>
<td></td>
<td>.05</td>
</tr>
<tr>
<td>Acculturation</td>
<td>-.09</td>
<td>-.16</td>
<td>-.02</td>
<td>.03</td>
<td>-.24**</td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.94***</td>
<td>.73</td>
<td>1.16</td>
<td>.11</td>
<td></td>
<td>.10</td>
</tr>
<tr>
<td>Acculturation</td>
<td>-.15</td>
<td>-.23</td>
<td>-.07</td>
<td>.04</td>
<td>-.40**</td>
<td></td>
</tr>
<tr>
<td>Length of Residency</td>
<td>.07</td>
<td>.02</td>
<td>.02</td>
<td>.03</td>
<td>.28*</td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.12</td>
</tr>
<tr>
<td>Constant</td>
<td>1.62</td>
<td>.73</td>
<td>2.50</td>
<td>.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acculturation</td>
<td>.40</td>
<td>-.73</td>
<td>-.73</td>
<td>.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of Residency</td>
<td>-.09</td>
<td>-.30</td>
<td>.11</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>.06</td>
<td>-.02</td>
<td>.13</td>
<td>.04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

* p < .05. ** p < .01. *** p < .001.

The third multiple regression analysis was run to assess whether length of residency moderates the association between acculturation (SL-ASIA) and drug use (DAST). The first step of the analysis included examining whether acculturation (SL-ASIA) predicted drug use (DAST). Acculturation (SL-ASIA) did not account for a significant amount of the variance in drug use (DAST), ΔR² = .00, p = .828, ΔF(1, 119) = .05, p = .828. The model did not explain a significant amount of variance in the regression model. Thus, length of residency was not added...
as a predictor to the model because these results indicated that there was not a significant moderation effect between length of residency and acculturation (SL-ASIA) on drug use (DAST). See Table 10 for the unstandardized regression coefficients (\( B \)), intercept, and standardized regression coefficients (\( \beta \)) for each variable. Overall, these results showed the hypotheses were not supported. Step one was not significant and hence we do not interpret steps beyond this step.

**Table 10**

*Regression Results for Potential Moderation Effects of Length of Residency on Acculturation and Drug Use Behaviors*

<table>
<thead>
<tr>
<th>Variable</th>
<th>( B )</th>
<th>95% CI for ( B )</th>
<th>( SE )</th>
<th>( \beta )</th>
<th>( R^2 )</th>
<th>( \Delta R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.86***</td>
<td>.75</td>
<td>.96</td>
<td>.05</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Psychological Well-Being</td>
<td>.004</td>
<td>-.03</td>
<td>.04</td>
<td>.02</td>
<td>.02</td>
<td></td>
</tr>
</tbody>
</table>

*Note. CI = confidence interval; LL = lower limit; UL = upper limit.*

* \( p < .05 \). ** \( p < .01 \). *** \( p < .001 \).*

**Post Hoc Analyses**

**Correlations of Psychological Well-Being Dimensions**

Analyses were conducted in order to examine the six dimensions of the psychological well-being scale separately and to assess whether these dimensions were correlated with the study variables of alcohol use (AUDIT), drug use (DAST), and generation status. These dimensions of psychological well-being (SPWB) included (a) personal growth, (b) purpose in life, (c) relations with others, (d) autonomy, (e) environmental mastery, and (f) self-acceptance.

The correlations between drug use (DAST) and the psychological well-being (SPWB) dimensions were found to be in the low range with the exception of two dimensions. The
personal growth dimension, $r = .39, p < .01$ and the purpose of life dimension, $r = .34, p < .01$, had a medium effect size with drug use (DAST). Similar correlations were found with the correlations of the alcohol use measure (AUDIT) and dimensions of psychological well-being (SPWB). The personal growth dimension, $r = .41, p < .01$ and purpose of life dimensions, $r = .35, p < .01$ were found to have medium effect sizes with alcohol use (AUDIT). See Table 11 for all correlations with the AUDIT and DAST measures.

**Table 11**

*Correlations between Alcohol and Drug with Psychological Well-Being Scales*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Alcohol</th>
<th>Drug</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug</td>
<td>.63**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>.30**</td>
<td>.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Mastery</td>
<td>.30**</td>
<td>.24**</td>
<td>.61**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Growth</td>
<td>.40**</td>
<td>.35**</td>
<td>.47**</td>
<td>.49**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Relations with</td>
<td>.20*</td>
<td>.20*</td>
<td>.39**</td>
<td>.57**</td>
<td>.64**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose of Life</td>
<td>.40**</td>
<td>.35**</td>
<td>.39**</td>
<td>.54**</td>
<td>.65**</td>
<td>.47**</td>
<td></td>
</tr>
<tr>
<td>Self Acceptance</td>
<td>.15</td>
<td>.13</td>
<td>.58**</td>
<td>.69**</td>
<td>.51**</td>
<td>.66**</td>
<td>.49**</td>
</tr>
</tbody>
</table>

*Note. * $p < .05$. ** $p < .01$. *** $p < .001$.*

With regards to the acculturation measure, SL-ASIA, the correlations were found to have low effect sizes. Examination of the correlations revealed interesting patterns in the data. The environmental mastery dimension ($r = -.10, p = .383$), personal relations with others dimension ($r = -.04, p = .631$), and self-acceptance dimension ($r = -.10, p = .258$) had negative correlations with acculturation whilst the autonomy dimension ($r = .03, p = .770$), personal growth dimension,
(r = .09, p = .331) and purpose of life dimension (r = .04, p = .684) had positive correlations with acculturation (SL-ASIA). All effect sizes were determined using Cohen’s (1992) criteria.

Table 12

*Correlations between Generation Status, Years in the US, and Acculturation with Six Scales of Psychological Well-Being*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Years in US</th>
<th>Generation Status</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation Status</td>
<td>.17*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>.15</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Mastery</td>
<td>.11</td>
<td>.09</td>
<td>.61**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Growth</td>
<td>.30**</td>
<td>.11</td>
<td>.47**</td>
<td>.49**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Relations with</td>
<td>.16</td>
<td>.07</td>
<td>.39**</td>
<td>.57**</td>
<td>.64**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose of Life</td>
<td>.17*</td>
<td>.20*</td>
<td>.39**</td>
<td>.54**</td>
<td>.65**</td>
<td>.47**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Acceptance</td>
<td>-.04</td>
<td>.06</td>
<td>.58**</td>
<td>.69**</td>
<td>.51**</td>
<td>.66**</td>
<td>.49**</td>
<td></td>
</tr>
<tr>
<td>Acculturation</td>
<td>.61**</td>
<td>.26**</td>
<td>.03</td>
<td>-.04</td>
<td>.09</td>
<td>-.01</td>
<td>.13</td>
<td>-.13</td>
</tr>
</tbody>
</table>

*Note. * p < .05. ** p < .01. *** p < .001.*

**MANOVA with Generation Status and Six Dimensions of Psychological Well-Being**

A multivariate analysis of variance (MANOVA) was conducted to examine differences in generation status across scores for the six dimensions of the psychological well-being measure (SPWB): personal growth, purpose in life, relations with others, autonomy, environmental mastery, and self-acceptance. Generation status was grouped into three categories, first-generation or immigrant, 1.5 generation, and second-and third-generation.
The MANOVA results suggested a non-significant difference for generation status and dimensions of psychological well-being (SPWB), Wilk’s λ, $F(12, 228) = 1.09, p = .372, R^2 = .04$. Observed power in this case was .59 and partial $\eta^2 = .04$. Results for this MANOVA are summarized in Table 13 and means for each dimension across generation status are presented in Table 14.

**Table 13**

*Follow-Up Univariate Analysis of Variance for Generation Status and Dimensions of Psychological Well-Being*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>$F$</th>
<th>$df$</th>
<th>$p$</th>
<th>$\eta^2$</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>.64</td>
<td>.93</td>
<td>2</td>
<td>.397</td>
<td>.02</td>
<td>.21</td>
</tr>
<tr>
<td>Environmental Mastery</td>
<td>.72</td>
<td>.81</td>
<td>2</td>
<td>.446</td>
<td>.01</td>
<td>.19</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>1.69</td>
<td>2.52</td>
<td>2</td>
<td>.084</td>
<td>.04</td>
<td>.50</td>
</tr>
<tr>
<td>Positive Relations with Others</td>
<td>.44</td>
<td>.50</td>
<td>2</td>
<td>.610</td>
<td>.008</td>
<td>.13</td>
</tr>
<tr>
<td>Purpose of Life</td>
<td>1.92</td>
<td>4.07</td>
<td>2</td>
<td>.019</td>
<td>.06</td>
<td>.71</td>
</tr>
<tr>
<td>Self-Acceptance</td>
<td>.39</td>
<td>.44</td>
<td>2</td>
<td>.644</td>
<td>.007</td>
<td>.12</td>
</tr>
</tbody>
</table>

*Note.* Statistical significance level set at $p \leq .01$.  

87
Table 14

Descriptive Statistics for Generation Status and Dimensions of Psychological Well-Being

<table>
<thead>
<tr>
<th>SPWB Dimension</th>
<th>1</th>
<th>SD</th>
<th>2</th>
<th>SD</th>
<th>3</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>4.08</td>
<td>.72</td>
<td>3.83</td>
<td>.97</td>
<td>4.23</td>
<td>1.11</td>
</tr>
<tr>
<td>Environmental Mastery</td>
<td>4.01</td>
<td>.94</td>
<td>4.13</td>
<td>.90</td>
<td>4.29</td>
<td>.97</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>4.82</td>
<td>.80</td>
<td>4.41</td>
<td>.81</td>
<td>5.12</td>
<td>.88</td>
</tr>
<tr>
<td>Positive Relations with</td>
<td>4.64</td>
<td>.94</td>
<td>4.37</td>
<td>.99</td>
<td>4.73</td>
<td>.90</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose of Life</td>
<td>4.11</td>
<td>.66</td>
<td>3.85</td>
<td>.98</td>
<td>4.52</td>
<td>.66</td>
</tr>
<tr>
<td>Self-Acceptance</td>
<td>3.97</td>
<td>.95</td>
<td>3.81</td>
<td>.91</td>
<td>4.14</td>
<td>.88</td>
</tr>
</tbody>
</table>

*Note. 1 = immigrant/first-generation, 2 = 1.5 generation, 3 = second-generation/third-generation.*
CHAPTER V

DISCUSSION

This chapter presents a discussion on the interpretation of the results of the four hypotheses and ancillary analyses in the study. This chapter also includes a discussion on the limitations of the study, clinical and academic implications, and future research directions.

Purpose of Study

The United States continues to become more diverse as new immigrants arrive each year (Pew Research Center, 2017; Ramakrishnan & Ahmad, 2014; US Census Bureau, 2017). Immigrants bring with them experiences that are shaped by the sociopolitical lens of their country of origin and their cultural experiences, values, traditions, and beliefs. The type and duration of the adjustment of navigating a new dominant culture can differ based on an individual and group experiences (Berry, 2003; 2005; Krishnan & Berry, 1992; Oppedal et al., 2004). Cultural adjustment in the United States can be especially high among immigrants who come from non-western and non-European dominated cultures due to the vast differences in cultures (Berry, 1997; Berry, 2005; Tewari & Alvarez, 2009). The types of cultural adjustment could occur at a social level that includes norms of social interaction and behaviors and physical appearance (e.g., norms of attire), mannerisms, and values (Gibson, 2001). Cultural adjustment also happens at the political level that includes adjustment in a country where Asian Indians do not represent the face and voice of the majority which could have been their experience in their country of origin. Thus, as immigrants they may be confronted with having to navigate inequities and discrimination due to their new minority status and potential legal challenges (Gibson, 2001). Cultural adjustment can also manifest at the personal and familial level where
cultural practices, beliefs, and traditions may conflict with those in the dominant culture and also within their families.

Research has shown that the experiences of racial and ethnic minorities are shaped by their individual ancestral histories, cultural backgrounds, and values and that not taking them into account does a great disservice to serving an increasingly multicultural population (Sue & Morishima, 1982; Uba, 2002). This is why it is imperative to study sub-groups within the racial and ethnic minority population in the United States. There is a tendency to treat ethnic groups as monolithic groups which negates the vast differences in their ancestral histories and cultures (Navsaria, 2008; Sue & Sue, 1995; Yagalla et al., 1996). This study aimed to strengthen the literature that is attempting to break free from this monolithic treatment in the Asian American literature. Thus, this study specifically focused on the experiences of Asian Indians residing in the United States. This is a population, per immigration trends from the Pew Research Center (2017), that has steadily increased over the past four decades in the United States.

This research deepens existing scholarship that has examined the experiences of specific racial and ethnic groups. Since research has shown that the process of immigration can be a stressful experience due to cultural adjustment on multiple levels, it is important to understand any protective elements and risk factors that influence this population’s experiences. This study specifically sought to examine the effects of acculturation on psychological well-being, alcohol and substance use behaviors in the Asian Indian population living in the United States. The following questions guided this research study: (1) what is the relationship between acculturation and psychological well-being among Asian Indians; (2) are there differences across generation status with alcohol use, drug use and psychological well-being; (3) are the relationships between psychological well being and alcohol use and psychological well-being and drug use, moderated
by acculturation and (4) are the relationships between acculturation and alcohol use, acculturation and drug use and acculturation and psychological well-being moderated by length of residency in the United States.

**Interpretation of Findings**

**Participants**

The Asian Indian sample in this study were recruited from different geographical regions in the United States (e.g., Michigan, California, New York, New Jersey, Illinois). Information about the study was submitted through email lists for the Asian American Psychological Association (AAPA) and its’ sub-division, Division of South Asian Americans (DoSAA) as well as to South Asian community mental health centers and Asian Indian religious and cultural organizations across the United States. The average age of the participants was 33 years, although ages ranged from 18 to 60 years. The majority of the participants identified as female, heterosexual and Hindu. Most participants reported good English fluency, identified as U.S. citizens, and also reported as either being born and raised in the United States or having lived in the United States for at-least 10 to 15 years. There was some variability in the participant’s reports of relationship status as there were a lot of participants who identified in either the single or married categories. As a result, this sample for the most part may be viewed as homogeneous. This needs to be noted when considering the findings from this study as sub-cultures in India tend to differ across native languages, caste backgrounds, traditions, and religions which can significantly influence immigration and cultural experiences. Also, due to the sample being largely heterosexual and female, it may not represent the experiences of individuals who have other intersecting identities.
Potential Influences on Data

The literature base on Asian Americans and substance use is limited but there is a theme of Asian Americans being reluctant to disclose alcohol and substance use behaviors due to the cultural stigma associated with it (Bhattacharya, 1998). The stigma related to substance use (alcohol and drug use) may have played a role in the results obtained in this study. There was a pattern that was observed throughout the data collection process of the study whereby, several of the participants completed the demographic questionnaire, acculturation (SL-ASIA) and psychological well-being (SPWB) measures, which were first, and then discontinued the study once they reached the alcohol use (AUDIT) and drug use (DAST) sections of the survey. However, the length of the surveys may also have played a role in the retention of participants in the study.

Hypothesis 1

The first hypothesis stated that there will be a negative relationship between acculturation and psychological well-being among Asian Indians residing in the United States. This hypothesis was not supported by the results in this study. A significant relationship between the total scores on the psychological well-being and acculturation measures was not found. While, the results of the study did not indicate that acculturation significantly predicts psychological well-being in this Asian Indian sample, the negative regression coefficients indicates a negative relationship. Thus, the direction of the hypothesis appeared consistent with the findings. This suggests that when acculturation increases, psychological well-being decreases and vice versa. Previous research has found similar findings of an inverse relationship between acculturation and psychological well-being (Chae & Foley, 2010). It may be that as Asian Indians become more acculturated, they lose certain protective aspects of their cultural identity that plays a role in their
psychological well-being. Thus, less acculturated Asian Indian individuals may have a higher sense of psychological well-being due to the protective factors associated with holding on more to their heritage cultural values. However, it is also possible that not all dimensions of psychological well-being represent an overall sense of psychological well-being and that the relationship between acculturation and psychological well-being may be far more complex in the Asian Indian population in the United States. The complexity of this relationship was further established when the six dimensions of the psychological well-being measure were examined as separate constructs with the acculturation measure. The results showed unexpected findings and revealed interesting patterns. The environmental mastery dimension, personal relations with others dimension, and self-acceptance dimension had negative correlations with acculturation whilst the autonomy dimension, personal growth dimension, and purpose of life dimension had positive correlations with acculturation. While all six dimensions of the psychological well-being scale had low correlations with acculturation, the environmental mastery and self-acceptance dimensions had the highest correlations with acculturation but in the negative direction which provides useful information. These results suggested that as acculturation increases, environmental mastery and self-acceptance decreases and vice versa. First, the environmental mastery dimension refers to an individual’s sense of control over their own daily life activities and tasks (Ryff, 1989). Higher scores on the environmental mastery dimension indicate that an individual has developed competency and skills around choosing and developing situations that fulfill personal needs and values as well as developed abilities to make use of opportunities, which in turn aid in the management of a wide range of environmental activities (Ryff, 1989). On the other hand, lower scores on the environmental mastery dimension indicate that an individual may feel overwhelmed, not feel like they have control over their environment,
lack awareness about opportunities, and find it difficult to change or improve their surroundings or situations (Ryff, 1989). When the environmental mastery dimension is viewed in conjunction with acculturation, which refers to a process that an individual or group from a different culture experiences when they have first-hand contact with a new, dominant culture (Berry, 1987; 1997; 2003); the significance is clearer. Acculturation often involves immigrants who are attempting to integrate themselves into their new environments, working through ways to adapt to their circumstances and at the same time manage sociocultural conflicts between their native culture and that of the new dominant culture (Berry, 1987; 1997; 2003). It is interesting to see a negative correlation between acculturation and environmental mastery because often times when immigrants arrive to a new country, they have to negotiate internal cultural adjustments and make changes to their behaviors, perspectives, and values in order to integrate into the environment rather than facilitate changes in their environments. These internal adjustments should also be viewed in conjunction with being a racial and ethnic minority in the United States which may limit sociopolitical access and opportunities. Furthermore, immigrants may experience a loss and experience dissociative states in their identities. Thus, Asian Indian individuals who become more acculturated, may feel more overwhelmed by their situation, struggle with complex contexts, and may not have access to opportunities that should be available to everyone. Further, they may feel like they have to change themselves to fit into their environments rather than feeling empowered in being able to change their environments.

The self-acceptance dimension on the psychological well-being scale is defined as having a positive attitude and general acceptance of the self and past experiences (Ryff, 1989). People who score higher on the self-acceptance dimension tend to have positive feelings about themselves, accept their good and bad qualities, and reflect about their past experiences with
positive feelings (Ryff, 1989). On the other hand, low scores on the self-acceptance dimension indicate general dissatisfaction with life experiences, disappointment with self and lack acceptance of certain qualities about themselves (Ryff, 1989). As previously mentioned acculturation can often involve a loss of cultural identity which make it difficult for Asian Indians to accept themselves if they have to lose an integral part of their identity. Thus, while Asian Indians may be able to navigate bi-culturally in and out of dominant cultural frameworks, they may have to negotiate certain aspects of their cultural identities that may not be acceptable to them at their core.

**Hypothesis 2**

The second hypothesis stated that Asian Indians who are first-generation/immigrants and 1.5 generation will have higher levels of psychological well-being and lower levels of drug and alcohol use than those belonging to second generation and above. This hypothesis was not supported by the findings in the study. A closer examination of the mean scores for each of the three measures showed variability across generation status. While not significant, there were differences across generation status with regards to psychological well-being whereby third-generation participants had lower scores than the rest of the groups. However, it is important to note that those who identified as third generation comprised of significantly less of the sample. Another interesting finding was that second generation individuals had higher scores on the alcohol use measure than immigrants, 1.5 generation, and third-generation individuals but that immigrants had the second highest scores on alcohol use compared with 1.5 generation and third generation individuals.

With regards to scores on the drug use measure, immigrants and third-generation participants had lower scores than 1.5 generation and second-generation participants. These
findings were interesting because they did not show clear patterns of alcohol use, which suggested that other factors may play a role in the manifestation of alcohol use behaviors. Examination of the scores on the psychological well-being measure revealed that most of the participants reported adequate sense of psychological well-being, where most scores fell in the middle. This suggested that Asian Indians differ across generation status with regards to psychological well-being, alcohol and drug use that may be based on other characteristics.

**Hypothesis 3**

The third hypotheses stated that (a) psychological well-being will be a negative predictor of alcohol use, which will be moderated by acculturation and (b) psychological well-being will be a negative predictor of drug use, which will be moderated by acculturation. These hypotheses were partially supported by the data. There was a statistically significant relationship between psychological well-being and alcohol use and a statistically significant relationship between psychological well-being and drug use. However, acculturation was not found to have moderation effects on either the relationship between psychological well-being and alcohol use or the relationship between psychological well-being and drug use. Furthermore, the direction of the relationship was found to be positive for both alcohol use and drug use. These were interesting findings because it appeared that as psychological well-being increased, alcohol use increased as well, similarly, as psychological well-being increased, drug-use increased as well. Traditionally, alcohol use and substance use behaviors have been viewed with negative connotations. One common perception that people tend to have about alcohol and drug use is that those who may not be happy, may not have good mental health, or those who experience a lot of challenges in their lives are the only people who actively engage in alcohol and drug use behaviors. Closer inspection of the AUDIT scores also revealed that most participant’s total
scores were in the 0 to 7 range \((N = 98)\), which per WHO fall in the low-risk range. A number of participants indicated that they engaged in harmful alcohol use \((N = 12)\) and an equal number indicated a likelihood of developing alcohol dependence \((N = 12)\). When the responses to the questions on harmful alcohol use was examined on the AUDIT, most participants did not report harmful alcohol use, only four participants responded in the moderate range to question nine ("have you or someone else been injured because of your drinking in the last year?) and three participants responded in the severe range on question number 10 (has a relative, friend, doctor, or other health care worker been not in the during the concerned about your drinking last year last year or suggested you cut down). These results suggested that it may be possible that when alcohol use is not linked with harmful use, that it can be associated with positive feelings.

Adams, Boscarino, and Galea (2009) found similar findings in their study and concluded that when higher alcohol use was not linked with unhealthy use, it may produce lower levels of stress and buffer against negative physical consequences associated with this psychological state. Thus, it may be that those who have an adequate sense of psychological well-being may engage in increased alcohol use because it provides them an outlet to celebrate their goals and successes with others which may not be linked with unhealthy use, coping, or mental health concerns.

With regards to the relationship between psychological well-being and drug use, inspection of the results revealed that many participants did not endorse drug use behaviors (yes, in the past 12 months, \(N = 20\) and no, in the past 12 months, \(N = 102\)). Examination of the scores also showed that most participants reported no drug related problems or low-level drug related problems \((N = 108)\) while seven participants reported drug related problems in the severe range. These results suggest that while there was a positive direction found between psychological well-being and drug use, the small number of participants who endorsed drug use
may have skewed the data (as reflected in the outliers found in the data) and influenced the results.

When the specific dimensions of psychological well-being were examined, the measures of alcohol and drug use behaviors were found to have higher correlations with the personal growth and purpose in life dimensions than other dimensions of psychological well-being. Personal Growth is defined as an individual’s motivation to develop their abilities and capacities (Ryff; 1989). Higher scores on the personal growth dimension reflect increased capacities of being open to new experiences and ability to reflect on growth and potential in themselves. Given how Asian Indian culture tends to stigmatize drug and alcohol use; it could be that those who reported more personal growth, experienced increased independence in making decisions about their alcohol and substance use. Both alcohol and drug use measures also had higher correlations with the purpose in life dimension of psychological well-being. The purpose in life dimension looks at whether an individual has goals in their life, finds their lives meaningful and beliefs that give their lives purpose (Ryff, 1989). This was another unexpected finding with the purpose in life dimension being linked with alcohol and drug use measures. These findings indicated that when alcohol use is not linked with harmful use or alcohol dependence, it can be associated with psychological well-being. These findings also break the misconception that Asian Indians do not engage in alcohol use or substance use. While the majority of participants did not endorse harmful alcohol use or alcohol dependence, a sizeable portion did endorse alcohol use and drug-related problems. This suggested that while there is a perception of Asian Indians as having no substance or alcohol-related concerns; there are Asian Indians who do experience these problems. These results also confirmed previous research obtained through surveys of Asian American youth whereby Asian American youth may have an overall lower
rate of Alcohol consumption but when they engaged in alcohol use, they did so at higher rates (Lee et al., 2003).

**Hypothesis 4**

The fourth hypothesis stated that the length of residency in the United States will moderate the following relationships (a) negative relationship between acculturation and psychological well-being, (b) positive relationship between acculturation and alcohol use, and (c) positive relationship between acculturation and drug use. These hypotheses were not supported. A statistically significant relationship between acculturation and alcohol use was found but length of residency was not found to moderate this relationship. The direction of the significant relationship between acculturation and alcohol use was negative, which suggested that as acculturation increases, alcohol use decreases. This was an unexpected finding as previous research has shown that the stress associated with acculturation combined with the more acceptable social norms of drinking in the United States tend to result in increased alcohol use (Navsaria (2008; Prabhughate, 2010). It is possible that Asian Indian individuals who are less acculturated may notice their cultural differences with that of mainstream Eurocentric culture more due to the stronger cultural ties with their heritage culture than more acculturated Asian Indian Americans. These more apparent differences may be more difficult to navigate and adjust with the pressures to acculturate. Further, they may be more susceptible to noticing experiences of marginalization within mainstream communities. As a result, they may turn to alcohol use to cope with the challenges associated with navigating Eurocentric norms and culture.

**Summary**

The results from this study suggest that Asian Indians may have a high sense of overall psychological well-being when examined through measures based on individualistic cultural
norms. Furthermore, Asian Indians with a high sense of their psychological well-being may engage in substances and alcohol use for pleasure rather than just as ways of coping. Thus, this study may be helpful to Asian Indian individuals who feel isolated and stigmatize their own and others alcohol or substance use. In helping differentiate between pleasurable alcohol and substance use with harmful use or abuse, Asian Indians may begin to reduce the stigma related to their own and other people’s alcohol and substance use behaviors. This differentiation and decrease in stigma may help Asian Indians talk more openly about their alcohol and substance use behaviors. With regards to acculturation, the findings from this research indicate that there may be other factors that influence the relationship between acculturation and psychological well-being. Further, that the psychological well-being measure utilized in this study may not completely explain acculturation experiences for the Asian Indian sample in this study.

**Limitations**

There were several limitations to this study. There is limited research on the Asian Indian American population, and the present study is an attempt to add to the quantitative literature base on the acculturation experiences, sense of psychological well-being and alcohol and substance use behaviors in this population. One limitation with doing quantitative research with specific racial and ethnic minority populations, such as the Asian Indian population, is that the survey measures are often not validated with these cultural groups. This limitation highlights the necessity for additional research studies to be conducted to validate the existing measures on this population and/ or for the creation of specific measures to assess the needs and experiences of the Asian Indian population.

Another limitation may have been the use of the Ryff’s scale of psychological well-being. Ryff’s scale of psychological well-being has been extensively researched and validated across
different populations and settings and provides good information on an individual’s sense of well-being. However, a major limitation that was found to exist in the scale is that it does emphasize individuality. Given how Asian Indian culture tends to center around collectivism; the scale’s focus on individuality may have limited a complete understanding of an overall sense of their psychological well-being. While acculturated Asian Indians may adopt some levels of individualistic cultural norms, there is no evidence to suggest that they do not still hold collectivistic cultural norms and values as the measure did not assess for collectivistic cultural norms.

The demographic composition of the sample may also have been a limiting factor. As reported earlier, most participants identified as female, heterosexual, and Hindu. Thus, the generalizability of the study is limited as it does not represent Asian Indians who differ based on religion, sexual orientation, gender identity, and other intersecting identities. Research has shown that individuals who have more than one marginalized identity tend to experience more challenges and barriers which affects their mental health (Seng, Lopez, Sperlich, Hamama, & Reed, 2012). As a result, Asian Indians who have another minority identity both within Asian Indian spaces and in the larger societal context may have different experiences and as such acculturation may influence their psychological well-being, alcohol use and substance use behaviors in different ways.

The use of the SL-ASIA acculturation scale may also have posed limitations in attempting to fully understand an Asian Indian individual’s experiences of acculturation due its limited dimensionality and focus on cultural behaviors (Chen & Danish, 2010). The scope of the scale may be limited in that it may fail to capture nuances in acculturation experiences of those who identify more bi-culturally as reflected in the majority of the Asian Indian participants’
scores on the measure. Further, about half of the participants in this study reported that they were born and raised in the United States. As a result, this measure may not have adequately addressed the nuanced adaptations involved with regards to cultural values and worldviews for the Asian Indian participants in this study. Furthermore, since the measure does not specifically examine an Asian Indian person’s acculturation experiences; some of the items may not be as relevant to their experiences such as questions on English fluency (most have high levels of English fluency due to British colonization history in India) (Farver et al., 2002). Several words were modified on the SL-ASIA scale as there were terms that did not resonate with an Asian Indian individual’s identity such as the terms “Oriental” and “Asia”. Asian Indians tend to self-identify as Asian Indian, Indian American, Indian, Indian immigrant, and at times Asian-American.

Finally, a limitation to this study emerged as a result of utilizing alcohol and drug use measures. A barrier in using these measures is that most participants reported no alcohol use and no drug use and on the other end, a few participants reported severe alcohol and drug use. This created significant outliers in the data set, which has been especially apparent in studies such as this with small sample sizes. As a result, the total scores of the AUDIT and DAST were transformed to reduce the number of outliers. Several different methods of managing outliers were tested, including the removal of outliers in the data. All analyses involving the AUDIT and DAST were run with the transformed outliers and compared with analyses with the outliers removed in the data set. Both methods revealed the same results with regards to statistical significance.
Clinical Implications

Asian Americans constitute sub-groups with immense diversity in culture and traditions which is why it is important to study within group diversity. This research provides a cultural framework for educators and mental health practitioners to better serve the needs of the Asian Indian American population. This research calls for educators to stop aggregating Asian American as one homogeneous group in order to provide a better understanding of the individual sub-group needs within this population. While the scholarship on acculturation is abundant, the findings from this study indicate that acculturation experiences may look different for the Asian Indian American population. Mental health practitioners working with Asian Indian clients should consider cultural values and context into their case conceptualization. This includes (a) family values and collectivistic orientation, (b) immigration history or generation status, (c) religious background, (d) cultural caste system, and (e) cultural worldview and biculturalism (Chandras et al., 2013). More often than not, when American society thinks of immigrants, especially from Asia, there is a tendency to think that all Asian immigrants have limited English fluency or do not speak English as their first language; and in this sense perceive fluency in English language as the most important barrier to consider in the process of cultural adjustment into American society (Farver et al., 2002). However, the high English fluency of Asian Indians due to British colonialism in India negates this as a major barrier in their immigration experiences. This suggests that Asian Indians may be more used to navigating the world biculturally and that other factors may influence how they adjust and navigate between cultures. Findings from this study also indicate that acculturation may be better explained by other aspects of psychological well-being that may not be represented in the existent measure of psychological well-being. Thus, when working with Asian Indian clients in clinical settings, it is important to
look beyond their English fluency as a sign of whether or not they are acculturated, experiencing mental health struggles as a result of immigration, and their engagement with substance use behaviors. Conflicts between Asian Indian cultural values and American values across generations in the family may be a large influence in an Asian Indian person’s experiences which is consistent with previous research as well. It does a disservice to the Asian Indian population’s needs, when cultural values and family systems are not considered as significant aspects of their identity and lives.

Since, findings from this study indicated that a negative relationship exists between acculturation and alcohol use, it may be useful to assess the acculturation level of an Asian Indian client. This information may be helpful for clinicians working with Asian Indian clients because client experiences may be related to connections to their heritage culture. Given, the likelihood that less acculturated Asian Indians may find it more difficult to navigate American society due to Eurocentric mainstream norms, they may be at greater risk for engaging in alcohol use. This exploration alongside an assessment of whether alcohol use is linked with coping versus celebrating successes and socializing with peers, will aid in how mental health professionals approach treatment with this population. Thus, Asian Indian clients may need to be assisted in exploring coping methods to help with managing experiences of racism, discrimination, and cultural value conflicts.

While there is a general tendency to view Asian Indians as having low rates of substance use due to low numbers in research, this may highlight the discomfort and shame surrounding substance use rather than actual numbers. Thus, it is essential that practitioners conduct an assessment that includes questions that ask about alcohol and substance use. This lack of exploration combined with the stigma and shame associated with both mental illness and
substance use may make it difficult for Asian Indian clients who are struggling with both of these issues to seek treatment. However, the findings from this study also suggest that substance and alcohol use may not always be linked with decreased psychological well-being. It appears that Asian Indians who engage in alcohol or substance use may have positive associations with psychological well-being. While there is a lot of stigma surrounding substance use and alcohol use, mental health practitioners who are able to consider the possible positive connotations surrounding use, may be able to increase therapeutic rapport and de-stigmatize substance and alcohol use for their Asian Indian clients.

Oftentimes, mainstream U.S. society tends to place both explicit and implicit systemic pressures on racial and ethnic minority groups to conform and acculturate to mainstream culture, resulting in immigrants losing essential parts of their cultural identities and/ or experiencing significant barriers when they do not assimilate and adopt U.S. dominant cultural values. This may become evident in therapy settings when therapists impose Western, Eurocentric values while working with Asian Indian clients, exposing cultural biases. In order to provide culturally competent services to Asian Indian American clients, the following recommendations may be a useful starting point. First, given the high level of stigma related to mental illnesses and seeking mental health services among Asian Indians; it is important that therapists begin by preparing their client for counseling. This preparation involves providing psychoeducation on the stages of counseling, what happens in counseling, and explaining the role of the therapist and client (Ibrahim et al., 1997). Second, it is important to refrain from making assumptions about an Asian Indian American client’s experiences or imposing Eurocentric cultural values on them. For example, if an Asian Indian client is bringing up increased bicultural conflicts with their family members due to different levels of acculturation; rather than guiding them to set “boundaries” or
“distance” from their families; helping clients explore what “cultural boundaries” might look like for them (keeping in mind collectivistic cultural frameworks) might be more helpful. In addition, Western notions of relationships tend to pathologize interdependence in relationships, which for many Asian Indians is a positive and protective factor. The difficulties mental health practitioners have in seeing how their cultural values may be protective and positive attributes may result in many Asian Indian clients to not return to seek therapy services (Chandras et al., 2013). Further, it might be beneficial to explore what “well-being” and “mental health” means for Asian Indian clients and to use this knowledge to guide treatment goals and assess outcomes. Finally, this study also highlights the need for researchers to develop more culturally nuanced models of psychological well-being. Such models will be able to better integrate the interplay of diverse cultural worldviews and values in the conceptualization of psychological well-being and mental health.

**Future Research Recommendations**

Patterns observed throughout the recruitment phase of the study indicated that stigma associated with substance and alcohol abuse among Asian Indian participants influenced participation. In order to access participants who experience high discomfort responding to substance and alcohol-related questions, it might be helpful for future researchers to embed a video at the beginning of the study, introducing themselves and sharing some background information as a way to connect with participants. Given limitations in accessing second and third generation Asian Indian individuals, it might be useful to consider snow-ball sampling methods and recruiting participants at non-South Asian-concentric locations. These study adjustments may be help counter the fact that the majority of Asian Indians identify as
immigrant/first-generation and/or 1.5 generation because most immigrated to the United States in the past three decades (Misra, 2013; Ruy et al., 2002).

**Mediating Variables**

This research study uncovered a limitation of existent models of psychological well-being, specifically Ryff’s (1989) scale of psychological well-being. The findings from this study showed that not only did acculturation not significantly predict psychological well-being in this Asian Indian sample but that the different dimensions of psychological well-being are correlated in different directions. Given how about half the participants in this study identified as born and raised in the United States, it might be useful to explore differences among US-Born Asian Indians and Non-US born Asian Indians. Further, it might be useful to explore gender differences among Asian Indians with regards to alcohol and substance use behaviors. In the present study, most participants identified as female, and hence comparisons across groups was not possible. However, research has shown that individuals who identify as male tend to engage in more alcohol and substance use and it would be valuable to assess whether the same holds true for the Asian Indian population.

Finally, in order to gain a comprehensive understanding about the role of acculturation and its effects on psychological well-being, future studies should examine the contribution of a variety of mediating and moderating variables together including demographic variables (e.g., relationship status, residency status, birth county/parent’s birth country, and religion), psychological characteristics, and family dynamics.

**Asian Indian LGBTQ+ Communities**

It would greatly add to the literature base for future research studies to specifically examine the experiences of Asian Indians who identify within LGBTQ+ communities. The
sample in this study largely self-identified as heterosexual and female. Due to the cultural context surrounding heteronormative relationships, an Asian Indian person who identifies within the LGBTQ+ spectrum may not report the same levels of psychological well-being as reported by this sample. It is important to conduct this research because there is a lack of literature that examines the experiences of the Asian Indian LGBTQ+ community.

**Religious Diversity**

Another limitation of this study is that the sample was predominately Hindu which limits the generalizability of the findings to Asian Indians living in the United States who do not identify as Hindu. Asian Indians from different religious backgrounds may experience unique protective and risk factors that influence their psychological well-being and subsequent alcohol and drug use behaviors. Furthermore, Asian Indians from different religious backgrounds may also experience acculturation differently based on their identities. For example, an Asian Indian person who identifies as Christian may experience different levels of cultural adjustment where the majority culture practices Christianity versus an Asian Indian person who identifies as Muslim, where the majority culture has often discriminated and negatively stereotyped this population. Also, after Hinduism, the second highest group in the sample was found to be “other” which could refer to other religions not listed or agnosticism and atheism. The latter two may completely change the conceptualization when examining acculturation experiences. Thus, studies that more specifically assess these variables may allow for enriched information about Asian Indian individual’s experiences.

**Mixed Method Design**

It may be useful to employ a mixed methods design that includes both quantitative and qualitative methods. Qualitative methodology may increase the richness of the data as it can
provide a broader range of experiences that Asian Indians living in the United States experience. It may also allow researchers to delve deeper into the difficulties with responding to questions related to alcohol and substance use behaviors. A concern that arose during the process of data collection in the study was participants dropping out when they reached the alcohol and drug use questions. While quantitative measures have advantages of anonymity when responding to uncomfortable questions, direct interaction with the participant may aid with building rapport and safety, allowing for rich information about their experiences and observations that can aid with the interpretation of the findings.

**Generation Status**

It might be useful to explore the nature of the relationship that Asian Indian Americans across generation status experience with regards to psychological well-being, acculturation, alcohol, and substance use behaviors. While, this study explored linear relationships among the variables, it could be possible that curvilinear relationships might exist between these variables. As previously mentioned, 1.5 generation individuals tend to be “in-between” and as a result may often serve as the bridge between immigrant and second generation individuals in their families and communities. This role may create a different set of barriers and challenges than for immigrant and second or third generation Asian Indian Americans.
REFERENCES


Ambedkar, B. R. (1948). The Untoucheables Who were they and Why they became untoucheables?


doi:10.1207/s15327884mca1103_4


https://doi.org/10.4088/jcp.v64n0705


doi:10.1016/2006.04.007


doi:10.1177/0022022103034003003


http://dx.doi.org.libproxy.library.wmich.edu/10.1177/0020872811407940


https://doi.org/10.1037/rel0000256


https://doi.org/10.1080/07481756.1998.12068957


doi:10.1108/17465721111134556


https://doi.org/10.1080/03069880701593516


https://doi.org/10.1016/0306-4603(82)90005-3


APPENDIX A

Informed Consent Form
Appendix A

Informed Consent Form

Western Michigan University

Counselor Education and Counseling Psychology

Informed Consent

Principal Investigator: [Joseph R. Morris, Ph.D.]

Student Investigator: [Sonia Amin, M.A.]

You have been invited to participate in a research study because you identify as Asian Indian American and are between the ages of 18 to 60. The goal of the research study is to understand the experiences of Asian Indian American people. This consent form will describe the goals of the study, time commitment asked of you, and benefits and risks to participating in the study. This consent document will also talk about how your information will be kept private and anonymous. Please read this document carefully. Please contact me if you have any questions or concerns about participation in this study.

Your participation in this study is completely voluntary. You may choose to not participate. If you decide to participate in this study, you may withdraw at any time. If you decide to not participate in this study or withdraw participating at any time, you will not suffer any consequences personally, academically, or professionally.

The study involves completing online surveys that will take approximately 25-30 minutes. Your responses will be confidential and private. You will not be asked to share any personal information such as your name, residence, or contact information. If you choose to enter a random draw for the chance to receive a $25 Amazon gift card, you will be asked to provide an email address at the end of the survey. However, the information collected from the study will be kept separate from your email address. After the draw, your information will be discarded.
The information that is being measured in this study are the experiences of Asian Indian American. For example, the kinds of cultural adjustments you make or are making when you moved to the United States. The goal of this study is to understand the experiences of Asian Indian Americans living in the United States. The survey questions will ask you about demographics such as age, gender, generation status, country of origin, sexual orientation, and citizenship status. You will also be asked questions related to your acculturation level, family, lifestyle changes, cultural values and social connections, alcohol and drug use. You will also be asked questions related to your psychological well-being.

All data is stored in an electronic format that is password-protected. Only the investigators will have access to the password. To ensure your information is kept confidential, you will not be asked to share any information that will personally identify you.

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

While there are minimal risks of participating in this study, there may be some questions that could be uncomfortable or upsetting to answer. This is a reason that questionnaires have been selected that are widely used and not known to cause extreme distress in the Asian American population. Furthermore, you can contact the student investigator or principal investigator at any point in this study if at any point you feel upset or distressed by the questions asked of you in the study. Resources for counseling in your community will also be available if requested.

**What are the benefits of participating in this study?**

The benefits of participating in this study might help increase awareness about the mental health needs of the Asian Indian population. This in turn might help mental health professionals better treat you or others in the Asian Indian community.
What if you want to stop participating in this study?

You can decide to stop participating in the study at any point in time and for any reason. You will not get any penalty or endure any prejudice by your decision to discontinue participation. You will experience no consequences either academically or personally for choosing to stop participating in this study. The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the student investigator, [Sonia Amin, M.A.] at [sonia.y.amin@wmich.edu]. Please feel free to also contact the primary investigator, [Joseph R. Morris, PhD] at [269-387-5112] or [joseph.r.morris@wmich.edu]. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent has been approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB) on “September 26, 2018.” Do not participate after “September 26, 2019.”

I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study. Participating in this survey online indicates your consent for use of the answers you supply.
APPENDIX B

HSIRB Approval Letters
Date: October 9, 2018

To: Joseph Morris, Principal Investigator
Sonia Amin, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: IRB Project Number 18-09-30

This letter will serve as confirmation that your research project titled “Effects of Acculturation on Psychological Well-Being and Substance use in Asian-Indian American Population” has been approved under the exempt category of review by the Western Michigan University Institutional Review Board (IRB). The conditions and duration of this approval are specified in the policies of Western Michigan University. You may now begin to implement the research as described in the application.

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

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

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

Approval Termination: October 8, 2019
Date: November 13, 2019

To: Joseph Morris, Principal Investigator
    Sonia Amin, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: IRB Project Number 18-09-30

This letter will serve as confirmation that the change to your research project titled “Effects of Acculturation on Psychological Well-Being and Substance use in Asian-Indian American Population” requested in your memo received November 9, 2019 (to expand recruitment to organizations outside of Michigan) has been approved by the WMU Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the IRB for consultation.

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

Approval Termination: October 8, 2020
APPENDIX C

Recruitment Email Script
Appendix C

Recruitment Email Script

I am looking for participants that identify as Asian Indian, Asian Indian American, or Asian Indian immigrants, between the ages 18-60 to participate in this study. If you or anyone you know would be willing to contribute their knowledge and experiences to help provide more insight on Asian Indian’s experiences, please send them the invitation below. Any help will be much appreciated.

My name is Sonia Amin and I am a doctoral student in counseling psychology at Western Michigan University. I am writing to invite you to participate in my dissertation study that examines acculturation, substance use, and psychological well-being in Asian Indians/Asian Indian Americans. This study will help us understand the experiences of Asian Indians and develop tools to help this population further. Your insight is extremely important because it will be able to help mental health clinicians have a better understanding of your experiences and in turn better serve other Asian Indians.

You can complete the study online by answering a series of questions. It will take approximately 20-25 minutes to complete. Upon completion of the study, you can choose to enter a random draw by entering your email address to receive a $25 Amazon gift card.

Please feel free to contact me at sonia.y.amin@wmich.edu should you have any questions or need additional information. I would also be happy to speak with you over the phone to discuss the study, informed consent, and confidentiality.
APPENDIX D
Recruitment Flyer
Appendix D

Recruitment Flyer

Research Study seeking Asian Indian participants.

I am interested in the unique experiences of Asian Indians residing in the United States. The study can be completed online and takes 20-25 minutes to complete. Upon completion, you can choose to enter into a random draw to win a $25 Amazon gift card. Email me at 

sonia.y.amin@wmich.edu to know more about the study.

Thank you!
APPENDIX E

Demographic Questionnaire
Appendix E
Demographic Questionnaire

1. Age:

2. Gender identity:

3. Sexual orientation:
   - □ Heterosexual
   - □ Gay
   - □ Lesbian
   - □ Bisexual
   - □ Pansexual
   - □ Demisexual
   - □ Other

4. Religion:
   - □ Hindu
   - □ Sikh
   - □ Muslim
   - □ Jain
   - □ Christian
   - □ Other: ___

5. Relationship status
   - □ Married
   - □ Single
   - □ Other:
6. English language proficiency
   □ Good
   □ Okay
   □ Limited

7. Number of years residing in the United States
   □ 0-1 year
   □ 2-5 years
   □ 5-10 years
   □ 10-15 years
   □ Born and raised

8. Generation status
   □ Immigrant
   □ 1
   □ 1.5
   □ 2
   □ 3

9. Geographic location of country of origin

10. Residency status (H1-visa, permanent resident, citizen).
    □ Citizen
    □ Permanent Resident
    □ H-1 Visa
    □ Student Visa
    □ Other
APPENDIX F

Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA)
Appendix F

Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA)

Instructions: The questions which follow are for the purpose of collecting information about your historical background as well as more recent behaviors which may be related to your cultural identity. Choose the one answer which best describes you.

1. What language can you speak?
   1. Indian only (for example, Hindi, Marathi, Bengali, Urdu etc.)
   2. Mostly Indian, some English
   3. Indian and English about equally well (bilingual)
   4. Mostly English, some Indian
   5. Only English

2. What language do you prefer?
   1. Indian only (for example, Hindi, Marathi, Bengali, Urdu, etc.)
   2. Mostly Indian, some English
   3. Indian and English about equally well (bilingual)
   4. Mostly English, some Indian
   5. Only English

3. How do you identify yourself?
   1. Indian
   2. Asian
   3. Asian American
   4. Indian-American
   5. American
4. Which identification does (did) your mother use?
   1. Indian
   2. Asian
   3. Asian American
   4. Indian-American
   5. American

5. Which identification does (did) your father use?
   1. Indian
   2. Asian
   3. Asian American
   4. Indian-American
   5. American

6. What was the ethnic origin of the friends and peers you had, as a child up to age 6?
   1. Almost exclusively Indians, Indian-Americans, Asian Americans
   2. Mostly Indians, Indian-Americans, Asian Americans
   3. About equally Indian groups and Anglo groups
   4. Mostly Anglos, Blacks, Hispanics, or other non-Indian ethnic groups
   5. Almost exclusively Anglos, Blacks, Hispanics, or other non-Indian ethnic groups
7. What was the ethnic origin of the friends and peers you had, as a child from 6 to 18?

1. Almost exclusively Indians, Indian-Americans, Asian Americans
2. Mostly Indians, Indian-Americans, Asian Americans
3. About equally Indian groups and Anglo groups
4. Mostly Anglos, Blacks, Hispanics, or other non-Indian ethnic groups
5. Almost exclusively Anglos, Blacks, Hispanics, or other non-Indian ethnic groups

8. Whom do you now associate with in the community?

1. Almost exclusively Indians, Indian-Americans, Asian Americans
2. Mostly Indians, Indian-Americans, Asian Americans
3. About equally Indian groups and Anglo groups
4. Mostly Anglos, Blacks, Hispanics, or other non-Indian ethnic groups
5. Almost exclusively Anglos, Blacks, Hispanics, or other non-Indian ethnic groups

9. If you could pick, whom would you prefer to associate with in the community?

1. Almost exclusively Indians, Indian-Americans, Asian Americans
2. Mostly Indians, Indian-Americans, Asian Americans
3. About equally Indian groups and Anglo groups
4. Mostly Anglos, Blacks, Hispanics, or other non-Indian ethnic groups
5. Almost exclusively Anglos, Blacks, Hispanics, or other non-Indian ethnic groups
10. What is your music preference?
   1. Only Indian music
   2. Mostly Indian
   3. Equally Indian and English
   4. Mostly English
   5. English only

11. What is your movie preference?
   1. Indian-language movies only
   2. Indian-language movies mostly
   3. Equally Indian/English-language movies
   4. Mostly English-language movies
   5. English-language movies only

12. What generation are you? (circle the generation that best applies to you: )
   1. 1st Generation = I was born in India or country other than U.S.
   2. 2nd Generation = I was born in U.S., either parent was born in India or country other than U.S.
   3. 3rd Generation = I was born in U.S., both parents were born in U.S, and all grandparents born in India or country other than U.S.
   4. 4th Generation = I was born in U.S., both parents were born in U.S, and at least one grandparent born in India or country other than U.S. and one grandparent born in U.S.
   5. 5th Generation = I was born in U.S., both parents were born in U.S., and all grandparents also born in U.S.
   6. Don't know what generation best fits since I lack some information.
13. Where were you raised?
   1. In India only
   2. Mostly in India, some in U.S.
   3. Equally in India and U.S.
   4. Mostly in U.S., some in India
   5. In U.S. only

14. What contact have you had with India?
   1. Raised one year or more in India
   2. Lived for less than one year in India
   3. Occasional visits to India
   4. Occasional communications (letters, phone calls, etc.) with people in India
   5. No exposure or communications with people in India

15. What is your food preference at home?
   1. Exclusively India food
   2. Mostly India food, some American
   3. About equally India and American
   4. Mostly American food
   5. Exclusively American food
16. What is your food preference in restaurants?

1. Exclusively Indian food
2. Mostly Indian food, some American
3. About equally Indian and American
4. Mostly American food
5. Exclusively American food

17. Do you

1. read only an Indian language
2. read an Indian language better than English
3. read both Indian and English equally well
4. read English better than an Indian language
5. read only English

18. Do you

1. write only an Indian language
2. write an Indian language better than English
3. write both Indian and English equally well
4. write English better than an Indian language
5. write only English

19. If you consider yourself a member of the Indian group (Indian-American, Asian Indian, Indian, Indian immigrant, whatever term you prefer), how much pride do you have in this group?

1. Extremely proud
2. Moderately proud
3. Little pride
4. No pride but do not feel negative toward group
5. No pride but do feel negative toward group

20. How would you rate yourself?
   1. Very Indian
   2. Mostly Indian
   3. Bicultural
   4. Mostly Westernized
   5. Very Westernized

21. Do you participate in Indian occasions, holidays, traditions, etc.?
   1. Nearly all
   2. Most of them
   3. Some of them
   4. A few of them
   5. None at all

22. Rate yourself on how much you believe in Indian values (e.g., about marriage, families, education, work):
   1  2  3  4  5
   (do not believe)  (strongly believe in Asian values)

23. Rate your self on how much you believe in American (Western) values:
   1  2  3  4  5
   (do not believe)  (strongly believe in Asian values)

24. Rate yourself on how well you fit when with other Indian of the same ethnicity:
   1  2  3  4  5
   (do not fit)  (fit very well)
25. Rate yourself on how well you fit when with other Americans who are non-Indian (Westerners):

1  2  3  4  5
(do not fit) (fit very well)

26. There are many different ways in which people think of themselves. Which ONE of the following most closely describes how you view yourself?

1. I consider myself basically an Indian person. Even though I live and work in America, I still view myself basically as an Indian person.

2. I consider myself basically as an American. Even though I have an Indian background and characteristics, I still view myself basically as an American.

3. I consider myself as an Indian-American or Asian American, although deep down I always know I am an Indian.

4. I consider myself as an Indian-American or Asian American, although deep down, I view myself as an American first.

5. I consider myself as an Indian-American or Asian American. I have both Indian and American characteristics, and I view myself as a blend of both.

© Copyright 1992 of SL-ASIA by author Dr. Richard M. Suinn, Colorado State University.
APPENDIX G

Ryff’s Scale of Psychological Well-Being Scales (SPWB)
## Appendix G

### Ryff’s Psychological Well-Being Scales (PWB)

Please indicate your degree of agreement (using a score ranging from 1 - 6) to the following sentences:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>2</td>
<td>In general, I feel I am in charge of the situation in which I live.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>3</td>
<td>I am not interested in activities that will expand by horizons.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>4</td>
<td>Most people see me as loving and affectionate.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>5</td>
<td>I live life one day at a time and don’t really think about the future.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>6</td>
<td>When I look at the story of my life, I am pleased with how things have turned out.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>7</td>
<td>My decisions are not usually influenced by what everyone else is doing.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>8</td>
<td>The demands of everyday life often get me down.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>9</td>
<td>I think it is important to have new experiences that challenge how you think about yourself and the world.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>10</td>
<td>Maintaining close relationships has been difficult and frustrating for me.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>Score 1</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>11</td>
<td>I have a sense of direction and purpose in life.</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>In general, I feel confident and positive about myself.</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>I tend to worry about what other people think of me.</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>I do not fit very well with the people and the community around me.</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>When I think about it, I haven’t really improved much as a person over the years.</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>I often feel lonely because I have few close friends with whom to share my concerns.</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>My daily activities often seem trivial and unimportant to me.</td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>I feel like many of the people I know have gotten more out of life than I have.</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>I tend to be influenced by people with strong opinions.</td>
<td>1</td>
</tr>
<tr>
<td>20</td>
<td>I am quite good at managing the many responsibilities of my daily life.</td>
<td>1</td>
</tr>
<tr>
<td>21</td>
<td>I have a sense that I have developed a lot as a person over time.</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>I enjoy personal and mutual conversations with family members or friends.</td>
<td>1</td>
</tr>
<tr>
<td>23</td>
<td>I don’t have a good sense of what it is I’m trying to accomplish in life.</td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td>I like most aspects of my personality.</td>
<td>1</td>
</tr>
</tbody>
</table>
25 I have confidence in my opinions, even if they are contrary to the general consensus.  
1 2 3 4 5 6
26 I often feel overwhelmed by my responsibilities.  
1 2 3 4 5 6
27 I do not enjoy being in new situations that require me to change my old familiar ways of doing things.  
1 2 3 4 5 6
28 People would describe me as a giving person, willing to share my time with others.  
1 2 3 4 5 6
29 I enjoy making plans for the future and working to make them a reality.  
1 2 3 4 5 6
30 In many ways, I feel disappointed about my achievements in life.  
1 2 3 4 5 6
31 It’s difficult for me to voice my own opinions on controversial matters.  
1 2 3 4 5 6
32 I have difficulty arranging my life in a way that is satisfying to me.  
1 2 3 4 5 6
33 For me, life has been a continuous process of learning, changing and growth.  
1 2 3 4 5 6
34 I have not experienced many warm and trusting relationships with others.  
1 2 3 4 5 6
35 Some people wander aimlessly through life, but I am not one of them.  
1 2 3 4 5 6
36 My attitude about myself is probably not as positive as most people feel about themselves.  
1 2 3 4 5 6
I judge myself by what I think is important, not by the values of what others think is important.

I have been able to build a home and a lifestyle for myself that is much to my liking.

gave up trying to make big improvements or changes in my life a long time ago

I know that I can trust my friends, and they know they can trust me.

I sometimes feel as if I’ve done all there is to do in life.
APPENDIX H

Alcohol Use Disorders Identification Test: Self-Report Version
Appendix H

Alcohol Use Disorders Identification Test: Self-Report Version

Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest. Place an X in one box that best describes your answer to each question.

<table>
<thead>
<tr>
<th>Questions</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you have a drink containing alcohol?</td>
<td>Never</td>
<td>Monthly</td>
<td>2-4</td>
<td>2-3</td>
<td>4 or more</td>
</tr>
<tr>
<td></td>
<td>or less</td>
<td>times a</td>
<td>times a</td>
<td>more</td>
<td>week</td>
</tr>
<tr>
<td></td>
<td>month</td>
<td>week</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</td>
<td>1 or 2</td>
<td>3 or 4</td>
<td>5 or 6</td>
<td>7 to 9</td>
<td>10 or more</td>
</tr>
<tr>
<td>3. How often do you have six or more drinks on one occasion?</td>
<td>Never</td>
<td>Less than</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost</td>
</tr>
<tr>
<td></td>
<td>monthly</td>
<td>daily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. How often during the last year have you found that you were not able to stop drinking once you had started?</td>
<td>Never</td>
<td>Less than</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost</td>
</tr>
<tr>
<td></td>
<td>monthly</td>
<td>daily</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. How often during the last year have you failed to do what was normally expected of you because of drinking?  
   - Never  
   - Less than monthly  
   - Monthly  
   - Weekly  
   - Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?  
   - Never  
   - Less than monthly  
   - Monthly  
   - Weekly  
   - Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?  
   - Never  
   - Less than monthly  
   - Monthly  
   - Weekly  
   - Daily or almost daily

8. How often during the last year have you been unable to remember happened the night before because of your drinking?  
   - Never  
   - Less than monthly  
   - Monthly  
   - Weekly  
   - Daily or almost daily

9. Have you or someone else been injured because of your drinking in the last year?  
   - No  
   - Yes, but not in the last year  
   - Yes, during the last year
<table>
<thead>
<tr>
<th>Question</th>
<th>No</th>
<th>Yes, but</th>
<th>Yes, during</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has a relative, friend, doctor, or other health care worker been not in the concerned about your drinking last year last year or suggested you cut down?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX I

Drug Abuse Screening Test (DAST-10)
Appendix I

Drug Abuse Screening Test (DAST-10)

The following questions concern information about your possible involvement with drugs not including alcoholic beverages during the past 12 months. "Drug abuse" refers to (1) the use of prescribed or over-the-counter drugs in excess of the directions, and (2) any nonmedical use of drugs. The various classes of drugs may include cannabis (marijuana, hashish), solvents (e.g., paint thinner), tranquilizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics (e.g., heroin). Remember that the questions do not include alcoholic beverages. Please answer every question. If you have difficulty with a statement, then choose the response that is mostly right.

<table>
<thead>
<tr>
<th>In the past 12 months…</th>
<th>Circle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Have you used drugs other than those required for medical reasons?</td>
<td>Yes</td>
</tr>
<tr>
<td>2 Do you abuse more than one drug at a time?</td>
<td>Yes</td>
</tr>
<tr>
<td>3 Are you unable to stop abusing drugs when you want to?</td>
<td>Yes</td>
</tr>
<tr>
<td>4 Have you ever had blackouts or flashbacks as a result of drug use?</td>
<td>Yes</td>
</tr>
<tr>
<td>5 Do you ever feel bad or guilty about your drug use?</td>
<td>Yes</td>
</tr>
<tr>
<td>6 Does your spouse (or parents) ever complain about your involvement with drugs?</td>
<td>Yes</td>
</tr>
<tr>
<td>7 Have you neglected your family because of your use of drugs?</td>
<td>Yes</td>
</tr>
<tr>
<td>8 Have you engaged in illegal activities in order to obtain drugs?</td>
<td>Yes</td>
</tr>
<tr>
<td>9 Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?</td>
<td>Yes</td>
</tr>
<tr>
<td>10 Have you had medical problems as a result of your drug use (e.g., memory)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
loss, hepatitis, convulsions, bleeding)?

Scoring: Score 1 point for each question answered “Yes,” except for question 3 for which a “No” receives 1 point.

<table>
<thead>
<tr>
<th>Score</th>
<th>Degree of Problems Related to Drug Abuse</th>
<th>Suggested Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No problems reported</td>
<td>None at this time</td>
</tr>
<tr>
<td>1-2</td>
<td>Low level</td>
<td>Monitor, re-assess at a later date</td>
</tr>
<tr>
<td>3-5</td>
<td>Moderate level</td>
<td>Further investigation</td>
</tr>
<tr>
<td>6-8</td>
<td>Substantial level</td>
<td>Intensive assessment</td>
</tr>
<tr>
<td>9-10</td>
<td>Severe level</td>
<td>Intensive assessment</td>
</tr>
</tbody>
</table>

© Copyright 1982 by the test author Dr. Harvey Skinner, York University, Toronto, Canada and by the Centre for Addiction and Mental Health, Toronto, Canada.