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Predictors of Depression and Life Satisfaction Among Asian Indians Living in the United States of America

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Walden University
2023

Abstract

Predictors of Depression and Life Satisfaction

Among Asian Indians Living in the United States of America

by

Ramanjot Kaur Basanti

MS, Monash University, 2015

BS, Monash University, 2013

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

This study assessed the statistical contribution of gender, acculturation, Asian values, coping self-efficacy and discrimination in the prediction of depression and life satisfaction with Asian Indian American adults. The increasing number of Asian Indians in the United States has prompted psychologists and other clinicians to seek understanding of the unique mental health needs of this population. However, previous studies on predictors of depression and life satisfaction among Asian Indians living in the United States had been scarce and inconclusive. The current study, grounded in Berry's multidimensional theory of acculturation, used a cross-sectional correlational survey design to examine if gender, acculturation, Asian values, coping self-efficacy and discrimination predict depression and life satisfaction. A sample of 138 Asian Indian American adults living in the United States of America participated in the study. Standard multiple linear regression analyses revealed coping self-efficacy as the only predictor of depression and life satisfaction. There were gender differences in depression, life satisfaction, Asian values, and coping-self efficacy with women scoring higher than men on depression, but lower on life satisfaction, coping self-efficacy, and Asian values. The study's findings provide clinicians with critical knowledge on the role of self-efficacy in the prediction of depression and life satisfaction among Asian Indians. Results further suggest the potential for effecting positive social change through interventions focusing on the development of self-efficacy.

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Dedication

I dedicate this dissertation to my wonderful parents. My immigrant parents have dedicated their lives to their children. They have fought to create new doors of opportunities for me since the day I was born. I am the first woman in my family to attend graduate school, to live alone, and to follow my passions - all because of their unconditional love and support. My parents and grandparents have made many sacrifices for me to achieve what I have today. So, thank you, my ancestors, for always guiding and protecting me. Thank you, mom, and dad for being my confidants and my strength. Thank you for believing in me when I did not. I love you.

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I would like to give a special mention to Indian American Community Services (IACS) for helping me with the data collection by sharing my survey with their members on every platform.

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Table of Contents

List of Tables

Chapter 1: Introduction to the Study

Introduction

Asian Indians are the largest South Asian subgroup in the United States (Roberts et al., 2016). There are over three million Asian Indians in the United States, and they continue to be the fastest growing ethnic group in the country because of a rise in work and student visas (Chandra et al., 2016). For many Asian Indians, migration brings various challenges such as cultural differences, language proficiency, a new education system, finding employment, and assessing health care (Roberts et al., 2016). All these external stressors are predictors of mental health problems. However, over the years, researchers have found that compared to other ethnic groups, Asian Indians are least likely to seek medical help in America due to cultural and socioeconomic factors (Ye et al., 2012). Additionally, Asian Americans have a 17% overall lifetime rate of any psychiatric disorder, but they are three times less likely to seek mental health services compared to other ethnic groups, with only around 6% of Asian Indians expected to seek mental health services in their lifetime (Spencer et al., 2010).

Traditional cultural values are deeply rooted in the Asian Indian communities, and it continues to affect the lives of immigrants living in Western cultures (Roberts et al., 2016). It impacts their coping strategies, acculturation stress levels, and overall life satisfaction. Culture can shape expression and elicitation of clinical symptoms, treatment seeking behavior, and illness models (Chang & Kwon, 2014). Apart from cultural values, acculturation can also influence overall life satisfaction. Discrimination is another factor that has shown to impact life satisfaction in a different country and struggles with

acculturation (Chandra et al., 2016). Hence, contributing factors like Asian values, acculturation, type of coping strategy, and discrimination can put the Asian Indian population at a greater risk for experiencing psychiatric symptoms. Iwanmoto et al. (2020) examined psychological distress among different ethnic groups in colleges around the nation, with a clinical sample of 1,166 college students. Findings showed that Asian Americans reported the highest amount of psychological distress among all ethnic groups, indicating that mental health problems are far more prevalent in this population than presumed (Iwamoto et al., 2010). Additionally, over the years many studies have indicated a rise in mental health problems among Asian Indian women, making gender a prominent predictor for mental health related problems in this community (Chandra et al., 2016).

Notwithstanding the mental health problems faced by the Asian Indian population in the United States, the literature has yet to clearly identify predictors of depression and life satisfaction for this group. This study aims to increase knowledge regarding potential predictors of depression and life satisfaction among Asian Indian adults living in the United States. This study will promote social change by providing clinical psychologists and other mental health professionals with information on key factors associated with the mental health and wellbeing of this vulnerable population. The study's findings may motivate mental health professionals to consider these predictors in outreach services and treatment. The findings will help to break some barriers associated with mental health treatment in the Asian Indian culture, and address disparities in treatment.

This chapter provides an overview of the proposed research study. Information on key variables such as coping strategies, gender, acculturation, Asian values, discrimination, and their relationship with depression and life satisfaction is presented. A summary of relevant research findings and theoretical perspectives are presented in the background section. The research gap is identified and briefly discussed in the problem statement section. A rationale and justification for the study's clinical and social relevance is presented in the significance section. The research question and hypotheses are also identified. The theoretical foundation is described, grounded in John Berry's bidimensional model of acculturation. The study's limitations are also identified. Finally, a summary of the chapter is presented.

Background

The history of Asian Indians in the United States began in late 19th century, primarily with Sikh men from Punjab India migrating to the Western part of the United States in search of work in the agricultural sector (Roberts et al., 2016). The second immigration wave of Asian Indians to the United States was after the passage of the Immigration and Naturalization Act of 1965. In the mid-1980s, a third wave immigrated with the hope of reunification with families already settled in the United States. In the 1990s and 2000s, migration from India to the United States mostly consisted of individuals who had training and/or expertise in the software industry (Tummala-Narra, et al., 2017). Each of these migration waves had a different set of acculturation challenges. Most Asian Indian immigrants continue to maintain their native ethnic

identity and traditional values while adapting to the United States' cultural norms, which is a source of stress for many (Tummala-Narra et al., 2017).

Most of the literature on Asian Indian immigrants to the United States has been descriptive, and only a few studies have looked at mental health problems and treatment in this community. Some studies have explored different cultural factors that contribute to stigma associated with mental health in Asian Indian culture. For example, Indian immigrants in United States highly value academic achievement, and there is a great deal of self-critical perfectionism (Joseph et al., 2020). Cultural values like family recognition through achievements is associated to the concept of conditional acceptance. Having constant concerns that one is not living up to the standard can lead to psychological distress (Methikalam et al., 2015). Trying to live up to their own cultural standard in a different country can leave one feeling isolated, confused, and depressed. It impacts how one chooses to cope with external stressors.

Furthermore, in contrast to the individualistic culture of United States, India is a collectivistic culture. Collectivistic cultures encourage strong links among members within the social group, which can provide support, and a sense of belonging. However, collectivistic cultures also bring a lot of anxiety about not meeting social obligations or standards (Nosheen et al., 2017). Asian Indian immigrants moving from India to the United States face the challenge of adjusting in a new cultural mindset. They must adjust in an individualistic culture, which makes acculturation more difficult (Nosheen et al., 2017). Some studies have also shown significant association between perceived discrimination against Asian Indian immigrants and depressive symptoms (Methikalam et

al., 2015). Discrimination can also have a negative impact on acculturation, and acculturation difficulties can impact one's overall life satisfaction and can lead to prolonged stress or depression.

Despite such a rapid growth in the Asian Indian population in the United States, there is little known about the mental health status, needs, and perceptions of this group (Roberts et al., 2016). There are only few studies that have explored some of the health care disparities among this group. These studies highlight the psychological stress that this population faces in transitioning between cultures and coping with acculturation stress (Methikalam et al., 2015). Most of the previous studies have been done with women. In Asian Indian culture, women are expected to continue embracing their traditional gender roles, and balance between immigration and its inherent freedom. Most women only work in their family-owned businesses while balancing responsibilities at home. This makes them more vulnerable to various mental health problems like depression (Roberts et al., 2016; Srivastava et al, 2016).

In contrast to Asian Indian women, Asian Indian men carry authority in decision making, and their primary goal is providing for their family. They are less likely to show emotions and have difficulty connecting with their children. They miss their family back home and work hard to maintain a connection with their extended family (Srivastava et al., 2016). Constantly providing for the family and repressing emotions makes them more vulnerable to depression and low overall life satisfaction. Hence, issues like acculturation, coping style, gender, Asian values, and discrimination can be risk factors for many mental health issues, yet only 6% of Asian Indians seek help for mental health

disorders (Roberts et al., 2016). There continues to be a gap in the literature with Asian Indian adults and their mental health needs. This study will examine some of the predictors of depression and life satisfaction among Asian Indian adults living in the United States.

Problem Statement

Asian Americans are less likely to seek mental health as compared to other ethnic groups (Turner & Mohan, 2016). Strong adherence to traditional cultural values continues to affect the lives of Asian Indian immigrants living in Western cultures (Roberts et al., 2016). A clinical sample of 1,166 college students found that Asian Americans reported the highest amount of psychological distress among all ethnic groups, indicating that mental health problems are far more prevalent in this population than presumed (Iwamoto et al., 2010). Studies have addressed mental health issues relating to Asian Indian women and their battle with depression and suicide (Chandra et al., 2016). The stigma associated with mental health problems is likely to influence the overall life satisfaction. Individuals experiencing depressive symptoms are more likely to have difficulty adjusting to a new culture, develop negative coping strategies, and have overall lower life satisfaction (Turner & Mohan, 2016). The research is likely to assist clinical psychologists and other mental health professionals in understanding some of the cultural factors associated with depression and life satisfaction of Asian Indians living in the United States of America. These findings are likely to provide valuable information in treatment and diagnosis of this underserved and vulnerable population.

Asian Indians are one of the fastest growing ethnic groups in the United States (Roberts et al., 2016). Notwithstanding the increasing number of studies assessing the mental health needs of this population (e.g. Chandra et al., 2016; Roberts et al., 2016), the knowledge on several issues is still scarce and inconclusive. These studies have provided useful insights into the mental health needs of the Asian Indian population, yet there are several gaps in the literature on predictors of depression and life satisfaction. Research exploring predictors of depression among this population have found that depression is negatively related to acculturation (Chandra et al., 2016). However, the role of traditional Asian Indian values and beliefs is less clear, with some studies identifying these as positively associated while others as negatively associated with depression (Nadimpalli, et al., 2016). These inconsistent findings appear to be grounded in the poor operationalization of key constructs such as acculturation. Furthermore, the only study exploring the role of coping strategies and self-reported discrimination has the methodological shortcoming of assessing the construct with a single item (Nadimpalli et al., 2016). Finally, there is relatively little research on life satisfaction, as most studies focus on negative psychological experiences (Roberts et al., 2016). Summarizing, it is unclear if acculturation, perceived discrimination, and coping strategies predict depression and life satisfaction (both considered mental health or wellbeing indicators) among Asian Indians.

Purpose of the Study

The purpose of this study is to assess possible predictors of depression and life satisfaction among Asian Indian immigrants. This research project specifically aimed to

understand whether coping styles, gender, acculturation, Asian values, and discrimination predict different levels of depression and life satisfaction. The relationship between some of these variables has been previously explored, but the findings have been inconclusive and undermined by methodological shortcomings.

Research Questions and Hypotheses

RQ 1—Quantitative: Do gender, coping strategies, acculturation, Asian values, and discrimination predict depression and life satisfaction among Asian Indian in United States of America?

$H_0$1: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will not predict depression among Asian Indians.

$H_1$1: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will predict depression among Asian Indians.

$H_0$2: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will not predict life satisfaction among Asian Indians.

$H_1$2: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will predict life satisfaction among Asian Indians.

The direction of the relationship between predictors and the criterion variables in *H1* and *H*2 are as follows:

- Women will score higher than men on depression.
- Women will score lower than men on life satisfaction.
- Higher coping self-efficacy will predict lower depression symptomatology among Asian Indians.
- Higher coping self-efficacy will predict higher life satisfaction among Asian Indians.
- Integrated participants (see Berry's bidimensional acculturation model in the Framework section of this chapter) will score lower on depression as compared with their assimilated, separated, and marginalized counterparts.
- Integrated participants will score higher on life satisfaction as compared with their assimilated, separated, and marginalized counterparts.
- Perceived discrimination will positively predict depression.
- Perceived discrimination will negatively predict life satisfaction.
- Adherence to traditional Asian values will be negatively associated with depression.
- Adherence to traditional Asian values will be positively correlated with life satisfaction.

RQ2 – Quantitative: Are there gender differences in coping self-efficacy, acculturation, perceived discrimination, depression, and life satisfaction among Asian American immigrants living in the United States?

$H_0$3: There will not be gender differences in coping self-efficacy, acculturation, perceived discrimination, depression, and life satisfaction among Asian American immigrants.

$H_1$3: There are gender differences in coping self-efficacy (higher in men), acculturation (higher in men), perceived discrimination (higher in men), depression (higher in women), and life satisfaction (lower in women) among Asian American immigrants.

Theoretical Framework

Acculturation refers to changes resulting from contact with culturally dissimilar people and social influences (Gibson, 2001). John Berry was one of the first scholars to recognize acculturation as a long-term fluid process that can create lasting changes across various dimensions (Berry, 2005). Berry's bidimensional model of acculturation will be used as the theoretical framework for this dissertation. According to his theory, there are four possible outcomes of acculturation: assimilation, separation, integration, and marginalization (Krsmanovic, 2020). Assimilation occurs when the person adopts practices and outlook of the dominant culture, while eschewing their own culture. Separation occurs when the person preserves their own culture but avoids interactions with the dominant culture/group. Integration occurs when a person maintains their culture while developing a bond with the host culture/group. Marginalization occurs when there

is little or no success in maintaining one's own heritage or developing a connection with the new culture (Krsmanovic, 2020).

Berry conceptualized the acculturation process as a series of stress-provoking life changes requiring the individual to utilize their personal and interpersonal resources. Failure to use effective coping strategies in dealing with these stressors can lead to psychological challenges (Li et al., 2021). Utilizing Berry's acculturation model, this study explored how acculturation impacts an individuals' depressive symptoms and overall life satisfaction.

Nature of the Study

To address the gap in the literature on predictors of life satisfaction and depression among Asian Indians in the United States, this study used quantitative cross-sectional correlational survey design. The independent variables were gender, coping strategies, acculturation, Asian values, and discrimination, and the dependent variables were depression and life satisfaction.

For the present study, participants were Asian Indian adults, age 18 and over, living in the United States of America. Participants were recruited from different American based organizations like National Council of Asian Indian Association (NCAIA) and South Asian Americans Leading Together (SAALT). They were contacted through their websites. I created a poster to advertise on the organizations social network pages. The social media post included information on the purpose of the study, prospective participant characteristics, and my contact information. All the forms,

including the informed consent and the surveys, were accessed electronically through Survey Monkey website.

Definitions

Some terms within this study are used interchangeably and noted within the definitions.

Acculturation: John Berry conceptualized the acculturation process as a series of stress-provoking life changes associated with adapting to a new culture which requires the individual to utilize their personal and interpersonal resources (Berry, 1997).

Asian values: Some Asian Indian values include respecting family honor, living with family, having a collectivist cultural approach, speficic gender roles for men and women, perfectionisim, having higher standards compared to individualistic cultures for education, etc.

Coping self-efficacy. Coping self-efficacy refers to a person's ability to cope with stressful events and emotions. It has three different factors: confidence in ability to use problem focused coping, get support from friends and family, and stop unpleasant emotions or thoughts (Chesney et al., 2006).

Depression: Depression is a mood disorder that causes severe symptoms that affect how one feels, thinks, and handles daily activities such as sleeping, eating, or working (National Institute of Mental Health, 2013).

Gender: Gender is the behavioral, social, and psychological characteristics of men and women, while sex is the biological aspects of being a male or female (Pryzgoda & Chrisler, 2000).

Life satisfaction: Life satisfaction has been defined as the degree to which an individual positively evaluates the overall quality of their life (Ruut Veenhoven, 1996).

Perceived discrimination: Perceived discrimination is defined as a behavioral manifestation of negative attitude, or unfair treatment towards members of a group (Pascoe & Richman, 2009).

Assumptions

An assumption for this study is that all participants answered all the questionnaires honestly and correctly to draw valid conclutions. Another assumption is that all participants understood the questions being asked in the asssessments.

Scope and Delimitation

This study focuses on Asian Indian adults living in the United States of America. Hence, invididuals not included in the resarch are Asian Indians who are younger than 18 years old and those who do not identify as Asian Indians. Additionally, Asian Indians living outside of United States were not allowed to participate in this study, as the focus is on predictors of depression and life satisfaction among Asian Indian Americans. Participants who are not proficient in the English language are also not included in this study, as all the assesments are in English. There are no translations for the scales. Hence, participants who are not proficient in reading English langauge were not included in this resarech.

Limitations of the Study

The present study used a correlational research design. A limitation of this design is that it cannot be used to make inferences about a causal relationship among measured

variables (Roberts, 2010). Data were collected via self-report measures. Self-report measures are prone to social desirability bias and response sets (Roberts, 2010). The online data collection platform Survey Monkey was used to collect data, which limits any in person rapport building or interaction. Online survey collection can also lead to response bias, survey fatigue, survey fraud, and sampling issues. Online data collection methods discriminate people who do not have access to internet. Online surveys are also only completed by people who are literate (Lau & Kuziemsky, 2016). The survey was only available to participants who have internet and have access to social media pages where it is advertised.

Significance of the Study

The literature on predictors of depression and life satisfaction among Asian Indians living United States is scant and inconclusive. This study will add to the much needed and growing body of knowledge related to mental health needs of Asian Indian immigrants by evaluating the relevance of coping strategies, role of gender, acculturation, Asian Indian values, and discrimination as predictors of depression and life satisfaction. Most of these variables have not been previously studied in such manner. The significance of this study for clinical psychologists is learning about different predictors and their influences on depression and life satisfaction. The results of this study are likely to inform the clinical practice with Asian American immigrants. Positive social change may result from this study by increasing awareness on cultural factors associated with depression and life satisfaction. Learning about various depression and life satisfaction predictors will help clinical psychologists in treatment and diagnosis when working with

this population. Most previous studies with Asian Indian communities have been with women. This study will also help to fill this gap in research by including both men and women as participants. Results from this study should aid Asian Indian communities to gain knowledge about some of the personal and cultural barriers related to depression and life satisfaction. The integration of this information in clinical and community intervention is likely to advance social change in this population.

Summary

The purpose of this quantitative cross-sectional, correlational study is to explore predictors of depression and life satisfaction among Asian Indians living in the United States. The predictors to be explored are gender, coping style, acculturation, Asian values, and perceived discrimination. The purpose of this chapter was to give an overview of this proposed research study. This study will help fill several gaps in knowledge for the Asian Indian community living in the United States of America. The study used a quantitative-correlational design. Various surveys were used to measure for all the predictor variables. This study will contribute to positive social change by increasing knowledge about different factors that impact mental health among Asian Indians living in America. Chapter 2 will provide the literature search strategy used to select relevant sources, the theoretical framework of the study, and a detailed literature review of the key variables of the study. Additionally, Chapter 3 will focus on research methodology. Results of the study will be presented in Chapter 4 and discussed in Chapter 5.

Chapter 2: Literature Review

Introduction

Asian Indians are one of the fastest growing ethnic groups in the United States (Roberts et al, 2016). Many studies have provided useful insights into the mental health needs of Asian Indians immigrants, yet there are several gaps in the literature on predictors of depression and life satisfaction. In most studies, depression has been found to be negatively related to acculturation (Chandra et al., 2016). However, the role of traditional Asian Indian values on mental health is unclear, with some studies recognizing these as positively associated while others as negatively associated with depression (Nadimpalli et al, 2016). Additionally, the only study exploring the role of coping style and self-reported discrimination (Nadimpalli et al., 2016) has the methodological shortcoming of assessing the construct with a single item. Finally, there is relatively little research on life satisfaction with this population (Roberts et al., 2016).

The purpose of this study is to assess probable predictors of depression and life satisfaction among Asian Indians living in the United Stated of America. This study specifically aims to understand whether gender, coping style, acculturation, Asian values, and discrimination predict depression and life satisfaction. Most of these variables have not been previously studied in such manner. The results from this study will enhance knowledge about the mental health needs of the Asian Indian ethnic group.

This literature review will focus on coping self-efficacy, different types of acculturations, and self-reported discrimination as potential predictors of depression and life satisfaction among Asian Indians living in United States. The literature review will

look at Berry's bidimensional model of acculturation. The greater part of this review will look at acculturation and coping. The examination will also include a discussion of various cultural coping tools. The purpose of this chapter is to explore the research available on the various predictors of depression and life satisfaction, and how they apply to the Asian Indian population. The chapter is organized in three main areas, the literature research strategies, bidimensional model of acculturation, and a review of the empirical literature on the key variables of the study. The chapter ends with a summary and conclusion.

Literature Research Strategy

The literature search for this dissertation was conducted using the following electronic databases: Education Source, EBSCO discovery service, ProQuest Central, PsychEXTRA, Academic Search Complete, US National Library of Medicine, NCBI, and PsycINFO. The search was limited to journal articles, books, and theses. The empirical sources included research within the last 5 years. Key words used were, but not limited to, *Asian Indian*, *depression, predictors of depression, mental health, acculturation, suicide, self-reported discrimination, Asian culture, Berry's acculturation, barriers to mental health help, gender roles, discrimination, life satisfaction,* and *coping strategies.* The literature search was conducted over a 12-month period.

Theoretical Framework

Berry was one of the first scholars to recognize acculturation as a long-term fluid process that can create lasting changes across various dimensions (Berry, 2005). One of the most studied multidimensional theories of acculturation is Berry's bidimensional

model (Berry, 1997). The bidimensional model was the main theoretical framework driving the analysis of the proposed relationship between the variables of this study. Major propositions are mentioned next, followed by a report of empirical support for the theory and rationale for selection of this bidimensional model as the guiding framework for the analysis of the research question.

Bidimensional Model

Berry conceptualized the acculturation process as a series of stress-provoking life changes requiring the individual to utilize their personal and interpersonal resources (Berry, 1997). Failure to use effective coping strategies in dealing with these stressors can lead to psychological challenges (Li et al., 2021). Before Berry's model, acculturation was seen as a unidirectional process, which was vastly criticized for prohibiting migrants from acculturating to both host and origin culture simultaneously (Andrews et al., 2013). Berry was one of the first theorists to challenge this concept. His bidimensional model for acculturation suggests that the increase or decline of one culture does not have an impact on the other (Berry, 1980). In his argument, he put forward a matrix model that presented four acculturation strategies: assimilation, separation, integration, and marginalization (Krsmanovic, 2020).

Assimilation

Assimilation and acculturation are often used synonymously. Before research on acculturation, the American sociological literature regarded acculturation as a phase of assimilation (Gordon, 1964). Berry was the first to introduce assimilation as part of a multidimensional model. According to Berry, assimilation occurs when the person adopts

the practices and outlook of the dominant culture, while eschewing their own culture (Berry 1980). Assimilation is the strategy when a person chooses not to maintain their identity or heritage culture and seeks close interactions with host cultures. The individual adopts the cultural values, norms, and traditions of the new society (Berry et al., 2011). Over the years, researchers have tried to understand the desire for assimilation. Studies have indicated that both personal difference variables and structural factors facilitate acculturation strategies (Berry, 1980). Other factors like personality, self-efficacy, and need for cognitive closure can also influence the selection of assimilation (Kosic, 2002). For example, low tolerance for ambiguity predicts a preference for assimilation, whereas low socioeconomic status predicts a preference for other strategies (Berry, 1980).

The level of assimilation has also been linked with personality dimensions, coping, and acculturation strategies and outcomes (Berry, 1997). Berry (1980) argued that certain personality factors like neuroticism and impulsivity are inversely related to a preference for integration, and various coping strategies like problem-orientation coping are positively related to preference for assimilation. These arguments present the notion that the relationship between acculturation and assimilation is complicated, and more research is needed in this area of study.

Separation

Separation occurs when the person preserves their own culture but avoids interactions with the dominant culture/group (Berry, 1980). Separation is considered the opposite of assimilation as these individuals reject or avoid the new culture as a form of preserving their own ethnic identity. They often highly value their own original cultural

practices and avoid any involvement with dominant culture individuals (Berry et al., 2011). Berry's model brought specific attention to the mixing of biculturalism and separation. The bidimensional model provided insight into "separation class." When someone goes to another country, they lack a historic background in the host country, and factors like working in lower class settings and low socioeconomic status can make the person feel isolated. All these factors lead to separation rather than assimilation or integration (Berry et al., 2011). Additionally, preference for assimilation or separation varies with respect to one's ethnic group, situational domain, socioeconomic status, and society of settlement (Berry et al., 2006). For example, individuals who settle and remain in an ethnic neighborhood may further reinforce their apprehension of the host culture. Many external factors like language, clothing, traditional values can also promote separation from the host culture (Berry et al., 2011).

Integration

Integration occurs when a person maintains their culture while developing a bond with the host culture/group (Berry, 1980). It refers to the decision to make room for both cultures in one's life. The bidimensional model of acculturation was the first of its kind to introduce a concept like integration (Berry et al., 2011). Integration is the preferred acculturation strategy among immigrants in different countries around the world (Berry, 2005). Many countries have implemented policies to promote integration. For example, in Europe, the "Common Basic Principles of Integration," policy states that "integration is a dynamic, two-way process of mutual accommodation by all immigrants and residents of Member States" (Berry et al., 2011, p. 81). It is considered a continuous two-way

process of mutual accommodations. Terms like social and cultural integration have been vastly used around the globe to promote multiculturalism and to help make acculturation easier (Berry et al., 2011). Individuals who practice integration strategies have fewer difficulties in adaptation and have shown to have more life satisfaction (Berry, 2003). Integration strategies help individuals build a stronger sense of self and identity.

Marginalization

Marginalization occurs when there is little or no success in maintaining one's own heritage or connecting with the new culture (Berry, 1980). Individuals who prefer a marginalization acculturation strategy do not value their cultural maintenance nor intergroup relations (Berry et al., 2011). Unlike integration, marginalization is the least preferred strategy among people because the likelihood that an individual will develop a cultural identity without drawing on their own heritage or the host culture is very low (Berry, 2003). The marginalization strategy is seldom a freely chosen alternative by immigrants. This strategy is most often a default option resulting from the combination of failed attempts at forced assimilation and forced exclusion (Segall et al., 1999).

Empirical Support for Berry's Bidimensional Model

Over the years, Berry's acculturation models have been widely researched. The bidimensional model has gained attention worldwide. Psychologists have used Berry's acculturation strategies in their research to learn about acculturation trends in different cultures. For example, cultural research by Berry et al. (2006) found that most Chinese students in Germany tend to choose separation as the preferred acculturation strategy. The use of separation is reinforced by the lower social standing and discrimination that is

bestowed upon the economically weaker immigrant group by the host culture (Berry et al., 2006). Furthermore, studies have revealed that immigrants who pursue interpersonal connections with their host culture and continue to maintain their own culture and traditions are able to achieve a higher acculturation level (Berry, 2003).

Krsmanovic (2020) conducted a phenomenological study to investigate acculturation issues of first year international students studying in a large public university in southeast United States. The study utilized Berry's bidimensional model of acculturation as the framework. It explored the extent to which each of the four acculturation strategies emerged from the social experiences of international students during their first year at university. The findings revealed that all 10 participants shared experiencing separation, either voluntarily or involuntarily. Seven students in the sample shared experiencing integration. Six students in the sample shared experiencing assimilation. Like most previous studies, marginalization was the least experienced acculturation strategy.

Li et al. (2021) conducted a similar study with international students in the United States using Berry's bidimensional model and adult attachment style. In line with acculturation theory, the results revealed that international students who identify with assimilation and separation strategies of acculturation showed higher levels of attachment anxiety and higher levels of psychological and sociocultural adaptation issues.

Several meta-analyses have explored the bidimensional model with Asian Americans. Lui and Zamboanga (2018) presented a meta-analysis of original publications since 1979 and explored the association between acculturation and alcohol use among

Asian Americans. The results from 39 independent study samples found that acculturation was associated with alcohol consumption and intensity of hazardous alcohol use. Alcohol use was positively associated with acculturation and negatively associated with separation acculturation strategy. Another meta-analysis by Sun et al. (2016) explored the relationship between help-seeking attitudes and acculturation among Asian Americans. Findings revealed that different acculturation strategies influence help-seeking behaviors among Asian Indians. For example, individuals who utilize the separation acculturation strategy are less likely to seek help from someone who is of a different ethnicity.

Meca et al. (2017) conducted a cross-sectional study with 140 undocumented Latino immigrants from Houston, Texas, and Little Rock, Arkansas. The authors hypothesized that strategies characterized by heritage cultural retention (integration, separation) would be more favorable compared to ones who marked loss of one's heritage culture (marginalization, assimilation). The results were consistent with their prediction and Berry's acculturation model. Undocumented immigrants in the marginalized acculturation strategy reported the greatest length of residence in the United States. Spending many years without any change in legal status can lead to a disconnect from one's culture, and no desire to fit in the host culture. In the study, separated acculturation strategy was the most common one. Immigrants who feel rejected or unwanted by the larger population may detach themselves from the host culture and preserve their own culture. Bulut and Gayman (2020) duplicated Meca et al.'s study and

found consistent results. In their study, they also found that undocumented Latino immigrants reported the worst psychosocial outcomes compared to others.

Rationale for Selecting Berry's Bidimensional Model in Analyzing the Study's Research Question

Berry's bidimensional model has become one of the most used models of acculturation (Andrews et al., 2013). Unlike earlier unidimensional models, the bidimensional model of acculturation takes in consideration both the original and host cultures (Jang et al., 2007). It allows individuals to report different levels of acceptance and adherence to their own and new culture. When applying any acculturation model, it is necessary to consider specific group characteristics because each immigrant group has a different history and settlement status, and the bidimensional model takes into consideration all these factors (Jong et al., 2007).

The bidimensional model has been successfully used in research with immigrants because it takes into consideration that acculturating people will experience a change in their attitude (Andrews et al., 2013). Among the large body of research on this model, there is a huge array of studies that confirm that two dimensions of acculturation are independent, and integration is the strategy most preferred by immigrants (Ward, 2008). Other studies have explored other factors like employment opportunities, education, health, housing, and immigration status as factors contributing to the acculturation process (Ward, 2008). Berry (1997) stated that other acculturation indicators include urbanization—individuals who migrated to urban areas in the new culture; media—individuals who listen to radio or watch television to learn about the new culture; political

participation—individuals who vote in the new society; religion—individuals who changed their religion to be more accepted by the host culture; language—individuals who start using the language of the host culture etc. All these indicators have been highlighted and explored in various acculturation assessment scales (Somani, 2010).

In a study grounded in the bidimensional model, Needham et al. (2018) investigated the associations between bidimensional acculturation strategies and symptoms of depression among South Asians living in the United States. The participants were 906 South Asian adults living in San Francisco and Chicago. Findings revealed that depressive symptoms were higher among individuals utilizing the separation acculturation strategy as compared with those using the integration strategy.

The present study aimed to gain a better understanding of how acculturation impacts an individual's mental health. More specifically, it evaluates if acculturation strategies are associated with depressive symptoms and life satisfaction among Asian Indians living in the United States of America. Berry's bidimensional model is a useful foundation for this study because it helps to understand acculturation factors that can impact coping strategies and mental health. A significant number of Asian Americans in the United States are first- or second-generation immigrants. Berry's model is a logical choice to anchor the relationship between the key variables of this study as it has been successfully used to understand and explain the experiences of immigrants around the world. Furthermore, Berry's theory focuses on how individuals adapt and cope with the demands of integrating in more than one culture. Depression and life satisfaction could be considered associated with adaptation strategies of immigrants. It is expected that

integrative acculturative coping strategies result in lower levels of depression and higher life satisfaction. Hence, Berry's bidimensional model of acculturation offers to provide a core theoretical foundation for understanding the key variables of this study.

Literature Review Related to Key Variables

This section presents a review of the relevant literature related to the key variables of the study: depression, life satisfaction, gender, acculturation, Asian Indian values, perceived discrimination, and coping styles.

Depression

Depression is a mood disorder which causes severe symptoms that affect how one feels, thinks, and handles daily activities such as sleeping, eating, or working (National Institute of Mental Health, 2013). Depression affects about 16 million American adults every year (CDC, 2020). According to the Centers for Disease Control and Prevention (CDC), about 1out of every 6 adults will have depression at some point of their life. Data from the National Health Interview Survey revealed that in 2019, 18.5% of American adults experienced mild, moderate, or severe symptoms of depression in the past two weeks. Among these adults, more women reported symptoms of depression than men (Villarroel & Terlizzi, 2019). The diagnostic criteria for depression in the Diagnostic and Statistical Manual of Mental Disorders fifth edition (5th ed.; *DSM-5*; American Psychiatric Association, 2013) requires that five or more symptoms like depressed mood, diminished interest or pleasure in doing activities, significant weight loss or decrease in appetite, over eating, insomnia, hypersomnia, psychomotor agitation, fatigue or loss of energy, feeling worthless or inappropriate guilt, diminished ability to think or

concentrate, and recurrent thoughts of death, must be present during a two-week time period.

The cause of depression is unknown. Over the year's researchers have linked it with genetic, biological, environmental, and psychological factors (CDC, 2020). Each person is different, but some factors may increase a person's chances of becoming depressed. Some of these factors include having blood relatives who have depression, experiencing traumatic events, going through major life change, having a medical problem or chronic illness, taking certain medication, and using drugs or alcohol (CDC, 2020). Depression, in most cases, can be treated. The earlier the treatment, the more effective it is. Depression is usually treated with medications, psychotherapy, or a combination of the two. Antidepressants are a class of medications developed to treat depression which aim at improving how the brain uses certain chemicals that control mood and stress (National institute of Mental Health, 2013).

Depression has been associated with the experience of cultural adaptation and immigration (Markova et al., 2020). However, many immigrants hesitate to seek help when experiencing depressive symptomatology. A recent study by Markova et al. (2020) explored the link between immigration, acculturation and help seeking behavior for depression. Their findings revealed that immigrants who maintained their culture of origin as the acculturation strategy preferred traditional and informal health. They were less likely to seek help for depression in the new country. On the other hand, the adoption of the mainstream culture as the acculturation strategy was associated with semiformal and formal help seeking for depression.

Another study explored the relationship between acculturation stress and depression among first year Indian and Chinese international graduate students studying in southeast universities of The United States of America (Ma, 2021). The author explored the role that social support played in the level of depressive symptoms. The hierarchical regression analysis of the survey revealed that acculturative stress is a significant predictor of depression among Indian and Chinese international students at the beginning of the academic year. The relationship between acculturation stress and depression did not differ by the availability of social support. Hence, acculturative stress is directly linked with depression.

Another recent study by Wilson and Thayer (2018) explored the impact of acculturation on depression, perceived stress, and self-esteem among young Middle Eastern American adults. The study included a sample of 48 first or second generation Middle Eastern adults from the state of Colorado. Participants were divided into two different acculturation strategies: integrated and assimilated. The results revealed that integrated individuals had significantly lower stress and depression than assimilated individuals. Their findings are consistent with research on the impact of acculturation on depression.

Life Satisfaction

Veenhoven (1996) defined life satisfaction as the degree to which an individual positively evaluates the overall quality of their life. There are two notable categorizations of life satisfaction theories in psychology: the bottom-up theories and top-down theories. The bottom-up theory of life satisfaction has been used to identify the factors which

enhance individual's quality of life (Diener, 1984). This theory argues that overall life satisfaction is related to satisfaction with all of life's domains and subdomains. The top-down theory argues that life satisfaction is an influencer of domain specific satisfaction (Park et al., 2019).

Over the year's researchers have explored the relationship between depression and life satisfaction. Life satisfaction has been negatively associated with depression (Nes et al., 2013). That is, individuals who are satisfied with their lives tend to be less depressed as compared with those are less satisfied. Studies have also explored the relationship between life satisfaction and different acculturation strategies. A recent study by Morawa et al. (2020) investigated the relationship among depressive symptoms, life satisfaction, acculturation, migrant generational status, and gender in a sample of Turkish migrants in Germany. Results revealed that women reported more depressive symptoms than men. In addition, lower age-adjusted levels of life satisfaction were observed in the first migrant generation compared to the second.

Another study by Prapas and Mavreas (2019) explored the relationship between quality of life, psychological wellbeing, life satisfaction, and acculturation in Albanian immigrants living in Greece. The study was conducted with 520 participants. The results revealed that higher attachment to one's culture of origin is related to negative feelings and experiences in the host culture, which leads to lower life satisfaction. Age was another predictor of quality of life and life satisfaction among participants. A similar study by Wang et al. (2018) explored adaption of international students in United States, acculturation, and life satisfaction. Their results also revealed that the separation

acculturation strategy results in lower life satisfaction, whereas integrated acculturation strategy leads to higher life satisfaction.

Gender

Gender is the behavioral, social, and psychological characteristics of men and women, while sex is associated with the biological aspects of being a male or female (Pryzgoda & Chrisler, 2000). Gender is associated with the socialized behavior patterns of men and women in society. Different aspects of gender stereotypes, gender roles, and differences have been studied by psychologists for years. Since 2016, the United States National Institute of Health Research requires grant applicants to explain how they plan on controlling for gender in their research (Tannenbaum et al., 2016). Gender is considered a key variable in many studies because it is multifaceted and fluid. Social and cultural constructs greatly influence environments that create gender norms (Tannenbaum et al., 2016). Researchers understand gender as a function of gender roles like housework, gender identity like personality, gender relations like social support, and institutionalized gender such as career opportunities (Tannenbaum et al., 2016).

Over the years, researchers have found that prevalence of depression is much higher in women than in men (Villarroel & Terlizzi, 2019). According to the CDC (2020), in 2019, 21.8% of women experienced mild, moderate, or severe symptoms of depression in the past 2 weeks, as compared with only 15% of men. In the same survey, women were more likely than men to have experienced depression symptoms that were mild (13.4% and 9.6%, respectively), moderate (4.9% and 3.4%, respectively), and severe (3.5% and 2.1%, respectively).

There are several reasons why there are gender differences in prevalence of depression. For example, the triggers of depression for both men and women are different. Previous research has found that women are more likely to present with depressive symptoms due to biological factors such as puberty, premenstrual problems, postpartum issues etc., whereas men present with depressive symptoms as a result of social and cultural experiences (Eid et al., 2019). A recent study by Abdollahi and Zarghami (2018) examined the effects of postpartum depression on women's mental and physical health. The results revealed that women with postpartum depression were two times more likely to experience depression four years after childbirth, as compared with women without postpartum depression.

Another study by Strong et al., (2016) investigated the association between puberty and depression. The study was conducted with 1238 adolescents in United Kingdom. A clinical interview and the Mood and Feelings Questionnaire (Angold et al., 1995) were used to assess for depressive symptoms. The results revealed that adolescent girls reported more depressive symptoms than boys. For females, there was an increase in symptoms at age 14 by 1.4 points. Other puberty changes were also associated with an increase in depressive symptoms in girls as compared with boys.

Some researchers have also explored gender differences in life satisfaction. A study by Joshanloo (2018) used multi-level modeling to explore gender differences in the predictors of life satisfaction in a sample of over 900 thousand individuals from 150 countries. The author explored several different domains such as social, psychological, and demographic. The results revealed similarity in predictors of life satisfaction across

gender, but nontrivial gender differences were also discovered. The results revealed that social-political involvement, employment, and education were some of the most important predictors for life satisfaction among men, whereas marital status and interpersonal relationships were the most important predictors of life satisfaction among women.

Another study by Banjare et al., (2015) looked at different factors linked with life satisfaction amongst a sample of 310 rural elderly (over 60 years of age) participants in Odisha, India. Several predictors of life satisfaction such as socio-economic, demographic, health, and social support were examined. The results revealed that cognitive health was the most important factor in predicting life satisfaction among men and women. The findings also revealed that men experienced less alienation as compared with women. Women's life satisfaction, but not men's, was positively associated with number of social activities and social relationships.

Acculturation

The concept of acculturation has been discussed previously in the theoretical framework section. Research findings show that acculturation is a predictor for depression and life satisfaction. Recent studies like by Moawa et al. (2020) investigated the relationship among depressive symptoms, life satisfaction, and acculturation. Their results validated that depression and acculturation are negatively correlated, and an integrative acculturation strategy is associated with higher life satisfaction and lower depression.

Additionally, gender differences have also been noticed in acculturation experiences. A study by Klein et al. (2020) explored the relationship between acculturation and mental health of first-generation immigrant youth. They looked at different acculturation strategies: assimilation, separation, integration, and marginalization. Their findings revealed that females are more likely to use the integration acculturation strategy, and males are more likely to use the separation and marginalization strategies Hence, research continues to show the impact of acculturation on immigrant mental health, and life satisfaction.

Asian Indian Values

India is considered a collectivist culture. This culture type emphasizes the needs and goals of the whole group over the needs and desires of the individual (Susskind, 2005). In a collectivist culture, interpersonal relationships and connections play the key role in each person's identity. In Indian culture, family is a cherished institution. Most elderly live with their families, and it is also the preferred living arrangement for the aging adults (Samanta et al., 2015). Most adults live with their oldest son and his family. The male children are responsible for the family's finances, and in return they will inherit all the properties and investments from their parents. The grandparents play a major role in the upbringing of their grandchildren (Samanta et al., 2015). Furthermore, aging adults are considered wise because of their life experiences. They are involved in everyday decisions at home, and their opinions are greatly valued.

Over the years, many researchers have explored the connection between South Asian Indian values, immigration, and mental health. Culture can shape the expression

and elicitation of clinical symptoms, illness models and treatment seeking behavior (Chandra et al., 2016). Research evidence show that South Asian Indians have a different perspective on the manifestations, causes, and management of depression compared Americans (Chandra et la., 2016). In a study by Leenaars et la. (2010) there was comparison of suicide notes from India and The United States. The study found that compared to the American suicide notes, Indian suicide notes had greater indirect expression, masked aggression, and unconscious dynamics. Additionally, other mental health disorders like social anxiety disorder are also different in collectivist vs individualistic cultures. Collectivist cultures have higher prevalence of social anxiety because of ongoing fear of offending others (Hoffmann et al., 2010).

Gender roles are also greatly influenced by Asian Indian values. A study by Inman and Rao (2018) focused on Asian Indian women and their lived experiences with domestic violence and their ways of healing. They highlighted personal, political, social, and cultural factors that contributed to their resilience and vulnerability in India. The authors presented information on cultural expectations from women in India. Cultural factors like marital conflict, dowry, female feticide, lack of education, child marriage, preference of male child, and lack of resources contribute to the high percentage of mental health problems such as depression among Asian Indian women (Inman & Rao, 2018). Most women are unlikely to report psychological disturbance due to domestic violence to avoid legal repercussions, and to protect their family honor. Hence, domestic violence and cultural expectation surrounding family honor act as a barrier for women to seek mental health services (Inman & Rao, 2018).

Even though coping strategies like social support and emotion focused coping has been found relevant for Asian Indians, researchers have also found that some Asian Indian practices can lead to avoidance coping methods (Roberts et., 2016). For example, Asian Indian men are more likely to use alcohol as a coping mechanism for mental health stressors due stigma associated with seeking mental health services. The stigma surrounding mental health continues to rise in India (Gaiha et al., 2020). Gaiha et al. (2020) did a systematic review and meta-analysis of 30 observational studies. The results from the analysis revealed that one-third of young Asian Indians have poor knowledge of mental health problems and have a negative attitude towards people with mental health issues. Individuals presenting with mental health issues are perceived as week, irresponsible, and dangerous. This is due to misinformation about mental health problems through media, movies etc., and a collectivist cultural approach to keep everything in the family and protecting family honor. Hence, Asian Indian cultural values play a major role in the population's mental wellbeing and attitude towards depression and life satisfaction.

Discrimination

Discrimination is the unfair treatment of an individual or group based on characteristics such as race, gender, age, and sexual orientation (Pascoe & Richman, 2009). The human brain organizes things and people in categories. Discrimination stems from fear and misunderstanding of people in different categories (Banks et al., 2006). Perceived discrimination is defined as a behavioral manifestation of negative attitude, or unfair treatment towards members of a group (Pascoe & Richman, 2009). More

specifically, a person perceives he or she has been discriminated based on their group membership. The relationship between perceived discrimination and mental and physical health has been researched.

A recent study by Lowe et al. (2019) examined the relationship of perceived discrimination, depression, and anxiety among Muslim college students in the United States. Their study was conducted at Montclair State University in New Jersey. A sample of 141 participants completed a 45-minute survey with the following instruments: The Patient Health Questionnaire-8 (Kroenke et al., 2001) for assessing depression, the Generalized Anxiety Disorder-7 (Sprizer et al., 2006) for evaluating anxiety, the General Ethnic Discrimination Scale (Landrine et al., 2006) for measuring perceived discrimination, and an adapted version of Multigroup Ethnic Identity Measure (Phinney & Ong, 2007) was used to assess Muslim American Identity. The findings revealed that mental health burden was high in the sample. Almost 43% of the participants were classified as having Major Depressive Disorder (MDD) or Generalized Anxiety Disorder (GAD). Perceived discrimination was associated with severe MDD and GAD. Additionally, Muslim American identity moderated the relationship between perceived discrimination and GAD symptoms. Participants reporting strong Muslim American identity and high levels of perceived discrimination showed the highest levels of depression and anxiety symptoms. This study validates previous findings of a link between perceived discrimination and depression.

Another study by Johnson-Lawrence and colleagues (2020) assessed whether education moderates associations between discrimination and depression within southern

Black/African American neighborhoods of Pitt County, North Carolina. This cross-sectional study used data collected from 2001 follow up interviews of participants in the Pitt County study of North Carolina. This study was first initiated in 1988, which explored community-based health risk factors. The participants were middle-aged African American adults who were interviewed in 2001 and in the 1988 sample. Risk of depression was assessed with the Center for Epidemiologic Study-Depression (CES-D) scale (Radloff, 1977), and discrimination was measured using the Everyday Discrimination Scale (EDS) (Williams et al., 1997). Their findings of association between discrimination and depressive symptoms remained consistent with previous research. Higher discrimination and lower education were both significantly associated with higher scores on the depression scale. Higher education was also inversely related to depressive symptoms for women, and higher education was associated with better mental health for men experiencing discrimination.

Perceived discrimination has also been linked with life satisfaction. Vang et al. (2019) used a large national representative survey to study the relationship among perceived religious discrimination, religiosity, and their interaction on life satisfaction. Their results revealed a negative relationship between religious discrimination and life satisfaction. Higher religiosity, on the other hand, was associated with higher levels of life satisfaction and helped to mitigate the negative effect of experiencing religious discrimination. Another study by Tran and Sangalang (2016) explored the relation between racial ethnic discrimination and life satisfaction. Their study also found an association between racial discrimination and life satisfaction. Higher discrimination was

related to lower life satisfaction. The links between perceived discrimination, orientation to mainstream culture and life satisfaction has also been examined by Jamaludin et al. (2018). Their findings revealed that orientation to the mainstream culture was positively associated with destination loyalty (intention to revisit and recommend the destination to others). Furthermore, orientation to mainstream culture mediated the relation between perceived discrimination and destination loyalty.

Apart from depression and life satisfaction, perceived discrimination has also been linked to acculturation. Chan (2020) investigated the association of acculturation with perceived overt (visible) and covert (hidden) discrimination using the Everyday Discrimination Scale (EDS) (Williams et al., 1997) with a sample of 348 foreign-born older Asian Americans. Acculturation was measured by English proficiency, immigration related factors, citizenship status (naturalized citizen or noncitizen) and ethnic identity. The findings indicated that perceived covert discrimination was more prevalent than overt discrimination among older Asians. From the variables assessing acculturation, only citizenship (i.e. being a naturalized citizen) was associated with higher perceived covert and overt discrimination. Overall, the findings suggest that higher acculturation is associated with greater exposure to discrimination for Asian older adults living in United States.

A follow up study to Lowe et al.'s (2018) was conducted recently by Tineo et al. (2021). Lowe et al. (2018) indicated that perceived discrimination was linked with increased depression and anxiety symptoms among Muslim college students in the United States. Tineo et al. (2021) aimed to investigate whether acculturative stress

mediated, and Muslim identity moderated the relationship between perceived discrimination, depression, and anxiety. Findings of this study revealed that the indirect impact of perceived discrimination on depression and anxiety symptoms via acculturation stress was statistically significant. Perceived discrimination was associated with an increased in acculturation stress, and other mental health symptoms. Hence, discrimination is related to the mental wellbeing of the Asian Indian population. Although the relationship between mental wellbeing and discrimination has been explored, it is likely that coping strategies play a role as well. In the next section, the concept of coping self-efficacy will be discussed.

Coping Self-Efficacy

Coping style refers to how a person deals with a stressful situation (Billings & Moos, 1984). Self-efficacy, which is a person's belief in their ability to carry out a behavior necessary for reaching a goal (Bandura, 1977), plays a crucial role in implementing adaptive coping styles. Self-efficacy helps in motivation and performance and directly influences how a person copes with a situation. Coping self-efficacy refers to a person's ability to cope with stressful events and emotions (Chesney et al., 2006). Coping self-efficacy involves three different factors: confidence in the ability to use problem focused coping, support from friends and family, and unpleasant emotions or thoughts (Chesney et al., 2006). Coping involves both emotional and problem-solving attitude. Maladaptive coping involves responding to uncontrollable stressors primarily with a problem-focused copying style. Adaptive coping refers to situations in which there is a fit between the stressful event and the choice of coping style (Chesney et al., 2006).

Over the years, different mental health related coping styles have been explored. A study by Orzechowska et al. (2013) evaluated the most popular coping strategies used by individuals diagnosed with depression in comparison to a control group. Their findings showed that unlike the control group, individuals diagnosed with depression often use passive coping. Individuals with a passive coping style believe that circumstances cannot be changed, and thus accept the situation as it is (Choi et al., 2012). Strategies based on avoidance, denial, and difficulty focusing on positive aspects of a situation are indicative of low coping self-efficacy. A similar study by Kasi et al. (2012) examined the coping strategies of adults in Pakistan diagnosed with anxiety and those with diagnosed with depression. Passive coping strategies were preferred by patients with depression. They also found that religious coping is common in individuals presenting with symptoms of anxiety and depression.

Akhtar and colleagues (2019) explored the role of dispositional coping styles in determining the level of depression and anxiety among international medical students in Germany. Their cross-sectional study included a sample of 122 participants which completed different instruments to measure for depression, anxiety, coping styles, and demographics. Their results indicated that adaptive coping was found to be a health-promoting coping style predicting lower levels of depressive and anxiety symptoms among the international student population. Maladaptive coping or passive coping styles created more dysfunction and predicted higher levels of anxiety and depression.

Researchers have also explored the relationship of coping styles and life satisfaction. A recent study by Garg et al. (2018) identified coping strategies associated

with higher life satisfaction among terminally ill cancer patients. Their findings revealed that religious coping was the most frequently used coping strategy, followed by acceptance. Women showed higher coping self-efficacy and more frequently used adaptive coping styles as compared with men. Men, as compared with women, used more emotion-focused and avoidant coping strategies. Life satisfaction was negatively correlated with maladaptive coping styles. Maladaptive coping styles include denial, substance use, and venting. A similar study by García Montes et al. (2020) explored the relationship among coping styles, personality styles, and satisfaction with life in patients with chronic kidney disease. Their results showed a positive relationship between adaptive coping strategies and life satisfaction in this population.

Gori et al (2020) explored the association among life satisfaction, coping strategies, and perceived stress due to COVID-19 lockdown. Their findings also found that relationship between life satisfaction and perceived stress are mediated by coping self-efficacy. Adaptive coping strategies led to higher life satisfaction and less stress, whereas maladaptive coping strategies led to lower life satisfaction and higher stress.

Acculturation and coping styles have also been linked together. The four acculturation strategies (i.e. assimilation, separation, marginalization, and integration) are said to reflect coping styles that an individual develops to manage their relationship with the host culture (Berry, 1997). A study by Akhtar and Kröner-Herwig (2015) investigated how different socio-demographic variables and coping styles are associated with the level of acculturative stress among international students in Germany. Results revealed that language proficiency was associated with acculturation levels. Maladaptive coping styles

predicted a higher level of acculturative stress. Additionally, Szabo et al. (2017) conducted a 3-month longitudinal study on secondary coping (i.e. changing our thoughts about the stressors, rather than changing stressors) involving a sample of Asian and Western international students in China and New Zealand. Their findings revealed that secondary coping exacerbated the negative effects of acculturative stress on psychological adjustment in New Zealand. However, secondary coping acted as a buffer in China, and reduced acculturation stress. Their findings indicate that culture also plays a major role in coping styles for acculturation.

Summary and Conclusion

This chapter reviewed the psychological literature on predictors of depression and life satisfaction among Asian Indians in the United States. Research has shown that, as compared with other ethnic groups, Asian Indian Americans are more vulnerable to mental health problems (Roberts et al., 2016). The literature review centered on research findings of gender, acculturation, Asian Indian values, discrimination, and coping style. These findings reveal the significant role of each predictor among Asian Indian adults. John Berry's bidimensional acculturation theory was described and discussed, as it serves as framework for understanding the relationship among key variables of the study.

Research exploring predictors of depression and life satisfaction in Asian Indians is scarce. Research exploring predictors of depression among this population has found that depression is negatively related to acculturation (Chandra et al., 2016). Most research has also explored predictors like gender and acculturation, but there remains a gap in exploring other variables like coping styles, Asian Indian values, and perceived

discrimination. For example, the role of traditional Asian Indian values and beliefs is less clear, with some studies identifying these as positively associated while others as negatively associated with depression (Nadimpalli et al., 2016). The only study exploring the role of coping strategies and self-reported discrimination has the methodological shortcoming of assessing the construct with a single item (Nadimpalli et al., 2016).

The present study will fill the gap in knowledge by looking at a variety of predictors for not only depression but also life satisfaction. The literature review included studies from different methodologies assessing predictors of depression among Asian Indians. However, correlational studies using self-report questionnaires account for most of this. Chapter 3 will include a description of the present study's methodological approach.

Chapter 3: Research Method

Introduction

The purpose of this study is to assess predictors of depression and life satisfaction among Asian Indians living the United States of America. This research project specifically aims to understand whether gender, coping style, acculturation, Asian values, and perceived discrimination predict depression and life satisfaction. The relationship between some of these variables has been previously explored, but the findings have been inconclusive. This chapter will provide details regarding the research design and the rationale for its selection, followed by a description of the sampling procedures and an explanation of the power analysis used to determine the study's sample size. Procedures for participant recruitment, consent, and data collection will be presented as well. Data collection will be based on a brief demographic survey and four instruments. Next, the data analysis plan, research question, and hypothesis are described. Finally, there will be a discussion about threats to validity and ethical procedures.

Research Design and Rationale

The present study used a quantitative research methodology. Quantitative studies are based on collection and analysis of data (Smith, 2021). Quantitative research is associated with positivism (i.e. epistemological position proposing knowledge should be derived by empirical research methods) and involves data that are analyzed numerically through statistical or other mathematical means (Burkholder et al., 2016). The components of quantitative research include measuring subjects and reporting the results (Smith, 2021). In comparison to quantitative research, qualitative research is based on

interpretation, observation, and a naturalistic approach to the world (Burkholder et al., 2016). Unlike quantitative research, qualitative research does not address prediction. Quantitative research methodology is the most suitable research method for a study exploring different predictors of depression and life satisfaction.

This study examines if gender, coping style, acculturation, Asian values, and discrimination (independent variables) predict depression and life satisfaction (dependent variables) among Asian Indians living in the United States of America. A cross-sectional correlational survey was used to examine the relationship between the different variables and assess if depression and life satisfaction are predicted by gender, coping skills, acculturation, Asian values, and discrimination. A correlational research design evaluates whether two or more variables are correlated. It is used when independent variables are not manipulated and there is no treatment given to participants. Correlational designs also assess the positive or negative statistical relationship between variables (Roberts, 2010). A cross-sectional correlational survey design is used when all measures are taken at the same point in time (Roberts, 2010). Additionally, a multiple regression analysis was used to test the hypothesis.

Methodology

Population

The targeted population was Asian Indian adults (i.e., 18 years of age or older) living in United States of America. Both men and women were eligible to participate in this study. The U.S. census reported that Asians were among the largest growing ethnic

group in the United States in the last decade. Asian Indians represented the third largest population with approximately 3.2 million (Roberts et al., 2016).

Sampling and Sampling Procedures

Probability sampling involves selecting participants randomly. It is a procedure that gives every prospective participant in the target population a known and non-zero probability of being selected. Nonprobability sampling, on the other hand, does not give some elements in the population a chance to be in the sample (Daniel, 2011). Unlike probability sampling, nonprobability sampling is more economical in terms of money and time and allows for smaller sample sizes of the target audience (Daniel, 2011). Nonprobability sampling is also appropriate in cross-cultural studies where complete listings of all members of a particular population is not fully available (Daniel, 2011). A convenience sample is a nonprobability sampling technique used when participants are recruited based on ease of access rather than a sampling strategy (Jager et al., 2017). Some strengths of convenience sampling are that they are cost-effective, efficient, and simple to implement (Daniel, 2011). For this study, convenience sampling was used.

In quantitative research designs, there must be a certain level of confidence in the validity of the measured constructs. Power analysis is a key part of this. Power analysis is the process where one of many statistical parameters can be calculated given others, and it calculates the needed sample size given the effect size, alpha, and power (Faul et al., 2007). To estimate the sample size in this study, a power analysis was performed using the G*Power 3.1.9.7. software application. The G*Power 3.1.9.7. software is a program developed with the purpose of assisting researchers in calculating general power analysis

and determining appropriate sample size (Faul et al., 2007). To determine the sample size in using linear multiple regression analysis, parameters were set at .95 for power and .05 for the alpha level. The power has been suggested as 0.90 or greater. Sample size is associated with power. When the sample size increases, the power of the study increases (Frankfort-Nachmias & Nachmias, 2008). G*Power estimated 138 participants for conducting a linear multiple regression (fixed effect size was set at .15, statistical power of .95, alpha of .05, and five predictors).

Procedures for Recruitment, Participation, and Data Collection

Participants were recruited from different American based organizations. I created a poster to advertise on the organizations' social network pages. The social media post included information on the purpose of the study, prospective participant characteristics, and the researcher's contact information. A snowball sampling recruitment technique was used to recruit more participants, if needed. This is a recruitment method in which research participants are asked to help researchers in identifying other potential participants (Wagner, 2015). Snowballing is considered appropriate for cross-cultural research, especially when researchers work through cultural brokers or community leaders.

Interested participants accessed the study's informed consent form and surveys via a website link. The data collection was anonymous as research surveys included items requiring disclosure of personal information such as names and addresses. However, participants were asked to provide general demographic information such as age, gender,

and years lived in the United States of America (Appendix B). The data were stored in a password-protected computer and only accessible to me and my dissertation chair.

To uphold the ethical standards regarding informed consent, participants were presented with information about the nature and purpose of the study, risks, benefits, confidentiality, and expected time to complete the survey. Participants were asked about the need for English language proficiency, as all the surveys were in English. Before starting the surveys, participants were provided with information on the estimated time of completion (20-30 minutes) and the voluntary nature of their participation in the study. Participants had the choice to withdraw from the study at any time. Participants can also discontinue at any time if they anticipate any kind of risk or discomfort.

All the forms, including the informed consent and the surveys, were accessed electronically through the Survey Monkey website. The surveys included a sociodemographic survey, Patient Health Questionnaire-9 (PHQ-9; Sptizer et al., 1999), The Satisfaction with Life Scale (SWLS; Diener et al., 1985), the Coping Self-Efficacy Scale (CSES;Chesney et al., 2006), the Asian Values Scale (AVS; Kim et al., 1999), the Vancouver Index of Acculturation (VIA; Ryder et al., 2000), and the Everyday Discrimination Scale (EDS; Williams et al., 1997). Through the Survey Monkey website, participants were able to access the entire survey with one link, instead of using multiple links to complete all short surveys. This makes for a more efficient, less frustrating, and less time-consuming data collection process. As noted in the previous section, the G power analysis estimated a minimum of 138 participants for this study. The online survey remained open until 160 surveys have been completed as some may need to be discarded

due to missing values or response sets. Collected data will be entered in the statistical software program IBM SPSS for statistical data analyses.

Instrumentation and Operationalization of Constructs

This study is assessing gender, coping style, acculturation, Asian values, and perceived discrimination as predictors of depression and life satisfaction (criterion variables) among Asian Indians living in the United States of America. A socio-demographic survey (Appendix B) was used to inquire about gender, age, and years living in the USA. The PHQ-9 was used to assess for depressive symptoms. The SWLS was used to assess participants' overall life satisfaction. Type of coping skills used by participants was assessed using the CSES. The AVS was used to learn about participant's engagement in their culture. The VIA helped to assess acculturation strategies. Finally, the EDS was used to assess for perceived discrimination. A detailed description of the instruments used to measure these constructs is presented in the following section.

The Sociodemographic Survey

This survey included questions on the participants' age, gender, ethnicity, religion, and the number of years lived in the United States.

The Patient Health Questionnaire (PHQ-9: Spitzer et al., 1999)

This is a nine-item self-administered instrument based on the DSM-IV for a major depressive episode (Marconi et al., 2019). This measure screens for depressive symptoms in the last 2 weeks and has four response options: (0) *not at all*, (1) *several days*, (2) *more than half the days*, and (3) *nearly every day*. Full scale scores range from 0 to 27 with higher scores indicating a higher level of depression. This brief questionnaire is

reportedly a useful clinical and research tool with good reliability. In a study with Asian Indians by Roberts et al. (2016), the Cronbach α for PHQ-9 was 0.82, indicating adequate reliability.

Kroenke et al. (2001) examined the validity of PHQ-9 compared to other short depression scales. In their study, the PHQ-9 was completed by 6,000 patients in eight primary care clinics and seven obstetrics-gynecology clinics. Their findings revealed that as PHQ-9's depression severity increased there was a substantial decrease in functional status on all six subscales, thus documenting the PHQ-9 as a reliable and valid measure for depression. The internal reliability (Cronbach's α) of the PHQ-9 was reported as 0.89 (Kroenke et al., 2001). A study by Chen et al. (2013) also examined the reliability and validity of the PHQ-9 for screening depression in Chinese primary care settings. They randomly selected 2,639 participants from primary care clinics of Hangzhou City and used the PHQ-9 to screen for depression. Out of the total participants, 280 were also interviewed with Structured Clinical Interview for Diagnostic and Statistical Manual Disorders for diagnosis of major depression. The Cronbach α was .87, and specificity of .91. According to the psychometric guidelines, a value of .70 or more for internal consistency are acceptable (Nunnally, 1978), making PHQ-9 reliable in Chinese primary care settings. In this study, the correlations between nine items of the PHQ-9 and its total score ranged from .67-.79, and all correlations were significant at the .01 level, meaning strong construct validity of the PHQ-9.

The Satisfaction With Life Scale (SWLS: Diener et al., 1985)

This is a self-administered 5-item measure designed to assess overall life satisfaction (Diener et al., 1985). It uses a 7-point Likert scale ranging from (1) *strongly disagree* to (7) *strongly agree*. Possible scores range from 5 to 35, with higher scores indicating a higher life satisfaction (Roberts et al., 2016). Over the years, many studies have indicated adequate internal reliability with Cronbach α values from 0.80 to 0.96 (Roberts et al., 2016).

SWLS has favorable psychometric properties and has high internal consistency and reliability. In most studies high internal consistency has been found to range between .79 and .80 (Cronbach's alpha; Diener et al., 1985). This sale has been used worldwide with many different ethnicities. For example, a study was conducted with sample for 2003 people representing the Lithuanian population to explore psychometric properties of satisfaction with life using SWLS and another mental health scale. The results demonstrated that internal consistency of SWLS and provided evidence that it is a valid and reliable measure for evaluation of satisfaction with life (Dirzyte et al., 2021). Convergent validity of the scale has been supported by moderate Pearson correlations with the Cantril's ladder ($r = .62$, $p < .05$; $r = .66$, $p < .05$) and the Andrew and Withey's Delighted-Terrible ($r = .68$, $p < .05$; $r = .62$, $p < .05$) scales (Diener et al., 1985). Cantril's ladder scale measures wellbeing while Andrew and Withey's scale assesses happiness. Convergent validity refers to the degree a measure is related to similar measures (Dunn, 2009). It would be expected that a measure on life satisfaction would be positively correlated with measures of wellbeing and happiness as it was evidenced in Diener et

al.'s (1985) SWLS validation study. Another study by Maraoufizadeh et al. (2016) examined the psychometric properties of the Persian version of SWLS in infertile women. Their results found high internal consistency, and the item-total and inter-item correlations were acceptable. Cronbach's alpha for assessing internal consistency of the scale was .89. To examine the convergent validity of the SWLS, Pearson correlation of coefficients were calculated between SWLS and the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983). SWLS was significantly negatively correlated with the Hospital Anxiety and Depression Scale (r = -.41; p < .001), indicating an acceptable convergent validity. Their findings remained consistent with previous studies.

To test for reliability of Diener et al.'s Life Satisfaction Scale, a study by Toker (2012) examined the connection between educators and life satisfaction. This study was conducted with academics from University of Turkey (n = 648). The results showed good internal reliability of .80 to .89, Cronbach alpha of .83. In this study, the alpha score is strong enough to support reliability of the instrument. The result of the study found that educators with 20 years or more in service had increased life satisfaction compared to professors who had the job for 6-10 years.

The Coping Self-Efficacy Scale (CSES: Chesney et al., 2006)

This is a self-report scale which measures for one's perceived ability to cope effectively with life challenges (Chesney et al., 2006). The CSES is a 26-item scale that uses 11-point Likert-type scale that ranges from (0) *cannot do at all,* (5) *moderately certain can do*, and (10) *certain can do*. The total scores for the 26-item scale range from 0 to 260. Higher scores indicate a greater degree of confidence in one's ability to cope,

and lower scores indicate a lower confidence to cope with life stressors (Chesney et al., 2006). Although the scale items are divided among three subscales (used problem focused coping, stop unpleasant emotions and thoughts, and get support from friends and family), only the full-scale scores were used for the purposes of the present study.

Chesney et al. (2006) used the CSES to evaluate the effectiveness of a coping self-efficacy training intervention, which was designed to enhance the coping skills of 349 men clinically diagnosed with depression and were HIV positive. The goal of their intervention was to decrease stress caused by the HIV diagnosis. Prior to coping self-efficacy training, only coping styles were assessed. It was noticed that coping style did not change before or after coping self-efficacy training. However, coping self-efficacy did change after completing the training (absolute βs ranged from 0.21 to 0.35, $p < .001$). According to Chesney et al. (2006), an internal consistency of .95 was found for the full-scale score, which indicates a high degree of reliability. For "used problem focused coping" items (12 items) the Cronbach α was .91, "stop unpleasant emotions and thoughts" items (9 items) the Cronbach α was .91 as well, and for the last set of items "get support from friends and family" (5 items), the Cronbach α was .80 (Chesney et al., 2006). For years now, the scale has been used with diverse population around the world, and most studies have indicated Cronbach alpha of .90 or greater, which is indicative of adequate reliability. Predictive validity for the scale has been supported by the associations (measured as standardized beta scores in a simultaneous multiple regression) of the emotion- and problem-focused coping skill factors with measures of reduced psychological distress and well-being (Chesney et al., 2006). More specifically, the stop

unpleasant emotions scale predicted perceived stress (β = -.35, p < .001), burnout (β = -.31, p < .001), and anxiety (β = -.28, p < .001), and the problem focused coping scale predicted perceived stress (β = -.13, p < .05) and anxiety (β = -.16, p < .01). Predictive validity is a form of validity which provides evidence of construct validity. It refers to the prediction of a criterion variable by the measure of interest (Cozby & Bates, 2015). It would be expected that individuals' efforts to actively engage in stopping negative emotions and thoughts (emotion focused) as well as solving the problems associated with personal distress (problem focused) would predict lower psychological distress and higher wellbeing as evidenced by Chesney and colleagues' (2006) validation study. Chesney et al. (2006) found that individuals who scored high on self-efficacy to help stop unpleasant emotions and thoughts scored low on cognitive escape-avoidance (partial r = -. 20, p < .001), and individuals endorsing higher self-efficacy to get support from their friends and family were predicted to pursue social support more than others (partial r = .21, p < .001). These findings suggest that CSES has sufficient validity and reliability.

Asian Values Scale (AVS: Kim et al., 1999)

The AVS scale was selected to examine the construct of Asian cultural values and its relationship to other psychological concepts. The AVS is a 36-item scale that uses 7-point Likert response format that ranges from (1) *strongly disagree* to (7) *strongly agree* (Kim & Hong, 2004). The AVS looks at different domains such as collectivism, conformity to norms, emotional self-control, family recognition through achievement, filial piety, and humility. The total scores for the 36 items range from 36 to 252. Higher

scores indicate higher conformity to traditional Asian values, and lower scores indicate low conformity.

Support for the AVS' construct validity was gained by identifying a nationwide survey and focus groups. Kim et al. (1999) reviewed literature on Asian cultural values, used nationwide survey of Asian American psychologists, and did three focus-group discussions. The literature review helped to generate 10 Asian value dimensions and 60 statements. The national survey was shared with 103 psychologists, who were then asked to distribute copies of the response form to their Asian American associates and request for their input in the identification of these values. The focus discussion groups were used to generate Asian cultural value dimensions and statements describing each dimension. The first group had an Asian Indian American woman, a Chinese man, and a Korean American man. The other two groups also had different participants from different Asian ethnicities. In their study, convergent validity was supported by positive correlations with the Suinn-Lew Asian Self-Identity Acculturation Scale and the Individualism-Collectivism Scale. (Kim et al., 1999). Convergent validity is evidenced when the measure of interest is associated with other measures assessing the same or similar construct (Cozby & Bates, 2015), Kim et al. (199) reported internal consistency of .81 and .82 and a 2-week- test-retest reliability of .83. A scale on Asian values would be expected to be negatively associated with acculturation to the White-American culture and individualism as evidenced by Kim et al. (1999).

The AVS has now been used in number of studies in the field of counseling and psychology. A study that examined the relationship among client adherence to Asian

cultural values, counselor expression of cultural values, and counselor ethnicity (Kim & Atkinson, 2002) found that participants who had high scores on the AVS, as compared with participants with low score on AVS rated Asian American counselors as more empathic and credible. In contrast, when counselors were not Asian, client with low score on AVS rated counselors to be more empathic than clients with high AVS. This study yielded Cronbach α.90. for depth, .80 for smoothness, .89 for positivity, and .81 for arousal, which is consistent with Kim et al.'s findings. Hence, the AVS has been used many different settings, and has proven to be a reliable tool.

The Vancouver Index of Acculturation (VIA: Ryder et al., 2000)

This bidimensional scale has 20 questions that assess interest and participation in one's "heritage culture" and the "typical American culture" (Ryder et al., 2000). Each cultural orientation subscale has 10 items, which are worded identically except for the culture referenced (Hyunh et al., 2009). The scale assesses for values, social relationships, and adherence to traditions (Huynh et al., 2009). The scale uses a 9-point Likert response format ranging from strongly disagree to strongly agree. Full scale scores for each of the dimensions range from 10 to 90. The heritage score is the mean of the odd-numbered items, whereas the mainstream score is the mean of the even-numbered items (Huynh et al., 2009).

A study by Huynh et al. (2009), examined the validity of acculturation instruments, including the VIA. On average the VIA yielded alphas greater than .80 on both domains across many different samples. This average estimated reliability meets the cutoff for use in research. The main advantage of the VIA is that it covers a wider range

of cultural domains. Concurrent validity has been supported by correlations of the heritage (r = -.30, p < .01) and mainstream (r = .57, p < .01) dimensions with amount of time lived and/or studied in a Western country. Predictive validity was evidenced by multiple regression beta coefficients resulting in prediction of the interdependent self-identity by the VIA-Heritage dimension (β = .26, p < .01), and the prediction of the independent self-identity by the VIA-Mainstream dimension (β = .39, p < .01) (Ryder et al., 2000). Concurrent validity is evidenced by an association between the instrument of interest and another measure of the same construct (Cozby & Bates, 2015). It would be expected for a measure of acculturation to be associated with the amount of time in the host culture as it would imply more familiarity with its beliefs, values, and behavioral expectations. Predictive validity refers to the association between a measure and a criterion assessed at a future time (Cozby & Bates, 2015). This scale has been found to have strong internal consistency for the heritage (α = .79 –.92) and mainstream (α= .75 – .89) dimensions. VIA also has strong concurrent validity for acculturation, including percentage of time residing in a different country, percentage of time educated in a different country, generational status, plans to remain in another country (vs. return to home country), English as a first language (vs. second language), and self-rated different identification.

The Everyday Discrimination Scale (EDS: Williams et al., 1997)

This scale measures self-reported discrimination. The EDS is a nine-item, self-report scale that reflects beliefs and thoughts about experiencing discrimination (Williams et al., 1997). It has a 6-point Likert scale ranging from *almost every day* to

never (Michaels et al., 2019). This scale was initially developed as a subjective measure to capture self-reported frequency of discriminatory experiences. The scores can range from 10 to 60, with higher scores indicating higher levels of discrimination.

The original validation study (Williams et al., 1997) examined the extent to which racial differences in socio-economic status, social class, and chronic indicators of perceived discrimination differed among White and Black Americans. Predictive validity refers to a measure's prediction of a criterion assessed at a future time (Cozby & Bates, 2015). Predictive validity was evidenced by the EDS positive association with psychological distress and negative relation with well-being (Williams et al., 1997). The EDS has yet to be used with the Asian Indian population, but there are many cross-cultural studies have found this scale to be reliable. For example, a recent study by Gonzales et al. (2016) assessed the validity of EDS among American Indians and Alaska Natives. The data were derived from the Special Diabetes Program for Indians. The study was conducted with participants (n = 3039) using a self-report survey that included the EDS. Reliability was calculated and yielded a single factor with high internal consistency (α =0.92). More educated and younger educated participants reported higher perceived discrimination compared with retired or widowed participants. Four psychosocial scales and two health knowledge measures were used to access for convergent and divergent validity of the EDS. Three of these scales were predicted to correlate positively with EDS, which assessed for convergent validity. For convergent validity, standardized coefficients for levels of distress, anger, and hostility ranged from .17 to .19 ($p < .001$). For divergent validity, standardized coefficients for resilient coping, general diabetes

related knowledge, and insulin-specific diabetes knowledge were smaller in magnitude (-0.01 to -0.07). In conclusion, empirical evidence suggests the EDS as a valid and reliable instrument for measuring perceived discrimination.

Data Analysis Plan

Data was analyzed using the SPSS statistical program. Data analysis included an examination of means, standard deviations, and medians to assess for skewness, outliers, and detect missing data. Data errors was checked with an analysis of minimum and maximum values and descriptive statistics. Missing values were addressed with the expectation-maximization procedures from the missing value analysis menu in SPSS.

The study's research question and hypotheses are as follows:

RQ 1—Quantitative: Do gender, coping strategies, acculturation, Asian values, and discrimination predict depression and life satisfaction among Asian Indian in United States of America?

$H_0$1: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will not predict depression among Asian Indians.

$H_1$1: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will predict depression among Asian Indians.

$H_0$2: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will not predict life satisfaction among Asian Indians.

$H_1$2: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will predict life satisfaction among Asian Indians.

The direction of the relationship between predictors and the criterion variables in *H1* and *H*2 are as follows:

- Women will score higher than men on depression.
- Women will score lower than men on life satisfaction.
- Higher coping self-efficacy will predict lower depression symptomatology among Asian Indians.
- Higher coping self-efficacy will predict higher life satisfaction among Asian Indians.
- Integrated participants (see Berry's bidimensional acculturation model in the Framework section of this chapter) will score lower on depression as compared with their assimilated, separated, and marginalized counterparts
- Integrated participants will score higher on life satisfaction as compared with their assimilated, separated, and marginalized counterparts
- Perceived discrimination will positively predict depression
- Perceived discrimination will negatively predict life satisfaction.
- Adherence to traditional Asian values will be negatively associated with depression.
- Adherence to traditional Asian values will positively correlated with life satisfaction.

RQ2 – Quantitative: Are there gender differences in coping self-efficacy, acculturation, perceived discrimination, depression, and life satisfaction among Asian American immigrants living in the United States?

$H_0$3: There will not be gender differences in coping self-efficacy, acculturation, perceived discrimination, depression, and life satisfaction among Asian American immigrants.

$H_1$3: There are gender differences in coping self-efficacy (higher in men), acculturation (higher in men), perceived discrimination (higher in men), depression (higher in women), and life satisfaction (lower in women) among Asian American immigrants.

A standard/simultaneous lineal multiple regression analysis was conducted for each criterion variable to test the hypotheses. Gender was included as a dummy-coded variable in the regression analyses. Multiple regression estimated the variance in the dependent variable's scores associated with several independent variables (Frankfort-Nachmias & Leon-Guerrero, 2018). The alpha level was set to the .05 level of statistical significance for testing the hypothesis ($p < .05$).

Threats to Validity

Validity is referred to as "the degree to which evidence and theory support the interpretations of test scores for proposed uses of tests" (American Education Research Association, 20114, p. 11). In other words, the validity of a test concerns what the test measures and how well it does so (Anastasi & Urbina, 1997). Internal validity refers to the extent to which the evidence supports the claim and focuses on the main effect of the

primary interest (Urban & Van Eeden-Moorefield, 2018). External validity is exploring if one's research can be used and applied in other experiences, settings etc. Hoping that one's research can be generalized to contexts and or populations outside of one's sample is external validity (Urban & Van Eeden-Moorefield, 2018). There are many threats to internal and external validity. Some threats can be planned for, but others may show up unexpectedly.

Threats to Internal Validity

Internal validity threats in the proposed study would include selection/selection bias and mortality. Selection threat occurs when people with certain characteristics are more likely to participate in the study (Urban & Van Eeden-Moorefield, 2018). To get a diverse sample, this study will target American Indian adults of all ages, regardless of their gender, socio-economic status, time lived in America, and their views on mental health. The demographic survey helped to obtain information about the participants to reduce threats to internal validity. Additionally, mortality threat occurs when people drop out of a study due to various reasons like emotional discomfort, time, fatigue etc. (Urban & Van Eeden-Moorefield, 2018). A large sample size of 138 participants may account for the dropout rate. Other mortality issues can be reduced by gathering the most up to date contact method like primary email address, by sending reminder emails, and staying within the 30-minute time limit for assessments. However, this study used an anonymous data collection strategy and thus will not ask for personal information such as email addresses.

Threats to External Validity

One primary threat to external validity in this study used selection-treatment interactions. This occurs when participant characteristics and demographics are limited (Urban & Van Eeden-Moorefield, 2018). A convenience sample of 138 Asian Indian Americans living in America is not enough to represent the entire population and their characteristics. The lack of randomization limited the generalizability of findings to Asian Indians with the social and demographic characteristics of the obtained convenience sample.

Ethical Procedures

The present study was submitted to Walden University's Institutional Review Board (IRB) for approval. This ensured that the study was conducted in an ethical manner. This study posed minimal risk to the participants. Participants were given the informed consent prior to completing the surveys so they were aware of the time commitment and risks involved in the study. They were provided with the researcher and the university's contact information. The research consent form was used to ensure that all the necessary details about the research study were given prior to participation. Participants completed the assessments online instead of in person, which helped to protect their anonymity. The data collected was maintained securely and to be destroyed after five years, as per Walden University's policy.

Summary

The purpose of this quantitative cross-sectional, correlational study was to explore predictors of depression and life satisfaction among Asian Indians living in the United

States. The predictors explored were gender, coping style, acculturation, Asian values, and perceived discrimination. The National Council of Asian Indian Association (NCAIA) and South Asian Americans Leading Together (SAALT) and Indian American Community Services (IACS) were the primary recruiting sites for this study. SurveyMonkey was used to send out all assessments and for data collection. SPSS software was used to enter data and run data analyses. This included a multiple regression analysis to test the statistical contribution of various predictors to the variance in the dependent variables. The instruments used were the sociodemographic survey, The Patient Health Questionnaire (PHQ-9; Spitzer et al., 1999), the Satisfaction with Life Scale (SWLS; Diener et al., 1985), the Coping Self-Efficacy Scale (CSES; Chesney et al., 2006), the Asian Values Scale (AVS; Kim et al., 1999), the Vancouver Index of Acculturation (VIA; Ryder et al., 2000), and the Everyday Discrimination Scale (EDS; Williams et al., 1997). Participant confidentiality and safety was prioritized throughout the study. Ethical guidelines for research with human participants was thoroughly followed. Prospective participants were provided with informed consent. The study was submitted to Walden University's IRB for approval.

Chapter 4 describes the results of the present study. Included in chapter 4 is quantitative and statistical analysis reports of the significant and nonsignificant findings. Descriptive statistics for all key variables are also included. Results of the multiple regression analysis testing the study's hypothesis are presented as well.

Chapter 4: Results

Introduction

This quantitative study focused on predictors of depression and life satisfaction among Asian Indians living in the United States of America. Adult (18 and over) Asian Indian men and women currently living in America participated in the study. The study assessed if gender, coping style, acculturation, Asian values, and perceived discrimination predict depression and life satisfaction.

The following hypothesis were proposed:

$H_0$1: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will not predict depression among Asian Indians.

$H_1$1: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will predict depression among Asian Indians.

$H_0$2: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will not predict life satisfaction among Asian Indians.

$H_1$2: The model comprised of gender, coping self-efficacy, acculturation, Asian values, and perceived discrimination will predict life satisfaction among Asian Indians.

The direction of the relationship between predictors and the criterion variables in *H1* and *H*2 are as follows:

- Women will score higher than men on depression.
- Women will score lower than men on life satisfaction.
- Higher coping self-efficacy will predict lower depression symptomatology among Asian Indians.
- Higher coping self-efficacy will predict higher life satisfaction among Asian Indians.
- Integrated participants (see Berry's bidimensional acculturation model in the Framework section of this chapter) will score lower on depression as compared with their assimilated, separated, and marginalized counterparts.
- Integrated participants will score higher on life satisfaction as compared with their assimilated, separated, and marginalized counterparts.
- Perceived discrimination will positively predict depression.
- Perceived discrimination will negatively predict life satisfaction.
- Adherence to traditional Asian values will be negatively associated with depression.
- Adherence to traditional Asian values will be positively correlated with life satisfaction.

$H_0$3: There will not be gender differences in coping self-efficacy, acculturation, perceived discrimination, depression, and life satisfaction among Asian American immigrants.

$H_1$3: There are gender differences in coping self-efficacy (higher in men), acculturation (higher in men), perceived discrimination (higher in men),

depression (higher in women), and life satisfaction (lower in women) among Asian American immigrants.

Data Collection

The following issues associated with data collection appear in this section: (a) data collection timeframe, response rates, missing data, and discrepancies, (b) demographic characteristics of the sample, (c) an analysis of the representativeness of the sample, and (d) results of basic univariate analyses.

Timeframe, Response Rates, and Discrepancies

After receiving approval from Walden University's IRB (approval number 04-22-220755560), data collection was initiated. The recruitment flyer, sociodemographic survey, and each of the scales to be administered were created in Survey Monkey. The flyer was electronically shared on Facebook and other social media platforms by various associations such Indian American Community Services (IACS). After 2 weeks, 27 participants completed the survey. The recruitment flyer was also advertised at the Indian Association of Western Washington's community event board.

A total of 148 individuals participated in the study. Two participants from the data analyses were removed for not meeting the demographic requirement of identifying as Asian Indian. Furthermore, 17 participants left significant portions of the survey incomplete. After removing these cases, the final number of participants available for data analyses was 131. This number was slightly less than the minimum size needed, as calculated by the G*Power software, 138 participants. There were many items with missing values. Values were computed for the missing data with the Expectation-

Maximization algorithm, as suggested by Tabachnick and Fidell (2013). There were no discrepancies in data procedures.

Demographic Characteristics of the Sample

Of the 131 participants, 64 (48.9%) were men and 67 (51.1%) were women. The mean age was 36.76 years (M = 36.76; SD = 15.23). Almost half of the participants (n = 61; 46.6%) reported being married, with 38 (29%) single, 25 (119.1%) in a relationship, 3 (2.3%) divorced, and 4(3.1%) widowed. With regards to number of years lived in United States of America, the mean number of years was 17.88 (M = 17.88, SD = 9.21). Most of the participants were born in India (n = 96, 73.3%), 26(19.8%) in the United States, and nine (6.9%) in other places, and 14% of the population has been in the United States of over 20 years. With regards to religion and spirituality, 47 respondents (35.9%) rated completely agreeing with being religious, 58(44.3%) agreed with being religious, 16(12.2%) disagreed with being religious, and 10(7.6%) completely disagreed with being religious, 55(42%) completely agreed about being spiritual, 60(45.8%) agreed to being spiritual, nine (6.9%) disagreed about being spiritual, and seven (5.3%) completely disagreed about being spiritual. Majority of the participants reported religious affiliation as Sikh (n = 53, 40.5%) and Hindu (n = 50, 38.2%). Eight (6.1%) participants reported being Muslim, six (4.6%) as Christian, two (1.5%) as Buddhist, 11(8.4%) as not religious, and one (.8%) as other. Regarding household income, most of the participants reported household income between $60k-80k ($n$ = 46, 35.1%). Thirty (22.9%) reported income between $80k-100k, seven (5.3%) participants reported less than $20k, 10(7.6%) reported household income between $20k-40k, 16(12.2%) reported between $40k-60k,

nine (6.9%) reported household income between 100k-200k, four (3.1%) reported household income between $120k-140k, three (2.3%) reported between $140k-160k, and six (4.6%) reported household income more than $180k.

Representativeness of the Sample

Asian Indians are one of the fastest growing ethnic groups int eh United States, and currently there are estimated 4.5 million Asian Indians living in the United States of America (Census Bureau, 2022), yet research gaining insights about this populations mental health needs is scarce. According to the census bureau the mean age for Asian Indians living in the United States of America is 34 years old (Budiman, 2022). In the present study the mean age was 36 years old. The median household income of this population is between 60-80k (Budiman, 2022), which is also similar to that of this study's sample of 60-80k.Most Asian Indians living in America identify as Hindu, with Sikh and Muslim being the second most popular religion among Asian Indians (Budiman, 2022), this study found similar findings, with 53 Sikh participants and 50 Hindu participants. All in all, there are no significant representative discrepancies between the sample in this study and the national statistics.

Basic Univariate Analyses

The mean and standard deviations for relevant variables in the study are as follows: depression (M = 13.27; SD = 4.85), life satisfaction (M = 12.73; SD = 6.84), acculturation Indian (M = 79.79; SD = 15.28), acculturation American (M = 57.32; SD = 25.10), coping self-efficacy (M = 180.10; SD = 53.10), Asian values (M = 136.80; SD =

35.17), and discrimination (M = 19.27; SD = 7.12). Age and gender statistics appear in the demographic characteristics section.

Results of the Statistical Analyses Testing of the Study's Hypotheses

This section presents the results of statistical tests evaluating the study's hypotheses. The study proposed three hypotheses: two assessing the contribution of key predictors to the statistical variance of depression and life satisfaction, and one exploring gender differences among variables. Table 1 displays a correlation matrix with correlations for the following variables: gender, depression (PHQ9), life satisfaction (SWLS), coping self-efficacy (CSES), Asian values (AVS), acculturation (VIA – Full Scale), and discrimination (EDS).

Table 1

Bivariate Correlations Among Variables

		1	2	3	4	5	6	7
1	Depression	--						
2	Life Satisfaction	-.66**	--					
3	Gender	.41**	-.43**	--				
4	Asian Values	-.19*	.25**	-.21*	--			
5	Acculturation	.12	-.15	.14	-.40	--		
6	Coping	-.68**	.77**	-.51**	.31**	-.10	--	
7	Discrimination	.12*	-.10	-.01	.19*	-.12*	-.15	--

Note. * p < .05., **p < .01.

Hypothesis 1: Predictors of Depression

One purpose of this study was to look at various predictors of depression and life satisfaction among Asian Indians living in the United States of America. The first hypothesis of the study assessed the prediction of depression. To achieve this objective, a standard multiple regression analysis was conducted. The demographic characteristics and univariate analysis section show the means and standard deviations of these variables. Bivariate correlations for these variables were run as well (see Table 1). In the multiple regression model, gender, Asian values, coping self-efficacy, and discrimination were entered as predictor variables and depression as criterion variable. In running the standard multiple regression, key test assumptions were evaluated as well. Bivariate correlations did not present any multicollinearity problems among predictor variables. This finding was corroborated with the SPSS multiple regression collinearity assessment, which yielded tolerance values much higher than .10 and variance inflation factor values much lower than 10. Inspection of the Normal Probability Plot of the Standardized Residuals suggested no deviation from normality. The Scatterplot of Standardized Residuals, on the other hand, presented few values outside the 3.3 to -3.3 range, which indicates few outliers but majority of them were within the range. Based on these analysis assumptions were met. Results of the multiple regression predicting depression are presented in Table 2.

Table 2

Summary of Multiple Regression Analysis for Variables Predicting Depression

Variable	*B*	*SE B*	*B*	*T*	*P*
Gender	.89	.73	.09	1.2	.22
Asian Values	.00	.01	.03	.38	.71
Acculturation	.01	.01	.08	1.11	.27
Discrimination	.08	.05	.11	1.65	.10
Coping	-.06	.01	-.62	-7.83	<.001

Hypothesis 2: Predictors of Life Satisfaction

The second hypothesis of the study assessed the prediction of depression. A standard multiple regression analysis was conducted. In the multiple regression model, gender, Asian values, coping self-efficacy, and discrimination were entered as predictor variables and life satisfaction as criterion variable. In running the standard multiple regression, key test assumptions were evaluated as well. Bivariate correlations did not present any multicollinearity problems among predictor variables. This finding was corroborated with the SPSS multiple regression collinearity assessment, which yielded tolerance values much higher than .10 and variance inflation factor values much lower than 10. Inspection of the Normal Probability Plot of the Standardized Residuals suggested no deviation from normality. The Scatterplot of Standardized Residuals, on the other hand, presented few values outside the 3.3 to -3.3 range, which indicates few outliers but majority of them were within the range. Based on these analyses,

assumptions were met. Results of the multiple regression predicting life satisfaction are presented in Table 3.

Table 3

Summary of Multiple Regression Analysis for Variables Predicting Life Satisfaction

Variable	*B*	*SE B*	*B*	*T*	*P*
Gender	-.59	-.91	-.04	-.64	-.52
Asian Values	-.01	-.01	-.02	-.36	-.72
Acculturation	-.02	-.02	-.07	-1.16	-.25
Discrimination	.00	-.06	.01	.10	-.92
Coping	.09	-.01	.74	10.53	<.001

Hypothesis 3: Gender Differences

The third hypothesis of the study assessed gender differences among participants. Independent-samples t-tests were conducted to compare scores on depression, life satisfaction, Asian values, coping self-efficacy, and discrimination for males and females. Based on Levene's Tests for Equality of Variances, the assumption of equality of variances was violated for scores on depression and discrimination. Thus, alternative *t*-values are presented for those two variables. Equality of variances are assumed for all other variables. Results of t-tests are presented next.

There was a significant difference in depression scores for males (M = 11.25, SD = 4.24) and females (M = 15.21; SD = 4.64; t (128.74) = -5.10, p < .00, two-tailed). A

significant difference for males (M = 30.23, SD = 6.59) and females (M = 24.43; SD = 5.85; t (129) = 5.34, p < .00, two-tailed) was also reported in life satisfaction scores. There was a significant difference in Asian values scores for males (M = 144.19, SD = 37.37) and females (M = 129.73; SD = 31.63; t (129) = 2.39, p = .02, two-tailed). With regards to discrimination, there was no significant difference in scores for males (M = 19.36, SD = 8.43) and females (M = 19.18; SD = 5.67; t (109.58) = .14, p = .89, two-tailed). There was a significant difference in coping scores for males (M = 207.53, SD = 43.95) and females (M = 153.88; SD = 47.78; t (129) = 6.68, p < .00, two-tailed). There was no significant difference in acculturation scores for males (M = 133.36, SD = 25.49) and females (M = 140.59; SD = 26.98; t (129) = -1.58, p = .12, two-tailed).

Chapter Summary

This chapter presented the results of the statistical analysis of the survey responses of 131 participants. The descriptive data showed a diverse sample of adults with regards to age, religious affiliation, believe in spirituality, birthplace, household income, and marital status. A standard multiple regression analysis was used to test the hypothesis of gender, acculturation, discrimination, coping self-efficacy, and Asian values contribution to the prediction of depression and life satisfaction. Bivariate correlations were also done to test associations between other variables and depression and life satisfaction. Age, years lived in America, birthplace, and religious affiliation were also looked at.

Chapter 5 presents the key results from the study. The discussion includes implications for John Berry's bidimensional acculturation model as a framework to

understand acculturation as a predictor for depression and life satisfaction. The chapter also presents implications for the practice of professionals supporting the mental health needs of the Asian Indian population living in America.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

This chapter includes interpreation of of the results, and discussion includes implications for John Berry's bidimensional acculturation model as a framework to understand acculturation as a predictor for depression and life satisfaction. Grounded in Berry's multidimensional theory of acculturation, this study explored potential predictors of depression and life satisfaction among Asian Indians living in United States of America. A cross-sectional correlational survey design was used to examine if gender, acculturation, Asian values, coping self-efficacy and discrimination predicted depression and life satisfaction. The targeted population was Asian Indian American adults, ages 18 and older living in United States of America. A sample of 138 participants were recruited. After discarding surveys with a high number of missing data, 131 cases were included in the statistical analyses.

Standard/simultaneous multiple regression analyses and bivariate correlations were used to test the study's hypotheses. Multiple regression analysis identified coping self-efficacy as the only predictor of depression and life satisfaction. Finally, gender differences were noted in depression, life satisfaction, Asian values, and coping self-efficacy. Women scored higher on depression, while men had higher levels of life satisfaction, Asian values, and coping self-efficacy. This chapter includes the interpretation of findings, limitations of the study, recommendations for further research, implications for social change, and the conclusion.

Interpretation of the Findings

Prediction of Depression

Coping self-efficacy was found to predict depression in Asian Indian adults living in Untied States of America. Coping self-efficacy's significant correlation with depression was consistent with several studies (Akhtar et al., 2019; Choi et al., 2012; Kasi et al., 2012). Self-efficacy helps in motivation and performance and directly influences how a person copes with a situation, and coping self-efficacy refers to a person's ability to cope with stressful events and emotions (Chesney et al., 2006). Individuals with diagnosed with depression may use passive coping style, which is believing that circumstances cannot be changed, and thus accept the situation as it is, whereas adaptive coping style is about confronting the problems and taking steps to solve the situation (Choi et al., 2012).

Coping self-efficacy determines how an individual will deal with depressive symptoms. It is possible, then, that study participants with higher coping self-efficacy had positive attitudes, which helped them cope with depressive symptoms such as lack of motivation, loss of interest etc. Akhtar et al. (2019) found that coping self-efficacy for individuals diagnosed with depression was directly linked with what kind of coping mechanism one engages in. It was determined that adaptive coping was found to be a health-promoting coping style predicting lower levels of depressive symptoms and maladaptive coping or passive coping styles created more dysfunction and predicted higher levels depression. Results from the current study indicate that coping self-efficacy

plays a critical role in predicting depression not only in general population, but also among Asian Indian population.

The current study did not find gender as a predictor for depression. Some past studies have suggested that older women are more likely than men to report and experience stressful life events and report higher depressive symptoms than men, but other studies have also not found gender as a predictor (Katsumata et al., 2005; Rubio et al., 2016). These studies found that when social support such as community support, family support etc. was high, there was no gender difference among men or women in reporting gender differences, in contrast when social support was low, both men and women reported higher levels of depressive symptoms (Ferri et al., 2022). Asian Indians come from a collectivist cultures, where strong links and support from the community and family, hence, they are less likely to report depressive symptoms. Additionally, the stigma around mental health can also prevent both men and women to endorse depressive symptoms and as a result gender was not a predictor of depression in this study.

This study was also rooted in the theoretical framework of Berry's bidimensional acculturation theory. Berry's model has been previously used to understand the impact of acculturation on the immigrant population in the United States of America (Bernstein et al., 2011). Acculturation has been found to be negatively correlated with depression in previous studies and has been considered a predictor of depression among immigrant populations (Klein et al., 2020; Moawa et al., 2020). However, other studies have not found acculturation as a predictor for depression (Bernstein et al., 2011; Yunjin et al., 2002). One explanation why acculturation has failed to show as a predictor in other

studies is because acculturation stress is temporary (Yunjin et al., 2002). Considering Berry's theory, in the early stages (1-3 years) of immigration, there is higher financial stress, acculturation stress and this process requires great sacrifice (Berry, 2005). In years 3-5, most immigrants are able to achieve the resolution stage, and they gain familiarity with the American culture, better employment, and gain English proficiency. These individuals are less likely to express acculturation stress (Bernstein et al., 2011; Berry, 2005). In this study, most participants have lived in the United States for America for a significant number of years. For example, the mean for length of stay in the United States was 17.88 with a standard deviation of 9.21. Hence, they have acclimated to the American culture more than recent immigrants and are less likely to report acculturation as a predictor for depression.

Asian values have also been considered a predictor of depression in previous studies (Chandra et al., 2016; Samanta et al., 2015). Other studies have found that Asian values may cause stress, but they lead to suppression of depressive symptoms and as a result it may not necessarily appear to be a predictor in research (Liw et al., 2022). Asian values may lead to stressful emotions like guilt or shame, but those emotions are generally suppressed by the individual. The stigma around mental health is also a key factor in suppression of depressive symptoms. In this study, Asian values did not predict depression, potentially because of stigma around mental health, which is a part of the cultural values, and because depressive symptoms may be suppressed. That is, it is possible that participants in this study underreported depressive symptoms. Future studies

may benefit from including mental health stigma as a control variable when assessing depression among Asian Indians living in the United States.

Discrimination has been found as a predictor for depression in previous studies (Johson-Lawrence et al., 2020; Loew et al., 2019). However, other studies have found that discrimination stress is related to various life stressors (Bernstein et al., 2011; Noh & Kaspar, 2003). These authors found that overt discrimination was linked to erosion of positive effects, whereas subtle form of discrimination was associated with depressive symptoms (Noh & Kaspar, 2003). This study measured for perceived discrimination and most of the participants had reported having less acculturation stress and as a result. This could be because subtle or few incidents of discrimination may not necessarily predict depression. However, repeated discrimination experiences in immigrants can lead to depressive symptoms. Although it is possible that the sample in the present study underreported discrimination, it is also possible that the significance of perceived discrimination is moderated by other variables such as coping style. This suggest that being the recipient of discrimination acts is not as relevant as how the person copes with and makes sense of these instances.

Prediction of Life Satisfaction

Coping self-efficacy was a statistically significant predictor of life satisfaction. This result is consistent with previous researcher's findings (García Montes et al, 2020; Garg et al., 2018; Gori et al., 2020). There is a relationship between life satisfaction and perceived stress, and these are mediated by coping self-efficacy. Adaptive coping

strategies lead to higher life satisfaction and less stress, whereas maladaptive coping strategies led to lower life satisfaction and higher stress (Gori et al., 2020).

The findings of the present study indicate the relevance of coping self-efficacy and life satisfaction. It is possible that study participants with higher coping self-efficacy had positive attitudes, which leads to higher feelings of life satisfaction. Results from previous studies have shown that positive relationship between adaptive coping strategies and life satisfaction, and a negative relationship between passive coping strategies and life satisfaction (García Montes et al., 2020). Results from the current study indicate that coping self-efficacy plays a critical role in predicting life satisfaction not only in general population, but also among Asian Indian population.

This study also explored other predictors such as gender, acculturation, Asian values, and discrimination for life satisfaction. However, the results revealed that these variables were not predictable of life satisfaction. In this study, it was assumed that men are more likely to report higher life satisfaction compared to women, which was consistent with some previous studies (Banjare et al, 2015; Joshanloo, 2018). However, recent study by Joshanloo and Jovanović (2020) found that despite less favorable objective conditions for women globally, they are found to report more life satisfaction with their lives than men. Conflicting results in studies on gender and life satisfaction reveal that the relationship between gender and life satisfaction is influenced by many factors such as national contexts, sociocultural conditions, and demographic variables (Joshanloo & Jovanović, 2020). Hence, these factors could have played a major part in the current study's results where gender did not predict life satisfaction.

Additionally, previous studies have found that acculturation is a predictor of life satisfaction (Klein et al., 2020; Moawa et al., 2020; Prapas et al., 2019). These studies have found that higher attachment to one's culture of origin is related to negative feelings and experiences in the host culture, which can result in lower life satisfaction. However, no such connects were found in the present study. Previous studies which also did not find acculturation as a predictor for life satisfaction (Marsiglia et la., 2013) found that factors like assimilation play a major role in predicting acculturation for life satisfaction. Individuals who are well assimilated in the host culture are less likely to have negative outlook towards the host culture (Berry, 2005), but that does not necessarily mean they have higher life satisfaction.

Previous studies have also found Asian values to effect life satisfaction (Chandra et la., 2016; Leenaars et al., 2010). This study hypothesized that adherence to traditional Asian values will positively correlate with life satisfaction. However, the results did not show such correlation. Adherence to Asian values was not found to be a significant predictor in previous studies as well. Cultural expectations may lead to stress, shame, and guilt, which then impacts coping styles and mental health but not necessarily life satisfaction (Liw et al., 2022).

Furthermore, previous studies have also found some correlation between perceived discrimination and life satisfaction (Morawa et al., 2020; Park et al., 2019). This study considered perceived discrimination as a predictor for life satisfaction. It was assumed that individuals who report higher perceived discrimination will report lower life satisfaction, however, there were no correlations found. A recent study by Yao and

colleagues (2018) found that perceived discrimination was a predictor for life satisfaction among elderly Asians only. This study was done with all adult age groups, which may have impacted the results. Hence, factors like age, cultural assimilation, community support may play an important role in one's experience with discrimination and that can then impact life satisfaction. Another study explained that after being discriminated against, one may be prompted to form a stronger internal group identification and alleviate the negative effects of discrimination (Garstka et al., 2004). Thus, discrimination may not be a direct predictor of life satisfaction.

Gender as Predictor

In the present study, gender differences were noted in depression, life satisfaction, Asian values, and coping-self efficacy. Gender differences with depression was consistent with several studies (Bartels et al., 2013; Shively et al., 2005; Strong et al., 2016). Over the years, researchers have found that prevalence of depression is much higher in women than in men (Villarroel & Terlizzi, 2019). According to the CDC (2020), in 2019, 21.8% of women experienced mild, moderate, or severe symptoms of depression in the past 2 weeks, as compared with only 15% of men. There are many reasons why there are gender differences in prevalence of depression. Researchers have found that the triggers of depression for both men and women are different. Women often present with internalized symptoms and men present with externalized symptoms (Shively et al., 2005). Women also have specific forms of depression related illnesses. Examples of these include premenstrual dysphoric disorder, postpartum depression, and post-menopausal depression. These illnesses are related to hormonal changes in women,

which are directly linked to an increase in depressive mood (Bartels et al., 2013). Results from the current study remained consistent with this finding as women participants reported higher depressive symptoms than men.

Gender differences in life satisfaction were consistent with other studies (Banjare et al., 2015; Joshanloo, 2018;). These studies found that men are more likely to report higher level of life satisfaction then women. Men experience less alienation as compared with women, and cultural expectations from women are some of the factors that influence life satisfaction among genders. The current study was consistent with this finding. Additionally, Asian values and coping self-efficacy also showed gender differences, where men reported higher level of coping self-efficacy and Asian values, these findings remain consistent with previous findings (Gaiha et al., 2020; Inman & Rao, 2018; Tannenbaum et al., 2016). Gender roles are greatly influenced by Asian Indian values. A study by Inman and Rao (2018) focused on Asian Indian women and their lived experiences with domestic violence and their ways of healing. Cultural factors like marital conflict, dowry, female feticide, lack of education, child marriage, preference of male child, and lack of resources contribute to the high percentage of mental health problems such as depression among Asian Indian women (Inman & Rao, 2018). Hence, men are more likely to adhere Asian values than women, which reflected in the currently study's results. Similarly, men are more likely to report higher coping self-efficacy than women as culturally men are more likely to engage in adaptive coping strategies than women (Chesney et al., 2006). Cultural factors also influence the choice of coping strategies. Even though coping strategies like social support and emotion focused coping

has been found relevant for Asian Indians, researchers have also found that some Asian Indian practices can lead to avoidance coping methods (Roberts et., 2016). While men choose to engage more action driven coping strategies, Asian Indian women are more likely to engage in religious coping (Kasi et al., 2012). Thus, the current study remains consistent with previous findings.

Limitations of the Study

There are several limitations in the present study. This study uses a correlational research design. A limitation of this design is that it cannot be used to make inferences about a causal relationship among measured variables (Roberts, 2010). This research design can determine association between exposure and outcomes but cannot predict causation. This research design does not give a conclusive reason for why a connection may exist (Lau & Kuziemsky, 2016).

This study used self-report measures for assessing the key constructs of interest. Self-report measures are known to be sensitive to social desirability bias, by which participants alter their responses to appear in a better light to researcher or themselves (Roberts, 2010). Response bias is also a limitation of self-report data. Response bias can occur in self-report surveys through misunderstanding of what a proper measurement is. Respondents might want to 'look good' in the survey, or they may not understand some words yet make guesses. In self-report survey's respondents do not get an opportunity to clarify questions which can also lead to response bias (Roberts, 2010). Online survey collection can also lead to response bias, survey fatigue, survey fraud, and sampling issues. Online data collection method can also have incompetence to reach people who do

not have access to internet. Online surveys are also only completed by people who are literate (Lau & Kuziemsky, 2016).

The surveys were presented to participants in English language. However, a significant number of participants did not report English as their native language. Not providing the opportunity for respondents to complete surveys in their native language is likely to have affected comprehension of items for some participants. Thus, language could have been a limitation in this study. Respondents who take surveys in a non-native language have difficulty with the process and may have difficulty understanding and interpreting the survey questions (Wenz et al., 2020). Additionally, when questions are complex and have a greater cognitive burden on respondent, it might be especially difficult to non-native speakers. When respondents have limited question comprehension, they are likely to select inaccurate answers that do not show their true response. They are also more likely to select a neutral response such as "don't know" due to confusion (Wenz et al., 2020). Hence, language proficiency can be interpreted as a limitation for this study.

Multiple regression analysis assesses the contribution of multiple variables to the statistical variance of a given criterion variable. In this study, depression and life satisfaction were the criterion variables of interest. Unfortunately, not entering in the regression equation potential constructs which are known or thought of as predictors of these criterion variables may misrepresent the actual contribution of predictors entered in the analysis. Furthermore, failure to account for these potentially relevant predictors is likely to affect our understanding of the relationship among the variables of interest. One

such potential predictor of depression and life satisfaction is mental health stigma. Mental health stigma is likely to be particularly relevant for participants whose cultural and social background contributes to negative beliefs about mental health. For example, it is possible that some participants in this study's sample may have underreported depressive symptoms based on the social stigma associated with such disclosure.

Recommendations for Further Study

This study explored potential predictors of depression and life satisfaction among Asian Indian adults living in United States of America. Psychological research on the Asian Indian population is limited. Although some of the predictors used in this study have been previously included in studies on Asian Indians. For example, depression, life satisfaction, discrimination, and Asian values had not been researched in the context of Asian Indians living in America. Scholars can build upon the results of this study to conduct further inquiry into the mental health needs of this population.

Notwithstanding the contributions of this study, there are some limitations as noted in the previous section. Future research is likely to benefit from addressing those shortcomings. For example, the current study uses a correlational research design which does not explore the causality inferences. Hence, a more robust research design, such as experimental and quasi-experimental would be useful. For example, participants could be randomly assigned to different levels of a coping strategies intervention and compared on pre and post-depression and life satisfaction measures. Researchers may also consider a causal-comparative research design to find the causal relationship between variables. A

longitudinal study may also assist in understanding if the relationship between some of the predictor variables change over time.

Researchers are encouraged to expand the range of predictors and explore other variables such as mental health stigma and help seeking behavior. Various studies have explored mental health problems in the Asian Indian community in America (Chesney et al., 2006; Kasi et al., 2012; Roberts, 2010; Roberts et., 2016), and their results have validated the clinically significant increased levels various mental health problems such as anxiety and depression. However, many Asian Indians are less likely than other groups to seek professional help for mental health related issues due to the stigma associated with mental health treatments in western countries. Most individuals from traditional cultural values are likely to rely on religion, social networks and family (Roberts et al., 2016). Hence, research exploring mental health stigma and treatment seeking behavior will help to fill this gap.

Additionally, this study used a quantitative research design. Researchers are encouraged to utilize qualitative research, which could present a more comprehensive approach in understanding the lived experiences of Asian Indians in America. Qualitative research allows participants to express ideas and allows the interviewer to be responsive to the individual differences and situational circumstances (Smith, 2021). Qualitative research also allows to understand the complex community dynamics within a community.

Future scholars can also use measures like The Balanced Inventory of Desirable Responding (BIDR) (Paulhus, 1998) to eliminate social desirability bias. The BIDR

consists of two subscales, Self-Deceptive Enhancement (SDE) and Impression Management (IM). The SDE refers to tendency to give self-reports that are honest but positively biased and the IM refers to the deliberate self-presentation to an audience (Paulhus, 1998). Hence, researchers can use this scale as part of quantitative research to eliminate any self-report and desirability bias.

Implications

This study sought to understand the predictors of depression and life satisfaction among the Asian Indian adults living in the United States of America. This section will discuss the clinical and social change implications of the study's findings.

Clinical Practice

Clinical psychologists and other health care professionals have the ethical and professional responsibility to provide quality care for Asian Indian adults in America. The main goal of these professionals is to increase the health and well-being of this minority population. Hence, it is important to consider how the results from the present study assist these health care professionals in better understanding the needs of the Asian Indian adults living in the United States of America.

This study's findings contribute to existing knowledge about the mental health needs of the Asian Indian population. Like other cultures, there is a lot of stigmas around mental health treatment in the Asian Indian culture. Interestingly, this study showed that coping self-efficacy was a significant predictor for depression and life satisfaction. Health care providers working with this population can recommend that they engage in learning more active coping mechanisms. This also suggests that although social and cultural

factors are relevant to consider, clinical interventions should prioritize the development of emotional, cognitive, and behavioral skills.

The findings of this study indicate that agency policies and funding should incorporate alternative care options like coping skills training and appropriate mental health professional referrals. Mental health professionals might want to include information on coping self-efficacy. They can include coping self-efficacy as part of the treatment plan and set goals accordingly. Other medical professionals could use the results of this study to develop a coping self-efficacy program that includes training, webinars, trainings etc. Of course, a major challenge involves to develop these interventions while considering key social and cultural factors.

Social Change

Walden University defines positive social change as a process of creating and implementing ideas followed by actions that promote worth, dignity, development of communities, organizations, cultures etc. The ultimate result is to improve human and social conditions (Walden, 2020). Over the years, Walden's social change moto has contributed to the social change movement in the field of social and clinical psychology. Positive social change results from a positive vision and strength-based approach. The results from this study will assist psychologists, behavioral scientists, and health care policymakers in implementing social change by understanding various predictors and other psychological variables associated with the Asian Indian population's mental health needs. Findings may contribute to future research and motivate other professionals to explore other predictors of depression and life satisfaction.

Findings from this study could lead to a positive social change by exploring different variables for depression and life satisfaction. Research focusing on mental health needs of the Asian Indian population is lacking, and this study creates a positive social change by conducting research with a marginalized population. There are several stereotypes associated with Asian Indian's seeking help for mental health problems such as, cultural expectations, language barriers, and others. However, this study failed to identify Asian values or language as significant predictors of life satisfaction and depression. The results from this study will encourage other practitioners to assess for other predictors. Behavioral health clinical, support groups and organizations working with this population may focus on coping-self efficacy while considering the relevance of social and cultural factors such as Asian values, acculturation, and religious beliefs. Therefore, the results of this study have potential to effect positive social change by encouraging health care and mental health professionals to provide better care when working with this population.

Conclusion

Research exploring mental health needs of the Asian Indian population in America is limited. This study aimed at increasing knowledge regarding potential predictors of depression and life satisfaction among Asian Indian adults living in the United States. Berry's bidimensional model of acculturation (Berry, 2005) was used as the theoretical framework for this study. It was an appropriate framework for this study because unlike earlier unidimensional models, the bidimensional model of acculturation takes in consideration both the original and host cultures (Jang et al., 2007). It allows

individuals to report different levels of acceptance and adherence to their own and new culture. The bidimensional model has been successfully used in research with immigrants because it takes into consideration that acculturating people will experience a change in their attitude (Andrews et al., 2013).

It was hypothesized that various predictors such as gender, acculturation, discrimination, coping self-efficacy, and Asian values would predict depression and life satisfaction. The results revealed that coping self-efficacy predicted depression in Asian Indian adults living in Untied States of America. Based on these findings, clinicians who are interested in working with the Asian Indian population may wish to stress the role of coping self-efficacy. The results from this study may have implications beyond the individual and clinical levels of analysis. Knowledge based on this study has the potential to effect social change by promoting better mental health treatment modalities when working with the Asian Indian population. Future researchers can contribute to better understanding of other predictors and variables addressing the unique needs of this population.

References

Abdollahi, F., & Zarghami, M. (2018). Effect of postpartum depression on women's mental and physical health four years after childbirth. *Eastern Mediterranean Health Journal, 24*(10), 1002–1009. https://doi.org/10.26719/2018.24.10.1002

Akhtar, M., & Kröner-Herwig, B. (2015). Acculturative stress among international students in context of socio-demographic variables and coping styles. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues, 34*(4), 803–815. https://doi.org/10.1007/s12144-015-9303-4

Akhtar, M., Herwig, B. K., & Faize, F. A. (2019). Depression and anxiety among international medical students in Germany: The predictive role of coping styles. *JPMA. The Journal of the Pakistan Medical Association, 69*(2), 230–234.

American Educational Research Association. (2014). *The standards for educational and psychological testing*. Washington, DC: American Educational Research Association.

American Psychological Association (2013). *Diagnostic and statistics manual of mental disorders 5 diagnostic exam*. American Psychiatric Publishing.

Anastasi, A., & Urbina, S. (1997). *Psychological testing* (7th ed.). Prentice Hall.

Andrews, A. R., 3rd, Bridges, A. J., & Gomez, D. (2013). A multi-study analysis of conceptual and measurement issues related to health research on acculturation in Latinos. *Journal of Transcultural Nursing: Official Journal of the Transcultural Nursing Society, 24*(2), 134–143. https://doi.org/10.1177/1043659612472199.

Angold, A., Costello, E. J., Messer, S. C., Pickles, A., Winder, F., & Silver, D. (1995) The development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research*, 5, 237–249.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215.

Banjare, P., Dwivedi, R., & Pradhan, J. (2015). Factors associated with the life satisfaction amongst the rural elderly in Odisha, India. *Health and Quality of Life Outcomes, 13*, 201. https://doi.org/10.1186/s12955-015-0398-y

Banks, K.H., Kohn-Wood, L.P., Spencer, M. (2009). An examination of the African American experience of everyday discrimination and symptoms of psychological distress. *Community Mental Health Journal, 42*(6), 555–569.

Bartels, M., Cacioppo, J. T., van Beijsterveldt, T. C., & Boomsma, D. I. (2013). Exploring the association between well-being and psychopathology in adolescents. *Behavior Genetics, 43*(3), 177–190. https://doi.org/10.1007/s10519-013-9589-7

Bernstein, K. S., Park, S. Y., Shin, J., Cho, S., & Park, Y. (2011). Acculturation, discrimination and depressive symptoms among Korean immigrants in New York City. *Community Mental Health Journal, 47*(1), 24–34. https://doi.org/10.1007/s10597-009-9261-0

Berry, J. W. (1980). Acculturation as varieties of adaptation. In A. Padilla (ed.), *Acculturation: Theory, models, and some new findings*. Westview.

Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review, 46*, 5–34.

Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations, 29*(6), 697–712. https://doi.org/10.1016/j.ijintrel.2005.07.013.

Berry, J. W. (2003). Conceptual approaches to acculturation. In Chun, K. M., Organista, P. B., Marin, G. (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 17–38). American Psychological Association

Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigrant youth: acculturation, identity, and adaptation. *Applied Psychology: An International Review*, *55*(3), 303–332. https://doi.org/10.1111/j.1464-0597.2006.00256.x

Berry, J. W., Chasiotis, A., Poortinga, Y. H., Sam, D. L., Breugelmans, S. M. (2011). *Cro ss-Cultural Psychology: Research and Applications.* Cambridge University Press.

Billings, A. G., & Moos, R. H. (1984). Coping, stress, and social resources among adults with unipolar depression. *Journal of Personality and Social Psychology*, *46*(4), 877–891. https://doi.org/10.1037/0022-3514.46.4.877

Budiman, A. (2022). *Indians in the U.S. fact sheet*. Pew Research Center's Social & Demographic Trends Project. Retrieved October 31, 2022, from https://www.pewresearch.org/social-trends/fact-sheet/asian-americans-indians-in-the-u-s/

Bulut, E., & Gayman, M. D. (2020). A latent class analysis of acculturation and depressive symptoms among Latino immigrants: Examining the role of social support. *International Journal of Intercultural Relations, 76*, 13–25. https://doi org/10.1016/j.ijintrel.2020.02.002.

Burkholder, G. J., Cox, K. A., & Crawford, L. M. (2016). *The Scholar-Practitioner's Guide to Research Design. Laureate* Publishing.

Census Bureau. (2022). *Asian American and Pacific Islander Heritage month: May 2022*. Census.gov. Retrieved October 31, 2022, from https://www.census.gov/newsroom/facts-for-features/2022/asian-american-pacific-islander.html

Center for Disease Control and Prevention (CDC). (2020). *Mental Health Conditions: Depression and Anxiety*. Retrieved from https://www.cdc.gov/tobacco/campaign/tips/diseases/depression-anxiety.html#four

Chan, K. (2020). The association of acculturation with overt and covert perceived discrimination for older Asian Americans. *Social Work Research*, *44*(1), 59–71. https://doi.org/10.1093/swr/svz023

Chandra, R. M., Arora, L., Mehta, U. M., Asnaani, A., & Radhakrishnan, R. (2016). Asian Indians in America: The influence of values and culture on mental health. *Asian Journal of Psychiatry*, *22*, 202–209.

Chang, E.C., & Kwon, P. (2014). Special issue on psychopathology in Asians and the DSM-5: culture matters. *Asian Journal of Psychiatry, 7*, 66-67.

Chen, S., Fang, Y., Chiu, H., Fan, H., Jin, T., & Conwell, Y. (2013). Validation of the nine-item Patient Health Questionnaire to screen for major depression in a Chinese primary care population. *Asia-Pacific Psychiatry, 5*(2), 61–68. https://doi.org/10.1111/appy.12063

Chesney, M. A., Neilands, T. B., Chambers, D. B., Taylor, J. M., & Folkman, S. (2006). A validity and reliability study of the Coping Self-Efficacy Scale. *British Journal of Health Psychology*, *11*, 421–437. doi:10.1348/135910705X53155

Choi, N. G., Hegel, M. T., Sirrianni, L., Marinucci, M. L., & Bruce, M. L. (2012). Passive coping response to depressive symptoms among low-income homebound older adults: does it affect depression severity and treatment outcome? *Behaviour Research and Therapy*, *50*(11), 668–674. https://doi.org/10.1016/j.brat.2012.07.003.

Cozby, P. C., & Bates, S. (2015). *Methods in behavioral research* (12th ed.). McGraw-Hill.

Daniel, J. (2011). *Sampling Essentials: Practical Guidelines for Making Sampling Choices SAGE* Publications.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*(3), 542–575. https://doi.org/10.1037/0033-2909.95.3.542

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment, 49*(1), 71-75.

Dirzyte, A., Perminas, A., & Biliuniene, E. (2021). Psychometric properties of Satisfaction with Life Scale (SWLS) and Psychological Capital Questionnaire (PCQ-24) in the Lithuanian population. *International Journal of Environmental Research and Public Health, 18*(5). https://doi.org/10.3390/ijerph18052608

Dunn, D. S. (2009). *Research Methods for Social Psychology*. Wiley-Blackwell.

Eid, R.S., Gobinath, A.R., & Galea, L. (2019). Sex differences in depression: Insights from clinical and preclinical studies. *Progress in Neurobiology*, *179*, 86-102. https://doi.org/10.1016/j.pneurobio.2019.01.006

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavioral Research Methods, 39*, 175-191. http://doi.org/10.3758/BF03193146.

Ferri, C., Yang, K., & Girgus, J. S. (2022). Predicting the gender difference in depressive symptoms in older adults. *Aging & Mental Health*. https://doi.org/10.1080/13607863.2022.2084712

Frankfort-Nachmias, C., & Leon-Guerrero, A. (2018). *Social Statistics for a Diverse Society* (8th ed.). Sage Publications.

Frankfort-Nachmias, C., & Nachmias, D. (*2008*). *Research methods in the Social Sciences*. 7th Edition, Worth.

Gaiha, S. M., Taylor Salisbury, T., Koschorke, M., Raman, U., & Petticrew, M. (2020). Stigma associated with mental health problems among young people in India: A

systematic review of magnitude, manifestations and recommendations. *BMC Psychiatry*, *20*(1), 538.

Garg, R., Chauhan, V., & Sabreen, B. (2018). Coping styles and life satisfaction in palliative care. *Indian Journal of Palliative Care*, *24*(4), 491–495.

García Montes, J. M., Sánchez Elena, M. J., & Valverde Romera, M. (2020). The influence of coping and personality styles on satisfaction with life in patients with chronic kidney disease. *Psychologica Belgica*, *60*(1), 73–85. https://doi.org/10.5334/pb.518

Garstka, T. A., Schmitt, M. T., Branscombe, N. R., & Hummert, M. L. (2004). How young and older adults differ in their responses to perceived age discrimination. *Psychology and aging*, *19*(2), 326–335. https://doi.org/10.1037/0882-7974.19.2.326

Gibson, M.A. (2001). Immigrant adaptation and patterns of acculturation. *Human Development, 44*, 19-23.

Gonzales, K. L., Noonan, C., Goins, R. T., Henderson, W. G., Beals, J., Manson, S. M., Acton, K. J., & Roubideaux, Y. (2016). Assessing the Everyday Discrimination Scale among American Indians and Alaska Natives. *Psychological Assessment, 28*(1), 51–58. https://doi.org/10.1037/a0039337.

Gordon, M. (1964). *Assimilation in American life*. Oxford University Press.

Gori, A., Topino, E., & Di Fabio, A. (2020). The protective role of life satisfaction, coping strategies and defense mechanisms on perceived stress due to COVID-19

emergency: A chained mediation model. *PloS One*, *15*(11), https://doi.org/10.1371/journal.pone.0242402.

Hofmann, S.G., Asnaani, A., & Hinton, D.E. (2010). Cultural aspects in social anxiety and social anxiety disorder. *Depression and Anxiety, 27* (12), 1117–1127, http://dx.doi.org/ 10.1002/da.20759.

Huang, Y. (2018). Gender differences in the role of acculturation, self-regulation, and self-esteem in alcohol consumption among Asian American adults. *Journal of the Utah Academy of Sciences, Arts & Letters*, *95*, 161–177.

Huynh, Q.-L., Howell, R. T., & Benet-Martinez, V. (2009). Reliability of bidimensional acculturation scores: a meta-analysis. *Journal of Cross-Cultural Psychology*, *40*(2), 256.

Inman, A. G., & Rao, K. (2018). Asian Indian women: Domestic violence, mental health, and sites of resilience. *Women & Therapy, 41*(1–2), 83–96.

Iwamoto, D. K., Liao, L., & Liu, W. M. (2010). Masculine norms, avoidant coping, Asian values, and depression among Asian American men. *Psychology of Men & Masculinity, 11*(1), 15–24. https://doi.org/10.1037/a0017874.

Jager, J., Putnick, D. L., & Bornstein, M. H. (2017). More than just convenient: the scientific merits of homogenous convenience samples. *Monographs of the Society for Research in Child Development*, *82*(2), 13–30. https://doi.org/10.1111/mono.12296.

Jamaludin, N. L., Sam, D. L., Sandal, G. M., & Adam, A. A. (2018). The influence of perceived discrimination, orientation to mainstream culture and life satisfaction

on destination loyalty intentions: the case of international students. *Current Issues in Tourism*, *21*(8), 934–949. https://doi.org/10.1080/13683500.2015.1119102

Jang, Y., Kim, G., Chiriboga, D., & Kallimanis, B. (2007). A bidimensional model of acculturation for Korean American older adults. *Journal of Aging Studies*, *21*(3), 267–275. https://doi.org/10.1016/j.jaging.2006.10.004

Johnson-Lawrence, V., Scott, J. B., & James, S. A. (2020). Education, perceived discrimination and risk for depression in a southern black cohort. *Aging & Mental Health*, *24*(11), 1872–1878. https://doi org/10.1080/13607863.2019.1647131

Joseph, A., Jenkins, S. R., Wright, B., & Sebastian, B. (2020). Acculturation processes and mental health of Asian Indian women in the United States: A mixed-methods study. *American Journal of Orthopsychiatry*, *90*(4), 510–522. https://doi org/10.1037/ort0000465.

Joshanloo, M., & Jovanović, V. (2020). The relationship between gender and life satisfaction: analysis across demographic groups and global regions. *Archives of Women's Mental Health*, *23*(3), 331–338. https://doi.org/10.1007/s00737-019-00998-w

Joshanloo, M. (2018). Gender differences in the predictors of life satisfaction across 150 nations. *Personality and Individual Differences*, *135*, 312–315. https://doi org/10.1016/j.paid.2018.07.043.

Kasi, P. M., Naqvi, H. A., Afghan, A. K., Khawar, T., Khan, F. H., Khan, U. Z., Khuwaja, U. B., Kiani, J., & Khan, H. M. (2012). Coping styles in patients with

anxiety and depression. *ISRN Psychiatry*, *2012*, 128672. https://doi.org/10.5402/2012/128672

Katsumata, Y., Arai, A., Ishida, K., Tomimori, M., Denda, K., & Tamashiro, H. (2005). Gender differences in the contributions of risk factors to depressive symptoms among the elderly persons dwelling in a community. *International Journal of Geriatric Psychiatry*, *20*(11), 1084–1089. https://doi.org/10.1002/gps.1403

Kim, B. S. K., Atkinson, D. R., & Yang, P. H. (1999). The Asian Values Scale: Development, factor analysis, validation, and reliability. *Journal of Counseling Psychology*, *46*, 342–352.

Kim, B. S. K., & Atkinson, D. R. (2002). Asian American client adherence to Asian cultural values, counselor expression of cultural values, counselor ethnicity, and career counseling process. *Journal of Counseling Psychology, 49*, 3–13.

Kim, B. S. K., & Hong, S. (2004). A psychometric revision of the Asian Values Scale using the Rasch model. *Measurement & Evaluation in Counseling & Development*, *37*(1), 15–27. https://doi-.org/10.1080/07481756.2004.11909747.

Klein, E. M., Müller, K. W., Wölfling, K., Dreier, M., Ernst, M., & Beutel, M. E. (2020). The relationship between acculturation and mental health of 1st generation immigrant youth in a representative school survey: does gender matter? *Child & Adolescent Psychiatry & Mental Health*, *14*(1), 1–10. https://doi.org/10.1186/s13034-020-00334-6

Kosic, A. (2002). Acculturation attitudes, need for cognitive closure, and adaptation of immigrants. *The Journal of Social Psychology, 142*(2), 179–201. https://doi.org/10.1080/00224540209603894

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.

Krsmanovic, M. (2020). "I was new and I was afraid": The acculturation strategies adopted by international first-year undergraduate students in the United States. *Journal of International Students, 10*(4), 954–975. https://doi.org/10.32674/jis.v10i4.1160.

Landrine, H., Klonoff, E. A., Corral, I., Fernandez, S., & Roesch, S. (2006). Conceptualizing and measuring ethnic discrimination in health research. *Journal of Behavioral Medicine, 29*, 79–94. https://doi.org/10. 1007/s10865-005-9029-0.

Lau, F.Y., & Kuziemsky, C.E. (2016). *Handbook of eHealth Evaluation: An Evidence-based Approach*. University of Victoria. Available from: https://www.ncbi.nlm.nih.gov/books/NBK481614/

Leenaars, A.A., Girdhar, S., Dogra, T.D., Wenckstern, S. &, Leenaars, L. (2010). Suicide notes from India and the United States: a thematic comparison. *Death Studies, 34* (5), 426–440.

Li, M., Reese, R. J., Ma, X., & Love, K. (2021). The role of adult attachment in international students' acculturation process. *International Journal of Intercultural Relations, 81*, 29–41. https://doi org/10.1016/j.ijintrel.2020.12.008.

Liw, L., Ciftci, A., & Kim, T. (2022). Cultural values, shame and guilt, and expressive suppression as predictors of depression. *International Journal of Intercultural Relations, 89*, 90–99. https://doi.org/10.1016/j.ijintrel.2022.05.005

Lowe, S. R., Tineo, P., & Young, M. N. (2019). Perceived discrimination and major depression and generalized anxiety symptoms: In Muslim American college students. *Journal of Religion and Health, 58*(4), 1136–1145. https://doi.org/10.1007/s10943-018-0684-1

Lui, P. P., & Zamboanga, B. L. (2018). Acculturation and alcohol use among Asian Americans: A meta-analytic review. *Psychology of Addictive Behaviors, 32*(2), 173–186. doi.org/10.1037/adb0000340

Ma, K. (2021). Acculturation Stress and Depression among First-Year International Graduate Students from China and India in the U.S. *College Student Journal, 55*(1), 104–118.

Marconi, A., Ranum, N., Van Orman, S., Hanson, B., Donovan, V., & Borenitsch, E. (2019). Demographic differences in response rates for PHQ9 in a university student population. *Journal of American College Health, 67*(3), 283–289. https://doi.org/10.1080/07448481.2018.1481073.

Markova, V., Sandal, G. M., & Pallesen, S. (2020). Immigration, acculturation, and preferred help-seeking sources for depression: comparison of five ethnic groups. *BMC Health Services Research, 20*(1), 648. https://doi.org/10.1186/s12913-020-05478-x

Maroufizadeh, S., Ghaheri, A., Omani Samani, R., & Ezabadi, Z. (2016). Psychometric properties of the satisfaction with life scale (SWLS) in Iranian infertile women. *International Journal of Reproductive Biomedicine*, *14*(1), 57–62.

Marsiglia, F. F., Booth, J. M., Baldwin, A., & Ayers, S. (2013). Acculturation and Life Satisfaction Among Immigrant Mexican Adults. *Advances in social work*, *14*(1), 49–64.

Meca, A., Cobb, C., Xie, D., Schwartz, S. J., Allen, C., & Hunter, R. (2017). Exploring adaptive acculturation approaches among undocumented Latinos: A test of Berry's Model. *Counseling Psychologist*, *45*(8), 1115–1140. https://doi.org/10.1177/0011000017745978.

Methikalam, B., Wang, K. T., Slaney, R. B., & Yeung, J. G. (2015). Asian values, personal and family perfectionism, and mental health among Asian Indians in the United States. *Asian American Journal of Psychology*, *6*(3), 223–232.

Miao, S., & Xiao, Y. (2020). Does acculturation really matter for internal migrants' health? Evidence from eight cities in China. *Social science & medicine (1982)*, *260*, 113210. https://doi.org/10.1016/j.socscimed.2020.113210.

Michaels, E., Thomas, M., Reeves, A., Price, M., Hasson, R., Chae, D., & Allen, A. (2019). Coding the Everyday Discrimination Scale: implications for exposure assessment and associations with hypertension and depression among a cross section of mid-life African American women. *Journal of Epidemiology and Community Health*, *73*(6), 577–584. https://doi.org/10.1136/jech-2018-211230.

Morawa, E., Brand, T., Dragano, N., Jöckel, K.-H., Moebus, S., & Erim, Y. (2020). Associations between acculturation, depressive symptoms, and life satisfaction among migrants of Turkish origin in Germany: Gender- and generation-related aspects. *Frontiers in Psychiatry*, *11*, 715. https://doi.org/10.3389/fpsyt.2020.00715

Nadimpalli, S. B., Kanaya, A. M., McDade, T. W., & Kandula, N. R. (2016). Self-reported discrimination and mental health among Asian Indians: Cultural beliefs and coping style as moderators. *Asian American Journal of Psychology*, *7*(3), 185–194.

National Institute of Mental Health. (2013). *Depression.* Retrieved from http://www.nimh.nih.gov/health/topics/depression/index.shtml

Needham, B. L., Mukherjee, B., Bagchi, P., Kim, C., Mukherjea, A., Kandula, N. R., & Kanaya, A. M. (2018). Acculturation strategies and symptoms of depression: The mediators of atherosclerosis in south Asians living in America (MASALA) study. *Journal of Immigrant and Minority Health*, *20*(4), 792–798. https://doi.org/10.1007/s10903-017-0635-z.

Nes, R. B., Czajkowski, N. O., Røysamb, E., Orstavik, R. E., Tambs, K., & Reichborn-Kjennerud, T. (2013). Major depression and life satisfaction: a population-based twin study. *Journal of Affective Disorders*, *144*(1-2), 51–58. https://doi.org/10.1016/j.jad.2012.05.060

Noh, S., & Kaspar, V. (2003). Perceived Discrimination and Depression: Moderating Effects of Coping, Acculturation, and Ethnic Support. *American Journal of Public Health, 93*(2), 232–238. https://doi.org/10.2105/AJPH.93.2.232

Nosheen, A., Riaz, M. N., Malik, N. I., Yasmin, H., & Malik, S. (2017). Mental health outcomes of sense of coherence in individualistic and collectivistic culture: moderating role of social support. *Pakistan Journal of Psychological Research, 32*(2), 563–579.

Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill

Orzechowska, A., Zajączkowska, M., Talarowska, M., & Gałecki, P. (2013). Depression and ways of coping with stress: a preliminary study. *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research, 19*, 1050–1056. https://doi.org/10.12659/MSM.889778

Park, K., Hyelin, K., & Chung, J. (2019). Bottom-up theory of life satisfaction by running event participants. *E-Review of Tourism Research, 16*(6), 557–566.

Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: a meta-analytic review. *Psychological Bulletin, 135*(4), 531–554. https://doi.org/10.1037/a0016059

Paulhus D. L. (1998). *Manual for the Paulhus Deception Scales: BIDR Version 7*. Multi-Health Systems.

Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology, 54*, 271–281. https://doi.org/10.1037/0022- 0167.54.3.271.

Prapas, C., & Mavreas, V. (2019). The relationship between quality of life, psychological wellbeing, satisfaction with life and acculturation of immigrants in Greece. *Culture, Medicine and Psychiatry*, *43*(1), 77–92. https://doi.org/10.1007/s11013-018-9598-3

Pryzgoda, J., & Chrisler, J.C. (2000). The definitions of gender and sex: the subtleties of meaning. *Sex Roles, 43* (7/8): 553– 569. http:/doi.org/10.1023/A:1007123617636.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurements,* 1, 385-401.

Roberts, C. M. (2010). *The dissertation journey: A practical and comprehensive guide to planning, writing, and defending your dissertation* (2nd ed.). Corwin.

Roberts, L. R., Mann, S. K., & Montgomery, S. B. (2016). Mental health and sociocultural determinants in an Asian Indian community. *Family & Community Health*, *39*(1), 31–39. https://doi.org/10.1097/FCH.0000000000000087.

Rubio, L., Dumitrache, C., Cordon-Pozo, E., & Rubio-Herrera, R. (2016). Coping: Impact of gender and stressful life events in middle and in Old Age. *Clinical Gerontologist, 39*(5), 468–488. https://doi.org/10.1080/07317115.2015.1132290

Ryder, A.G., Alden, L., & Paulhus, D.L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of demographics, personality, self-identity, and adjustment. *Journal of Personality and Social Psychology*, *79*, 49-65.

Samanta, T., Chen, F., & Vanneman, R. (2015). Living arrangements and health of older adults in India, *The Journals of Gerontology: Series B, 70*(6). 937-947, https://doi.org/10.1093/geronb/gbu164

Shively, C. A., Register, T. C., Friedman, D. P., Morgan, T. M., Thompson, J., & Lanier, T. (2005). Social stress-associated depression in adult female cynomolgus monkeys (Macaca fascicularis). *Biological psychology*, *69*(1), 67–84. https://doi.org/10.1016/j.biopsycho.2004.11.006

Smith, T. (2021). Qualitative and quantitative research. *Salem Press Encyclopedia*.

Somani, I. (2010). Becoming American. *Journal of International & Intercultural Communication*, *3*(1), 59–81. https://doi.org/10.1080/17513050903428125

Spencer, M., Chen, J., Gee, G., Fabian, C., Takeuchi, D. (2010). Discrimination and mental health-related service use in a national study of Asian Americans. *American Journal of Public Health*, *100*(12), 2410-2417.

Spitzer, R. L., Kroenke, K., & Williams, J. B. (1999). Validation and utility of a self-report version of PRIME-MD: the PHQ primary care study. Primary care evaluation of mental disorders. patient health questionnaire. *JAMA*, *282*(18), 1737–1744. https://doi.org/10.1001/jama.282.18.1737

Spitzer, R. L., Kroenke, K., Williams, J. W., & Lo¨we, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, *166*, 1092–1097. https://doi.org/10.1001/ archinte.166.10.1092

Srivastava, K., Chatterjee, K., & Bhat, P. S. (2016). Mental health awareness: The Indian scenario. *Industrial Psychiatry Journal*, *25*(2), 131–134. https://doi.org/10.4103/ipj.ipj_45_17.

Strong, C., Tsai, M.-C., Lin, C.-Y., & Cheng, C.-P. (2016). Childhood adversity, timing of puberty and adolescent depressive symptoms: A longitudinal study in Taiwan. *Child Psychiatry and Human Development*, *47*(3), 347–357. https://doi /10.1007/s10578-015-0570-y

Sun, S., Hoyt, W. T., Brockberg, D., Lam, J., & Tiwari, D. (2016). Acculturation and enculturation as predictors of psychological help-seeking attitudes (HSAs) among racial and ethnic minorities: A meta-analytic investigation. *Journal of Counseling Psychology*, *63*(6), 617–632. https://doi org/10.1037/cou0000172.supp (Supplemental).

Susskind, J. (2005). Social development. In Neil J. Salkind (Ed.), *Encyclopedia of human development* (pp. 1191–1197).

Szabo, A., English, A. S., Zhijia, Z., Jose, P., Ward, C., & Jianhong, M. (2017). Is the utility of secondary coping a function of ethnicity or the context of reception? A longitudinal study across Western and Eastern cultures. *Journal of Cross-Cultural Psychology*, *48*(8), 1230–1246. https://doi.org/10.1177/0022022117719158.

Tabachnick, G. B., & Fidell, S. L. (2013). *Using multivariate statistics*. Northbridge, CA: California State University.

Tannenbaum, C., Greaves, L., & Graham, I. D. (2016). Why sex and gender matter in implementation research. *BMC Medical Research Methodology*, *16*(1), 145. https://doi.org/10.1186/s12874-016-0247-7.

Tineo, P., Lowe, S. R., Reyes-Portillo, J. A., & Fuentes, M. A. (2021). Impact of perceived discrimination on depression and anxiety among Muslim college students: The role of acculturative stress, religious support, and Muslim identity. *American Journal of Orthopsychiatry*. https://doi.org/10.1037/ort0000545.

Toker, B. (2012). Life satisfaction among academicians: An empirical study on the universities of Turkey. *Procedia - Social and Behavioral Sciences*, *47*, 190–195. https://doi.org/10.1016/j.sbspro.2012.06.637

Tran, A. G. T. T., & Sangalang, C. C. (2016). Personal discrimination and satisfaction with life: Exploring perceived functional effects of Asian American race/ethnicity as a moderator. *Cultural Diversity and Ethnic Minority Psychology*, *22*(1), 83–92. https://doi.org/10.1037/cdp0000052

Tummala-Narra, P., Houston-Kolnik, J., Sathasivam-Rueckert, N., & Greeson, M. (2017). An examination of attitudes toward gender and sexual violence among Asian Indians in the United States. *Asian American Journal of Psychology, 8*(2), 156–166. https://doi.org/10.1037/aap0000078.

Turner, E., & Mohan, S. (2016). Child mental health services and psychotherapy attitudes among Asian Indian parents: An exploratory study. *Community Mental Health Journal, 52*(8), 989–997. https://doi.org/10.1007/s10597-015-9976-z.

Urban, J. B., & Van Eeden-Moorefield, B. M. (2018). Establishing validity for quantitative studies. In *Designing and proposing your research project.* (pp. 111–117). American Psychological Association. https://doi.org/10.1037/0000049-009.

Vang, Z. M., Hou, F., & Elder, K. (2019). Perceived religious discrimination, religiosity, and life satisfaction. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *20*(6), 1913–1932. https://doi.org/10.1007/s10902-018-0032-x

Veenhoven, R. (1996). Developments in satisfaction-research. *Social Indicators Research*, *37*(1), 1–46. https://doi.org/10.1007/BF00300268

Villarroel, M.A., & Terlizzi, E.P (2019). Symptoms of depression among adults: United States. Retrieved from https://www.cdc.gov/nchs/products/databriefs/db379.htm

Wagner, W. E., Ruel, E., & Gillespie, B. J. (2015). *The practice of survey research: Theory and applications*. India: SAGE Publications.

Walden. (2020). *Social change*. Retrieved on February 27, 2020 from http://catalog.waldenu.edu/content.php?catoid=41&navoid=5182

Wang, Y., Li, T., Noltemeyer, A., Wang, A., Zhang, J., & Shaw, K. (2018). Cross-Cultural adaptation of international college students in the United States. *Journal of International Students*, *8*(2), 821–842.

Ward, C. (2008). Thinking outside the Berry boxes: New perspectives on identity, acculturation and intercultural relations. *International Journal of Intercultural Relations*, *32*(2), 105–114. https://doi org/10.1016/j.ijintrel.2007.11.002

Wenz, A., Baghal, T.A., & Gaia, A. (2020). Language Proficiency Among Respondents: Implications for Data Quality in a Longitudinal Face-To-Face Survey. *Journal of Survey Statistics and Methodology*, *9*(1), 73-93. https://doi.org/10.1093/jssam/smz045

Wilson, M., & Thayer, Z. (2018). Impact of acculturation on depression, perceived stress and self-esteem in young Middle Eastern American adults. *Annals of Human Biology*, *45*(4), 346–353. https://doi.org/10.1080/03014460.2018.1484160.

Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socio-economic status, stress and discrimination. *Journal of Health Psychology*, *2*(3), 335-351.

Yao, J., Yang, L., Han, X., & Li, Y. (2018). Perceived Discrimination and Life Satisfaction of Elderly Chinese People: The Chain Mediating Effects of National Identity and Sense of Community. *Frontiers in psychology*, *9*, 2572. https://doi.org/10.3389/fpsyg.2018.02572

Ye, J., Mack, D., Fry-Johnson, Y., & Parker, K. (2012). Health care access and utilization among US-born and foreign-born Asian Americans. *Journal of Immigrant and Minority Health*, *14*(5), 731–737. https://doi.org/10.1007/s10903-011-9543-9.

Yunjin Oh, Koeske, G. F., & Sales, E. (2002). Acculturation, Stress, and Depressive Symptoms Among Korean Immigrants in the United States. *Journal of Social Psychology*, *142*(4), 511–526. https://doi.org/10.1080/00224540209603915

Zigmond, A. S., & Snaith, R. P. (1983). The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica*, *67*(6), 361-370.

Appendix A: Permission to Use Scales

RE: Requesting Permission for Coping Self Efficacy Scale (CSES)

Processor A

10/5/2021 2:33pm

Dear Ramanjot Basanti,

Thank you for your interest in the Coping Self Efficacy Scale (CSES). You have my permission to use the scale in your dissertation research examining predictors of depression and life satisfaction among Asian Indians living in United States of America. I strongly recommend that you use the full scale and I have attached a copy. The full 26-item scale will give you the most reliable measure and is the form of the CSES that other investigators are using. I developed the scale for a major intervention study because none of the other existing coping questionnaires or scales was able to be used to assess changes in coping over time. The CSES is able to assess coping at any point in time and is also able to measure the effects of intervention or changes over time.

All the very best
Processor A

RE: Requesting Permission for Asian Values Scale
Processor B
9/28/2021 3:32pm
Dear Raman

Thank you for your interest in the AVS. Attached is the scale and its scoring instructions. You have my permission to use the scale for your research.

Good luck on your research
Processor B

The Patient Health Questionnaire (PHQ-9)

Citation:
Spitzer, R. L., Kroenke, K., & Williams, J. B. (1999). Validation and utility of a self-report version of PRIME-MD: the PHQ primary care study. Primary care evaluation of mental disorders. patient health questionnaire. *JAMA*, *282*(18), 1737–1744. https://doi.org/10.1001/jama.282.18.1737

Instrument Type:
Rating Scale

Test Format:
The scale instructs respondents to indicate on the 4-point rating scale (0=not at all true,1=several days, 2=more than half the days, 3=nearly every day) measuring for depressive symptoms.

Source and Permission
Developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc. No permission required to reproduce, translate, display or distribute.

The Satisfaction with Life Scale (SWLS)

Citation:
Kobau, R., Sniezek, J., Zack, M. M., Lucas, R. E., & Burns, A. (2010). Well-being assessment: An evaluation of well-being scales for public health and population estimates of well-being among US adults. Applied Psychology: *Health and Well-being, 2*(3), 272-297. doi:http://dx.doi.org/10.1111/j.1758-0854.2010.01035.x
Instrument Type:
Rating Scale

Test Format:
The test has 5 statements. The scale instructs respondents to indicate on the 7-point rating scale (1=Strongly disagree, to 7= Strongly agree) indicating your satisfaction with life.

Source and Permission
The scale is copyrighted but you are free to use it without permission or charge by all professionals (researchers and practitioners) as long as you give credit to the authors of the scale: Ed Diener, Robert A. Emmons, Randy J. Larsen and Sharon Griffin as noted in the 1985 article in the Journal of Personality Assessment.

Vancouver Index of Acculturation (VIA)

Citation:
Ryder, A.G., Alden, L., & Paulhus, D.L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of demographics, personality, self-identity, and adjustment. *Journal of Personality and Social Psychology, 79*, 49-65.

Instrument Type:

Rating Scale

Test Format:
The test has 20 statements. The scale instructs respondents to indicate on the 9-point rating scale (1= disagree, to 9= agree) indicating their adherence to Asian Values.

Source and Permission
by Ryder, A.G., Alden, L., and Paulhus, D.L. It was published by Paulhus and on their official website it says, "scale can be used without permission" and give public access to their official scale and scoring instructions. Website:
https://www2.psych.ubc.ca/~dpaulhus/Paulhus_measures/

The Everyday Discrimination Scale (EDS)

Citation:
Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socio-economic status, stress and discrimination. *Journal of Health Psychology*, *2*(3), 335-351.

Instrument Type:
Rating Scale

Test Format:
The test has 9 statements. The scale instructs respondents to indicate on the 6-point rating scale (1= never, to 6= almost every day) indicating the way other people have treated them

Source and Permission
Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socio-economic status, stress and discrimination. *Journal of Health Psychology*, *2*(3), 335-351. The scale is publicly available. No Permission is necessary for its use. Website: discrimination_resource_dec._2020.pdf (harvard.edu)

Appendix B: Sociodemographic Survey

- How old are you? (write in number of years) _____
- Do you identify as Asian Indian/Southeast Asian Indian (write yes or no) ___
- What is your gender? (circle your selection)
    1. Male
    2. Female
- How well can you read and understand English? (circle your selection)
    1. Not at all
    2. Not well
    3. Well
    4. Very Well
- How many years have you lived in the United States? (write number of years) ____
- Where were you born?
    1. India
    2. USA
    3. Other _____
- I consider myself a religious person
    1. Completely disagree
    2. Disagree
    3. Agree
    4. Completely disagree
- I consider myself a spiritual person
    1. Completely disagree
    2. Disagree
    3. Agree
    4. Completely disagree
- Religious affiliation
    1. Hindu
    2. Muslim
    3. Sikh
    4. Christian
    5. Buddhist
    6. Not religious

7. Other _____

- Which of the following represents your annual household income?
    1. Less than $20,000
    2. $20,000 to $40,000
    3. 40,000 to 60,000
    4. $60,000 to 80,000

Appendix C: Patient Health Questionnaire (PHQ-9)

PHQ-9 Rating Scale:
0 = not at all
1= several days
2= More than half the days
3 = Nearly every day

Over the last 2 weeks, how often have you been bothered by any of the following problems?	**Rating:**
1) Little interest or pleasure in doing things	0 1 2 3
2) Feeling down, depressed, or hopeless	0 1 2 3
3) Trouble falling or staying asleep, or sleeping too much	0 1 2 3
4) Feeling tired or having little energy	0 1 2 3
5) Poor appetite or overeating	0 1 2 3
6) Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0 1 2 3
7) Trouble concentrating on things, such as reading the newspaper or watching television	0 1 2 3
8) Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0 1 2 3
9) Thoughts that you would be better off dead or of hurting yourself in some way	0 1 2 3

Sum: _____

Appendix D: The Satisfaction with Life Scale (SWLS)

Instructions: Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 - Strongly agree
- 6 - Agree
- 5 - Slightly agree
- 4 - Neither agree nor disagree
- 3 - Slightly disagree
- 2 - Disagree
- 1 - Strongly disagree

____ In most ways my life is close to my ideal.

____ The conditions of my life are excellent.

____ I am satisfied with my life.

____ So far I have gotten the important things I want in life.

____ If I could live my life over, I would change almost nothing.

Appendix E: Coping Self-Efficacy Scale (CSES)

When things aren't going well for you, or when you're having problems, how confident or certain are you that you can do the following:

Cannot do at all				Moderately certain can do						Certain can do
0	1	2	3	4	5	6	7	8	9	10

For each of the following items, write a number from 0 –10, using the scale above.

1. Keep from getting down in the dumps. _____
2. Talk positively to yourself. _____
3. Sort out what can be changed, and what cannot be changed. _____
4. Get emotional support from friends and family. _____
5. Find solutions to your most difficult problems. _____
6. Break an upsetting problem down into smaller parts. _____
7. Leave options open when things get stressful. _____
8. Make a plan of action and follow it when confronted with a problem. _____
9. Develop new hobbies or recreations. _____
10. Take your mind off unpleasant thoughts. _____
11. Look for something good in a negative situation. _____
12. Keep from feeling sad. _____
13. See things from the other person's point of view during a heated argument. _____
14. Try other solutions to your problems if your first solutions don't work. _____
15. Stop yourself from being upset by unpleasant thoughts. _____
16. Make new friends. _____
17. Get friends to help you with the things you need. _____
18. Do something positive for yourself when you are feeling discouraged. _____
19. Make unpleasant thoughts go away. _____
20. Think about one part of the problem at a time. _____
21. Visualize a pleasant activity or place. _____
22. Keep yourself from feeling lonely. _____
23. Pray or meditate. _____
24. Get emotional support from community organizations or resources. _____
25. Stand your ground and fight for what you want. _____
26. Resist the impulse to act hastily when under pressure. _____

Appendix F: Asian Values Scale (AVS)

Instructions: Use the scale below to indicate the extent to which you agree with the value expressed in each statement.

1 = Strongly disagree
2 = Moderately disagree
3 = Mildly disagree
4 = Neither Agree nor disagree
5 = Mildly agree
6 = Moderately agree
7 = Strongly agree

——1. Educational failure does not bring shame to the family.
——2. One should not deviate from familial and social norms.
——3. Children should not place their parents in retirement homes.
——4. One need not focus all energies on one's studies.
——5. One should be discouraged from talking about one's accomplishments.
——6. One should not be boastful.
——7. Younger persons should be able to confront their elders.
——8. When one receives a gift, one should reciprocate with a gift of equal or greater value.
——9. One need not follow one's family's and the society's norms.
——10. One need not achieve academically in order to make one's parents proud.
——11. One need not minimize or depreciate one's own achievements.
——12. One should consider the needs of others before considering one's own needs.
——13. Educational and career achievements need not be one's top priority.
——14. One should think about one's group before oneself.
——15. One should be able to question a person in an authority position.
——16. Modesty is an important quality for a person.
——17. One's achievements should be viewed as family's achievements.
——18. Elders may not have more wisdom than younger persons.
——19. One should avoid bringing displeasure to one's ancestors.
——20. One need not conform to one's family's and the society's expectations.
——21. One should have sufficient inner resources to resolve emotional problems.
——22. Parental love should be implicitly understood and not openly expressed.
——23. The worst thing one can do is to bring disgrace to one's family reputation.
——24. One need not remain reserved and tranquil.
——25. The ability to control one's emotions is a sign of strength.
——26. One should be humble and modest.
——27. Family's reputation is not the primary social concern.
——28. One need not be able to resolve psychological problems on one's own.
——29. Following familial and social expectations are important.
——30. One should not inconvenience others.
——31. Occupational failure does not bring shame to the family.

——32. One need not follow the role expectations (gender, family hierarchy) of one's family.
——33. One should not make waves.
——34. Children need not take care of their parents when the parents become unable to take care of themselves.
——35. One need not control one's expression of emotions.
——36. One's family need not be the main source of trust and dependence

Appendix G: Vancouver Index of Acculturation (VIA)

Please circle one of the numbers to the right of each question to indicate your degree of agreement or disagreement. Many of these questions will refer to your Asian Indian culture.

Disagree								Agree
1	2	3	4	5	6	7	8	9

1. I often participate in my Indian cultural traditions.
2. I often participate in mainstream American cultural traditions.
3. I would be willing to marry a person from my Indian culture.
4. I would be willing to marry a white American person.
5. I enjoy social activities with people from the Indian culture.
6. I enjoy social activities with typical American people.
7. I am comfortable interacting with people of Indian culture.
8. I am comfortable interacting with typical American people.
9. I enjoy entertainment (e.g. movies, music) from my Indian culture.
10. I enjoy American entertainment (e.g. movies, music).
11. I often behave in ways that are typical of my Indian culture.
12. I often behave in ways that are typically American.
13. It is important for me to maintain or develop the practices of my Indian culture.
14. It is important for me to maintain or develop American cultural practices.
15. I believe in the values of my Indian culture.
16. I believe in mainstream American values.
17. I enjoy the jokes and humor of my Indian culture.
18. I enjoy white American jokes and humor.
19. I am interested in having friends from my Indian culture.
20. I am interested in having white American friends.

Appendix H: The Everyday Discrimination Scale (EDS)

In the following questions, we are interested in the way other people have treated you or your beliefs about how other people have treated you. Can you tell me if any of the following has ever happened to you?

1= Never
2= Less than once a year
3= A few times a year
4= A few times a month
5= At least once a week
6= Almost everyday

How often has the follow happened to you?	**Rating:**
1. You are treated with less courtesy than other people are	1 2 3 4 5 6
2. You are treated with less respect than other people are.	1 2 3 4 5 6
3. You receive poorer service than other people at restaurants or stores.	1 2 3 4 5 6
4. People act as if they think you are not smart.	1 2 3 4 5 6
5. People act as if they are afraid of you.	1 2 3 4 5 6
6. People act as if they think you are dishonest.	1 2 3 4 5 6
7. People act as if they're better than you are.	1 2 3 4 5 6
8. You are called names or insulted.	1 2 3 4 5 6
9. You are threatened or harassed**.**	1 2 3 4 5 6