

PERCEIVED DISCRIMINATION AND PSYCHOLOGICAL DISTRESS: THE  
MODERATING AND MEDIATING EFFECTS OF SOCIAL CONTEXT AMONG ASIAN  
AMERICANS

By

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## ABSTRACT

### PERCEIVED DISCRIMINATION AND PSYCHOLOGICAL DISTRESS: THE MODERATING AND MEDIATING EFFECTS OF SOCIAL CONTEXT AMONG ASIAN AMERICANS

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This study is based on secondary analyses of the National Latino And Asian American Study (NLAAS). Focusing on Asian Americans as an aggregate, and the three largest subgroups represented in the NLAAS (i.e., Chinese, Filipino and Vietnamese Americans), this study investigated the extent to which (a) perceived discrimination predicted psychological distress, (b) social context variables (family cohesion, family conflict, neighborhood cohesion, subjective socioeconomic status) moderated the relationship between perceived discrimination and psychological distress, and (c) measures of subjective socioeconomic status (SES) mediated the relationship between perceived discrimination and psychological distress. By testing these models separately for Chinese, Filipino, and Vietnamese American groups, results provided a more nuanced assessment of each group's unique experience. The results indicated that perceived discrimination was significantly related to increased psychological distress in the total Asian American sample, and the three Asian ethnic groups, however, the moderation and mediation model revealed divergent patterns for each Asian ethnic group and for the aggregate sample. Therefore, the results of this study may have implications for understanding within-group variability in the Asian American community.

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## CHAPTER 1: INTRODUCTION

Across social sciences, scholars examine the mistreatment and relatively difficult life events that result from racial and ethnic discrimination. There is an abundance of literature suggesting that discrimination influences life circumstances of racial minorities through multiple pathways, such as by determining ones' residence, economic opportunities, their experience with health care, and level of stress exposure (Chou & Feagin, 2014; Williams & Mohammed, 2009). As noted by scholars (e.g. Schmitt et al., 2014; Paradeis, 2006; Meyer, 2003; Clark, Anderson, Clark, & Williams, 1999), it is important to make a distinction between the objectively defined life conditions that represent the discriminatory events, and the extent to which people perceive the self as a target or victim of discrimination. Both objective and subjective perceptions of discrimination have unique consequence for psychological well-being (Schmitt et al., 2014). The present study focused on the consequences of the subjective interpretation of discrimination, referred to as perceived discrimination (William & Mohammed, 2009).

In general, perceived discrimination has been identified as a stressor, which represents a threat to well-being, and has important implications for understanding patterns of racial disparities in health (William & Mohammed, 2009; Clark et al., 1999). A number of empirical studies have linked perceived discrimination to poor physical (e.g. cardiovascular diseases, breast cancer) and psychological well-being (e.g. anxiety, low self-esteem, lowered sense of mastery and control over life) (Williams & Mohammed, 2009; Williams, Neighbors, & Jackson, 2003; Chakraborty & McKenzie, 2002; Broman et al., 2000). It is well documented that experiences of discrimination disproportionately affect the physical and mental health of racial/ethnic minorities in the U.S. (Schmitt et al. 2014; Pascoe & Richman, 2009; William & Mohammed, 2009; Paradeis, 2006). However, such studies have been largely limited to a mono-racial samples, comprised mainly of

African American or White participants and/or convenience samples (e.g. college students) that limit generalizability to community settings (Liang, Li, & Kim, 2004; Hwang & Goto, 2009). Relatively few studies have examined the intricate relationship between discrimination and mental health in Asian Americans (Lee & Ahn, 2011; Hwang & Goto, 2009; Gee, Ro, Shariff-Marco, & Chae, 2009).

Asian Americans are the fastest growing racial group in the U.S., with reported population growth of 72% between 2000 and 2015 (from 11.9 million to 20.4 million) (Gustavo et al., 2017). Today, Asian Americans comprise of 6 percent of the entire U.S. population, but it is projected that by 2055 Asian Americans will surpass Hispanics as the largest immigrant group in the U.S. (Gustavo et al., 2017). Despite their increasing visibility in the U.S., the psychological cost that Asian Americans endure due to discrimination is often overshadowed by the racial experiences of Whites and African Americans. Often research findings for these racial groups are assumed to also speak to the experiences of the Asian American population (Sue, Bucci, Lin, Nadal, & Torino, 2007; Liang, Li, & Kim, 2004).

Asian American scholars (e.g. Gee, Ro, Shariff-Marco, & Chae, 2009; Sue, Bucci, Lin, Nadal, & Torino, 2007; Lee, 2003) have extensively noted how the endorsement of the “model minority” stereotype has served as a convenient rationale to neglect the exploration of discrimination and mental health problems among Asian Americans (Alvarez & Helms, 2001). Since the 1960s, Asians have been placed under the "model minority" paradigm (Delgado & Stefani 2001; Chou & Feagin, 2014). This paradigm suggests that Asian Americans, despite being historically disadvantaged in the U.S., embody the modern-day immigrant success story as they are presumed to demonstrate successful integration into the various facets of mainstream society. Based on reports documenting their socioeconomic profiles, the U.S. Asian population overall

performs well on measures related to economic well-being compared with the general population. For instance, the median annual household income of households headed by Asian Americans (\$73,060) is reported to be higher than all U.S. households (\$53,600). In terms of educational attainment, Asians and non-Hispanic Whites are more likely to hold a bachelor's degree or higher compared to African Americans or Hispanics (Ryan et al., 2016). Further, some studies have highlighted the lower prevalence rates of certain mental health disorders among Asian Americans in comparison to other racial/ethnic populations (Singh, McBride, & Kak, 2015; Chu & Sue, 2011). While Asian Americans appear to demonstrate high economic and academic achievement, along with purported better emotional health (often attributed to strong family ties), these statistics belie social, economic, and psychological problems encountered by large segments of this population. For instance, in 2015, Asians (12%) were found to be less likely than the general U.S. population (15.1%) to live under poverty. However, among the 19 Asian ethnic groups analyzed 8 subgroups had poverty rates higher than the U.S. average including Hmong, Cambodians, Bhutanese, and Burmese (Gustavo et al., 2017).

The public portrayals of Asian Americans as a psychologically well-adjusted group also may not accurately reflect their experiences. Mental health problems are of increasing importance in this population (Sue & Chu, 2003; Chae, Lee & Ahn, 2011). National prevalence estimates of any lifetime and 12-month psychiatric disorder among Asian Americans are found to be 17.3 and 9.2%, respectively (Takeuchi, Zane et al., 2007). Although these estimates were lower than Latinos and African Americans (Chae, Lee, Lincoln & Ihara, 2012; Alegria et al., 2007; Williams, Haile, Gonzalez, Neighbors, & Baser, 2007), this is a sizeable burden of mental illness that warrants considerable attention (Spencer, Chen et al., 2010). Further, as suggested by many researchers, disaggregating the Asian American population is essential to clarifying the incidence and

prevalence of mental health disorders (Chu & Sue, 2011). Asian American college students, for example, suffer from more severe depression and social anxiety than their White counterparts (Juang & Alvarez, 2010; Young, Fang & Zisook, 2010; Okazaki, 1997). The prevalence and severity of depression also appears to be pronounced among older Asian Americans (see Kuo, Chong, & Joseph, 2008 for critical review). U.S.-born Asian American women were found to be at higher risk for suicidal ideation than U.S.-born men and immigrant Asian men and women (Duldulao, Takeuchi & Hong, 2009). Variance in mental health prevalence is also based on Asian American subgroups. Epidemiological studies show that groups that have recently immigrated to the U.S., such as Southeast Asian refugees (e.g. Cambodians), have higher levels of depression and post-traumatic stress disorder than the general U.S. population (Chu & Sue, 2011; Moon & Cho, 2012). Filipino American adolescents have one of the highest rates of suicidal ideation and attempts in the country (David & Okazaki, 2006). Adding to these concerns are the low mental health service utilization rates among Asian Americans. Research has consistently shown that Asian Americans, are less likely to seek professional help for mental health problems than other racial demographic groups, including Latinos, African Americans and Whites. (Abe- Kim et al., 2007; Kearney, Draper, & Baron, 2005). The lower use of mental health services applies to Asian Americans regardless of age, gender, education, or Asian ethnic subgroup (Chu & Sue, 2011).

With growing concerns over Asian American groups' mental health vulnerabilities, it is vital to understand the various risk factors that contribute to their well-being. Accordingly, discrimination has gained attention as a potential explanation for poor mental health among Asian Americans (Wong & Halgin, 2006; Chou & Feagin, 2015). An uptick in research on discrimination and mental health has led to calls to probe the complexity of this association by investigating

potential mediators and moderators (Mereish, Liu, & Helms, 2012; Syed & Juan, 2010; Lee & Ahn, 2011; Clark, Anderson, Clark, & Williams, 1999).

A key issue in research assessing the complex relationship between perceived discrimination and mental health in Asian American is considering the diversity of this population in their analytic strategy. Moreover, scholars have warned that it is not plausible to treat Asians as a homogeneous group (Algeria et al. 2004; Lee & Ahn, 2011). Despite such warnings, health disparities research often aggregates Asians into a single racial category (Mereish, Liu, & Helms, 2012; Lee and Ahn, 2011). This is problematic given that there are over 20 Asian ethnic subgroups, each with unique characteristics in terms of culture, spoken language, and socioeconomic background (Nadal et al., 2012). Often the justification for aggregating ethnic groups is based on efforts to conceptualize their shared Asian racial group experience, small within-group sample sizes, and a paucity of data recognizing sub-ethnic difference in mental health patterns and its correlates (Alegria et al., 2004; Kim et al., 2010; Bilheimer & Sisk, 2008). Given this, few studies examine the patterns of association between perceived discrimination and mental health for specific Asian subgroups. While it is important to include the panethnic experiences, the need to make comparisons across various ethnic groups, or provide ethnic specific analyses is an important step in advancing this field of research.

### **The Current Study**

The primary aim of this study was to expand upon the literature suggesting that perceived discrimination is associated with psychological distress among Asian Americans and three Asian subgroups (Chinese, Filipino and Vietnamese). A national sample of Asian American adults from the 2002–2003 National Latino and Asian American Study (NLAAS) was used. One important contribution of the NLAAS is that it provided a nationally represented profile of various Asian

ethnic groups in relatively large numbers. This has made it possible to analyze ethnic subgroups separately to understand their unique situations, especially regarding discrimination and mental health (Alegría et al., 2004). Going beyond direct associations, the study tested the role of moderating and mediation variables in further elucidating the relation between perceived discrimination and psychological distress. Prior research has largely focused on individual level factors (e.g. Asian American ethnic identity, self-esteem) (Yoo & Lee, 2008) as potential moderators in this association (Syed & Juan, 2010). However, theories that emphasize the social origins of stress (e.g. Pearlin, 1989; Pearlin et al., 2005) have delineated the importance situating the consequences of stressors, such as discrimination, in the context of strengths and vulnerabilities present in one's social environment (Meyer, 2003). The current study examined how aspects of individuals' social context (e.g. family, neighborhood and social status) might mitigate or exacerbate the impact of perceived discrimination on psychological distress.

Further, subjective experiences of discrimination may impact mental health through various pathways (Schmitt et al. 2014). One contribution of this study is that it provided a possible mechanism for understanding this relationship. To capture this, it examined the mediating effects of subjective socioeconomic status (SES) measures in the connection between stressful life experiences (i.e., discrimination) and psychological distress. The aforementioned moderation and mediation model were tested for the entire Asian American sample in NLAAS. In addition to examining Asian Americans in the aggregate, these models were also tested within each of the three largest Asian American subgroups: Chinese, Filipino and Vietnamese Americans. By testing the moderation and mediation models separately for the three Asian American subgroups, the present study attempted to provide a more nuanced assessment of each group's experience as it

highlighted the emergence of differential patterns of association between mental health and perceived discrimination.

## **Overview of Chapters**

Chapter 2 includes an overview of relevant literature and theories that explicate the relationship between perceived discrimination and mental health in Asian Americans. In this chapter, I review the literature concerning discrimination against Asian Americans and the three major ethnic groups (Chinese, Filipino, & Vietnamese). I describe how Asian American ethnic groups have been targets of longstanding institutional and personal discrimination. I also briefly (a full account is beyond the scope of this paper) delve into the unique origins and immigration histories of the three subgroups. Shedding light onto the diverse historical and contemporary forces that define their lived experiences will help illuminate the point that anti-Asian discrimination is differentially experienced (Nadal, 2004; Takaki, 1989). Further, I provide a general overview of the dominant explanatory models linking perceived discrimination with negative psychological well-being. Along these lines, I also review existing literature on perceived discrimination and mental health as it relates to Asian Americans and the three subgroups. The theoretical frameworks will build upon social stress theories (Meyer, 2003; Pearlin, 1989) and highlight the potential role that social context may play in the association between discrimination and mental health. Driven by these theories, I discuss the important role of family context, neighborhood context and subjective SES in this association.

Chapter 3 covers the description of data, information of variables used in the study, and descriptions of the analyses used. As mentioned earlier, the hypotheses will be tested for the total Asian American sample, followed by the three largest groups represented in the NLAAS study. The next chapter entails the result section for each sample.

Chapter 4 covers the results based on the analyses for Asian Americans, Chinese American, Filipino American and Vietnamese Americans. Finally, a discussion of the findings is covered in Chapter 5. I conclude this chapter with a brief note on the study's strength and limitations.



## CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORKS

### **Defining Discrimination**

With the persistence of substantial economic and social inequality along racial lines, scholars have asserted the need to understand discrimination and oppression directed at racial/ethnic minorities as an endemic and persistent feature of the U.S. (Feagin, 2014; Bonilla-Silva, 2006). Borrowing from Feagin and Eckberg (1980), discrimination can be defined as the “actions and practices of members of dominant racial or ethnic groups that have a differential and negative impact on members of subordinate racial and ethnic groups” (pp. 1-2). In other words, it involves the differential or unfair treatment based on race or factors other than race that disadvantages a racial group (Gee et al., 2009). When conceptualizing discrimination, it is important to underscore that it is a multidimensional construct. Discrimination can manifest through blatant or covert forms of actions. Overt discrimination is generally blatant and may include extreme or major incidents of race related hate crimes, or exposure to racial slurs. Overt discrimination tends to be less pervasive than covert forms of discriminatory behavior, which is more subtle, ambiguous and operates in an insidious fashion (Sue, 2010; Swim et al. 2003). This includes actions such as being treated disrespectfully in social settings or comments directed at people of color that may appear to have been made in a jest or as a joke but imply some form of racial prejudice (Swim et al., 2003). Discrimination also exists at multiple levels, mainly in the form of institutional and personal discrimination (Feagin & Feagin, 1978; Jones, 2000; Gee, Spencer et al., 2007). “Institutionalized discrimination” refers to the “social patterning of discriminatory actions” (Feagin, 1991, p. 23) that reproduces asymmetrical or hierarchical ordering of racial/ethnic groups with regard to power, resources and opportunities (Feagin, 2014). Institutional discrimination, Thus, represents processes built into social organizations and entities

(e.g. government agencies, media, culture) that reinforce existing privileges and inequalities (Feagin, 2014).

At the interpersonal level, facing discriminatory practices is revealed to be a part of everyday life as it pervades minorities' daily interactions in multiple social arenas (Feagin & Sikes, 1994; Swim et al., 2003). Personal discrimination can include major or acute experiences of discrimination (such as being unfairly fired from a job) or "chronic, every day, and routine minor experiences with discrimination commonly referred to as "everyday discrimination" (Torres-Harding & Turner, 2015 p. 466; Swim et al., 2003). Moreover, these everyday events have also been described by some as forms of microaggressions, which are characterized by the subtle, brief and everyday exchanges that denigrate racial/ethnic minorities or any other targets (Sue, Bucceri, Lin et al., 2007). Others (e.g. Meyer, 2003; Williams et al., 1999) have treated every day, minor events related to discrimination or feelings of being belittled or unfairly treated, analogous to "daily hassles." An example of everyday discrimination provided by Williams et al., (1999), described occurrences such as African American men being followed in stores for suspicion of shoplifting or not being able to hail a cab (Meyer, 2003; Swim et al., 2003). Frequent encounters of this nature by racial minorities is considered to have consequences that are rendered far more detrimental than traditionally defined "daily hassles" that occur daily regardless of race (Meyer, 2003). This is consistent with studies noting that subtle or ambiguous microaggressions are more deleterious than blatant discrimination (Wang, Leu and Shoda 2011; Sue, 2010; Sue et al., 2009).

### **Asian Americans' Historical and Contemporary Experiences with Discrimination**

Asian Americans have a history of exposure to institutional racism and discrimination. Beginning in the late 1800s, there has been deliberate attempts by the U.S. government to systematically undermine basic civil and human rights of those with Asian ancestry. This was done

through congressional actions and laws that excluded Asians from citizenship, land ownership and suffrage. In this section, I delve into some of the historic discrimination against Asian Americans to set the context.

Asian immigration to the U.S. can be traced back to the influx of Chinese labor migrants, who contributed immensely to American industrial expansion during the California Gold Rush of 1848, and the construction of the Pacific Railroad (1864-1869). As the need for cheap and accessible labor subsided in the West Coast, Chinese immigrants were met with racist and anti-immigrant sentiment that rose to levels of violent attacks, particularly during the economic downturn of 1873 and 1877 (Koven & Gotzke, 2010). This sentiment was not only expressed by European workers who felt threatened by their presence, but also outspoken politicians, who called for restrictive legislative actions against Chinese labor migrants (Koven & Gotzke 2010). The passage of the Chinese Exclusion Act of 1882 marked the victory of the anti-Chinese movement, as it suspended immigration of Chinese laborers for a decade. More importantly, the passage of this act made way for U.S. Supreme Court and Congress to take absolute control over immigration admission and expulsion. The 1882 act set in motion steadily increasing discriminatory immigration policies that targeted Asians of almost all ethnic backgrounds. For instance, the Chinese exclusion law and federal courts also declared all Asians ineligible for naturalization making them permanent foreigners (Ngai, 2004). Inevitably, Asian ethnic groups such as Japanese, Indians, and Filipinos who immigrated to the U.S. replacing Chinese labor became new targets of exclusion in the early 20<sup>th</sup> century (Ngai, 2004).

To contextualize U.S. immigration and its history of Asian exclusion in the early 20<sup>th</sup> century, Ngai (2004) noted that the migration experience to the U.S. for many Asian nationalities has been a byproduct of specific economic, colonial, military, and political ties between the U.S.

and other countries (e.g., Japan, South Korea, the Philippines). For instance, after the formal exclusion of Chinese labor migrants, the U.S.'s growing relations with Japan resulted in larger numbers of Japanese migrant laborers entering large-scale agricultural enterprises. Like the Chinese, they were met with strong anti-Japanese sentiment, forcing the U.S. government to take measures in 1908 to curb Japanese immigration. Further, the internment of Japanese Americans during World War II stands as one of the extreme cases of discrimination against Asians in American history.

In 1917, the U.S. government was successful in denying entry to Asian immigrants by mapping a "barred Asiatic zone" that ran from Afghanistan to the Pacific (Ngai, 2004). This excluded the Japanese and Filipinos (Ngai, 2004). However, it was not until the 1924 Johnson-Reed Act were Chinese, Japanese, Indians, and other Asians successfully barred from entering the U.S. on grounds that they were racially ineligible for naturalized citizenship. At this time, exceptions were granted to migrants from the Philippines, a country that was considered commonwealth territory between 1899 and 1946. After the 1924 act, the agricultural enterprises turned to Filipinos to replace Japanese farm labor. The workers were met with similar anti-Asian sentiment that had been years in the making. Unlike the Chinese or other Asian subgroups, as subjects of the American colonial policy, Filipinos were defined as "U.S. nationals" which allowed them to work legally in the U.S. (Ngai, 2004). This unique status required them to owe allegiance to the U.S. At the same, they were given limited status as they did not share the same rights as citizens, most notably the rights of representation and trial by jury or the freedom to travel within the territorial jurisdiction of the U.S. Ngai (2004) referred to this scenario as an act of "imported colonialism" (p. 129).

While the period between 1882 and 1924 is known for its restrictive immigration politics, major changes in the U.S. policy in 1960s welcomed a diverse group of Asians who had been strategically excluded under the old regime. Sweeping changes in the number and makeup of Asians ensued because of the Hart-Celler Act of 1965, and the historic resettlement of Southeast Asian refugees (e.g. Vietnamese, Cambodians) after the Vietnam War and 1980 refugee act (Zhou, 2004). Before 1970, Asian Americans were largely comprised of Japanese, Chinese and Filipinos. Today, Asian Americans represent over 20 countries in East, Southeast, and South Asia. Chinese, Indian and Filipinos are the three largest groups, followed by Vietnamese, Koreans and Japanese (Gustavo et al., 2017; Zhou, 2004). Further, 70% of Asian adults are foreign born (Gustavo et al., 2017; Zhou & Xiong, 2005). Unlike earlier immigrants from Asia who were mostly poor and unskilled male migrant workers, the post-1965 Asian immigrants represented diversity in demographic and socioeconomic characteristics (Zhou & Xiong, 2005). Recent Asian immigrants constituted a large proportion of women and children migrating as members of family groups. They are also widely dispersed in different areas of the country, with the majority settling in traditional gateway or metropolitan cities in the West and Northeast, but also spreading out into new urban centers across the country. Today's Asian Americans also bring a wide range of skills and socioeconomic levels. As a group, Asian Americans report higher levels of education and high median annual household income. However, highly educated and skilled professionals tend to be overrepresented among Chinese, Indians, and Filipinos, while poorly educated, low-skilled workers tend to be over-represented among Vietnamese and other Southeast Asians, most of whom have entered the U.S. as refugees (Gustavo et al., 2017; Zhou & Xiong, 2005).

As briefly discussed, unique historical circumstances and forces have molded today's Asian American community, marked by diverse and accelerated population growth and the

dominance of the first generation (Zhou & Xiong, 2005). While this has contributed to the increasing visibility of Americans with Asian ancestry, they continue to face systematic discrimination in several arenas such as housing, employment, politics and government services in contemporary society (Chou & Feagin, 2014). Based on a 2012 government report on housing discrimination in 28 metropolitan areas, it was found that African Americans, Latino and Asians were shown fewer apartments and housing compared to equally qualified White home buyers (Feagin, 2014). In national surveys, Asian Americans have reported experiencing racist-name calling, and barriers in job promotion and college admission (Feagin, 2014). Asian Americans also continue to experience hate crimes related to robberies, threats, and vandalism of immigrant owned businesses (Syed & Juan, 2012).

With the changing nature of racism in the U.S. as evidenced by the decline in support for blatant forms of discrimination, particularly after the 1960s (see Bobo, Kluegel, and Smith, 1997), contemporary research has shifted towards understanding subtle, ambiguous, and unconscious forms of racism and discrimination (Bonilla-Silva, 2006; Sue et al., 2007; Lewis, Chesler, & Forman, 2000). This includes the study of “everyday discrimination” or “microaggressions” (Sue et al., 2007; Torres-Harding & Turner, 2015; Swim et al., 2003). Consistent with the concept of everyday discrimination, represented by frequent irritations and indignities in everyday situations, surveys indicate that Asian Americans are not alien to such encounters in various domains of their life. Using self-report methods, studies have revealed the frequency of Asian American experience with everyday discrimination. For instance, based on the NLAAS survey, it was found that 74% of Asian Americans reported experiencing some form of routine unfair treatment in their lifetime, and 62% reported being disliked, treated unfairly, or seeing friends being treated unfairly because they were Asian (Chae et al., 2008). Further, studies suggest that Asian American college students

reported experiencing discrimination at least once a week and, in some cases, multiple times daily (Ong, Burrow, Fuller-Rowell, Ja, & Sue, 2013). In addition, Asian American youth or adolescents are reported to experience significantly higher levels of peer discrimination compared to their black and Latino counterparts (Greene, Way, & Pahl, 2006).

Often the nature of the everyday discrimination reported by Asian Americans is not overt, but rather takes the form of microaggressions that may include subtle, yet derogatory, negative slights or insults directed towards their racial group (Nadal et al., 2012). A qualitative study was conducted by Sue et al. (2009) to identify microaggressions experienced by Asian Americans. Based on interviews with 10 self-identified Asian American participants, several themes emerged. The participants affirmed that they felt most frustrated when comments and questions directed at them implied that they were not “real Americans” or suggested that they were perpetual foreigners, despite being born in the U.S. For instance, some participants discussed being asked questions such as, “Where are you from?” or being told, “You speak good English.” Similarly, another pervasive theme that emerged in the study was the widely prevalent assumption that Asian Americans are highly intelligent and academically competent. Participants revealed that comments such as, “You people always do well in school,” or “All Asians are good at math and science,” put undue pressure to live up to the “model minority stereotype” (Sue et al., 2009, p. 77).

Although limited in number, comparative research has indicated that Asian American ethnic groups experience different rates of perceived discrimination and racism (Gee et al., 2009). For instance, one study of college-aged students found that Filipino Americans reported experiencing higher levels of everyday racism compared to Chinese participants (Alvarez, Juang, & Liang, 2006). Similarly, the 2003 California Health Interview Survey (CHIS) found that 42% of Vietnamese reported being unfairly treated because of their race in their lifetime, compared to

75% among Japanese (Gee et al., 2009). Among participants of the Study of Women's Health across the Nation (SWAN), 60% of Chinese women reported discrimination compared to 36% of Japanese women (Brown et al., 2006).

With over 20 ethnic groups, it is also important to note that Asian American ethnic groups may have differential experiences of discrimination because of their respective historical and sociopolitical experiences in the U.S. (Nadal, 2004). For instance, as discussed earlier, Chinese Americans have a long history of immigration to the U.S. Being among the first Asian ethnic groups to immigrate in significant numbers, they have experienced racial/ethnic discrimination from the early years of immigration (e.g. Chinese Exclusion Act, 1882). As the largest and most established Asian ethnic minority today, Chinese Americans' high visibility in the U.S. may make them susceptible to unique forms of discrimination (Gee et al., 2009). It is also true that many Asian Americans' experiences are conflated with Chinese Americans, as non-Asians are unable and sometimes unwilling to distinguish between Asian subgroups (Meissner & Brigham, 2000). Further, the racial experiences of the Vietnamese population in the U.S. is largely shaped by the historical process of Vietnamese refugees' resettlement in the U.S. From 1975 through the early 1990s, Vietnamese refugees poured into the U.S. in three significant waves. As refugees, they were forced to abandon their homeland, due to varying political and economic circumstances. Compared to voluntary immigrants, refugees often tend to come from low socioeconomic class backgrounds and are less likely to have existing support systems (e.g., preexisting family networks and ethnic communities) in the country of settlement (Suarez-Orozco et al., 2008). These conditions can expose them to harsher circumstances as refugee resettlement may involuntarily disperse Vietnamese families into disruptive urban or suburban neighborhoods, increasing their vulnerability to stressful circumstances associated with discrimination (Zhou & Bankston, 1998).



As noted by scholars (Alvarez & Juang, 2010; David & Okazaki, 2006), it is likely that Filipino Americans' long-standing experience with direct U.S. colonization and being denigrated to second class citizens in their own country, has shaped their racial experiences. As a result of being U.S. colonial subjects, the post 1965 Filipino immigrants tended to have high English proficiency and familiarity with American culture and racial dynamics (Nadal, 2004). With this, many Filipinos may already have been sensitized to racism in the U.S. (Alvarez, Juang, & Liang, 2006). Further, the experience of colonization is related to the heightened sense of "internalized oppression" that Filipino Americans deal with in response to discrimination or what David and Okazaki (2006) called a "colonial mentality." In recognizing their unique history, Nadal et al. (2012) conducted a qualitative study to identify microaggressions that pertained to Filipino Americans. Participants' responses suggested that some experiences of microaggressions diverged from other Asian Americans. One theme that signified this distinction was the, "mistaken identity" in which many Filipinos were phenotypically mistaken as Latino, Native American or African American. Filipinos also noted struggling with microaggressions that insinuated that they were criminally deviant and intellectually inferior. Such microaggressions contrasted the stereotype of "model minority," which is generally attributed to Asian Americans (Nadal et al., 2012; see, Sue et al., 2009).

The goal of this study is not to provide a complex and detailed historical and contemporary overview of Asian Americans, or Chinese, Filipino and Vietnamese Americans experiences with discrimination. Rather, by acknowledging their unique sociohistorical backdrop, the study recognizes the theoretical and empirical advantage of disaggregating Asian American groups to better understand ethnic specific encounters with discrimination and its relationship with

subsequent negative psychological consequences. In the next section, the study addresses the health and psychological implications of perceiving oneself as a victim of discrimination.

### **The Effect of Perceived Discrimination on Asian American Well-Being**

As described earlier, discrimination can take a variety of forms, as it can be ingrained in the various institutions of society, or manifest in everyday, individual interactions. Given this, researchers have posited that the relationship between discrimination and health are produced and maintained at multiple levels (Gee et al., 2009). At the broad or macro level, institutional forms of discrimination (e.g. residential segregation, redlining) is associated with health problems among racial minorities (Gee et al, 2009; Morello-Frosch & Jesdale, 2006; Gee, 2008; Williams & Collins, 2001). At the personal level, racial groups can regularly encounter daily hassles, and minor or major events associated with their minority status (Meyer, 2003; Clark, Anderson, Clark, & Williams, 1999). The perception that one is a target of such occurrences is often referred to as perceived discrimination (Williams & Mohammed, 2009; Meyer, 2003; Clark, Anderson, Clark, & Williams, 1999).

Perceived discrimination among Asian Americans has found to be associated with a diverse range of poor physical and mental health outcomes. It has been linked with a number of chronic health conditions including cardiovascular diseases (e.g. heart disease, stroke, high blood pressure), respiratory problems (e.g. asthma, tuberculosis, breathing problems), and bodily pains (e.g. chronic back or neck problems, severe headaches, ulcer) (Lee & Ahn, 2011; Gee et al., 2009; Gee, Spencer, Chen, & Takeuchi, 2007). Discrimination has also been associated with increased risk for breast cancer, diabetes, cholesterol, and obesity (Gee, Ro, Gavin, & Takeuchi, 2008; Piette, Bibbins-Domingo, & Schillinger, 2006). In Asian American youth, perceived discrimination has been found to be positively related to health risk behaviors such as increased alcohol consumption,

tobacco use, as well as propensity for illicit drug use (Lee & Ahn, 2011; Gee, Delva, & Takeuchi, 2007; Choi, Harachi, Gilmore, Catalano 2006).

Research has consistently found that perceived discrimination takes a toll on ones' self-concept and self-esteem (Liang & Fassinger, 2008; Greene, Way, & Pahl, 2006). In a 3-year longitudinal study of minority adolescents, Green, Way & Pahl (2006) found that over time perceptions of discrimination were significantly associated with decreased self-esteem and increased depressive symptoms among Asian American adolescents. Further, the stress associated with perceived discriminatory experiences is also found to have broad impacts on the mental health status of young Asian American adults. Using samples of Asian American college students, studies have revealed that perceptions of discrimination are negatively associated with state and trait anxiety, depression, suicide ideation and psychological distress (Hwang & Goto, 2009; Lee, 2003; Lam, 2007). However, studies of discrimination and mental health among Asian Americans in the U.S. are found to be largely confined to small convenience samples (Gee et al., 2009; Gilbert et al., 2007), which have led scholars to question the extent to which findings based on college student samples can be generalized to community samples or Asian American ethnic groups nationwide (Hwang & Goto, 2009; Gee et al., 2007). In addressing this limitation, researchers have also explored the association between self-reported discrimination and mental health issues in nonstudent, community-based samples. For instance, Barry & Grillo (2007) reported that East Asian immigrants' personal experiences of discrimination was associated with low self-esteem. Data from the Survey of the Health of Adults, the Population and the Environment (SHAPE 2002)- a community sample of multi-ethnic adults in Minnesota, showed that perceptions of everyday discrimination were associated with lower utilization of mental health services among Southeast

Asians. Chae and Yoshikawa (2008) and Yoshikawa et al. (2004), found that discrimination was related to higher levels of depressive mood among a sample of Asian and Pacific Islander gay men.

The dominant tendency in research towards analyzing the Asian American population as a homogenous group has resulted in relatively few studies that examine the relation between discrimination and mental health for specific racial or ethnic group (Lee & Ahn, 2011). Limited studies targeting Asian ethnic groups have primarily come from two randomly selected, population-based samples in the West Coast. The first is the Chinese-American Psychiatric Epidemiological Study (1993-1994), which consists of a community sample of 1503 Chinese Americans residing in Los Angeles. Studies based on the analyses of this dataset have shown that reports of discrimination were associated with health-related quality of life, psychological distress (Gee, 2008), and decreased use of mental health services among Chinese Americans. (Spencer & Chen, 2004). The Filipino-American Community Epidemiological Study was a household survey of 2,241 Filipino Americans in Honolulu and San Francisco in 1998 and 1999. The study finds that chronic and episodic experiences of discrimination were related to elevated depressive symptoms, substance abuse, and chronic health conditions among Filipino Americans (de Castro, Gee, & Takeuchi, 2008; Gee, Delva, & Takeuchi, 2007; Gee, Chen, & Spencer, 2006; Mossakowski, 2003). Similar associations were also found by the Children of Immigrants Longitudinal Study (CILS; Portes & Rumbaut, 2006). The study found that discrimination was associated with depressive symptoms among Filipino, Vietnamese, Laotian and Cambodian elementary school youth in San Diego. Although these studies have enabled ethnic specific analyses, the samples are based in specific regions of the country (mainly West Coast), which by no means is representative of all Americans of Asian origins in the U.S.

There have been few national probability studies addressing mental health patterns of Asian Americans. Even fewer studies, examine the association between perceived discrimination and mental health among Asian ethnic groups, using nationally representative samples (Lee & Ahn, Gee et al., 2009). To date, the NLAAS is the most comprehensive, representative study of the mental health of Asian Americans carried out in the U.S. (Gee et al., 2009; Gee et al., 2007; Guarnaccia et al., 2007; Alegria et al., 2004). NLAAS researchers have examined the impact of social and cultural factors on mental health outcomes and services utilization. For instance, studies have shown how perceived discrimination was consistently linked to greater odds of meeting criteria for multiple DSM–IV mental health disorders such as past year depressive or anxiety disorders, chronic physical conditions and increased substance use, among a national sample of Asian Americans (Chae et al., 2008; Gee, Spencer & Chen, 2007; Gee, Spencer, Chen, Yip & Takeuchi, 2007; Yip, Gee, & Takeuchi, 2004). Importantly, the NLAAS, with its complex probability sampling design, has been deemed valid for ethnic comparisons and ethnic-specific analyses (Alegria et al., 2004). With this, NLAAS studies have shown that Asian ethnic group across the U.S. vary in their reports of discrimination, mental health conditions, and associations between discrimination and mental health (Mereish, Marcia, & Helms, 2012; Syed & Juan, 2012; Tummala-Narra, Alegria, & Chen, 2012; Gee, Spencer, Chen, & Takeuchi, 2007).

Taken together, these studies show that there is a strong relationship between perceived discrimination and psychological well-being. Theoretical perspectives investigating the psychological implications of perceiving oneself as a victim of discrimination have revealed that this relationship is not straightforward. In the next section of this chapter, I review some of the literature that delineate the complex and multiple pathways whereby discrimination may influence well-being among racial and racial/ethnic minorities. It is important to note that most literature

theorizing the link between perceived discrimination and well-being, have been largely based on efforts to understand African Americans (Williams & Mohammed, 2009; Clark, Anderson, Clark, & Williams, 1999). As a racial group, African Americans have been the targets of disproportionate levels of discrimination and racism in the U.S. (Feagin, 2014; Clark, Anderson, Clark, & Williams, 1999). Nonetheless, growing number of studies have applied and even expanded on existing frameworks to understand the unique experiences of relatively understudied racial/ethnic minorities such as Asian Americans (Gee, Spencer, Chen, & Takeuchi, 2007; Meyer, 2003).

### **Theoretical Framework**

Although nearly everyone encounters some form of unfair treatment during their lifetime, there is little disagreement that ones' status or location within society, as indexed by social categories such as race, gender, religion, sexuality and SES, influences the likelihood of experiencing discrimination and prejudice (Feagin, 2014; Schmitt, Branscombe, Postmes, & Garcia, 2014; Gee et al., 2007; Major, Quinton, & McCoy, 2002; Krieger et al., 1993; Pearlin, 1989). Numerous studies indicate that members of low status or "chronically stigmatized groups" (Major, Quinton, & McCoy, 2002, p. 251) are more likely to become targets of discrimination that are acute and frequent, and encounter discrimination across a wider range of social domains than do members of higher status groups (Schmitt & Branscombe, 2002; Major, Quinton, & McCoy, 2002). This describes the predicament of disadvantaged groups such as women, gays and lesbians, those facing economic hardship, and devalued racial/ethnic minorities (Schmitt, Branscombe, Postmes, & Garcia, 2014; Schmitt & Branscombe, 2002; Major, Quinton, & McCoy, 2002; Meyer, 2003). In addition to encountering frequent discrimination, marginalized groups are also more likely to report on surveys that they are victims of discrimination (Gee, Spencer et al., 2007; Major, Quinton, & McCoy, 2002; Gomez & Trierweiler, 2001).

As emphasized by scholars (Paradeis, 2006; Meyer, 2003) distinguishing between objective occurrences of discrimination and the subjective interpretation of discrimination is instructive. The objective dimension refers to the external events representing discrimination, which may have real and observable consequences in the form of worse life outcomes (Meyer, 2003; Clark, Anderson, Clark, & Williams, 1999). These are often inferred by population level patterns of disparities along racial/ethnic lines, or research that been attentive to the ways in discrimination may affect health through institutional mechanism (Scheid & Brown, 2010; Meyer, 2003). For instance, residential segregation has been widely studied for its health implications among racial/ethnic minorities living in segregated communities. More specifically, residential segregation has created systematic differences in access to health protective services such as medical care and mental health treatment (Williams & Mohammed, 2009; Williams & Collins, 2001; Williams & Jackson, 2005; Massey & Denton, 1998).

The subjective interpretation of discrimination or perceived discrimination focuses on the targets' perspective by obtaining individuals' descriptions and reports of their lived experiences (Swim et al., 2003). In other words, the subjective view is largely based on the "appraisal processes applied by the individual" (Meyer, 2003, p. 690; Lazarus & Folkman, 1984). Paradeis (2006) noted that not all systematic and personal forms of discrimination are "perceived subjectively (and may not be perceivable) by individuals who experience these phenomena" (p. 147). On the other hand, individuals' may also perceive discrimination when it has not objectively occurred. Given these scenarios, it is possible that individuals who become targets of chronic and pervasive discrimination are more sensitized to cues in their environment (Meyer, 2003). This may make them susceptible to raising false alarms in some cases. Accordingly, those who are chronically exposed to discrimination may also underestimate or dismiss these encounters (Paradeis, 2006;

Meyer, 2003; Major, Quinton, & McCoy, 2002). This is particularly true in everyday life, when the nature of discrimination tends to be subtler and more ambiguous, leading to increased possibility for misinterpretation or minimization of discriminatory events (Wang, Leu and Shoda 2011; Sue et al., 2007; Major, Quinton, & McCoy, 2002).

Despite room for error in judgments, researchers continue to value ethnic minority voices and perceptions to understand the characteristics and pervasiveness of racism and discrimination in their lives (Paradeis, 2006; Swim et al., 2003). More importantly, studies have shown that while encountering discrimination is harmful, there are unique psychological consequences depending on how the mistreatment is subjectively understood (Schmitt et al., 2014; Pascoe & Richman, 2009). As a threat to psychological well-being, perceived discrimination is found to impact mental health through various pathways (Gomez & Trierweiler, 2001). A full discussion of these is beyond the scope of this paper, however, I discuss a few approaches that have been widely cited in literature.

A symbolic interactionist perspective emphasizes the importance of an individual's perception of how they are evaluated in society, as denoted by the concepts such as "looking glass self" and "reflected appraisals" (see, Mead, 1934; Cooley, 1902). According to this view, the self-concept develops through social interactions and reflects others' appraisals of oneself. Symbolic interaction theories thus suggests that negative regard from others would lead to negative self-regard. Similarly, as suggested by social comparison theories, individuals learn about themselves in the process of comparing themselves with others in society (Pettigrew, 1967). Further, individuals' may derive their self-concept from the social values and meaning attached to their group membership (Tajfel & Turner, 1979; Crocker & Major, 1989). Thus, to a considerable extent, feelings of self-worth can depend on the "social evaluation of the group with which a person



is identified” (Cartwright, 1950, p. 440). As a member of a stigmatized group (Goffman, 1963; Crocker & Major, 1989) –a social category devalued by dominant society – individuals are subject to negative stereotyping, attitudes and beliefs about their group (Crocker & Major, 1989). An awareness of these negative evaluation, in the form of stereotypes and prejudice directed at minorities or oppressed people are rendered threatening to individuals’ self-concept, resulting in adverse psychological consequences (Meyer, 2003; Major, Quinton, & McCoy, 2002). Taken together, these theoretical insights have influenced a body of research that focused on how discrimination may influence negative self-concept by creating a sense of powerlessness that hinders ones’ ability to control their environment, reinforces secondary social status, and diminishes self-esteem (DuBois et al., 2002; Schmitt et al., 2014). Given the devaluation and lack of control suggested by discrimination, perceived discrimination is expected to impede “positive identity formation” (Chae et al, 2008) and undermine psychological wellbeing (Schmitt et al., 2014; Branscombe, Schmitt, & Harvey, 1999).

There is broad recognition in the stress literature that environmental stressors may have lasting health impacts (Pascoe & Richman, 2009; Williams & Mohammed, 2009; Brown, 2003; Pearlin et al., 2005; Meyer, 2003; Clark, Anderson, Clark, & Williams, 1999). Stressors as defined by Wheaton & Montazer (2009), are “conditions of threat, challenge, demands, or structural constraints that... call into question the operating integrity of the organism” (p.173). The biological stress model includes the notion of “allostatic load” (Wheaton & Montazer, 2009, which helps to capture the “physiological burden imposed by stress” (Geronimus et al., 2006). Moreover, this concept refers to the long term “wear and tear” of the body systems due to cumulative stress exposures (Wheaton & Montazer, 2009, p.174; Geronimus et al., 2006; McEwen & Stellar, 1993). For example, chronic experiences of stress can affect levels of cortisol secreted in the body, which

is thought to be damaging to tissues and may lead to the “dysregulation of biological systems” (Pascoe & Richman, 2009, p.544). In other words, it may disrupt the regulation of numerous systems throughout the body (e.g. cardiovascular, immune system), eventually leading to increased risk for premature morbidity and mortality (Seeman et al., 2004; Geronimus et al., 2006). Following the biological models of stress, discrimination is conceptualized as a stressor that engenders physiological stress responses (e.g., increased heart rate and blood pressure, cortisol secretions) (Pascoe & Richman, 2009). These heightened physiological stress responses over time has the potential to erode individual’s protective resources (i.e. their adaptive, stress-reducing function), and increase their vulnerability to various physical illnesses (Pascoe & Richman, 2009; Williams & Mohammed, 2009; Gee, Spencer, Chen, & Takeuchi, 2007).

Moving beyond psychological stress responses to environmental stressors, research on the psychological implications of perceiving discrimination, have heavily relied on the “stress and coping” approach (Lazarus & Folkman, 1984). According to the model of stress and coping introduced by Lazarus and Folkman (1984), reactions and adjustment to stressful life events are a function of two cognitive appraisal processes. First, the “primary appraisal” was defined as the process by which individuals evaluate whether an event has the potential to be threatening or benign. This is followed by the “secondary appraisal” which involves individuals’ assessment of whether they had the coping resources to meet the demands of their environment (Lazarus & Folkman, 1984). An event is appraised as stressful insofar as its demands are perceived to be taxing or exceeding the adaptive resources of the individual (Lazarus & Folkman, 1984). However, as highlighted by Lazarus and Folkman (1984), the appraisal process itself is affected by individual or personal factors (e.g. self-esteem, group identification), situational characteristics (e.g. presence

or absence of social support), and characteristics of the physical stressor (e.g. predictability, severity, pervasiveness) (McCoy & Major, 2003; Major, Quinton, & McCoy, 2002).

The stress and coping framework developed by Lazarus and Folkman (1984) is highly influential to understanding the psychology of stress processes (Major, Quinton, & McCoy, 2002; Hobfoll, 1998). An underlying proposition of this approach is that exposure to potentially stressful events does not necessarily lead to negative well-being (Eccleston & Major, 2006). Counter to the assumption that the perceived discrimination inevitably leads to mental and physical health issues, this perspective accentuates the variability in responses, and underlying psychological factors that might influence differential responses to stressors (Major, Quinton, & McCoy, 2002). More importantly, it brings to attention the importance of “psychological resilience” rather than simply their “vulnerability” (Major, Quinton, & McCoy, 2002, p.253).

From a stress and coping perspective, individuals are not passive victims of environmental constraints, but active agents who construe and negotiate their social situations (Major, Quinton, & McCoy, 2002; Lazarus & Folkman, 1984). In this sense, the consequences of perceived discrimination (as a stressor) depend on coping strategies defined as individuals’ abilities in the form of “behavioral or cognitive attempts to manage or overcome situational demands” (Scheid & Brown, 2010, p. 111; Lazarus & Folkman, 1984). With this, studies that adopted the “stress and coping” framework have focused on individuals’ use of various forms of “cognitive coping strategies” (e.g. emotion and problem focused strategies) which involves “cognitively restructuring, or changing the meaning of, stressful life events” (Scheid & Brown, 2010; Quinton, & McCoy, 2002, p.256). Given this, many scholars credit Lazarus and Folkman (1984) in directing attention to the role of cognition and appraisal processes applied by the individuals in interpreting

the meaning of an external event and coping with external circumstances that challenge or threaten them (Scheid & Brown, 2010; Hobfoll, 1998).

That Lazarus and Folkman (1984) see cognition and appraisal as key to understanding the stress processes has also been subject to critique. This psychological model has been scrutinized for conceptualizing stress and coping as more of an internal or “mentalistic” process (Hobfoll, 1998). Although their model acknowledges the role of external environment as a critical factor in the stress process, the “stress and coping” paradigm is overwhelmingly cognitive in its approach (Hobfoll, 1998; Scheid & Brown, 2010). For instance, Lazarus and Folkman (1984) theorized social structures as “distal concepts” that impact individuals. The effects, therefore, is posited to be largely dependent on how these forces manifest “in the immediate context of thought, feeling, and action—the proximal social experiences of a person’s life” (Lazarus & Folkman, 1984 p. 321). Much of what is considered coping is also largely based on emotions and appraisals. Thus, the external aspects of society such as culture and context are deemed secondary to the stress process (Scheid & Brown, 2010). Similarly, the biological stress model prioritized organisms’ functioning capacity in responses to stressful circumstances, and in doing so deemphasizes the role of context and prior experiences in defining the level of threat (Scheid & Brown, 2010). With this, social scientists have emphasized the need to widen the study of stress to incorporate social, cultural and contextual considerations that shape “proximate stressors” and perceptions of those experiences (Scheid & Brown, 2010; Meyer, 2003).

Broadly speaking, sociologists have added to our understanding of the social and economic underpinnings of social inequalities and health in society (Pearlin et al., 2005; 1999, Pearlin 1989, Hobfoll, 1998). Sociology’s unique contribution to the study of stress lies its development of a “social stress theory,” which shifted the stress discourse more towards understanding the role of

external events or longstanding social conditions in generating stressors which are burdensome and exceed individuals' capacity to endure, therefore having potential to induce negative psychological well-being (Dohrenwend, 2000; Pearlin, 1989). Within this framework, a fundamental objective is to explain why mental health issues are more common among certain segments of society than others (Scheid & Brown, 2010). Accordingly, this theory posited that people in socially disadvantaged positions are at greater risk for mental health problems given the high levels of exposure to stressors and lesser access to coping resources in their environment (e.g. interpersonal, and material) (Pearlin et al., 2005). As stated by Pearlin (1989),

“Many stressful experiences, it should be recognized, don't spring out of a vacuum but typically can be traced back to surrounding social structures and people's locations within them. The most encompassing of these structures are the various systems of stratification that cut across societies, such as those based on social and economic class, race and ethnicity, gender, and age. To the extent that these systems embody the unequal distribution of resources, opportunities, and self-regard, a low status within them may itself be a source of stressful life conditions” (p.242).

The concept of social stress extends the psychological stress theory by presenting an opportunity to observe how well-being is linked to the social arrangements of people's lives and the diverse and unequal experiences that stem from it. Recognizing that there are group and individual differences in perceptions and attributions to stressors, Lazarus and Folkman (1984), suggested that the impact of socio-environmental demands is conditional, to the extent that stressors are appraised as burdensome and individuals demonstrate psychological resiliency. This contrasts the sociological models of stress that have tended to focus on the social contexts that give stressors their meaning (Scheid & Brown, 2010). Scheid and Brown (2010) along with others (e.g.

Pearlin et al., 2005; Hobfoll, 1998) have argued that stressors cannot be detached from the social environment in which it occurs because its meaning, and thus its level of threat, is defined by a complex configuration of the various social contexts that are interwoven across time and place (Scheid & Brown, 2010) . This is not to downplay the importance of individual appraisal and cognitive abilities emphasized by the psychological models of stress. Rather, the social stress framework has been useful in understanding that individuals' appraisals of stressors is not merely an individual process but occurs within a sociohistorical context (Hobfoll, 1998). As noted earlier, members of devalued racial/ethnic minority groups consistently report more discrimination than White/European Americans. In accordance with the social stress perspective described by Pearlin (1989, 2005) and others (e.g. Hobfoll, 1998), group differences in perceptions of discrimination also reflects differences in the objective realities of the lives of the non-dominant versus dominant groups in society, and not merely differences in subjective appraisals of the same events (Meyer, 2003). This is to suggest that the subjective view itself “depends on properties of the external event” (Meyer, 2003, p. 690).

How social context shapes and defines the ways in which environmental stressors are translated into psychological outcomes vary across racial/ethnic groups (Scheid & Brown, 2010). Scholars have emphasized that advantages and disadvantages (mainly in the form of structural constraints, coping resources, social support) present in the wider environment are an integral part of understanding the relationship between perceived discrimination and mental health. Upon discussing this, I highlight the importance of specific social contexts involving family and neighborhood to further understand this complex association among Asian American ethnic groups. Then I move on to discuss the important role that one's social status or location in society plays in determining the impact of perceived discrimination on psychological distress.

## **The Role of Social Context**

The link between discrimination and mental health outcomes cannot be examined in a vacuum. Pearlin (1989) states that contexts are “not extraneous to the stress process but are fundamental to that process” (p. 242). With this understanding, conceptualizing perceived discrimination as a “social stressor” fits well within the sociological notion of stress, which emphasized the “social origins of stress” and is often framed in terms of the unequal distribution of stressors and coping resources across racial and ethnic groups (Pearlin, 1989, p.252).

Influenced by sociology and social psychological theories, the Minority Stress Model (MST) introduced by Meyer (2003) offered a conceptual framework for understanding “excess stress to which individuals from stigmatized social categories are exposed as a result of their social, often a minority, position” (p. 675). Although this framework was developed to examine why LGB people suffer from higher prevalence of mental illnesses than heterosexuals, its underlying assumptions is also relevant to understanding the stress induced from occupying other disadvantaged positions in society. Meyer (2003) explained that minorities live in a society where dominant norms and culture are incongruent with their lived experiences. For Asian American ethnic groups, this means confronting social institutions that alienate and treat them as second-class citizens based on phenotype or ethnic cultural attributes (Chou & Feagin, 2014). Moreover, living in a “racialized” social context may create a situation where Asian Americans have very little control over their physical and psychological safety (Sue et al., 2007). Given the extra effort required to manage these unique external demands, minority groups are posited to experience stress that is “additive to general stressors that are experienced by all people” (Meyer, 2003, p. 676). Ultimately, this can exacerbate mental health problems (Meyer, 2003).

As described here, the minority stress model begins with the premise that stress is “socially based” as it accounts for the objective conditions of minorities lives (i.e. differences in economic and social resources, power and authority) (Meyer, 2003). However, in her description of a stress process unique to a minority status, Meyer (2003) recognized that the association between these objective conditions and mental health are contingent upon how they are perceived. In this respect, Meyer (2003) acknowledged the role of cognitive appraisal put forward by Lazarus and Folkman (1984). Following this, Meyer (2003) contended that the translation of stressors into negative psychological outcomes is not inevitable and suggested that minority members respond to prejudice with coping and resilience. As mentioned earlier, the stress and coping (Lazarus & Folkman, 1984) perspective underlines “psychological resilience and hardiness” (Major, Quinton, & McCoy, 2002, p.253), as a major form of adaptation and resistance to adverse social conditions. Viewed strictly from this framework, resiliency implies that most circumstances in one’s life are under one’s personal control (Thotis, 2010). Harboring such a view is argued to be risky as it may frame the failure to cope or inability to demonstrate resiliency by minorities as a form of personal shortcoming or deficiency, rather than a societal failing (Meyer, 2003; Hobfoll, 1998).

Recognizing that Lazarus & Folkman (1984) conceptualized stress and coping as more of a personal or individual event, Meyer’s (2003) minority stress model attempted to provide a more comprehensive understanding of the stress process. Within this framework, stressors such as discrimination are experienced as harmful or benign, depending on “personal predispositions, biological background, ongoing situations, appraisal and coping” but also “advantages and disadvantages” in the environment. (Meyer, 2003, p.678). Further, individuals are said to exhibit both “vulnerability and resilience” (Major, Quinton & McCoy, 2002, p. 254) not just depending on their ability to employ coping resources that operate at the individual level (e.g. self-esteem)



(Lazarus & Folkman, 1984; Crocker & Major, 1989), but also coping strategies that relate to “group level social structural factors” (Meyer, 2003, p. 677).

Against this background, it is crucial to situate minorities’ experiences of stress and coping within the context of “strengths and vulnerabilities” or “advantages and disadvantages” (Meyer, 2003, p.254) present in the wider environment (Dohrenwend 2000, 1998; Pearlin, 2005, 1989). That is, social context determines the constraints and opportunity structures on how individuals can manage stressors such as discrimination (Pearlin, 1989). Further, the availability of social resources in the environment of the minorities is a critical factor in satisfactory adaptation although the ability to effectively use or mobilize social resources largely depends on the interaction between the individual and their social environment (Meyer, 2003; Hobfoll, 1998). According to Bronfenbrenner’s (1979) ecological theory, individuals’ relationship with the social environment occurs at multiple levels. Ecological system theory depicts social environments as a “nested arrangement of structures.” (Bronfenbrenner 1979, p. 5). Moving from the innermost to the broadest level of environment, each social system is contained within the next, like a “set of Russian dolls” (Bronfenbrenner 1979). Individuals’ lives are, Thus, embedded in multiple contexts which has been classified into micro-, meso-, exo-, macro-, and chronosystems (Bronfenbrenner, 1979). The system ranges from immediate context (i.e. the micro system) in which a person lives and interacts, to the broadest level (macrosystem) which refers to the social, political and legal structures that have a direct or indirect impact on individuals’ lives.

Although the psychological effects of discrimination may vary across these ecological systems, this study focused on the most immediate or proximal contextual factors that shape the experiences of individuals in society. Family and neighborhood contexts represent a microsystem that constitutes the closest surroundings in which individuals participate in daily activities, social

roles and maintain the most personal relationships (Mossakowski & Zhang, 2014). Research in the area of perceived discrimination and health have called for assessing aspects of family and neighborhood context that ameliorate or exacerbate the effect of discrimination (Scheid & Brown, 2010). Within these specific contexts, researchers have focused on “social support networks” that include immediate family members, extended relatives, friends, neighbors, and community organizations. Social support refers to the resources people derive from their social network ties (Gee et al., 2006). Individuals may be able to draw upon and provide “emotional, informational, or practical assistance with stressors” through their “social support networks” (Scheid & Brown, 2010, p.111).

Similar social contexts can be experienced in divergent ways (Syed & Juan, 2010), which is why social contexts are understood through objective and subjective properties (Syed & Juan, 2010; Meyer, 2003; Bronfenbrenner, 1979). Sociologists and psychologists have argued that the nature of social support within ones’ environment is best understood as a complex, multidimensional construct, involving objective and subjective elements (Scheid & Brown, 2010; Cobb, 1976). In the family and neighborhood context, the objective dimension of social support is often denoted by received or enacted support in the form of tangible instrumental assistance (Scheid & Brown, 2010, Cheng, 1998). Moreover, the objective dimension encompasses the component of “structural support” which recognizes the organization of one’s social network and relational ties, including frequency of contact, and degree of exchange or reciprocity that occurs among network members (Scheid & Brown, 2010; Umberson et al., 1996; Pearlin, 1989). The belief and appraisal that one belongs to a “communicative and caring social network” is referred to as “perceived support” (Scheid & Brown, p. 203; Cheng, 1998; Cobb, 1976). Perceived support

is often equated with emotional support (e.g. empathy, sense of connection, understanding) experienced within immediate social ties (Scheid & Brown, 2010; Cheng, 1998).

Indeed, as argued by Pearlin (1989) and others (e.g., Scheid & Brown, 2010), an understanding of the significance of social contexts and its institutions requires the consideration of tangible resources and social network which can be a source of buffer against harmful stressors. However, equally important is the role of perceived or emotional support (Scheid & Brown, 2010). Studies examining the significance of social support for psychological well-being, has identified that perceptions of social support are more persistently related to positive mental health outcomes compared to received or actual support (Mossakowski & Zhang, 2014; Berkman & Glass, 2000; Thoits, 1995). An underlying argument for this observation is that social resources and support in an environment is useful to an individual only to the extent that it is perceived (Scheid & Brown, 2010). Further, the stronger and positive relationship of perceived support with well-being is also due to its measurability, as it is the “most direct criterion for assessing the broader role and significance of social support” (Scheid & Brown, 2010, p.204).

Family and neighborhood contexts are potential moderators in the association between perceived discrimination and psychological distress among Asian Americans. Moreover, the subjective aspects of these contexts i.e. the extent to which individuals feel socially connected to their neighborhood, receive emotional support, and experience cohesion within their families can protect or exacerbate experiences of discrimination. When the family and neighborhood context are perceived as a source of affiliation and social support, family relations and social connections buffer negative effects of perceived discrimination (Mossakowski & Zhang, 2014; Gee et al., 2006). While more attention has been given to how social support can mitigate the effects of discrimination, ones’ social support networks may also be a source of additional stresses (Scheid

& Brown, 2010; Syed, Juang & Takagi, 2010). In this respect, negative interactions or conflict within the family may exacerbate the association between perceived discrimination and mental health (Chae, Lee, Lincoln, & Ihara, 2012).

Despite great diversity (e.g. language, customs, family composition) represented among Asian Americans, limited studies have emphasized whether family and social ties experienced by specific Asian subgroups function as protective or risk factors against negative mental health. To address this research gap, the dissertation disaggregated Asian Americans into the three largest groups – Chinese, Filipino and Vietnamese Americans – to examine whether subjective aspects of family context (i.e. family cohesion, family conflict) and neighborhood context (i.e. neighborhood cohesion) may buffer or exacerbate the effect of perceived discrimination on psychological distress.

**Family and neighborhood context.** As with the general population, social support is said to alleviate the negative impact of perceived discrimination on the mental health of Asian Americans either directly or by moderating the effects (Rollock & Liu, 2016; Noh & Kasper, 2003). The strength of the direct and buffering effect, however varies with the type and source of support being assessed (Mossakowski & Zhang, 2014; Wei, Yeh, Chao, Carrera, 2013). Family and neighborhood context have been identified as a primary source of supportive experiences within various Asian American communities (Guo et al., 2015). The importance of these specific contexts is deeply tied to their immigration-related background. A disproportionate number of Asian Americans are foreign born with unique migration histories to the U.S. The diverse patterns of adaptation and integration into the U.S. mainstream institutions has been partly attributed to the characteristics and centrality of family relations, along with characteristics of their ethnic social networks (Portes & Rumbaut, 2006; Zhou & Xiong, 2005; Zhou & Bankston, 1994). Thus, the

success of various first generation and subsequent generations of Asian American ethnic groups depends on strong familial networks and existing ethnic communities (see, Rumbaut & Portes, 2001; Zhou & Xiong, 2005). In the following sections, I review the role of family cohesion and neighborhood social connections in determining the mental health of Asian Americans who face various obstacles related to their racial and immigration status.

**Family cohesion.** Compared to non-Hispanic whites and several other racial groups, Asian Americans tend to have more intact families (e.g. lower rates of divorce) and live in married-couple and multigenerational households with larger average family size (Guo et al., 2015; Zhou & Xiong, 2005; Lee & Liu, 2001). In addition, Asian American families are often characterized as having a collectivistic orientation (Phinney, Ong, & Madden, 2000). Values and norms around family obligations, filial piety, interdependence, and group conformity have been associated with Asian cultures (Guo et al., 2015). These collectivist values are also reflected in the cultures of the three ethnic groups studied in the current dissertation. Vietnamese culture which is based in Confucian and Buddhist roots, is considered highly collectivist (Phinney, Ong, & Madden, 2000). In a study with Vietnamese refugees, authors found that immigrant parents endorsed conforming to parental authority, obedience, respect and a sense of obligation to the family (Zhou & Bankston, 1994, 1998). Similarly, Chinese families also emphasize collective identity, duties and obligations, respect towards elders, which are normative of collectivistic traditions (Lim et al., 2008). With Catholicism as the predominant religion, Filipino Americans also come from a collectivist culture. Families have been described as having a strong emphasis on interdependence and reliance on an extended family system (Alvarez & Juang, 2010; Gee et al., 2006).

Asian Americans are more likely to use kin for emotional or instrumental support compared to other ethnic groups (Zhang & Ta, 2009). Research focused on familism and well-being in Asian

Americans, have found that perceived social support or comfort from supportive family members are a significant source of “emotional sustenance” and provide a “sense of security” (Mossakowski & Zhang, 2014, p.277). Along these lines, research indicates that family cohesion (defined as strong sense of intimate, connected relation with family members) is positively associated with self-rated overall mental health among Asians, even after controlling for demographic and immigration-related factors (Zhang & Ta, 2009). Similarly, greater perceptions of family cohesion have been linked to decreased distress among Asian American adults, college students and Filipino and Chinese adolescents (Juang & Alvarez, 2010; Yip & Takeuchi, 2008; Gee et al., 2006). In this sense, perceptions of family cohesion have been identified as a potential protective factor against stressors (Syed, Juang, & Takagi, 2007). Moreover, in the face discrimination, social support derived from family ties are reported to directly benefit mental health, but also play a buffering role (Mossakowski & Zhang, 2014). Because a cohesive family is shown to be a source of emotional support during times of distress, I hypothesized that greater family cohesion would buffer or protect against the negative effects of perceived discrimination within the Asian American sample, and the three subethnic groups- Chinese, Filipino and Vietnamese Americans.

**Family conflict.** It is important to note that the notions of collectivistic cultural values and strong family ties in Asian ethnic groups may obscure the reality of conflict that pervades their lives. Similar to the general population, family conflict is common in Asian American families. Nonetheless, due to their unique racial, immigration, and adaptation patterns in the U.S., some conflict- oriented issues cannot be generalized to the broader population. Because most Americans of Asian origin are foreign born, or have at least one parent who is foreign born, differences between the values and customs of their culture of origin and those of larger society are potential ground for family conflict to emerge (Phinney, Ong, & Madden 2000). The nature of this conflict

is found to be qualitatively different from mainstream American families, particularly, White/European Americans.

Research shows that immigrants who arrive in the U.S. as adults tend to have a challenging time integrating into their new environment compared to those who arrive as children or are born in the U.S. (Portes & Rumbaut, 2006; Lee & Liu, 2001). For instance, it is found that immigrant parents have more difficulty learning English and are also less likely to have contact with the larger society than their children (Portes & Rumbaut, 2006; Zhou & Bankston, 1998). Since their parents have been socialized outside the U.S., they tend to harbor family values and practices that reflect their country of origin. Many immigrant parents, therefore, expect their children to abide by their families' cultural values, traditions, and lifestyles (Lee & Liu, 2001). Children of immigrant parents, however, adapt rather quickly to the norms and cultures of the host society as they are socialized in American school systems. The differential patterns and rates of acculturation observed between immigrant parents and their children is referred to as "dissonant acculturation" (Portes & Rumbaut, 2006). According to Portes and Rumbaut (2006), this discrepancy can lead to a "breakdown of intrafamily communication" and "loss of parental control" over their children who are quickly learning English and the American ways (p. 282).

Family conflicts in Asian American families often occur as a result of cultural differences in values and lifestyles across the generations (Glick, 2010). These differences are most pronounced in parenting beliefs and practices (Lee & Liu, 2000). As Lee and Liu (2001) noted, immigrant parents often expect their adult children to remain dutiful and respectful to parental wishes, but their children may express resistance to traditional norms surrounding family obligation and filial piety (Guo et al., 2015; Zhou & Bankston, 1998). With time, the value discord between parents and children heightens intergenerational conflict which has the potential to result

in greater misunderstanding and conflict in Asian American early adult life (Lee, Choe, Kim, & Ngo, 2000; Greenberger and Chen 1996). For older immigration parents, intergenerational discrepancies in values and behaviors signifies a breakdown of traditional family structures (e.g. change in gender roles), as well as a loss of respect, power and authority in the family dynamic (Guo et al., 2015; Zhou & Bankston, 1998).

Family cultural conflicts caused by differing acculturation levels across generations exert a detrimental influence on the mental health in both younger as well as older Asian American groups (Lee, Choe, Kim, & Ngo, 2000; Guo et al., 2015). A national study found that family conflict was a significant predictor of psychiatric morbidity among older (60+ years) Asian Americans (Kim & Choi, 2010). Another study found that perceptions of parental expectations and criticisms were associated with depressive symptoms among Asian American college student (Yoon & Lau, 2006). The study of family conflict arising from intergenerational differences in the endorsement of family values and norms has been largely based on studies of Asian American adolescence of various ethnic backgrounds. Phinney, Ong and Madden (2000) found that Vietnamese parents endorsed higher levels of family obligations than their adolescents, and this difference was associated with lower levels of life satisfaction for Vietnamese adolescents in the U.S. (Phinney & Ong, 2000). Using a large-scale data set based in San Diego, Rumbaut (1994) found that Asian American children, specifically, Filipinos, and children of refugee parents (Vietnamese and Cambodians) expressed higher levels of family conflict and embarrassment than their Latino counterparts. Further, they found that parent-child conflict related to autonomy and family obligations was a predictor of lower self-esteem and higher depression among these adolescents. Studies of Chinese American adolescents found that parent-child conflict, stemming



from intergenerational discrepancies concerning parental control predicted greater depressive symptoms and distress (Lim et al., 2008; Syed, Juang, & Takagi, 2007).

It is important to point out that the experiences of conflict in Asian American families do not always stem from differing acculturation levels or intergenerational differences in cultural values. Taken together, however, studies have identified family conflict as a “vulnerability” or “risk” factor as it is correlated with poorer psychological well-being among Asian immigrants, Asian American children, adolescence, and adults (Juang, Syed & Takagi, 2007). In this context, it has been important to consider how family conflict or negative interactions with relatives exacerbate or worsens the negative effects of discrimination. Limited studies that have examined this moderating effect, finds that family conflict exacerbated the psychological effects (e.g. increased anxiety and loneliness) of discrimination among adolescents (Juang & Alvarez, 2010). Although this association has been tested among Asian American adolescents, fewer studies have focused on the moderating role of family conflict in Asian Americans adults, and within nationally represented Asian subpopulations. Given this, I hypothesized that greater perceptions of family conflict would exacerbate the negative effects of perceived discrimination in a nation-wide sample of Asian Americans, Chinese, Filipino and Vietnamese American adults.

**Neighborhood cohesion.** While families play a key role in the lives of the Asian Americans, social support can also be derived from the communities in which their lives are embedded. There is extensive literature in sociology suggesting that families and the social relations and network ties built around them has shaped and, to an important extent, determined their multifaceted experiences and opportunities for upward socioeconomic mobility (Portes & Rumbaut, 2006; Zhou & Bankston, 1998). More importantly, for Asian immigrants, refugees and their children, who live in socially isolated environment that is disconnected from mainstream

institutions, or lack adequate economic resources, ethnic communities are key to their adaptation and success for the subsequent generation (Zhou & Bankston, 1998). Zhou and Bankston (1998) presented a case study of Vietnamese refugee families in Versailles Village, which is a low-income, minority neighborhood in New Orleans. The authors demonstrate how Vietnamese ethnic communities' may function as a buffering mechanism between individual families and the larger society. Here they describe how "family-based, interknit, multilevel social ties within the ethnic community" are key to transforming the lives of individual members and their families (Zhou & Bankston, 1998). While many high skilled Asian immigrants and their families are able to bypass inner-city living, ethnic enclaves such as Chinatown, Manilatown, Korea town, Little Phnom Penh, and Thai town, have historically emerged in many cities and persisted in helping newcomers by providing opportunities to live and work, thus reducing concerns related to cultural and language difficulties (Zhou & Xiong, 2005). In sum, because of economic constraints, linguistic and cultural barriers, ethnic communities may serve to protect the well-being of certain Asian Americans (e.g. older Asians, refugee families) or mitigate stress by reducing social isolation and creating access to ethnic social and health services (Guo et al., 2015; Zhou & Bankston, 1998).

As described here, within the community context, informal networks, friends, neighbors, co-workers, and voluntary organizations may facilitate access to tangible assistance. Further, regular interaction with members and active participation in ones' social networks contributes to an enhanced sense of belonging in the community (Mossakowski & Zhang, 2014; Kim & Mckenry, 1998). With this, literature on social support and health have also considered the importance of social connections and cohesion at the neighborhood level, and its relationship with well-being (Sampson, Morenoff, & Gannon-Rowley, 2002). Neighborhood cohesion emphasizes sense of belonging, mutual trust, solidarity, among residents in the community (Mossakowski &

Zhang, 2014). Among Asian Americans, research has indicated that perception of neighborhood cohesion is an important determinant of self-rated physical and mental health (Syed & Juan, 2012; Zhang & Ta, 2009). Zhang & Ta (2009) found that neighborhood cohesion is associated with well-being among Asian Americans, however, it was mediated by various immigration and SES factors. Few quantitative studies have examined the role of neighborhood cohesion in the relationship between discrimination and mental health, and in particular, how it might function to protect or exacerbate the association in Asian American and within specific ethnic groups (Syed & Juan, 2012). Focusing on the entire Asian American sample, and the three Asian national origin groups (e.g., Chinese, Filipino, and Vietnamese Americans), I hypothesized that neighborhood social cohesion would moderate the association perceived discrimination and psychological distress. More specifically, I expect that higher levels of social cohesion would ameliorate the negative effects of perceived discrimination for these four samples.

### **The Role of Social Status**

Beyond family and neighborhood context, studies have also looked at how contextual factors such as social position or social status might modify the association between perceived discrimination and psychological distress (Zhang & Hong, 2013). Traditionally, literature has focused on objective measures of socioeconomic status (SES) such as income, education, and occupation as an indicator of social status (Yoon et al., 2012). Abundant research point to the evidence that objective SES measures determine individual and population health (Lhila & Simon, 2010; Wilkinson & Pickett, 2006). High levels of SES afford people access to better medical care, provides resources to live in better neighborhoods and enables them to maintain important social ties and networks (Gong, Xu, & Takeuchi, 2012). The economic and psychosocial resource advantages associated with high objective SES measures is argued to be an effective way to cope

with social stressors such as perceived discrimination and alleviate their harmful health consequences (Zhang & Hong, 2013; Yoon et al., 2012).

More recently an emerging body of research have attended to the subjective SES, defined as “perceived or subjective position within the hierarchies of society” as a critical determinant of psychological well-being (Yoon et al., 2012, p. 88). Few studies have investigated subjective SES among Asian Americans, but findings suggest that it has been consistently associated with depression and distress independent of objective status indicators (deCastro, Gee, & Takeuchi, 2010). Within the U.S., it is assumed that all Asian Americans are economically successful. However, this argument does not consider that fact that there is a bimodal distribution of SES among Asian Americans, split between those who tend to have high income and education, and those who do not. Thus, research has shown that common markers of SES may not fully capture the effects of Asian Americans’ social status on health (de Castro et al., 2010; Takeuchi et al., 1998). Given this, the study also aims to explore the linkage between self-reported discrimination and psychological distress by focusing on measures of subjective SES as a moderator and mediator. For the moderation model, I hypothesized that subjective SES (i.e. higher perceived social standing in the U.S. and in one’s community) will buffer the association. In the mediation model, I proposed subjective SES measures as a probable pathway through which perceived discrimination may influence psychological distress. In the following subsections, I emphasize how subjective SES differs from objective measures of SES. I then discuss the relevance of measures of subjective SES in Asian Americans, and how it may be an important factor linking perceived discrimination to mental health.

**Objective versus subjective SES.** The study of subjective SES is posited to be a product of relative deprivation and social comparison processes (Schnittker & McLeod, 2005). Moreover,

researchers have expanded on such theories by investigating the association between objective and subjective SES (Scheid & Brown, 2010; Schnittker & McLeod, 2005). Based on research that has revealed the association between relative income inequality and health, it is suggested that the “social gradient in health” observed in rich or developed nations is primarily a gradient in relative income, or social status, rather than a reflection of absolute material living standards (Marmot & Wilkinson, 2001; Wilkinson & Pickett, 2006). This observation was made notable by the Whitehall studies of British civil servants, which showed that the gradient in health runs from those that are represented the bottom rungs of society to the top (Marmot, 2003). The Whitehall Study I, showed that even among those who are not considered poor, a pattern emerged where higher the socioeconomic position, the lower the mortality rate. Twenty years after the initial study, the Whitehall II study documented a similar gradient, but in relation to morbidity (Marmot, 2003).

Crucially, relative deprivation has helped to advance an explanation for the presence of a “social gradient” in the association between absolute SES and health, which cuts across the spectrum of socioeconomic status (Wilkinson & Pickett, 2006). Distinguishing the effects of relative and absolute standards of living has provided the theoretical impetus to go beyond studying the effects of absolute measures of SES. Further, research on relative deprivation provides further evidence for the importance of social comparison or evaluation processes in effectively understanding ones’ social position (Scheid & Brown, 2010; Schnittker & McLeod, 2005). In general, the theory of relative deprivation discusses the “dissatisfaction and resentment resulting from the belief that one is deprived of desired and deserved outcomes compared with what others have” (Kim, *et al*, 2017, p. 373). It essentially involves “psychosocial” processes contingent on social comparisons. (Williams & Pickett, 2006; Marmot & Wilkinson, 2001). An illustration of social comparison based on the theory of relative deprivation is when individuals compare

themselves to those who are similar or better-off than themselves in terms of income, education and other metrics (Subramanyam, Kawachi, Berkman, Subramanian, 2009). Through the process of social comparison, individuals internalize perceptions of their place in socioeconomic hierarchies. These perceptions, in turn, influence health through various mechanisms such as stress and neuroendocrine pathways (McEwen & Gianaros, 2010). It is found that those who are lower in the income hierarchy are more likely to experience stress and frustration stemming from upward social comparisons (Marmot, & Wilkinson, 2001; Subramanyam et al., 2009). Further, the stress of internalized inferiority has meaningful, negative psychosocial effects that exist above and beyond the consequences of absolute material deprivation (Wilkinson & Pickett, 2006). Marmot (2004) argued that perception of a low social status is stressful because it reduces people's control over their lives and work. It is also associated with feelings of anxiety, social isolation, and depression (Marmot & Wilkinson, 2001). Thus, the prevalence of these psychosocial risk factors is understood to be influenced by people's relative and perceived social position or status within the broader socioeconomic structure of society (Marmot & Wilkinson, 2001).

An emphasis on the psychosocial effects associated with social positions, has also pushed social class scholars to focus on the meaning of particular socioeconomic position, and more specifically, individual's perception of his/her social standing in comparison to others (Mangyo, & Park, 2011; Lhila & Simon, 2010; Wilkinson & Park, 2006). In past sociological literatures a common approach to capturing personal ranking of ones' social standing was based on self-assignment to a social class, known as "subjective class identification" (Jackman & Jackman, 1973). Social class was measured using 4-6 categories such as lower class, working class, middle class, upper middle class, and upper class (Jackman & Jackman, 1973). Jackman (1979) established that both social and economic aspects determine self- assignment to ones' social class.

The author contended that class membership cannot be seen strictly in terms of “shared objective characteristics”, rather it “extends to encompass cultural/expressive characteristics, such as shared lifestyle or beliefs and feelings” (p.445).

Singh-Manoux, Adler, & Marmot (2003) argued that subjective social class, measured by respondents placing themselves in predefined social class categories (Jackman & Jackman, 1973), does not adequately capture subjective perceptions of social status. First, it presupposes that all respondents have similar perceptions of the class-system. Further, they argue that class terminology such as “middle class”, along with being politically loaded, is interpreted in multiple ways which can be very misleading (Singh-Manoux, Adler, & Marmot, 2003). More recently, pictorial representations have been used to measure subjective SES (Adler, Epel, Castellazzo, & Ickovics, 2000; Ostrove, Adler, Kuppermann, & Washington, 2000). The MacArthur Scale of Subjective Social Status (SSS) is currently the most widely used scale based on a simple pictorial representation of a 10- rung ladder (Franzini & Fernandez-Esquer, 2004; Adler et al., 2000). Respondents are provided with a symbolic ladder with 10 rungs that asks them to place themselves in comparison with others in relation to commonly perceived social realities of what it means to be at the top and bottom of U.S. society. The top and bottom are symbolically occupied by people who are the most and least affluent and educated, and who have the best and worse jobs, respectively (Adler et al., 2000). The 10-rung SSS ladder recognizes ones’ socioeconomic status as a subjective indicator based on an individuals’ appraisal of her/his social standing, which is likely to involve processes of social comparisons (Singh-Manoux, Adler, & Marmot, 2003).

Prior studies have used this SSS ladder and analyzed its link with physical and mental health outcomes (Franzini & Fernandez-Esquer, 2006). Such studies have found that SSS is independently associated with physical and psychological health outcomes among British civil

servants, low-income Mexican Americans, and ethnically diverse pregnant women (Franzini & Fernandez-Esquer, 2006; Ostrove, Adler, Kuppermann, & Washington, 2000; Singh-Manoux, Adler, & Marmot, 2003). Accordingly, scholars have also concluded that the SSS ladder may be a better predictor of physical and psychological functioning, compared to the traditional objective measures of SES (e.g. education, income, occupation) (Franzini, & Fernandez-Esquer, 2006; Singh-Manoux et al., 2003). Adler et al. (2000) found that compared to OSS (objective social status), the SSS ladder was more strongly and consistently related to psychological functioning and to a variety of health indicators including self-rated health, body fat distribution, and heart rate. Further, the study revealed that among healthy White women, low SSS was related to greater stress, while higher SSS was associated with “better health trajectories” (Adler et al., 2000. p. 590). This negative association remained even after controlling for OSS (education, income, and occupation (Adler et al. 2000).

In demonstrating that measures of subjective SES are a better or more reliable predictor of health than Objective SES, Singh-Manoux et al., (2003) claimed that the SSS ladder (Adler et al., 2000) is a more precise measure of social position. The authors argued that individual’s subjective self-rating of social position accounts for their personal or unique life circumstances, reflecting not only current socioeconomic circumstances but also an assessment of their past (educational, and economic background) along with their future prospects. For this reason, they contend that “SSS reflects an individual’s sociocultural circumstance more fully than any of the other objective measures of social class” (Singh-Manoux et al., 2003, p. 1331). Further, SSS is also known for its “multidimensional quality”, in that it reflects not a single aspect of social position, but a “synthesis of the different elements of SES at the individual level” (Singh-Manoux et al., 2005, p. 1331). With this, the SSS measure allows for more nuanced understanding of the “objective indicators of



social status” and its concomitant opportunities and life chances (Singh-Manoux et al., 2003). For example, the differential status and life chances accorded by a degree from an Ivy League relative to a degree from a less prestigious college may be captured by a measure of SSS but not by an objective measure of education (Operario, Adler, & Williams, 2004). The emphasis on the advantages of using SSS measures do not suggest the lack of utility in OSS. Studies find that there is an association between SSS, and conventional measures of objective SES—employment grade, education, and income (Franzini & Fernandez-Esquer, 2006, Ostrove et al., 2000). Nonetheless, while SSS is shown to be related to OSS, each indicator captures different aspects of social standing not captured by the other (de Castro et al, 2010; Singh-Manoux et al.,2003).

**Role of subjective SES in Asian Americans.** In this subsection, I focus on the relevance of subjective SES measures in Asian American ethnic groups. Research has linked objective SES measures to Asian American mental health. For instance, studies have reported that education, employment status, and occupation were significantly associated with depression or psychiatric disorders among Chinese, Korean, Southeast Asian refugees and other Asian ethnic groups (Hurh & Kim, 1990; Kuo, 1984; Noh & Avison, 1996; Noh et al., 1999; Takeuchi et al., 1998). On the contrary, studies have also shown that objective indicators may not consistently relate to well-being among Asian Americans, and that the relevance of objective SES measures may vary by ethnicity (Gong, Xu, &Takeuchi, 2012). In some community-studies with large Asian ethnic samples, it was found that conventional indicators were not consistently related with physical and mental health outcomes. For example, the Filipino American Epidemiological Study, showed that education and income were not associated with chronic physical health conditions or psychological distress, but was somewhat associated with occupation (de Castro, Gee, & Takeuchi, 2008). Similarly, the Multi-Ethnic Study of Atherosclerosis (MESA), a longitudinal study of a general

population sample, noted that low education was a risk for coronary calcification among Whites and Hispanics, but not among Chinese Americans (Roux et al., 2005). These mixed findings suggest that education, occupation, and income capture some but not all facets of socioeconomic status among Asian Americans.

There is limited research on subjective SES and its effect on racial/ethnic minorities. Limited research in this area reveal that for Asian Americans, alternative measures of social conditions such as subjective SES (e.g. SSS, perceived economic opportunity) are a powerful predictor of well-being. Ostrove et al. (2000) found that the SSS ladder was a better predictor of self-rated health for Chinese American pregnant women than education and household income. Leu et al., (2008) reported that higher SSS was negatively associated with mood dysfunction among immigrant Asian Americans, however, income and education did not predict this outcome. Gong, Xu, and Takeuchi (2012) also reported that self-perceived higher social standing in the U.S. and community was linked to better physical and mental health among a nationally represented Asian population. In their study, conventional SES indicators (e.g. occupation) were not related to self-rated physical health, self-rated mental health, and psychological distress.

The diversity reflected in Asian Americans' key demographic and socio-economic characteristics have important implications for understanding lack of consistent or prevalent associations between objective SES variables and self-reported mental health outcomes (Gong, Xu, & Takeuchi, 2012; de Castro, Gee, & Takeuchi, 2008). Asian Americans are not simply a culturally diverse group but also represent vast socioeconomic disparities. For instance, some ethnic groups (e.g., Asian Indian, Filipino, and Chinese) have incomes and educational levels far exceeding national averages, while others (Hmong, Cambodians) have the lowest income and education levels in the U.S. As mentioned, majority of Asian American population is represented

by foreign born immigrants, who are more likely to speak a language other than English. With this, conventional markers of SES may fall short in grasping the dynamic sociocultural and economic contexts, and their complex process of migration and adaptation in the U.S. It is important to note that Asian Americans' immigrant background is inextricably linked with their socioeconomic circumstance. Portes and Rumbaut (2006) emphasized immigrants' context of exit and reception which explicates this point. The context of exit entails possession of pre-migration resources such as money, knowledge, and skills, along with the social class status of immigrants in their homelands. The context of reception, on the other hand, is influenced by their positions in the system of racial stratification, labor market conditions, government policies, strength and viability of ethnic communities in the U.S. (Portes & Rumbaut, 2006).

The complex interaction between these contexts can lead to both salient and subtle changes in their career trajectories and socioeconomic position (de Castro et al., 2010). The pre-migration skills and knowledge immigrants possesses may not translate into the types and amount of material and/or psychosocial resources as they do for the general population (de Castro et al., 2010). Education or degrees received outside the U.S. often do not lead to commensurate occupational and economic gains as foreign degrees may not be recognized or valued in the American labor market. Thus, even among skilled and well-educated Asian immigrants with high English proficiency, occupational downgrading or underemployment is possible if they hold foreign education credentials (de Castro et al., 2010). Similarly, income may also bear different meanings for immigrants as a large portion may be sent to relatives from the homeland in the form of remittance – a common trend among Asian Americans or immigrants (Zeng & Xie, 2004). Many adult immigrants lacking English proficiency and job skills rarely have the time and money to

enroll in school and retrain for better jobs. This leads to being trapped in low-skilled, hazardous jobs (de Castro, Fujishiro, Sweitzer, & Oliva, 2006; Tsai & Salazar, 2007).

Further, it is important to note that the experiences of first generation immigrants tend to reproduce in succeeding generations. Theories of segmented assimilation posit that immigrants' children, born and raised in America, are inevitably influenced by the first-generation experiences prior to immigration and after arrival (Zhou & Xiong, 2005; Zhou, 1997). Thus, it would be simplistic to assume that they are immune from the migration context, and therefore, experience automatic path towards socio-economic mobility (Portes & Rumbaut, 2006; Zhou & Bankston, 1998). Rather, depending on various individual and contextual factors, children of immigrants may take "multiple paths and counteract disadvantages, and even advantages, in multiple ways" (Zhou and Xiong, 2005, p.1147). Even when socioeconomic mobility is achievable, and they rise up the SES ladder, as a racial minority group, Asian Americans in general may encounter the so-called "bamboo ceiling" (akin to "glass ceiling") that inhibits occupational advancement and promotion (de Castro, Gee, & Takeuchi, 2008). Altogether, these dynamic experiences described here are the lived sociocultural experiences of many Asian Americans/immigrants, which conventional measures of objective SES may fail to fully capture (de Castro et al., 2010).

**Subjective SES as a moderator and mediator.** Among Asian Americans, studies have mainly focused on the moderating role of objective SES, rather than perceived social standing. For instance, Zhang and Hong (2013) examined the role of education, as an example of a structural factor, which affects the relationship between perceived everyday discrimination and psychological distress. They found that higher levels of education among Asian Americans did not buffer this association and, further concluded that there was a need to examine whether subjective SES may play a moderating role (Zhang & Hong, 2013). As emphasized earlier, subjective SES

encompasses a wide range of socioeconomic phenomena that common SES indicators do not reliably capture. This makes subjective SES particularly relevant to Asian Americans who are an economically diverse group (de Castro et al., 2010; Takeuchi et al., 1998). It has been established measures of subjective SES such as the SSS ladder is a potentially important health risk factor for this group. This study expands on this area of research by considering how perceived position on the social hierarchy or ones' subjective SES may moderate the association between perceived discrimination on psychological distress. This is to say, it examined whether high and low levels of perceived social standing in the U.S. and in the community, alleviate or exacerbate the harmful consequence of perceived discrimination. As discussed earlier, theories on discrimination have found that groups with low status in society are more likely report and appraise that they are targets of discrimination (Schmitt et al., 2015). Further, disadvantaged or low status groups on average have fewer material and psychosocial resources to protect them against the adverse effects of chronic and pervasive discrimination (Scheid & Brown, 2010). The extent to which discrimination may impact mental health is contingent upon how they are perceived (Meyer, 2003; Lazarus & Folkman, 1984). The detrimental effect of perceived discrimination has been widely noted. Similarly, an individual's social positions in social hierarchies also involve interpretations of their own and others' life circumstances. As identified earlier, low subjective SES has been associated with numerous mental and physical health outcomes among various Asian American groups. More specifically, it has been noted that low levels of subjective SES or lower perceived social standing may induce constant stress leading to negative psychological outcomes (Gong et al., 2012). On the other hand, high levels of subjective SES may provide individuals with necessary psychosocial resources such as sense of mastery, hope and security, which may enhance their health (Operario

et al., 2004). Given this, the study hypothesized that high subjective SES may buffer or alleviate the effect of perceived discrimination on psychological distress in Asian American ethnic groups.

Measures of subjective SES has been directly associated with various psychological outcomes, however, few studies have examined whether the relation of perceived discrimination and mental health is mediated by subjective SES. Limited studies that have used subjective SES measures as a potential mediator, have not necessarily explored this dynamic. For example, a study by Yoon et al., (2012) examined whether acculturation on subjective well-being (SWB) would be mediated by expected social status and found that expected social status positively mediated the effects of acculturation on subjective well-being. In another study, the SSS ladder explained why non-citizens experienced worse psychological well-being compared to citizens (Gee, Morey *et al.*, 2016). In this study, I explore subjective SES measures as a pathway linking perceived discrimination to psychological distress.

While discrimination accounts for the objective conditions of social disadvantages (Scheidt & Brown, 2010), racial/ethnic minorities who perceive high racial discrimination are also likely to feel rejected by mainstream society (Yoon et al., 2012). The sense of rejection may stem from perceived discrimination, which is said to create a sense of powerlessness and lack of control over life outcomes as it implies social exclusion in terms of access to resources, prestige and social power (Branscombe, Schmitt, & Harvey, 1999). Accordingly, Hobfoll (1998) argued that the attainment of social status (e.g. possessing fetish objects, money) and social power (e.g. success) is a valuable goal that individuals strive to achieve and uphold. The “search for status and concomitant self-esteem” has been a common theme across time and societies (Hobfoll, 1998, p. 27). Social structures and conditions related to social status, is argued to be vehemently protected, “just as the basic elements of survival like food for the table and desire for a mate” (Hobfoll, 1998,

p. 27). “Status resources” (e.g. money, wealth, luxury, home) are diligently protected because they are intimately tied with power and stability over other important resources, including employment, salary, organizational memberships, and social recognition (Hobfoll, 1998). Thus, when individuals’ status is threatened it can “undermine their basic sense of identity and other’s view of themselves and place in the world (Hobfoll, 1998, p.52). More importantly, he underscored the fact that environmental or social conditions that threaten valued goals or undermine ones’ ability to sustain or achieve these goals, has the potential to induce stress (Hobfoll, 1998). Discrimination encountered by racial/ethnic minorities is recognized as a source of threat to individuals’ status and position in the social hierarchy (Hobfoll, 1998). Perceived discrimination (as a social stressor) is particularly harmful to health (Williams & Mohammed, 2009) because it has the ability to diminish people’s capacity to cultivate and guard important individual and social resources that may protect them from stressful circumstances arising from their social context (Hobfoll, 1998).

The quest to improve one’s financial and economic opportunity is a central theme for most, but it is particularly notable in immigrants and racial/ethnic minorities who strive to achieve socioeconomic advancement in society where opportunities and life chances are unequally distributed across racial and class lines. In the U.S., economic opportunities for Asian immigrants and their children can translate into improved quality of life, access to financial assets, and better physical and psychological well-being (Gee et al., 2009). It has been noted that while actual economic gains are important, one’s subjective sense of economic opportunity has implications for well-being (de Castro, Gee, & Takeuchi, 2010). Perceptions of economic opportunity denotes ones’ “anticipated economic trajectory” or may reflect ones’ plan and determination to improve their lives (de Castro, Gee, & Takeuchi, 2010, p. 668). In their study, de Castro, Gee, and Takeuchi (2010), found that perceptions of economic opportunity, and specifically greater satisfaction with

one economic opportunity was related to better health outcomes. Thus, while actual economic gains and perceptions of opportunities may positively contribute to socioeconomic achievement, and well-being, racial discrimination may “place psychological and real barriers to racial/ethnic minorities’ socioeconomic aspiration and accomplishment” (Yoon et al., 2012, p. 88; de Castro, Gee, & Takeuchi, 2010, p.). In this sense, discrimination may harm ones’ psychological well-being by inhibiting realization and attainment of individuals’ economic and social goals that are tied to their social status and position in the social hierarchy (Hobfoll, 1998). Given this background, the study hypothesized that higher level of perceived discrimination will be associated with lower self-perceived standing in society, which in turn may lead to psychological distress. This proposed mediation highlights subjective SES as potential pathway through which perceived discrimination may impact mental health among Asian American ethnic groups.

## **Summary**

Using the 2002–2003 National Latino and Asian American Study (NLAAS), this dissertation examined the following hypotheses related to the relationship between perceived discrimination and psychological distress. These hypotheses were tested in the aggregate sample and within the three largest Asian ethnic groups represented in the NLAAS study.

Hypothesis 1: Figure 1 presents the summary of this hypothesis that examined the direct association. Consistent with the broader literature, perceive discrimination is hypothesized to be a strong predictor of psychological distress. More specifically, there will be a positive association between perceived discrimination and psychological distress.

Hypothesis 2: Figure 2 summarized the proposed moderation model which tests whether the relationship between perceived discrimination and psychological distress can be modified by social context variables. Moderators can alter the relationship between stressors and mental health



in two specific ways. It can either help to protect people from the effects of stressors or make individuals more vulnerable to their deleterious effects.

Social context was expected to have a moderating effect on the association between perceived discrimination and psychological distress. The moderation model tested the effect of perceived discrimination on psychological distress across differing levels of family cohesion, family conflict, neighborhood cohesion and measures subjective SES. Two separate measures were used to gauge subjective SES. One measure pertained to individual's perception of their social standing relative to the entire U.S. This is referred to simply as SSS in the study. The second measure pertained to individuals' perception of their social standing within their community. In this study, this measure will be referred to as Community-SSS (Gong et al., 2012). A more detailed description of the two subjective SES measures can be found in the following methods chapter.

Family cohesion, which relates to the emotional attachment and bond experienced in the family domain is expected to buffer this association (Zhang & Ta, 2009). On the contrary, perceptions of negative interactions with family members (i.e. family conflict) is expected to exacerbate the negative effects of perceived discrimination. Further, perceptions of neighborhood cohesion are expected to buffer this association. High levels of SSS and Community- SSS are expected to buffer against the harmful impacts of perceived discrimination.

Hypothesis 3: The proposed mediation model aimed to identify and explain the mechanism or process that underlies the relationship between perceived discrimination and psychological distress. A mediator is linked to both the stressor (perceived discrimination) and its outcome (distress). It can, therefore, be treated as pathways through which the effects of discrimination on mental health can be traced.

The study explored subjective SES as potential mediators or pathway that link discrimination to mental health. The study hypothesized that SSS and Community-SSS would mediate the association between perceived discrimination and psychological distress. It included two mediation models, which is summarized in figure 3 and 4. For each model (H3a and H3b) three hypotheses are presented. The first two hypotheses are relevant to the basic conditions of a mediation analysis (e.g., Baron, & Kenny, 1986), and the third hypothesis is specific to testing the mediation model and examined the indirect effect of perceived discrimination on psychological distress through (H3a) SSS and (H3b) Community -SSS.

H3a) The first model (Figure 3) examined the role of SSS as the mediator between perceived discrimination and psychological distress. Here the first hypothesis examined the relationship between perceived discrimination and SSS. More specifically, it was hypothesized that perceived discrimination will be inversely related to SSS (H3a.1). The second hypothesis examined the relationship between SSS and psychological distress. It was hypothesized that SSS would be inversely associated with psychological distress (H3a.2). The study investigated these relationships as direct effects. In the third hypothesis, SSS is hypothesized to mediate the relationship between perceived discrimination and psychological distress. That is, the indirect effect of perceived discrimination on psychological distress through SSS will be significant (H3a.3).

H3b) The second model (Figure 4) examined the role of Community-SSS as the mediator between perceived discrimination and psychological distress. Here, the first hypothesis examined the relationship between perceived discrimination and Community-SSS. More specifically, it was hypothesized that perceived discrimination will be inversely related to Community-SSS (H3b.1). In the second hypothesis, it was hypothesized that Community-SSS would be inversely associated

with psychological distress(H3b.2). The study investigated these relationships as direct effects. In the third hypothesis, Community-SSS is hypothesized to mediate the relationship between perceived discrimination and psychological distress. That is to say, the indirect effect of perceived discrimination on psychological distress through Community-SSS will be significant (H3b.3).

## CHAPTER 3: METHODS

### **Dataset**

This study was based on secondary data analyses of the National Latino and Asian American Study (NLAAS; Alegria et al., 2004). The NLAAS is a nationally representative household survey conducted by University of Michigan Survey Research Center, between May 2002 and November 2003. In general, the NLAAS data estimates the prevalence of psychiatric disorders and mental health service utilization by Latinos and Asian Americans in the U.S. For Latinos and Asian Americans populations, the NLAAS is one of the most comprehensive surveys to be implemented as it goes beyond assessing the national rates of mental illness and service use. Rather, it brings attention to the “social, cultural and contextual correlates of disease expression” (Alegria et al., 2004, p. 209). More specifically, a central aim of NLAAS was to elucidate the ethnic, social, and environmental determinants of mental health disorders and service use differences among Latinos and Asians nationwide. At the same time, Latino and Asian American ethnic categories encompass a diverse range of national backgrounds, migration histories, social classes, among other distinctions. With this, the NLAAS data conceptual and methodological approach addresses the divergent sociocultural contexts in explaining the risk for mental health disorders across a wide range of Latino and Asian American ethnic groups (see, Alegria et al., 2004). The emphasis on the unique cultural and social characteristics of the sample makes way for analyses of ethnic specific or ethnic groups’ differences in mental health patterns.

**Sampling procedure.** With limited information available at the national level that documents Latinos and Asian American mental health prevalence and needs, the primary aim of the data set was to enable comparisons of mental health characteristics among both the Latinos and Asian Americans represented in NLAAS survey populations and the larger U.S. adult

population. The NLAAS is based on a multistage stratified area probability sampling design. Its sampling designs is rendered to be one of the most complex designs ever developed by the University of Michigan Survey Research Center (see, Heeringa et al., 2004). The stratified probability sample included a NLAAS Core sample, where housing units and household members were sampled from a core sampling of primary sampling units (based on metropolitan statistical areas and counties). Because the Core sample did not follow the geographic residential of Latinos and Asian Americans, the method alone produced very low density of certain national origins of interest. Therefore, the supplemental NLAAS-HD sample component was added to the sample plan, which oversampled geographic areas with moderate-to-high density ( $> 5\%$ ) of targeted Latino and Asian households in the U.S. Oversampling was particularly relevant for ethnic groups with low prevalence in the Core sample, namely, Puerto Rican, Cuban, Chinese, Filipino and Vietnamese (Heeringa et al., 2004). Secondary participants were also recruited from households where a primary respondent had already been interviewed. To ensure that the that the pooled Core and HD samples provided nationally representative estimates, the NLAAS survey team developed sampling weights. Sample weights were calculated separately for the Asian American and Latino samples and are valid for ethnic-specific analyses (Heeringa et al., 2004).

The final NLAAS sample consisted of 4,649 adults, of whom were 2,544 Latinos and 2,095 were Asian American. The weighted response rates were 73.2% for the total sample, 75.5% for the Latino sample, and 65.6% for the Asian sample (Heeringa et al., 2004). Eligible respondents were least 18 years of age and represent noninstitutionalized population of the coterminous U.S. and Washington, D.C. Latinos were divided into four strata of interest: Mexicans, Cubans, Puerto Ricans, and Other Latinos. The Asian American survey population was also stratified into 4

categories based on eligible adults' ancestry or national origin: Chinese, Filipino, Vietnamese, and all other Asians.

## **Sample**

The current study is restricted to the Asian American sample ( $n = 2,095$ ). Respondents in the present study were from the following backgrounds: Chinese ( $n = 600$ ), Vietnamese ( $n = 520$ ), Filipino ( $n = 508$ ), other Asian ( $n = 467$ ). The "Other Asian" category included 141 Indians, 107 Japanese, 81 Koreans, 39 Pacific Islanders, and 99 members of smaller subgroups. These 467 "Other Asians" were included in the aggregate analyses but excluded from the within ethnic group analyses. For the purposes of ethnic specific analyses, only Chinese, Filipino, and Vietnamese American participants were selected ( $n = 1,628$ ). Within the total Asian American sample, Chinese, Filipino and Vietnamese Americans represented 28.6%, 24.2%, 24.8%, respectively. The "other Asian" category was not included due to small sample size (i.e., less than 150).

## **NLAAS Data Collection**

During data collection, respondents were given the option to be interviewed either in English or in their native language. Interviews were offered in English, Spanish Mandarin, Cantonese, Tagalog, and Vietnamese. They were primarily face-to face interviews conducted by trained, bilingual interviewers in the respondents' preferred language. The cultural and linguistic matching of interviewers to respondents broadened the category of Latinos and Asian Americans who can be represented in this national psychiatric epidemiology study. The NLAAS, therefore, was designed to incorporate a large segment of Asian Americans who are foreign-born or first-generation immigrants with limited English proficiency, who would otherwise be left out if the surveys were administered in English only (Alegria et al. 2004).

## Measures

It was important to the designers that the development, translation and adaptation of measures in the NLAAS were sensitive to cultural and contextual variations (Alegria et al., 2004). Research on Asian Americans involves comparing the lives of different ethnic groups, exposed to varied social, political and historical forces. One of the goals of NLAAS was to ensure that standardized measures taken from mainstream research were compatible with the divergent language and cultural patterns represented. In order to attain cultural sensitivity in instrumentation all survey instruments were translated into Spanish, Cantonese, Mandarin, Tagalog, and Vietnamese. The surveys were then translated back into English for verification. Further, the NLAAS study also sheds light on the importance of identifying constructs and measures that are culturally relevant to the study population. This is to say that the same mental health disorder may manifest differently in Asian Americans, so it was important to not solely rely on standard Western diagnostic tools (Cheng et al, 2010). NLAAS, Thus, included some culturally specific expressions of mental health disorders so as to understand differences found between groups (e.g. incorporation of cultural idioms of distress, such as ‘ataque de nervios’ and neurasthenia as part of estimates of mental disorder, see Alegria et al., 2004). An expert panel consisting of professional researchers from diverse academic and ethnic backgrounds were responsible for the operationalization of the constructs included in the NLAAS. The finalized measures and instruments in the NLAAS went through a rigorous process of translation and adaptation to ensure “cultural relevance” along with “cultural equivalence” of measures across linguistically and culturally different populations (for more detail on instrument translation, see Alegria et al., 2004).

The following measures taken from NLAAS were relevant to this current study as they capture and allow the investigation of contextual factors in understanding mental health among Asian American ethnic groups.

### **Outcome variables**

***Psychological Distress.*** Psychological distress was measured using the Kessler Psychological Distress Scale (K10). The scale measured psychological distress over the past 30 days that included feelings of depression and anxiety. The following 10 items are included in this scale: (1) During the last 30 days, about how often did you feel tired out for no good reason? (2) During the last 30 days, about how often did you feel nervous? (3) During the last 30 days, about how often did you feel so nervous that nothing could calm you down? (4) During the last 30 days, about how often did you feel hopeless? (5) During the last 30 days, about how often did you feel restless or fidgety? (6) During the last 30 days, about how often did you feel so restless you could not sit still? (7) During the last 30 days, about how often did you feel depressed? (8) During the last 30 days, about how often did you feel that everything was an effort? (9) During the last 30 days, about how often did you feel so sad that nothing could cheer you up? (10) During the last 30 days, about how often did you feel worthless?

For each item, respondents were asked to indicate the frequency (1 = all of the time, 2 = most of the time, 3 = some of the time, 4 = a little of the time, and 5 = none of the time). In the analysis, the items on the scale were reverse-coded (1= none of the time to 5= all of the time) and averaged together so that higher values correspond to greater psychological distress. The 10-item scale had a Cronbach's alpha coefficient of 0.91.

The K10 scale demonstrated good psychometric properties and is considered a simple and valid measure of mental health for racially diverse sample. It has been used to gauge the



experiences of psychological distress of Asian Americans in previous studies (Zhang and Hong, 2013; Mereish et al, 2012; Walton, & Takeuchi, 2010; Yip et al. 2008; Rivera et al. 2008).

### **Independent Variable**

***Perceived discrimination.*** Participants' reported frequency of recent experiences of unfair treatment using a 9-item measure of everyday perceived discrimination. Items for this scale were developed and used in the Detroit Area Study, a representative sample of residents from Detroit (Williams, Yu, Jackson, & Anderson, 1997). The everyday discrimination scale is one of the most widely used measures of everyday experiences of discrimination (Williams & Mohammed, 2009). It captured aspects of interpersonal and everyday discrimination that is more chronic, routine, and includes relatively minor experiences of unfair treatment.

Participants were asked to use a 6-point scale (1 = almost every day to 6 = never) to respond to the following 9-items: (1) "You are treated with less courtesy than other people," (2) "You are treated with less respect than other people," (3) "You receive poorer service than other people at restaurants or stores," (4) "People act as if they think that you are not smart," (5) "People act as if they are afraid of you," (6) "People act as if they think that you are dishonest," (7) "People act as if you are not as good as they are," (8) "You are called names or insulted," and (9) "You are threatened or harassed. All items on the scale were reverse-coded (1= never to 6= experience discrimination almost every day), and the average score was calculated. Higher mean scores indicated greater perceived unfair treatment or discrimination.

The Everyday Discrimination Scale has been adapted for various studies associated with mental health outcomes such as distress, depression and anxiety (Mereish et al. 2012). The scale was developed initially to examine routine and mundane experiences of discrimination among African Americans, but the Everyday Discrimination Scale has been adapted for studies of Filipino

Americans, Chinese Americans, Vietnamese Americans, and other Asian Americans. This scale has been associated with health problems among Asian Americans (Gee et al, 2007). Along with being used in multiple racial/ethnic populations in the U.S., it's also known for having good psychometric properties. The nine-item scale has a Cronbach's alpha coefficient of 0.91.

***Family context.*** In this study, family context was represented by two scales: Family Cohesion and Family Conflict. Neighborhood cohesion (also known as social cohesion) scale represented neighborhood context.

The Family Cohesion scale is derived from the Circumplex Model of Marital and Family Systems by Olson (1986). It is a ten-item scale in which respondents indicate their level of agreement with items that focus on elements of family closeness, support, flexibility and communication. The scale has been used in many studies with various Asian American (Yip et al. 2008; Leong et al. 2013). The following items in the NLAAS measured aspects of family cohesion: 1) "Family members respect one another." 2) "Family shares values." 3) "Family trusts and confides in each other." 4) "Family loyal to family." 5) "Proud of family." 6) "Express feelings with family." 7) "Family members like to spend free time with each other." 8) "Family togetherness is important." 9) "Family members feel very close to each other." 10) "Family togetherness is very important." Each item is rated on a 4-point scale ranging from 1 (strongly agree) to 4 (strongly disagree). For this study, each item was reverse-coded (1= strongly disagree to 4= strongly agree), and the average score was obtained. Higher scores represent greater levels of family cohesion as compared to lower scores. There is a strong internal consistency of 0.93.

To further gauge family dynamic, the Family Conflict scale addresses issues of cultural and intergenerational conflict between the respondents and their families. The items are drawn from a subscale of the Hispanic Stress Inventory (HSI; Cervantes, Padilla, & Salgado de Snyder,

1991). In the NLAAS, five items were taken from the Family/ Culture Stress subscale of the Hispanic Stress inventory to construct the Family Conflict scale (Guo et al, 2015). It included the following items: 1) “Being too close to family interfered with goals.” 2) “Argue with family over different customs.” 3) “Lonely and isolated due to lack of family unity.” 4) “Personal goals conflict with family.” 5) “Family relations less important to people close to you.” Response categories ranged from (1) hardly ever to (3) often. An average score of the items were taken, with higher scores indicating higher level of family conflict. The Cronbach’s alpha for the family conflict scale was 0.77.

The Neighborhood Cohesion Scale is a measure of social cohesion that assesses the degree of cohesiveness and trust the respondents feel in their neighborhoods. According to Alegria et al. (2004), the scale was constructed by taking items from three different instrument, which include the Social Cohesion and Trust scale (Sampson, Raudenbush, & Earls, 1997), the multisite study of Mental Health Service Use, Needs, Outcomes, and Costs in Child and Adolescent Populations (UNOCCAP; National Institute of Mental Health, 1994), and the National Longitudinal Study of Adolescent Health (Bearman, Jones, & Udry, 1997). Items included: 1) People in neighborhood can be trusted 2) People in neighborhood get along w/ each other 3) People in neighborhood help in emergency 4) People in neighborhood look out for each other. Respondents indicated their level of agreement on a 4-point Likert-type scale ranging from 1 (very true) to 4 (not at all true). The four items were reverse-coded and averaged together so that higher values correspond to greater social or neighborhood cohesion. The Cronbach’s alpha of this scale was 0.73.

The study used two measures of subjective SES to represent respondents’ subjective ratings of their U.S. standing and community standing. Respondents were shown a pictorial format of symbolic ladder with rungs ranging from 0 to 10 and asked to rate their self-perceived social status

relative to people in the U.S., and people in their community. The first and tenth rung represent the lowest and highest social status, respectively.

***Subjective Social Status (SSS).*** The first measure is the MacArthur Scale of Subjective Social Status (Adler et al., 2000). The MacArthur Scale of SSS was developed by Adler et al. (2000) and is considered the most widely used instrument for measuring subjective SES ladder (Operario et al., 2004; Ostrove et al., 2000; Singh-Manoux et al., 2003). Individuals were asked to rank themselves on the U.S. ladder, after being presented with the following information: “Think of this ladder as representing where people stand in the U.S. At the top of the ladder are the people who are the best off, those who have the most money, most education, and best jobs. At the bottom are the people who are the worst off, those who have the least money, least education, and worst jobs or no job. What is the number to the right of the rung where you think you stand at this time in your life, relative to other people in the U.S.?” The higher up respondents rank themselves on this ladder, the closer they are perceived to be at the very top; the lower self-ranking is associated with people at the very bottom in the U.S. (Adler et al., 2000).

***Community-SSS.*** In the second measure, respondents were asked to, ‘Think of this ladder as representing where people stand in their communities. People define community in different ways; please define it in whatever way is most meaningful for you. At the top of the ladder are the people who have the highest standing in their community. At the bottom are the people who have the lowest standing in their community. What is the number to the right of the rung where you think you stand at this time in your life, relative to other people in your community?’ The higher up respondents rank themselves on this ladder, the closer they are perceived to be at the very top.

***Covariates.*** The study included a variety of covariates that have been shown to be correlated with mental health risks in racial/ethnic minorities. They were (a) demographic

characteristics (ethnicity, age, gender, and marital status, state of residence (b) SES (employment, education, household income) c) immigration related factors (citizenship status, factors (nativity/length of residency in the U.S. and English language ability). Age was a continuous variable. Gender and citizenship status are dichotomous variables and were dummy coded (female= 0, non-citizen = 0). Marital status and employment status were recoded into a dichotomous variable (married/unmarried; unemployed/employed) and dummy coded (unmarried= 0, unemployed= 0). Ethnicity (Vietnamese, Chinese, Filipino, Other Asians) was dummy coded, with Chinese Americans= 0. Region of residence (Northeast, Midwest, South and West) was dummy coded, with Northeast= 0. Education was recoded into a dichotomous variable i.e. less than college (i.e. <16 years of education) and more than college, (>16 years of education), and then dummy coded (less than college= 0). Household income included the following four categories: \$0–14,999, \$15,000– 34,999, \$35,000–74,999, and \$75,000+. Nativity/length of residency was recoded into four categories: native born, in the U.S. for less than 10 years, in the U.S. for 11–20 years, and in the U.S. for more than 20 years. English language proficiency was assessed by asking the question “How well do you speak English?” Responses were collapsed into three categories (cannot speak English, fair/poor, excellent/good).

### **Data Analytics Procedure**

Data analyses were conducted using SPSS 25 (IBM Corp, 2017). All analyses included sampling weights to account for the complex sampling design in the NLAAS. For each hypothesis, models were conducted for the overall Asian American sample, and the three Asian American ethnic groups (Chinese, Filipino, and Vietnamese). All analyses controlled for various demographic, socioeconomic and immigration related variables- ethnicity, sex, age, marital status, state of residence, employment status, education, household income, English proficiency,

citizenship status, nativity/length of residence in the U.S. Ethnicity was used as a control variable for the entire Asian American sample but was removed from all the ethnic subgroup analyses.

Descriptive statistics for the study variables for the Asian sample, and the three ethnic groups was done. This was followed by four separate bivariate analysis to examine the association between all the independent variables in the study. ANOVA was run to test mean level differences across the three ethnic groups for the study variables (i.e. psychological distress, perceived discrimination, family cohesion, family conflict, neighborhood cohesion, SSS and Community-SSS). I then used Bonferroni correction for post hoc analyses.

The study used hierarchical multiple regression to test hypothesis 1 and 2, and mediation analyses for hypothesis 3. A total of 16 models were conducted: four models (2 multiple regression models, and 2 mediation models) each for the entire Asian American sample, Chinese American, Filipino American and Vietnamese American participants. The models were run separately for each ethnic group to examine ethnic-specific results. Pairwise deletion was used to account for missing data.

The hierarchical linear regression used to test hypothesis 1 examined the relationships between perceived everyday discrimination and psychological distress. Next, multiple moderated regression was used to test hypothesis 2. The control variables were included in the first step, followed by perceived discrimination, then the social context variables (i.e. family cohesion, family conflict, neighborhood cohesion, SSS, and Community-SSS), and lastly interaction terms. Predictors were mean centered prior to analysis to reduce multicollinearity. Five interaction terms were computed by multiplying perceived discrimination with each social context variable: perceived discrimination x family cohesion, perceived discrimination x family conflict, perceived

discrimination x neighborhood cohesion, perceived discrimination x SSS, perceived discrimination x Community-SSS.

For significant interactions terms, a simple slopes analysis was run. In other words, significant interactions were probed by examining main effect slopes across high and low levels of the moderator. In this process, a linear regression (i.e. psychological distress regressed on perceived discrimination) was run at high and low levels of the moderator. A scatterplot was also generated for each significant moderator. One standard deviation above and below the mean was used to indicate high and low levels of the moderator, respectively. However, if the sample was small, a half-standard deviation cutoff was used.

The PROCSS macro (Hayes & Preacher, 2013; Hayes, 2013) in SPSS was used to estimate mediation models to test hypothesis 3. Two mediation models were tested whereby perceived discrimination predicted psychological distress through (1) SSS and (2) Community-SSS. Mediation was determined by examining the estimates of the indirect effects. Specifically, the indirect effect represents the product of the a-path (e.g., slope of perceived discrimination and SSS), and b-path (e.g., slope of SSS on psychological distress). Non-parametric indirect effect estimates were derived from 5,000 bootstrap samples and the 95 percent confidence intervals were examined to determine significant. If zero was within the 95 percent confidence interval, then the model failed to reject the null hypothesis. An alternative approach to mediation is explained by Baron and Kenny (1986). This approach outlines a three-step procedure to test mediation. However, recent simulation studies suggest that Baron and Kenny's procedure is more conservative than test of the indirect effect (Shrout & Bolger, 2002). In other words, there are higher type II error rates in Baron and Kenny's procedure compared to test of the indirect effect.

## CHAPTER 4: RESULTS

### ANOVA

The mean levels of psychological distress were significantly different across the three groups,  $F [2,1622] = 6.79, p = 0.01$ . Post-hoc analyses using a Bonferroni correction showed that mean levels of psychological distress for Chinese Americans ( $M = 1.47, SD = 0.48$ ) was significantly greater than Filipinos ( $M = 1.33, SD = 0.42$ ), and Vietnamese Americans ( $M = 1.33, SD = 0.53$ ). There was no significant difference between Filipinos and Vietnamese.

The mean levels of perceived discrimination were significantly different across the three groups,  $F [78.20, 784.90] = 80.70, p = 0.00$ . Post-hoc analyses using a Bonferroni correction showed that mean levels of perceived discrimination for Filipinos ( $M = 1.99, SD = 0.79$ ) was significantly greater than Chinese ( $M = 1.78, SD = 0.66$ ), and Vietnamese Americans ( $M = 1.44, SD = 0.64$ ). Chinese Americans' mean levels of perceived discrimination was significantly greater than Vietnamese Americans.

The mean levels of family cohesion were significantly different across the three groups,  $F [12.47, 340.20] = 29.70, p = 0.00$ . Post-hoc analyses using a Bonferroni correction showed that mean levels of family cohesion for Vietnamese ( $M = 3.79, SD = 0.40$ ) was significantly greater than Filipinos ( $M = 3.70, SD = 0.44$ ), and Chinese Americans ( $M = 3.58, SD = 0.52$ ). Filipino Americans' mean level of family cohesion was significantly greater than Chinese Americans.

The mean levels of family conflict were significantly different across the three groups,  $F [2.50, 212.80] = 9.50, p = 0.00$ . Post-hoc analyses using a Bonferroni correction showed that mean levels of family conflict for Vietnamese ( $M = 1.23, SD = 0.35$ ) was significantly less than Chinese ( $M = 1.30, SD = 0.37$ ), and Filipino Americans ( $M = 1.32, SD = 0.38$ ). There was no significant difference between Chinese and Filipinos Americans.



The mean levels of neighborhood cohesion were significantly different across the three groups,  $F [5.92, 606.35] = 7.83, p = 0.00$ . Post-hoc analyses using a Bonferroni correction showed that mean levels of neighborhood cohesion for Filipinos ( $M = 3.23, SD = 0.59$ ) was significantly greater than Chinese Americans ( $M = 3.09, SD = 0.58$ ). There was no significant difference between Vietnamese ( $M = 3.17, SD = 0.68$ ) and Filipino Americans. There was also no significant difference between Vietnamese and Chinese Americans.

The mean levels of SSS were significantly different across the three groups,  $F [508.48, 5665.44] = 71, p = 0.00$ . Post-hoc analyses using a Bonferroni correction showed that mean levels of SSS for Filipinos ( $M = 6.21, SD = 1.61$ ) was significantly greater than Chinese ( $M = 5.77, SD = 1.87$ ) and Vietnamese American ( $M = 4.81, SD = 2.17$ ). Chinese Americans' mean level of SSS was significantly greater than Vietnamese Americans.

The mean levels of Community-SSS were significantly different across the three groups,  $F [372.54, 5821.33] = 50.11, p = 0.00$ . Post-hoc analyses using a Bonferroni correction showed that mean levels of Community-SSS for Filipinos ( $M = 6.60, SD = 1.70$ ) was significantly greater than Chinese ( $M = 6.97, SD = 1.90$ ) and Vietnamese American ( $M = 5.36, SD = 2.19$ ). Chinese Americans' mean level of Community-SSS was significantly greater than Vietnamese Americans.

### **Total Asian American Sample**

Table 1 and 2 summarized descriptive statistics for key demographic and study variables, for the Asian American sample. Bivariate correlations are shown in Table 3. For the entire Asian American sample ( $n = 2095$ ), more than half the respondents were female (52.7%), and most of them were married (70.1%). Chinese, Filipino and Vietnamese, Other Asians represented 28.6%, 24.2%, 24.8%, and 22.3% of the total sample, respectively. Their age ranged from 18 to 95 years ( $M = 41.22$ ). Respondents reported living in the following U.S. regions: West (81.5%), South

(6.9%), Northeast (7.3%), or Midwest (4.3%). Most Asian American respondents were employed (66.1%), and 49.1% reported having at least a college degree. 40.8% had an annual household income of \$75,000 or more. 70.5% reported to speak good/excellent English. Most Asians held a U.S. citizenship (70.1%). 22% were born in the U.S., and 49.5% reported living in the U.S. for longer than 10 years.

The first hypothesis in this study stated that perceived discrimination would be positively related to psychological distress. Table 7 presents results of the multiple regression model which was used to test whether there was a positive relationship between perceived discrimination and psychological distress for the Asian American sample. The predictors accounted for 10% of the variance in psychological distress ( $\Delta R^2 = 0.10$ ,  $F [16, 2019] = 14.27$ ,  $p < 0.001$ ). As hypothesized, there was a significant positive association between perceived discrimination and psychological distress ( $p < 0.001$ ) controlling for various demographic, socioeconomic and immigration related variables. To be more precise, a one-point increase on the perceived discrimination scale was related to an increase of 0.18 points on the psychological distress scale. Thus, results indicated that higher levels of perceived discrimination were associated with greater psychological distress for Asian Americans, even after controlling for ethnicity, sex, age, marital status, state of residence, employment status, education, household income, English proficiency, citizenship status, nativity/length of residence in the U.S.

In assessing the role of social context in the relationship between perceived discrimination and psychological well-being among Asian American's, the study hypothesized that family context (i.e., the level of family cohesion and family conflict) and neighborhood cohesion would moderate this association. High family cohesion was hypothesized to serve as a buffer against the psychological consequences of perceived discrimination, whereas low family conflict would

exacerbate the relationship between perceived discrimination and psychological distress. The level of social cohesion experienced in ones' neighborhood was also expected to play a moderating role, in the discrimination and psychological distress link. High neighborhood or social cohesion was hypothesized to be a buffer against harmful psychological consequences of perceived discrimination.

Along these lines, Asian Americans' subjective SES was also hypothesized to moderate the association between perceived discrimination and psychological distress. More specifically, self-perceived higher social standing in the U.S. (i.e. high SSS), and self-perceived higher social standing in ones' community (high Community-SSS) was expected to be protective against the negative psychological effects of perceived discrimination.

Table 8 represents the results for the moderated multiple regression analysis which was used to examine whether the relationship between perceived discrimination and psychological distress differ across levels of family cohesion and conflict, neighborhood cohesion, SSS and Community-SSS. In the first block of the hierarchical regression, covariates were entered. This included various demographic, socioeconomic and immigration related variables- ethnicity, sex, age, marital status, state of residence, employment status, education, household income, English proficiency, citizenship status, nativity/length of residence in the U.S. As shown in the Model 1 of Table 8, the variables accounted for 3% of the variance in psychological distress.

In the second block of the hierarchical regression, the main effect or independent variables were entered. The independent variable included perceived discrimination, family cohesion, family conflict, neighborhood cohesion, SSS and Community-SSS. Model 2 accounted for 20% of the variance in psychological distress. The addition of the independent variables led to a significant increase in  $R^2$  ( $\Delta R^2 = 0.17$ ,  $F [6, 1956] = 67.20$ ,  $p < 0.001$ ). In this model, perceived

discrimination ( $b = -0.08$ ,  $SE = 0.01$ ,  $p < 0.00$ ), family cohesion ( $b = 0.11$ ,  $SE = 0.02$ ,  $p < 0.00$ ), family conflict ( $b = 0.34$ ,  $SE = 0.03$ ,  $p < 0.00$ ), SSS ( $b = -0.01$ ,  $SE = 0.01$ ,  $p < 0.00$ ), and Community-SSS ( $b = -0.02$ ,  $SE = 0.01$ ,  $p < 0.00$ ), were significant predictors of psychological distress.

In the third and final block of the sequential regression, five interaction terms were included (see Model 3 of Table 8). Model 3 accounted for 22% of the variance in psychological distress. The addition of the interaction terms was related to statistically significant increase in  $R^2$  ( $\Delta R^2 = 0.02$ ,  $F [5, 1951] = 11.23$ ,  $p < 0.001$ ). The findings of the moderating model will be interpreted based on the estimates shown in the final model i.e. Model 3 of Table 8.

With the addition of the five different two-way interactions, the main effect of perceived discrimination, family cohesion, family conflict, SSS, and Community-SSS, on psychological distress remained significant ( $p < 0.05$ ). A one-point increase on the family cohesion scale was related to a decrease in psychological distress by 0.09 points. A one-point increase on the family conflict scale, was related to an increase in psychological distress by 0.28 points. A one-point increase on the SSS ladder was related to a decrease in psychological distress by 0.02 points. Similarly, a one-point increase on Community-SSS ladder was related to a decrease in psychological distress by 0.02 points. Thus, the results revealed that greater levels of family cohesion, and high levels of SSS and Community-SSS was associated with a decrease in the level of psychological distress, whereas higher levels of family conflict were associated with increased psychological distress among Asian Americans. The relationship between perceived discrimination and neighborhood cohesion was non-significant.

When observing the standardized coefficient to compare the relative influence of the main effect variable, the study finds that family conflict ( $\beta = 0.22$ ) has a stronger influence on psychological distress than family cohesion ( $\beta = -0.09$ ), SSS ( $\beta = -0.06$ ), SSS and Community-

SSS. Table 8 also reveals estimates of the moderating effect of these aforementioned variables on the association between perceived discrimination and psychological via five two-way interactions terms. The results revealed that there were three statistically significant interactions.

First, family cohesion moderated the relationship between perceived discrimination and psychological interaction ( $b = 0.07$ ,  $SE = 0.03$ ,  $p < 0.05$ ). This indicated that there would be a differential association between perceived discrimination and distress depending on level of family cohesion. To interpret the interaction between perceived discrimination and family cohesion, the study compared the effect of perceived discrimination on psychological distress across high and low levels of family cohesion.

The significant interaction between perceived discrimination and family cohesion is plotted in Figure 5. Specifically, the “high” and “low” levels of family cohesion were plotted as separate regression lines in a graph (scatterplot) of the dependent variable (psychological distress) on the independent variable (perceived discrimination). As in shown in Figure 5, perceived discrimination is positively associated with psychological distress at both, the high and low levels of family cohesion. Simple slopes analyses further confirmed that the effect of perceived discrimination is stronger for respondents that reported low levels of family cohesion ( $\beta = 0.21$ ,  $p < 0.001$ ) compared to the high levels of family cohesion ( $\beta = 0.19$ ,  $p < 0.001$ ). Thus, the results suggest that although higher self-reporting of everyday discrimination is found to increase psychological distress among respondents’ in both categories of family cohesion, the detrimental effect of perceived everyday discrimination is the strongest for those respondents with low levels of family cohesion. The finding supports the hypothesis that family cohesion buffered against some of the negative effects of perceived discrimination for the Asian American sample.

Second, family conflict also moderated the relationship perceived discrimination and psychological distress ( $b = 0.19$ ,  $SE = 0.04$ ,  $p < 0.001$ ). That is, the perceived discrimination-distress relationship varied across levels of family conflict. In order to interpret the significant interaction between perceived discrimination and family conflict, the study compared the effect of perceived discrimination on psychological distress across high and low levels of family conflict.

The significant interaction between perceived discrimination and family conflict is plotted in Figure 6. The “high” and “low” levels of family conflict were plotted as separate regression lines in a graph of the dependent variable (psychological distress) on the independent variable (perceived discrimination). As shown in Figure 6, it appears that perceived discrimination is positively associated with psychological distress for both categories of family conflict. Simple slope analysis confirmed that the effect of perceived discrimination on psychological distress was stronger for “high” level of family conflict ( $\beta = 0.29$ ,  $p < 0.001$ ) compared to the “low” level of family conflict ( $\beta = 0.12$ ,  $p < 0.000$ ). This is to say, Asian Americans who report high levels of family conflict may experience harsher negative psychological repercussion as a result of perceiving discrimination. This supports the hypothesis that family conflict can exacerbate the negative effects of perceived discrimination.

Lastly, Community-SSS was found to moderate the relationship between perceived discrimination and psychological distress ( $b = -0.03$ ,  $SE = 0.01$ ,  $p < 0.001$ ). That is, the impact of perceived discrimination on distress depended on their level of Community-SSS. To interpret the significant interaction between perceived discrimination and Community-SSS, the study compared the effect of perceived discrimination on psychological distress across high and low levels of Community-SSS.

The significant interaction between perceived discrimination and Community-SSS is illustrated in Figure 7. The ‘high’ and ‘low’ levels of Community-SSS were plotted as separate regression lines in a graph of the dependent variable (psychological distress) on the independent variable (perceived discrimination). Figure 7 revealed that perceived discrimination is positively related to psychological distress at both levels of Community-SSS, in that, higher level of perceived discrimination leads to increased psychological distress. Simple slopes analysis confirmed that the effect of perceived discrimination on psychological distress was stronger for Asian American respondents with ‘low’ level of Community-SSS ( $\beta = 0.41, p < 0.000$ ) compared to the ‘high’ level of Community-SSS ( $\beta = 0.25, p < 0.05$ ). This is to say, those with low levels of Community-SSS may experience more detrimental psychological effect of perceived everyday discrimination, compared to those who had high levels of Community-SSS. The results, thus, support the buffering hypothesis of Community-SSS in the relationship between perceived discrimination and psychological distress.

Hypothesis 3 stated that ones’ subjective SES will mediate the relationship between perceived discrimination and psychological distress, while controlling for ethnicity, sex, age, marital status, state of residence, employment status, education, household income, English proficiency, citizenship status, and nativity/length of residence in the U.S. There are two different measures of subjective SES (i.e., SSS and Community-SSS), thus the study examined two separate mediation models. Each model consists of three hypotheses.

The following hypothesis were tested for the first mediation model. Perceived discrimination is hypothesized to be negatively associated with SSS (i.e. higher perceived discrimination will be linked to lower SSS). Similarly, SSS will be inversely related to psychological distress (i.e. lower SSS will be associated with greater distress). Lastly, the indirect

effect of perceived discrimination on psychological distress through SSS will be significant. That is to say, SSS will mediate the effect of perceived discrimination on psychological distress.

Table 9 presents the results for the mediation analysis with SSS as the mediator. Higher levels of perceived discrimination were related to lower SSS ( $b = -0.17$ ,  $SE = .06$ ,  $p < 0.05$ ). Higher SSS was related to lower psychological distress ( $b = -0.03$ ,  $SE = .006$ ,  $p < 0.01$ ). The direct effect of perceived discrimination on psychological distress was also significant ( $b = 0.166$ ,  $SE = 0.015$ ,  $p < 0.01$ ), where higher perceived discrimination was associated with greater psychological distress. Results also revealed that the indirect effect of perceived discrimination on psychological distress through SSS was significant ( $Est. = .005$ ,  $SE = .002$ , 95% CI: 0.002, 0.011). That is, individuals reporting higher levels of perceived discrimination are more likely to report lower SSS, which in turn was related to greater psychological distress. SSS, therefore, mediated the relationship between perceived discrimination and psychological distress.

In the second mediation model, perceived discrimination was hypothesized to be negatively associated with Community-SSS, and Community-SSS will be inversely related to psychological distress. Lastly, Community-SSS was hypothesized to mediate the relationship between perceived discrimination and psychological distress.

Table 10 presents the results for the mediation analysis in which Community-SSS was the mediator. Higher reports of perceived discrimination were related to lower Community-SSS ( $b = -0.20$ ,  $SE = .06$ ,  $p < 0.05$ ). Higher Community-SSS was then related to lower psychological distress ( $b = -0.03$ ,  $SE = .006$ ,  $p < 0.01$ ). The direct effect of perceived discrimination on psychological distress was also significant ( $b = 0.165$ ,  $SE = 0.015$ ,  $p < 0.01$ ), where higher levels of perceived discrimination was related to greater psychological distress. Results also revealed that the indirect effect of perceived discrimination on psychological distress through Community-SSS was



significant ( $Est. = .005$ ,  $SE = .002$ , 95% CI: 0.002, 0.011). That is, higher levels of perceived discrimination are related to lower Community-SSS, which in turn was related to greater psychological distress. Community-SSS, therefore, mediated the relationship between perceived discrimination and psychological distress.

**Summary.** In accordance with hypothesis 1, the study found that perceived discrimination was positively associated with psychological distress among Asian Americans. That is, higher levels of perceived everyday discrimination were related to increased levels of psychological distress, and this effect still holds even after several demographic, economic and immigration related background variables were considered. Further, the findings suggest that considering ones' social context as a moderator can be useful for understanding how discrimination was related to psychological distress among Asian Americans (Hypothesis 2). Results from the moderation model suggested the following patterns. First, four of the main effect variables independently predicted psychological distress. That is, higher levels of family cohesion, along with self-perceived higher social standing in the U.S. (i.e. SSS), and self-perceived high social standing in ones' community (i.e. Community-SSS) was related to decreased psychological distress, whereas higher levels of family conflict was linked to increased psychological distress. Among the main effect variables, family conflict stood out as the strongest predictor of psychological distress.

More importantly, findings revealed that family context and Community-SSS are significant moderators in the relationship between perceived discrimination and psychological distress (hypothesis 2). First, family cohesion moderated the relationship between perceived discrimination and distress. The positive association between perceived discrimination and psychological distress was found to be stronger for Asian Americans' with low level of family cohesion. That is, those with low levels of family cohesion are at greater risk of experiencing

negative psychological consequences. With this, high family cohesion may serve as a buffer against the harmful psychological consequences of discrimination. Second, family conflict moderated the relationship between perceived discrimination and distress. It was found that family conflict may be a stress risk factor such that the detrimental effect of perceived discrimination on psychological distress are stronger for Asian Americans with higher levels of family conflict compared to those with lower levels of family conflict. In other words, family conflict exacerbated the effects of perceived discrimination. Lastly, Community-SSS moderated the relationship between perceived discrimination and psychological distress. The positive association between perceived discrimination and psychological distress was found to be stronger for Asian American's with low Community-SSS, suggesting that high ranking on the Community-SSS ladder served as a buffering factor against the negative psychological effects of perceived discrimination. Lastly, no significant moderating effects was observed for neighborhood cohesion and SSS.

Further, hypothesis 3 was supported. SSS mediated the relationship between perceived discrimination and psychological distress such that higher levels of perceived discrimination were related to lower SSS, and in turn lower levels of SSS was associated with greater psychological distress. Finally, Community-SSS also mediated the relationship between perceived discrimination and psychological distress. As presented in Table 10, perceived discrimination was related to lower Community-SSS, and lower Community-SSS in turn was related to increased psychological distress.

### **Chinese American Sample**

Table 1 and Table 2 summarizes descriptive statistics for key demographic and study variables for the Chinese American sample, respectively. Bivariate correlations are shown in Table 4. Chinese American adults ( $n = 600$ ; 52.7% women) ranged in age from 18 to 85 years ( $M =$

41.59). Most participants were married (69%). Participants reported living in the following regions in the U.S.: West (83.3%), Northeast (8.7%), Midwest (4.5%), or South (3.5%). Most Chinese American adults were employed (68%). 50.3% reported having at least a college degree or more (50.3%). 43.3% reported having an annual household of income of \$75,000 or more. 62.8% reported good/excellent English proficiency (62.8%). Most participants were U.S. citizens (68%). 21% were U.S. born, and 53.7% had lived in the U.S. for 10 or more years.

The study hypothesized that perceived everyday discrimination would be positively associated with psychological distress for Chinese Americans (Hypothesis 1). Table 11 presents results of the multiple regression model which was used to test whether perceived discrimination was positively related to psychological distress for the Chinese American sample. The predictors accounted for 8% of the variance in psychological distress ( $\Delta R^2 = 0.82$ ,  $F [13, 560] = 3.83$ ,  $p < 0.001$ ). There was a significant positive association between perceived discrimination and psychological distress ( $p < 0.001$ ). A one-point increase on the perceived discrimination scale was related to an increase of 0.12 points on the psychological distress scale. Thus, the result suggests that higher levels of perceived discrimination was related to increased psychological distress among Chinese Americans, while controlling for sex, age, marital status, state of residence, employment status, education, household income, English proficiency, citizenship status, and nativity/length of residence in the U.S.

The purpose of the present study was also to examine the role of the social context in the association between perceived discrimination and psychological distress in a nationally representative sample of Chinese Americans. With this, the study examined the moderating role of family context (i.e., family cohesion and family conflict), neighborhood context (i.e., neighborhood or social cohesion), subjective SES (i.e. SSS and Community-SSS). High levels of

family cohesion, neighborhood cohesion and subjective SES are hypothesized to buffer against harsh psychological consequences of perceived discrimination, whereas family conflict was expected to exacerbate the relationship between perceived discrimination and psychological distress.

Table 12 summarizes the results for the moderated multiple regression analysis which was used to examine whether the relationship between perceived discrimination and psychological distress differ across levels of family cohesion, family conflict, neighborhood cohesion, SSS and Community-SSS. Covariates were entered in the first block of the hierarchical regression. As shown in Model 1 of Table 12, these variables accounted for 6% of the variance in psychological distress. In the second block of the hierarchical regression, the main effect or independent variables were entered. The independent variable included perceived discrimination, family cohesion, family conflict, neighborhood cohesion, SSS and Community-SSS. Model 2 accounted for 18% of the variance in psychological distress. The addition of these independent variables led to a significant increase in  $R^2$  ( $\Delta R^2 = 0.12$ ,  $F [6, 536] = 12.83$ ,  $p < 0.001$ ). In Model 2, only family conflict ( $b = 0.38$ ,  $SE = 0.06$ ,  $p < 0.001$ ) was a significant associated with psychological distress.

In the third and final block of the sequential regression, five cross product or interaction terms were included (see model 3 of Table 12). Model 3 accounted for 18.3% of the variance in psychological distress. The addition of the interaction terms led to statistically significant increase in  $R^2$  ( $\Delta R^2 = 0.02$ ,  $F [5, 1951] = 11.23$ ,  $p < 0.001$ ). The addition of the interaction terms did not lead to a statistically significant increase in  $R^2$  ( $\Delta R^2 = 0.008$ ,  $F [5, 531] = 1.093$ ,  $p > 0.05$ ).

The findings of the moderation model will be interpreted based on the estimates shown in the final model i.e. Model 3 of Table 12. Results from this model revealed a significant main effect of family conflict ( $p < 0.001$ ). A one-point increase on the family conflict scale was related to an

increase in psychological distress scale by 0.36 points. That is, higher score of family conflict was related to increased psychological distress. Further, none of the interaction terms were significant, suggesting that in the Chinese American sample, family context, neighborhood context and subjective SES did not moderate the relationship between perceived discrimination and psychological distress.

Next, hypothesis 3 stated that one's subjective SES (i.e. SSS and Community-SSS) will mediate the relationship between perceived discrimination and psychological distress. Table 13 presents the estimates for the mediation analysis in which self-perceived higher social standing in the U.S. (i.e. SSS) was a mediator in the relationship between perceived discrimination and psychological distress. The first hypothesis (i.e. higher perceived discrimination will lead to increased psychological distress) was not supported (a-path). The second hypothesis (i.e. lower SSS will be related to increased psychological distress) was not supported (b-path). The direct effect of perceived discrimination on psychological distress was significant ( $b = 0.109$ ,  $SE = 0.032$ ,  $p < 0.001$ ). The indirect effect of perceived discrimination on psychological distress through SSS was not significant. SSS, therefore, did not mediate the relationship between perceived discrimination and psychological distress among Chinese Americans.

Table 14 presents the estimates for the mediation analysis in which Community-SSS is tested as a mediator relationship between perceived discrimination and psychological distress. The first hypothesis (i.e. perceived discrimination will be negatively related to Community-SSS) was not supported. However, the second hypothesis (i.e. Community-SSS will be inversely related to psychological distress) was supported. That is, greater sense of Community-SSS was related to lower psychological distress ( $b = -0.02$ ,  $SE = 0.01$ ,  $p < 0.05$ ). The direct effect of perceived discrimination on psychological distress was significant ( $b = 0.105$ ,  $SE = 0.033$ ,  $p < 0.05$ ). The third

hypothesis (i.e. the indirect effect of perceived discrimination on psychological distress through Community-SSS will be significant) was not supported. Since the indirect effect was not significant, Community-SSS did not mediate the relationship between perceived discrimination and psychological distress among the Chinese American sample.

**Summary.** Hypothesis 1 was supported, and it was found that in a national sample of Chinese Americans, higher levels of perceived everyday discrimination was related to increased levels of psychological distress. This effect still holds even after several demographic, economic and immigration related background variables were considered. Hypothesis 2 considered various social context variables as moderators in the relationship between perceived discrimination and psychological distress. Results from the moderation model revealed that only family conflict was independently associated with psychological distress. That is, higher levels of family conflict were related to increased psychological distress. There were no significant two-way interactions, hence, family cohesion, family conflict, neighborhood cohesion, SSS and Community-SSS did not moderate the relationship between perceived discrimination and psychological distress for Chinese Americans. Finally, the indirect effect of perceived discrimination on psychological distress through SSS was not significant. Similarly, the indirect effect of perceived discrimination on psychological distress through Community-SSS was also not significant. Thus, both measures of subjective SES did not mediate the relationship between perceived discrimination and psychological distress for Chinese Americans.

### **Filipino American Sample**

Table 1 and Table 2 provides the descriptive statistics for key demographic and study variables for the Filipino American sample, respectively. Bivariate correlations are shown in Table 5. Filipino Americans ( $n = 508$ ; 53.7% women) ranged in age from 18 to 89 years ( $M = 41.9$ ).

Most of them were married (68.1%). Participants reported living in the following regions in the U.S.: West (85.2%), Northeast (4.1%), Midwest (4.5%), or South (6.1%). Most Filipino adults were employed (67.3%). 37.4% of Filipinos reported having at least a college degree. 49.2% of Filipinos reported an annual household income of \$75,000 or more. 90% of Filipinos reported excellent English proficiency. Most of them held U.S. citizenship (78.3%). 32% were U.S. born, and 50.7% of Filipinos reported living in the U.S. for longer than 10 years.

Table 15 shows the significant ( $p < 0.001$ ) relationship between perceived everyday discrimination and psychological distress for Filipino Americans, adjusted for covariates (hypothesis 1). The predictors accounted for 19% of the variance in psychological distress ( $\Delta R^2 = 0.19$ ,  $F [13, 484] = 8.67$ ,  $p < 0.001$ ). A one-point increase on the perceived discrimination scale was associated with an increase of 0.12 points on the psychological distress scale ( $p < 0.001$ ). As hypothesized, for the Filipino American sample, reports of everyday discrimination were associated with increased psychological distress, after controlling for sex, age, marital status, state of residence, employment status, education, household income, English proficiency, citizenship status, and nativity/length of residence in the U.S.

Similar to the Asian American and Chinese American sample, a moderated multiple regression analysis was conducted to examine the second hypothesis (i.e. social context variables related to family, neighborhood and social status will moderate the association between perceived discrimination and psychological distress). Once again, family cohesion and neighborhood cohesion were hypothesized to be protective factors against the negative psychological effects of perceived discrimination, whereas family conflict was expected to exacerbate the effects of perceived discrimination. Self-perceived higher social standing in the U.S. (i.e. high SSS), and

self-perceived higher social standing in ones' community (i.e. Community-SSS) was expected to buffer against the negative psychological effects of perceived discrimination.

Table 16 summarizes the moderation analysis for the Filipino American sample. In step 1 of the multiple regression, covariates were entered. Model 1 of Table 16, which included various sociodemographic as well as immigration related variables explained 6% of the variance in psychological distress. In step 2, five independent or main effect variables (i.e. perceived discrimination, family cohesion and conflict, neighborhood cohesion, SSS, Community-SSS) were added. Model 2 explained 23% of the variance in psychological distress. The addition of these main effect variables led to a significant increase in  $R^2$  ( $\Delta R^2 = 0.16$ ,  $F [6, 474] = 16.50$ ,  $p < 0.001$ ). Family conflict ( $b = 0.18$ ,  $SE = 0.05$ ,  $p < 0.001$ ) was the only social context variable that was significantly associated with psychological distress in Model 2.

In the final step, five two-way interactions were added. Estimates for all predictors in the final step are reported in Model 3 of Table 16. The findings of the moderating model will be interpreted based on the estimates shown in this final model. Model 3 explained 25% variance in psychological distress. The addition of the interaction terms in Model 3 led to a statistically significant increase in  $R^2$  ( $\Delta R^2 = 0.03$ ,  $F [5, 469] = 3.35$ ,  $p < 0.05$ ). Family conflict remained the only significant predictor of psychological distress ( $p < 0.001$ ) after adding the interaction terms. Results revealed a negative association, where a one-point increase on the family conflict scale was associated with an increase in psychological distress by 0.17 points. Further, there were three significant two-way interactions.

First, neighborhood cohesion moderated the relationship between perceived discrimination and psychological distress ( $b = 0.07$ ,  $SE = 0.03$ ,  $p < 0.05$ ). The significant interaction between perceived discrimination and neighborhood cohesion is plotted in Figure 8. Figure 8 illustrates



that, at high and low levels of neighborhood cohesion, perceived discrimination is positively associated with psychological distress. Simple slopes analyses revealed that although higher levels of perceived discrimination were associated with greater psychological distress across the two levels, this association was slightly stronger for respondents with high neighborhood cohesion ( $\beta = 0.39, p < 0.000$ ) than low neighborhood cohesion ( $\beta = 0.31, p < 0.05$ ). As a result, neighborhood cohesion exacerbated the psychological effects of perceived discrimination, which is counter to the buffering hypothesis in this study.

The interaction between perceived discrimination and SSS was significant ( $b = 0.04, SE = 0.02, p < 0.05$ ), suggesting that SSS moderated the relationship between perceived discrimination and psychological interaction. Figure 9 illustrates the interaction between perceived discrimination and SSS. It shows a positive association between perceived discrimination and psychological distress at high and low levels of SSS. Simple slopes analysis found that the effect of discrimination on psychological distress was significantly stronger for those with high SSS ( $\beta = 0.36, p < 0.001$ ) compared to those with low SSS ( $\beta = 0.28, p < 0.05$ ). Thus, in the case of Filipino Americans, higher self-ranking on the SSS ladder was found to exacerbate the negative psychological effects of perceived discrimination. This finding was counter to the current study's hypothesis that SSS would play a buffering role.

Lastly, the interaction between perceived discrimination and Community-SSS was significant ( $b = -0.05, SE = 0.02, p < 0.001$ ). This interaction is plotted in Figure 10. As shown in the figure, perceived discrimination was positively related to psychological distress at both levels of Community-SSS. Simple slopes analysis confirmed that the effect of perceived discrimination on psychological distress was stronger for respondents with low levels of Community-SSS ( $\beta = 0.42, p < 0.05$ ) compared to the high levels of Community-SSS ( $\beta = 0.31, p < 0.05$ ). The results

thus support the hypothesis that for Filipino Americans, high self-rating on the Community-SSS ladder buffers against the negative consequences of perceived discrimination. Next, it was hypothesized that subjective SES (i.e. SSS and Community-SSS) would mediate the relationship between the perceived discrimination and psychological distress.

Table 17 presents the results for the mediation analysis in which SSS is tested as a mediator in the relationship between perceived discrimination and psychological distress among Filipino Americans. The first hypothesis (i.e. perceived discrimination will be negatively related to SSS) was not supported. The second hypothesis (i.e. SSS will be inversely related to psychological distress) was supported. That is, greater SSS was related to lower psychological distress ( $b = -0.03$ ,  $SE = 0.011$ ,  $p < 0.005$ ). The direct effect of perceived discrimination on psychological distress was significant ( $b = 0.20$ ,  $SE = 0.02$ ,  $p < 0.001$ ). The third hypothesis (i.e., the indirect effect of perceived discrimination on psychological distress through SSS will be significant) was not supported. Thus, for Filipino Americans SSS did not mediate the association between perceived discrimination and psychological distress.

Table 18 represents the results for the mediation model where Community-SSS is tested as a mediator. The first hypothesis (i.e. higher perceived discrimination will be related to lower Community-SSS) was not supported. The second hypothesis (i.e. lower Community-SSS will predict increased psychological distress) was also not supported. The direct effect of perceived discrimination on psychological distress was significant ( $b = 0.21$ ,  $SE = 0.02$ ,  $p < 0.001$ ). However, the indirect effect of perceived discrimination on psychological distress through Community-SSS was not significant. Community-SSS, therefore, did not mediate the association between perceived discrimination and psychological distress among Filipino Americans.

**Summary.** Consistent with hypothesis 1, higher levels of perceived discrimination were associated with increased psychological distress outcomes among a nationally represented sample of Filipino Americans. Further, results from the moderation model revealed the following patterns. First, only family conflict was associated with psychological distress. That is, higher levels of family conflict were linked to increased psychological distress. More importantly, findings revealed that neighborhood context as well as ones' subjective SES are significant moderators in the relationship between perceived discrimination and psychological distress (hypothesis 2). This indicated differential association between perceived discrimination and distress depending on level of neighborhood cohesion, as well levels of SSS and Community-SSS. The detrimental effect of perceived discrimination was more robust for Filipinos' with high levels of neighborhood cohesion, compared to those with low levels. Similarly, Filipino Americans' with high ranking on SSS experienced harsher negative psychological repercussion as a result of perceiving discrimination. Contradicting the study's prediction that high levels of neighborhood cohesion and SSS would buffer the association between perceived discrimination and distress, the two variables exacerbated the negative effects of perceived discrimination. However, it was found that Community-SSS buffered against the harmful psychological consequences of perceived discrimination. Family cohesion and family conflict did not moderate the association between perceived discrimination and psychological distress among Filipino Americans.

Lastly, the third hypothesis was not supported. The indirect effect of perceived discrimination on psychological distress through SSS was not significant. The indirect effect of perceived discrimination on psychological distress through Community-SSS was also not significant. Thus, both measures of subjective SES did not mediate the relationship between perceived discrimination and psychological distress for Filipino Americans.

## **Vietnamese American Sample**

Table 1 and Table 2 provides the descriptive statistics for key demographic and independent variables for the Vietnamese American. Bivariate correlations are shown in Table 6. Vietnamese Americans ( $n = 475$ ; 53.3% women) ranged age from 18 to 95 years ( $M = 43.05$ ). Most Vietnamese were married (68.1%). Participants reported living in the following U.S. regions: West (78.1%), South (14.8%), Northeast (6.5%), or Midwest (6%). Most Vietnamese adults were employed (62.7%). 23.7% reported having at least a college degree. 26.2% had an annual household income of less than \$15,000. 42.9% of Vietnamese reported good/excellent English proficiency. Most of them held U.S. citizenship (74.4%). 3.5% were U.S. born, and 56.1% reported living in the U.S. for longer than 10 years.

A multiple regression model was used to test hypothesis 1, or whether perceived discrimination was positively related to psychological distress for the Vietnamese American sample. As indicated in Table 19, the predictors accounted for 12% of the variance in psychological distress ( $\Delta R^2 = 0.12$ ,  $F [13, 489] = 4.98$ ,  $p < 0.001$ ). A one-point increase on the perceived discrimination scale was related to an increase of 0.13 points on the psychological distress scale ( $p < 0.001$ ). Thus, higher perceived discrimination was significantly associated with increased psychological distress among Vietnamese Americans after controlling for several demographic, socioeconomic and immigration related variables.

To examine hypothesis 2 a three-step hierarchical multiple regression was conducted which tested the moderating role of family context (i.e., family cohesion and family conflict), neighborhood context (i.e., neighborhood or social cohesion), subjective SES (i.e. SSS and Community-SSS). High levels of family cohesion, neighborhood cohesion, SSS and Community-SSS was hypothesized to buffer against the negative effects of perceived discrimination. Family

conflict was expected to exacerbate the effects of perceived discrimination on psychological distress among Vietnamese Americans.

Table 20 summarizes the moderation analysis. Covariates were added to Step 1 of the regression (Model 1), and these variables accounted for 9% of the variance in psychological distress. In Step 2 (Model 2), perceived discrimination and social context variables (family and neighborhood cohesion, family conflict, SSS and Community-SSS) were entered. Model 2 explained 22% of the variance in psychological distress. The addition of the independent or main effect variables led to a significant increase in  $R^2$  ( $\Delta R^2 = 0.13$ ,  $F [6, 474] = 12.71$ ,  $p < 0.001$ ). Family cohesion ( $b = -0.31$ ,  $SE = 0.07$ ,  $p < 0.001$ ) and family conflict ( $b = 0.22$ ,  $SE = 0.08$ ,  $p < 0.05$ ) exerted a significant direct effect on psychological distress in model 2.

The findings of the moderation analysis were interpreted based on the estimates shown in this final model (Model 3 of Table 20). Model 3 explained 25% of the variance in psychological distress. The addition of the interaction terms led to a statistically significant increase in  $R^2$  ( $\Delta R^2 = 0.02$ ,  $F [5, 469] = 2.61$ ,  $p < 0.05$ ). There was a significant main effect of family cohesion and family conflict on psychological distress. A one-point increase on the family cohesion scale was associated with a decrease in psychological distress by 0.33 points ( $p < 0.001$ ). Higher scores on the family cohesion scale was also related to decreased psychological distress. A one-point increase on the family conflict scale, was associated with increase in psychological distress by 0.22 points ( $p < 0.05$ ). Higher family conflict was associated with increased psychological distress. Family cohesion ( $\beta = -0.26$ ) has a stronger influence on psychological distress than family conflict ( $\beta = 0.16$ ) among Vietnamese Americans.

There were two statistically significant two-way interactions. The interaction between perceived discrimination and neighborhood cohesion were significant ( $b = 0.07$ ,  $SE = 0.03$ ,  $p$

<0.05), suggesting that neighborhood cohesion moderated the relationship between perceived discrimination and psychological interaction. The significant interaction between perceived discrimination and neighborhood cohesion is plotted in Figure 11. Results from the simple slope analysis confirmed that perceived discrimination was not significantly associated with psychological distress at low levels of neighborhood cohesion ( $p > 0.05$ ). At high levels of neighborhood cohesion, a one-point increase in perceived discrimination was related to a 0.31-point increase in psychological distress. Contrary to the hypothesis that neighborhood cohesion can be protective, neighborhood cohesion was found to exacerbate the negative effect of perceived discrimination.

Lastly, the interaction between perceived discrimination and SSS was significant ( $b = -0.05$ ,  $SE = 0.02$ ,  $p < 0.001$ ). As shown in Figure 12, among those with low SSS, perceived discrimination was related to increased psychological distress, whereas perceived discrimination appears to have no effect on psychological distress at high levels of SSS. Simple slope analysis confirmed that perceived discrimination was not significantly related to psychological distress at high SSS ( $p > 0.05$ ). At low SSS, one-point increase in perceived discrimination was associated with a 0.30-point increase on the psychological distress scale ( $p < 0.05$ ). That is, lower self-ranking on the SSS ladder was associated with increased psychological distress for Vietnamese Americans. Contrary to the hypothesis that SSS can serve as a buffer against perceived discrimination, the study found that SSS exacerbates the negative effects of perceived discrimination.

Estimates for mediation model (hypothesis 3) model are reported in Table 21 and Table 22. Table 21 presents the results for the mediation analysis in which SSS is tested as the mediator in the relationship between perceived discrimination and psychological distress. The first hypothesis (i.e. perceived discrimination will be negatively related to SSS) was not supported.

However, the second hypothesis (i.e. SSS will be inversely related to psychological distress) was supported. That is, higher SSS was related to lower psychological distress ( $b = -0.025$ ,  $SE = 0.013$ ,  $p < 0.05$ ). The direct effect of perceived discrimination on psychological distress was significant ( $b = 0.170$ ,  $SE = 0.041$ ,  $p < 0.001$ ). Lastly, the indirect effect of perceived discrimination on psychological distress through SSS was not significant for Vietnamese Americans. SSS, therefore, did not mediate the relationship between perceived discrimination and psychological distress.

Table 22 presents the results for the mediation analysis in which Community-SSS serves as the mediator. The first hypothesis (i.e. perceived discrimination will be negatively related to SSS) was not supported. The second hypothesis (i.e. SSS will be inversely related to psychological distress) was also not supported. The direct effect of perceived discrimination on psychological distress was significant ( $b = 0.172$ ,  $SE = 0.041$ ,  $p < 0.001$ ). The indirect effect of perceived discrimination on psychological distress through Community-SSS was not significant. Community-SSS, therefore, did not mediate the relationship between perceived discrimination and psychological distress among the Vietnamese American sample.

**Summary.** As hypothesized, higher levels of perceived everyday discrimination were related to increased psychological distress in a national sample of Vietnamese Americans, adjusting for various sociodemographic and immigration related covariates. Results from the moderation model (hypothesis 2) suggested the following patterns. First, family cohesion and family conflict were significantly associated with psychological distress. That is, higher levels of family cohesion were related to decreased psychological distress, whereas higher levels of family conflict were linked to increased psychological distress. Between the two significant main effect variables, family cohesion was a stronger predictor of psychological distress. Further, neighborhood cohesion and SSS were found to be significant moderators in the relationship

between perceived discrimination and psychological distress. The effect of perceived discrimination on psychological distress at high levels of neighborhood cohesion was not significant, suggesting that there was no relationship. At high levels of neighborhood cohesion, higher self-reporting of discrimination was related to greater psychological distress. The study also found no association between perceived discrimination and psychological distress among Vietnamese Americans' with high SSS. For low levels of SSS, however, higher perceived discrimination was linked to increased psychological distress. In contrast to the hypothesis that neighborhood cohesion and SSS would play a buffering role, the study revealed that these variables exacerbated the negative effects of perceived discrimination among Vietnamese Americans. Community-SSS, family cohesion, and family conflict did not moderate the association between perceived discrimination and psychological distress.

The third hypothesis was not supported. The indirect effect of perceived discrimination on psychological distress through SSS was not significant. The indirect effect of perceived discrimination on psychological distress through Community-SSS was also not significant. Thus, both measures of subjective SES did not mediate the relationship between perceived discrimination and psychological distress for Vietnamese Americans.



## CHAPTER 5: DISCUSSION

Discrimination can be conceptualized at multiple levels of analysis including institutionalized practices and personal experiences of discrimination (Gee et al., 2009). In its diverse forms, discrimination has the potential to reproduce social disadvantages by constraining opportunities and excluding members of subordinate ethnic groups from full societal benefits (Scheid & Brown, 2010). The translation of social disadvantages into poor mental health is not straightforward. A key component to understanding the complex relationship between discrimination and mental health is examining how subjective perceptions of their social disadvantages modify the effects of poor life conditions stemming from discrimination (Paradeis, 2006). While it is important to consider the role of broad institutional patterns in shaping mental health, the current study emphasized research on personal experiences of discrimination in everyday life. It considers perceived discrimination or individuals' subjective appraisals of discrimination. Perceived discrimination encompasses experiences of major/minor events but more importantly it captures general unfair treatment and negative micro-interactions in daily life (e.g. being belittled, treated disrespectfully) that are associated with one's minority status (Clark, Anderson, Clark, & Williams, 1999) also referred to as "everyday discrimination" (Williams, Yu, Jackson, & Anderson, 1997).

A growing body of research has examined the consequences of perceived discrimination on mental health (Paradeis, 2006; Williams & Mohammed 2009; Williams, Neighbors, & Jackson, 2003). Despite the long histories of exposure to racism and the rapidly increasing number of Asian ethnic groups in the U.S., psychological implications of discrimination are considerably less well understood among Asian Americans. Asians are widely considered "model minorities," implicating a sense of imperviousness to discrimination and mental health problems. The findings

in this study suggests otherwise and reveals that self-reports of everyday discrimination are indeed related to poorer mental health.

This study is based on secondary analyses of the NLAAS. Focusing on Asian Americans as an aggregate, and the three largest subgroups represented in the NLAAS (i.e., Chinese, Filipino and Vietnamese Americans), this study investigated the extent to which (a) perceived discrimination predicted psychological distress, (b) social context variables (family cohesion and conflict, neighborhood cohesion, subjective SES moderated the relationship between perceived discrimination and psychological distress, and (c) subjective SES measures (SSS & Community-SSS) mediated the relationship between perceived discrimination and psychological distress.

### **Perceived Discrimination and Psychological Distress**

Results showed that higher levels of perceived everyday discrimination were associated with greater psychological distress in the entire Asian American sample ( $n = 2095$ ) supporting the first hypothesis and consistent with past studies (Lee & Ahn, 2011; Yip, Gee & Takeuchi, 2008). The extant literature suggests a robust link between perceived discrimination and a wide range of mental health symptoms such as anxiety, depression, and suicide ideation (Cassidy et al., 2004; Hwang & Goto, 2009). These studies have also underscored the need to investigate differential effects of perceived discrimination depending upon the type of mental health indicator considered (Lee & Ahn, 2011; Pascoe & Richman, 2009; Hwang & Goto, 2009). Like depression and anxiety, psychological distress refers to a “maladaptive” response pattern in the presence of stress (Scheidt & Brown, 2010, p.174).

Although physical health was not considered, it is important to add that existing research using Asian American samples have also found that perceived discrimination was more consistently associated with mental health outcomes than physical health issues (Hahm et al., 2010;

Gee, 2002). For instance, Hamn et al., (2010) found that high levels of perceived discrimination impacted mental health outcomes more than physical health outcomes for both Asian men and women. The study included 3 different types of mental health outcomes (including Major Depressive disorder [MDD] and suicide ideation, and DSM-IV intermittent explosive disorder [IED]), as well as four types of outcomes for physical health problems (chronic headaches, chronic pain, high blood pressure, and diabetes/high blood sugar). Among Asian men, a high level of perceived discrimination increased the likelihood of having all three mental health outcomes. Among women, a high level of perceived discrimination increased the likelihood of having MDD and IED. For physical health outcomes, only chronic headaches were associated with a high level of discrimination for both genders. One possible explanation for this is that the effect perceived discrimination on physical health are dependent on the threshold or intensity of discrimination experienced. Thus, a higher discrimination threshold may be required for physical health effects to occur (Hahm et al., 2010; Gee, 2008). Another plausible explanation is that discrimination may take longer to affect physical health. Since, discrimination has the potential to induce immediate emotions (e.g. fear, anger, and stress) the effect on mental health may be more immediate (Krieger, 1999). A longitudinal analysis is required to examine the long-term impacts of perceived discrimination.

The current study also examined within-ethnic group heterogeneity, a key characteristic of the Asian American population. Results indicated that reports of everyday discrimination were positively related to psychological distress for all three groups, even after controlling for key demographic, socioeconomic and immigration-related factors. The findings are consistent with previous studies that have examined this association in Chinese, Filipino and Vietnamese American samples (Gee et al., 2009; Mossakowski, 2003; Gee, 2000). However, past studies rely

on regional samples which limit generalizability across Asian American ethnic groups nationwide (Gee et al., 2009). Using a nationally represented sample, the study revealed significant ethnic group differences in the reporting of discrimination, and psychological distress.

Mean levels of perceived discrimination for Filipinos was significantly higher than Chinese and Vietnamese Americans. Few other studies have found that Filipinos reported more frequent discrimination in everyday life compared to Chinese and other Asian ethnic groups (Gee et al., 2007; Kuo, 1995). These differences would be expected, given how Asian Americans differ drastically in terms of their immigration histories, socioeconomic profiles, and skin tone. For instance, studies have suggested that the higher reports of discrimination among Filipinos results from greater familiarity with U.S. racial dynamics because of colonization (Alvarez & Juang, 2010). Theories focused on skin color as a primary determinant of unfair treatment and racial bias suggest that their darker skin tone increases the likelihood they experience discrimination (Gee et al., 2009). Consistent with this, Filipinos were more likely than any other group to state that their main reason for everyday discrimination was related to their ancestry and skin color (Gee et al., 2007).

Given their unique history of involuntary immigration to the U.S., it is noteworthy that mean levels of everyday discrimination were lowest for Vietnamese Americans. Compared to the two other groups in the NLAAS, the Vietnamese sample comprised the highest percentage of foreign-born, reported lower household income and lower levels of English proficiency. As specified within the sociological literatures (e.g., Portes & Rumbaut, 2006; Zhou & Bankston, 1998), involuntary immigrants (i.e., asylum seekers and refugees) often come from less affluent backgrounds and are less likely to have existing support systems (e.g. pre-existing ethnic communities, family networks). Thus, refugee status can create obstacles in addition to common

immigrant or racial disadvantages (Yip & Cross, 2004). Groups with traditionally higher family SES backgrounds (i.e., Chinese, Koreans, and Indians) and greater English proficiency (e.g. Indians, Filipinos), on the other hand, can set a stage for advantageous context of reception and integration of Asian immigrants and their children into mainstream American society (Portes & Rumbaut, 2006). It is that argued that highly educated Asian ethnic groups, who are employed and have frequent social contacts with mainstream society are more likely to encounter and perceive negative interactions and discriminatory behaviors (Gee et al., 2007). Thus, theories related to social contact have explained how the frequency of exposure to the mainstream U.S. labor market may partially explain why Filipinos report higher levels discrimination (Zhang & Hong, 2013).

Mean levels of psychological distress for Chinese was significantly greater than Filipino Americans. This difference may reveal important cultural differences in the expression of distress (Alegria et al., 2004; Okazaki & Sue, 1995). For instance, among Chinese Americans, mental health symptoms such as psychological distress and anxiety may sometimes manifest in the form of physical outcomes, referred to as somatization (Mereish, Liu, & Helms, 2012). Further, the association between discrimination and psychological distress may manifest differently in Asian Americans. Intra-ethnic comparisons among Asian American subgroups, have shown that Chinese, Filipino, and Vietnamese Americans differed in the degree to which perceived discrimination predicted psychological distress (Mereish, Liu, & Helms, 2012; Gee et al., 2007). Studies have also revealed differential association based on specific health or psychological conditions (e.g., Gee et al., 2009, 2007). These differential associations may reflect different social, cultural and historical circumstances and perceptions of mental health (Gee et al., 2009). A full investigation of this was beyond the scope of the current study as these experiences are much more complex than can be captured here. However, there also appears to be limited theoretical

foundations and guidance to better understand how and why Asian ethnic groups differ in their association between mental health and discrimination (Gee et al., 2009).

### **Moderating Role of Social Context Variables**

Although results of this study indicated that perceive discrimination is positively related to psychological distress, researchers highlight the complex relationship between discrimination and mental health. Stress research predominantly draws upon the transactional model of stress and coping (Lazarus & Folkman, 1984), yet critics argue that stress cannot be strictly understood in cognitive terms (i.e. conceptualizing stress as an internal process rather focus on external elements such as culture or society that induce stress) (Hobfoll, 1998). Other theories emphasize the “social origins of stress” (Pearlin, 1989, p.252) and identify discrimination as social stressor that can help to explain health disparities (Pearlin et al., 2005). Thus, stress is shaped by social structures and conditions (Pearlin et al., 2005, Pearlin, 1989, Meyer, 2003; Hobfoll, 1998). Further, the translation of stress into negative psychological outcomes also depends on the social contexts which stressors meaning its meaning (Scheid & Brown, 2010; Wheaton, 1990). Individuals are embedded in “nested” social systems from the innermost level (microsystem) that constitutes one’s most immediate social (e.g., family, workplace, neighborhood) to the broadest level which refers to the culturally patterned social structures including the political and legal system (macrosystem) (Bronfenbrenner, 1979). Discrimination may differentially impact mental health depending on the context in which stress and coping responses are defined (Syed & Juan, 2012; Scheid & Brown, 2010). Through these perspectives, coping resources are defined in terms of the nature of social support that are available within ones’ environment (Scheid & Brown, 2010; Pearlin, 1989). The family and neighborhood represent the microsystem that constitutes intimate family relations and

social connections, that may serve to mitigate or exacerbate the negative effects of perceived discrimination.

Growing research examines the moderating factors that alter the relationship between discrimination and mental health. A moderating variable can protect against or increase the deleterious effects of stressors. In prior research focusing on the relation between discrimination and mental health, moderators have been limited to individual-level, psychological and behavioral factors (e.g. personality characteristics, sense of mastery, and self-esteem) (Pudrovska et al., 2005, Cassidy et al., 2004; Major, Quinton, & McCoy, 2002). A growing number of scholars provide evidence that the relationship between discrimination and mental health vary, depending on the subjective and objective aspects of social context (Syed & Juan, 2012; Zhang & Ta, 2009). The current study addressed social context in terms of perceived connectedness to the neighborhoods within which individuals live (neighborhood cohesion), perceptions of family relations or connections (family cohesion and conflict), and subjective SES (SSS and Community-SSS). It was hypothesized that family cohesion and conflict, neighborhood cohesion, and subjective SES measures would moderate the association between perceived discrimination and psychological distress.

**Family cohesion.** Family structure and processes are regarded as important social determinants of health status (Walton & Takeuchi, 2010). Often, the health benefits of Asian Americans (e.g. lower prevalence of psychiatric disorders, lower mortality rates and higher self-rated health compared to other ethnic groups) has been attributed to their prioritization of strong family values, norms and bonds (Guo et al., 2015; Zhang & Ta, 2009). The centrality of family relations in Asian Americans is also supported by literature showing that perceptions of emotional bonding and cohesion within the family has direct and independent effects on the self-rated

physical and mental health (Zhang & Ta, 2009). Consistent with the broader research, results in the current study revealed that perceptions of family cohesion played a significant role in promoting Asian American well-being. More specifically, higher levels of perceived family cohesion predicted lower psychological distress in the total Asian American sample after controlling for sociodemographic and immigration related factors.

The subgroup analyses revealed that family cohesion did not directly predict psychological distress for Chinese and Vietnamese Americans. A direct association was observed for Vietnamese Americans, such that higher levels of family cohesion were significantly related to lower levels of psychological distress. Mean levels of family cohesion for Vietnamese was also significantly higher than Filipinos, and Chinese Americans. Collectively, these findings indicate that although family cohesion is essential for Asian Americans in general, it may have a stronger or more pronounced role for specific Asian subpopulations (Zhang & Ta, 2009; Zhou & Bankston, 1998). As indicated, family cohesion related to mental health only among Vietnamese Americans. It is suggested that strong intimate family ties or bonds may be more protective for certain Asian subpopulations such as refugees, or low skilled immigrants with fewer economic and social resources (Zhang & Ta, 2009; Zhou & Bankston, 1998). Compared to the Chinese and Filipinos, Zhang and Ta (2009) demonstrated that there were stronger mental health benefits of family cohesion for Vietnamese. In their study, Vietnamese respondents reported significantly worse physical health than Filipino and Chinese Americans, yet they found no differences in self-rated mental health. This may imply that a strong family bond may make up for the lack of socioeconomic resources in certain Asian ethnic groups (Zhang & Ta, 2009).

In their book, *Growing Up American: How Vietnamese Children Adapt to Life in the U.S.*, Zhou and Bankston (1998) underscored the importance of family in the lives of Vietnamese



refugees and their children living in Versailles Village. Often, Vietnamese refugees with no formal education, limited industry skills and English-language proficiency, were forced to join the lower rungs of the U.S. economic structure. Refugees coming to the U.S. to improve living conditions are argued to look towards the next generation to realize personal hopes and economic aspirations. Vietnamese children, therefore, play a crucial role in the transformation from “refugees to American ethnics” (Zhou & Bankston, 1998, p.216). However, “refugee resettlement and their family socioeconomic situation, place Vietnamese children in specific neighborhoods and facilitate contact with specific peer groups” (Zhou & Bankston, 1998, p.5). Consequently, many of the involuntarily dispersed Vietnamese refugees and their children reside in disadvantaged neighborhoods. Despite their poor socioeconomic background, Vietnamese children living in Versailles village were able to demonstrate high academic achievement (Zhou & Bankston, 1998). Zhou and Bankston (1998) observed that many Vietnamese refugee parents reinforced traditional family values (e.g. respect towards elders, cooperation, harmony, and mutual obligations) and aspirations for upward mobility consistent with mainstream values, such as discipline and importance of academic achievement. Thus, the authors argued that children or students who remained connected with support systems in the family were more likely to have an academic orientation, and in turn, demonstrate high academic proficiency (Zhou & Bankston, 1998).

Contradicting the study’s hypothesis, family cohesion did not moderate the association between perceived discrimination and psychological distress within the three subgroups. This finding should be considered in light of limitations in considering family support as a protective resource against perceived discrimination among Asian American ethnic groups. Some studies have argued that social support should be distinguished by support from different family members (e.g., siblings, parents, or spouses) as each member may contribute in unique ways. Rollock and

Liu (2015) found that marital support in particular buffered the negative psychological consequences of perceived discrimination among Asians. Spousal support thus played a role in decreasing distress because of the unique intimate bond a couple shares. Researchers have also identified the drawbacks of strong family bond and connection. Ta, Holck, and Gee (2010) tested the relationship between family cohesion and mental health service use and found that Asian respondents who reported higher family cohesion were less likely to use mental health services, even after controlling for mental illness and other sociodemographic factors. In general, Asian Americans are less likely to seek professional help for mental health concerns (Wu et al., 2017). This reluctance is partially attributed to negative stigma associated with mental illness and the desire for social approval (Guo et al, 2015). More specifically, a cohesive family may discourage seeking help from non-family members to avoid embarrassment and to “save face” (Ta, Holck, & Gee, 2010). Thus, it is also possible that those who perceive themselves to be a victim of frequent discrimination may be less likely to confide with immediate family members for fear of being misunderstood or undermined. Taken together, these findings point to the possibility that family cohesion or bonding within the nuclear family may not sufficiently buffer against effects of perceived discrimination. This is not to suggest that family cohesion is not an important source of social support. Rather, there is a need to be cautious in overstating its protective qualities against perceived discrimination. This is to say that not all Asian Americans benefit from intimate, close connections with family members (Ta, Holck, & Gee, 2010).

It is also important to consider social connections outside the emotional attachment and bond experienced in the nuclear family domain. Kim and Mckenry (1998) found that Asian Americans were more likely to spend social evenings engaging with friends and relatives and partake in group recreation activities compared to Latinos, Whites and African Americans. Singh,

McBride & Kak (2015) found that friend support significantly buffered the association of perceived discrimination and distress in Asian Americans, including Chinese, Filipino and Vietnamese Americans, whereas the buffering effect of family cohesion was only significant for certain Asian ethnic groups. Juang and Alvarez (2010) found that family cohesion did not buffer against experiences of loneliness associated with discrimination among Chinese adolescents. The investigators argued that familial support may not be enough to overcome feelings of loneliness and highlighted the important role that peer support may play during their adolescent years.

Further, a recent meta-analysis exploring the complex link between racial discrimination and mental health, revealed that more individualistic forms of resources such as personal constructs (e.g. self-esteem and optimism), and coping strategies (e.g. active coping, help-seeking) appeared to have equal or in some case stronger role in protecting against racial discrimination than group resources such as social connectedness and family cohesion (Lee & Ahn, 2011). Although this finding is counter to well-documented evidence pointing to the importance of Asian family values in mitigating stress, it is an important reminder that upholding stereotypes of Asian cultural values (i.e., collectivism, filial piety) in research may actually yield misleading assumptions and faulty generalizations.

**Family conflict.** The overemphasis on Asian families as being cohesive may obfuscate the sources of family tension, conflict, or disappointment that can compromise mental health. Intergenerational conflict or tensions arising from cultural differences in values and lifestyles between generations has often been cited as a source of conflict for Asian Americans (Juan, Syed & Takagi, 2010). Studies consistently find that family conflict resulting from competing cultural values exert harmful effects on the mental health of both younger as well as older Asian American groups (Juang, & Alvarez, 2010; Kim, & Choi, 2010). Consistent with this research, results

showed that family conflict may function as a risk factor for poorer mental health in Asian Americans (Juang & Alvarez, 2010). Perceptions of family conflict were positively related to psychological distress. Compared to other predictors in the regression model (i.e. family cohesion, SSS, Community-SSS), family conflict was the strongest predictor of psychological distress in the Asian American sample.

Mean levels of family conflict were significantly different across the three ethnic groups. Vietnamese reported lower levels of family conflict than Chinese and Filipino Americans. Subgroup analyses also showed that family conflict was negatively associated with psychological distress in all three Asian ethnic groups. For both Chinese and Filipino Americans, family conflict was the only main effect variable that independently predicted psychological distress. High levels of family conflict were also linked to increased greater psychological distress in Vietnamese Americans. The strong influence of family conflict on psychological distress is similar to findings in the general population, which suggest that, although close and supportive family relations may have moderate benefits, conflict and negative interactions with family can be more harmful to mental health (Finch, Okun, Pool, & Ruehlman, 1999). Negative interactions with family members likely contribute to existing stressors and undermine the positive role of close and supportive family relations (Guo et al., 2015). Krause & Rook (2003) noted that social interaction with family members is often described in negative terms, compared to interactions with friends. Further, research has documented that negative family interactions are relatively persistent or stable over a long period of time, since family ties cannot be terminated as easily as other social ties (Krause & Rook, 2003). With this, family conflict may impact the mental health of individuals, even in late adult life (Guo et al., 2015).

Among the Asian American sample, family conflict exacerbated the negative effects of discrimination on psychological distress. This finding has important implications for understanding how discrimination may combine with other stressors to adversely affect health (Williams & Mohammed, 2009). The social stress literature has noted the importance of identifying multiple stressors in the social environments within which vulnerable populations live and work. Discrimination, according to Williams and Mohammed (2009) should be studied within a “larger social context of the multiple stressful exposures within which it is embedded” (p. 36). It is suggested that one’s ability to deal with new stressors in the environment is reduced by the burden and demands of preexisting stressors (Williams & Mohammed, 2009). Moreover, the “cumulative exposure to multiple adversities” may have more severe and long-term impacts on health (Williams and Mohammed, 2009, p.36). The current study examined negative interactions with relatives or family conflict, which may represent an important stressor experienced more proximally (Chae et al., 2012). However, it is also imperative to assess how discrimination may interact with stressors outside the family domain to affect the mental health (Chae et al., 2012; Williams & Mohammed, 2009) such as major hardships and disruptions in life that pertain to their financial or work circumstances (e.g. being in significant debt, unemployment, hostile work environment) (Pearlin et al., 2005).

Although it directly predicted mental health, family conflict did not moderate the association between perceived discrimination and psychological distress in all three subgroups. Failure to find a significant finding may be attributed to the limitations in the measurement scale used to assess experiences of negative family interactions in Asian. The study relied on previously developed measures and items from the NLAAS data set. The items in the family scale were taken from the Family/Culture Stress subscale of the Hispanic Stress inventory. Thus, it is possible that

the scale used for this study does not capture the different types of conflict that emerge within specific Asian ethnic families.

Although intergenerational conflict is an important source of conflict and distress in Asian Americans, family conflict may also manifest differently in each Asian ethnic group. Given that mean levels of family conflict differed across the three subgroups, there is a need to examine in more detail the nature of family conflict, and the kinds of family conflict associated with psychological distress in each group. Highlighting the importance of multidimensional family dynamics, scholars have suggested that negative consequences of family conflict may be more detrimental for Asian families that espouse strong collectivistic ideologies and endorse conforming to traditional family roles of parental control, obedience and family obligations (Guo et al., 2015). Further, the reinforcement of traditional or unequal gender dynamics may also be important to understanding the conflict within the family context. Rumbaut and Portes (2001) found that endorsement of traditional gender norms by immigrant parents was seen as a source of conflict for young Filipina Americans. Based on interviews, authors found that second generation Filipinas expressed resentment towards gender inequality in their family. They were particularly resentful towards the fact that their parents placed more restriction on their personal decisions and autonomy, compared to their brothers. Parents also placed greater demands on them to achieve higher grades and educational aspirations. Filipinas interviewed in their study appeared to work harder and academically outperform Filipino males. At the same time, they also experienced more family conflict, greater depression and lower self-esteem than their male counterparts (Rumbaut & Portes, 2001)

**Neighborhood cohesion.** Research on neighborhood and health have focused on how social cohesion may differentially affect health. Moreover, a cohesive neighborhood has been

characterized by trust, solidarity, and mutual support among residents that foster community and social participation (Carpiano, 2007). A socially cohesive neighborhood is said to provide individuals access resources produced through community ties and relationships (Hong, Zhang & Walton, 2014). The importance of social cohesion is supported by a growing body of literature that empirically examined its relationship to various mental health outcomes (Mulvaney-Day et al., 2007; Zhang & Ta, 2009). It is postulated that neighborhood social cohesion enhances mental health by providing emotional support and creating an atmosphere of encouragement and mutual respect (Hong, Zhang & Walton, 2014).

In examining the direct relationship between neighborhood cohesion and mental health, results from the current study found no significant associations for all groups. In other words, neighborhood cohesion did not predict psychological distress in Asian Americans. Similarly, the main effect of neighborhood cohesion on psychological distress was not significant within the three ethnic groups. The broader literature reveals mixed findings in regard to the effects of neighborhood social cohesion on mental health. While some studies have suggested that features of a community that promotes cohesion and a sense of belonging predicts improved better health (Ruijsbroek et al., 2016; McCulloch, 2001), others reveal non-significant findings (Mulvaney-Day et al., 2007; Zhang & Ta, 2009). Given these inconsistent findings, researchers have examined social cohesion as a mediator or moderator. For instance, studies have identified social cohesion as a mediator that explains the neighborhood poverty and poor mental health link (O'campo, Salmon, & Burke, 2009). However, limited research has focused on the moderating role of social cohesion in the relationship between discrimination and psychological distress (Syed & Juan, 2012).

Neighborhood cohesion did not moderate the association between perceived discrimination and psychological distress among Asian Americans or Chinese Americans. For Vietnamese and Filipino Americans, neighborhood cohesion was revealed to be a significant moderator. However, when examining differential association between perceived discrimination and psychological distress across high and low levels of neighborhood cohesion, an interesting pattern emerged. In contrast to the hypothesis that neighborhood cohesion would serve as a buffer, the study revealed that it exacerbated the negative effects of perceived discrimination on psychological distress among Filipino and Vietnamese Americans. This finding is consistent with a study conducted by Syed & Juan (2012) who found that the moderating role of neighborhood context depended on the ethnic group. Further, these scholars also underscore the importance of focusing on the operationalization of neighborhood contexts (Syed & Juan, 2012). Many studies have used objective measures of neighborhood such as ethnic density (Hong et al., 2014; Alvarez et al., 2006). Researchers have examined the ways in which neighborhood ethnic density, that is, living among others of the same race or ethnicity can influence mental health in racial/ethnic minorities (Hong et al., 2014). Among Asian Americans, neighborhood ethnic density has been linked to better physical and mental health, as well as health behaviors (Hong et al., 2014; Gee, 2008).

Ethnic density is important to consider in the context of discrimination (Juang & Alvarez, 2011). Available research suggests that individuals living in areas with high concentration of the same racial/ethnic group members report less discrimination. A study of Filipino adults found that those living in Honolulu reported lower levels of everyday discrimination, compared to Filipinos living in San Francisco. In the study, there were larger percentage of Filipinos residing in Honolulu (12%) than San Francisco (5%). More importantly, there was greater representation of Filipinos in Hawaiian governance compared to California (Gee et al., 2006). Given these observations, the



study concluded that Filipinos in Honolulu are less likely to perceive discrimination because they have a stronger support base and more power in political decision making. Further, individuals are also presumed to thrive in ethnically homogenous neighborhood because they offer more frequent exposure to others of same cultural background thereby increasing the opportunities for experiencing acceptance and solidarity (Juang & Alvarez, 2011).

Sociologists have extensively noted the importance of ethnic-based communities and availability of cultural resources (e.g., ethnic media, community-centers, and temples, or churches) that provide opportunities for connection and sense of belonging (Zhou & Xiong, 2005). Ethnic communities are particularly helpful for Asian immigrant families with minimal education, economic and social resources (Zhou & Xiong, 2005). For instance, in the Chinese immigrant community, “tangible ethnic resources” (Zhou & Lee, 2017, p. 9) such as academic tutoring centers, Scholastic Aptitude Test (SAT) preparatory courses, which are run by co-ethnic entrepreneurs, make it tenable for working class immigrant families to overcome their disadvantaged social class. Greater access to cultural resources may also protect individuals by reducing the likelihood of experiencing racial/ethnic discrimination as they are able to enjoy religious and health care services, outlets for socialization, and informational and instrumental support in their own communities (Juang & Alvarez, 2011; Zhou & Xiong, 2005).

While some research indicates that ethnic density may reduce exposure to direct prejudice and discrimination, studies have also shown that the negative effects of ethnic density on the mental health of Asian Americans (e.g., Hong et al., 2014; Syed & Juan, 2012; Juang & Alvarez, 2011). Hong et al. (2014) found that greater neighborhood ethnic density was directly related to poorer mental health. Further, they noted that levels of social cohesion in a neighborhood was not dependent on having neighbors of a similar racial or ethnic background among Asian Americans.

Thus, “culturally- specific social support” may not be as valuable as instrumental support received from ones’ social network in general (Hong et al., 2014; Capriano, 2007). Similarly, Walton (2012) found that social cohesion was associated with better physical health among Asian Americans residing in non-ethnic neighborhoods. Counter to the earlier argument that ethnic density reduces exposure to discrimination, it is also plausible that living among greater number of Asian co-ethnic can heighten the awareness of discrimination (Juang & Nguyen, 2010).

Noting the limitations of focusing only on ethnic density or number of co-ethnics, scholars have highlighted the need to include both objective and subjective properties of neighborhood context. Juan and Syed (2012) examined objective and subjective context as a moderator in the association between perceived discrimination and psychological distress among Asian Americans. In addition to using the neighborhood cohesion scale as a measure of subjective social context, the authors conceptualized ethnic density at three levels: ethnic-specific, pan-ethnic, and people-of-color. The authors concluded that subjective aspects of neighborhood context should be studied in conjunction with objective social context such as ethnic density, as it would give a more accurate picture of ones’ social context. Nonetheless, they also acknowledged that ethnic density does not adequately capture the local context or community within which many Asian Americans may reside. Further, the link between neighborhood cohesion and mental health may operate in complex ways across different ethnic national contexts (Ruijsbroek et al., 2016; Hong et al., 2014). Qualitative methods may permit a deeper understanding of the role of neighborhood in buffering the relationship discrimination and distress. Such an approach would be able to capture nuances in the structural ties and social connections of Asian ethnic neighborhoods that are contoured by the historical and economic contexts of different Asian American ethnic groups.

Despite the importance of including objective aspects of neighborhood, the study only examined the moderating role of perceptions of neighborhood cohesion. My study used the publicly available NLAAS data set, which contains crude geographic variable that divides the U.S. into four broad regions. The restricted-access NLAAS data allows researchers to conceptualize ethnic density at the county level. This somewhat limited the interpretation of the moderating effect of neighborhood cohesion observed for Vietnamese and Filipino Americans. As mentioned earlier, higher levels of neighborhood cohesion were found to exacerbate the harmful effects of perceived discrimination within the two ethnic groups. Since ethnic density was not included in the analyses, it is not possible to identify the racial composition of their neighborhood. Results from previous studies have suggested that living among community members of a similar background may not result in desired health benefits for certain Asian ethnic groups such as Vietnamese (Syed & Juan, 2012). Moreover, social cohesion may relate to greater distress, when there is a high concentration of co-ethnics in their communities (Hong et al., 2014). Several qualitative researchers have also illustrated that the contact or integration into the ethnic community is not conflict free, particularly for adolescence and young adults who face conflict arising from the generation gap between their own desires and expectations from their parents and the community (Rumbaut & Portes, 2001; Zhou & Bankston, 1998). Often, living in a densely knit community consisting of co-ethnics means being subject to neighbors that keep a watchful eye on one another. More importantly, co-ethnic neighbors may control the behavior of young people through continual vigilance and reinforce parents' goals of maintaining traditional values which is at odds with Asian American youth (Zhou & Bankston, 1998).

## **Moderating and Mediating Effect of Subjective SES**

Objective measures of SES, such as education and income, oversimplify the relationship between social standing and health among Asian Americans (de Castro et al., 2010). Asian Americans are often viewed as economically successful due to comparatively higher levels of education and median household incomes. These statistics often conceal high rates of poverty among specific subgroups (e.g. Hmong) (de castro et al., 2010; Zhou & Xiong, 2005). Further, a majority of Asian Americans are foreign-born and first generation, which suggests that their immigration background has a major influence on their socioeconomic position and mobility. In this context, it has been commonly observed that many first-generation Asian immigrants, who received education credentials from overseas, find that their degree is not recognized or valued in the U.S. labor market. Thus, they are forced into less paying and less prestigious jobs (Gong, Xu, Takeuchu et al., 2012). That their overseas education may not translate into corresponding economic gains in the U.S. has been identified as a form of “status inconsistency” (Lee, Toney, & Berry, 2009). Research has shown that individuals who experience status inconsistencies, such as a mismatch between education and occupation, experience overall poorer mental and physical health (Lee, Toney, & Berry, 2009). Further, as a racial minority group, Asian Americans also encounter barriers to upward mobility and job promotions due to a “glass-ceiling” (Leu et al., 2008). Given these scenarios, it is important to consider alternative measures of socioeconomic conditions such as subjective SES. Such measures are argued to be a more reliable predictor of mental and physical health outcomes because it can capture subtle aspects of social standing. In this respect, it may better account for Asian Americans’ sociocultural experiences that affect their relative economic and social position in the U.S. (Gong et al., 2012, de Castro et al., 2010).

Compared to objective SES measures, there is limited research on measures of subjective SES and its effect on mental among U.S. racial/ethnic minorities. Even fewer studies have investigated the psychological implications of subjective SES among Asian Americans (Yoon et al., 2012). In general, subjective SES has been defined as the perception of his/her social standing in society (Franzini & Fernandez-Esquer, 2006; Gong, Xu, & Takeuchi, 2012). Moreover, it taps into ones' perceived "hierarchical" position in a selected reference group (Gong et al., 2012, p.416). Subjective SES measures used in the current study assessed two broad reference categories – the entire U.S. and others in the community most important to them. Respondents' subjective ratings of their U.S. standing was based on the MacArthur Scale of SSS (Adler et al., 2000). An emerging line of research have indicated that this scale is significantly related to a multitude of self-reported health and mental health outcomes (e.g. mood dysfunction, depression, psychiatric disorders), even after controlling for conventional SES indicators (Gong, Xu, & Takeuchi, 2012; Leu et al. 2008; Franzini and Fernandez-Esquer, 2006; Ostrove et al., 2000; Singh-Manoux et al., 2003). However, fewer studies have reported on the association between Community-SSS and mental health (Gong, Xu, & Takeuchi, 2012; Leu et al., 2008).

**Subjective SES as a moderator.** Researchers exploring the intricacies of subjective SES examine how various aspects of subjective SES influence health (Gee et al., 2016; Gong et al., 2012; Franzini & Fernandez-Esquer, 2006). However, few have examined its interaction with other social stressors. To address this gap, the study examined the two subjective SES measures as a moderator in the relationship between perceived discrimination and psychological distress. Consistent with literature, among Asian Americans, high ranking on the Community-SSS and SSS ladder were related to decreased psychological distress. The findings provide some support for the argument which has suggested that for Asian Americans, alternative measures of social conditions

may be a good predictor of mental health outcome as it may account for their multifaceted sociocultural experiences. In addition, the study revealed that Community- SSS moderated the relationship between perceived discrimination and psychological distress within the Asian American sample.

To understand and interpret why higher ranking in the Community-SSS ladder buffered against the negative impacts of perceived discrimination, it may be important to reiterate the value of community for many Asian Americans, particularly in the context of widespread discrimination against this group. Perceived discrimination, as described earlier, is an important determinant of negative psychological outcomes, as it implies social denigration and exclusion from various domains of mainstream society. For older, first generation Asian Americans, their lack of English or mainstream cultural competence may increase their visibility and likelihood of experiencing discrimination. As a result, they may feel rejected by mainstream society and turn to their ethnic community to gain a sense of connectedness (Yoon et al., 2012). Given the collectivistic orientation in the Asian culture, values such as respect for elders, and family obligations are often reinforced through well-integrated ethnic communities. These values can be a source of advantage that leads to favorable outcomes (Zhou & Bankston, 1998). With this, although the feeling of being treated unfairly or denigrated may create a sense of secondary social status in larger society, higher ranking in Community-SSS may afford necessary psychosocial resources and social support required to buffer against the harmful consequences of perceived discrimination (Gong et al., 2012).

Subgroup analyses revealed interesting patterns. First, the mean levels of SSS and Community-SSS for Filipinos was significantly higher than Chinese and Vietnamese Americans. The two subjective SES measures significantly moderated the relationship between perceived

discrimination and psychological distress within the Filipino American sample. Results showed that Community-SSS buffered against the harmful psychological consequences of perceived discrimination. In contrast to the study's hypothesis, higher SSS exacerbated the negative effect of perceived discrimination among Filipinos. As a group, Filipinos tend to be highly educated and many arrive in the U.S. with more social and financial resources, which facilitate their adaptation process (Singh, McBride, & Kak, 2015). Further, greater familiarity with the English language, and better job placement or opportunities may increase their social contacts in mainstream society. Theories of social contact, as briefly discussed, posit that highly educated Asian ethnic groups, who are employed and have frequent social contacts with mainstream U.S. society are more likely to encounter discriminatory behaviors (Zhang & Hong, 2013; Gee et al., 2007). Frequent encounters with unfair treatment may also increase their awareness or sensitivity to discrimination. Further, some scholars have theorized that compared to the less educated, highly-educated Asian Americans compare themselves to those with similar or higher levels of education and income in the U.S. Although Asian Americans are generally well represented in the professional fields such as engineering, they are underrepresented as managers and leaders (Zhou & Lee, 2017). Related to this, it is found that Asian engineers are less likely to be promoted to managerial positions than their White American counterparts, even after controlling for education and performance evaluations (Zhou & Lee, 2017). The underrepresentation of Asian Americans such as Filipinos in executive managerial positions suggests that the glass ceiling—a structural barrier that impedes Asian Americans' upward mobility—may be a constant reminder of their secondary social status. Further, regardless of how integrated highly educated Asian Americans are in mainstream society or U.S. labor market, repeated perceptions of discrimination may reinforce a sense of injustice and relative deprivation (Zhang & Hong, 2013). With this, it is possible that even among Filipinos with

higher ranking on the SSS ladder, perceptions of discrimination may not protect from the harmful consequences of perceived discrimination. Rather with repeated exposure and perceptions of discrimination in mainstream U.S. society, such individuals' may experience increased psychological distress as their hard work and efforts may not be recognized and awarded in the same way it does for White Americans who occupy similar socioeconomic positions (Zhang & Hong, 2013).

Among Vietnamese Americans, there was a significant moderating effect of SSS. It was found that at lower levels of SSS, higher perceived discrimination was linked to increased psychological distress. Compared with the other two ethnic groups in the study, Vietnamese are relatively more recent immigrants, came to the U.S. under different circumstances, and are generally from lower SES backgrounds (Gee & Ponce, 2010; Ngo & Lee, 2007). Although the general population may perceive Vietnamese to be similar to other East Asians based on phenotype, it is possible that those with low status recognize their disadvantaged positions in relation to other successful Asian ethnic groups. Further, experiences with discrimination within the larger U.S. context may be a further reminder of their low status, making them more vulnerable to experiencing psychological distress related to discrimination (Schmitt et al., 2015).

**Subjective SES as a mediator.** Studies have examined how sociocultural factors such as perceive racism serves as a pathway through which subjective social status might influence health (Singh-Manoux et al., 2003; Franzini and Fernandez-Esquer, 2006). However, few have examined subjective SES measures as a mediator in the relationship between perceived discrimination and psychological distress (Gee et al., 2016). The current study hypothesized that the indirect effect of perceived discrimination on psychological distress would be mediated by subjective SES. Among the Asian American sample, it was found that SSS mediated the relationship between perceived



discrimination and psychological distress. This is to say, individuals that reported higher levels of perceived discrimination were more likely to report lower SSS, which in turn was related to greater psychological distress. There was also an indirect effect of perceived discrimination on psychological distress through Community-SSS. That is, higher levels of perceived discrimination were related to lower Community-SSS, which in turn was related to greater psychological distress.

As discussed earlier, high levels of subjective social status may provide individuals with necessary psychosocial resources which may enhance their well-being. The above results show some support for the earlier argument that discrimination may influence mental health by minimizing individuals' capacity to cultivate and guard important resources such as their social status that may protect them from stressful circumstances arising from their social context (Hobfoll, 1998). This may reinforce a secondary social status and create a sense of powerlessness that limits one's ability to take charge of their environment (Schmitt et al., 2015). Moreover, an individual's subjective social status is not just a reflection of their present circumstances, but one's anticipated economic prospects (de Castro et al., 2010). For those who are both advantaged and disadvantaged, a sense of future prospect may reflect their plans to help improve their current situation. Given that discrimination creates barriers to economic and social success, as well implies that one is devalued by society, perceived discrimination may also dampen individual's aspirations that is related to their social standing in society (Yoon et al., 2012). This taps into "goal striving stress", which refers to the extent to which individuals feel that their hard work matches their achievements (Sellars & Neighbors, 2008). "Goal-striving stress" has been found to have adverse effects on racial/ethnic minorities, such as African Americans (Yoon et al., 2012). Although the study does not test this incongruity between aspirations and achievements, future research should

investigate whether perceived discrimination may affect “goal-striving stress” among Asian Americans, and how that relates to health.

For all three subgroups, the indirect effect of perceived discrimination on psychological distress through subjective SES was not significant. It is possible that subjective SES may be a better predictor of outcomes other than psychological distress, such as self-rated health (Ostrove et al., 2000). Further, theory concerning the relationship between perceived discrimination, subjective SES and health have been limited. Future studies can benefit additionally from exploring what measures of subjective SES such as SSS and Community-SSS exactly captures. This may help to better understand how subjective SES might relate to discrimination and mental health in Asian Americans.

The study utilized two subjective SES measures, that allowed respondents to compare their social standing among people in the general U.S. population, as well as in their respective communities. However, the use of these ladders may not be ideal because of wide variations in definitions of community, and variation in the criteria individuals may apply in the process of ranking themselves in the social ladder. An issue that needs further exploration in the study of SES measures is social comparison, which as indicated earlier remains a critical component in the ranking of ones’ status in relation to others (Singh-Manoux et al., 2003). Given that I used two very broad categories (U.S. and community), it is impossible to determine who Asian Americans compare themselves to when responding to the questions on the two subjective SES ladders. With respect to this, some scholars have emphasized the need to identify the “type (upward, downward) and target (reference group) of social comparison” that are relevant for “understanding the complexity that goes into ranking ones’ social status (Franzini & Fernandez-Esquer, 2006, p. 791). For instance, Franzini and Fernandez-Esquer (2006) examined the association between MacArthur

Scale of SSS and health among Mexican-origin individuals living in low-income neighborhoods in Texas. Here, they identified and investigated the role of specific reference groups in determining SSS and its health outcomes. In their study, they found that people compare themselves to those similar to them. More specifically, social comparison differed by nativity and language. U.S. born individuals of Mexican origins tended to compare themselves to mainstream U.S. society, indicating acceptance of more mainstream societal standards. Among the Spanish-speaking immigrants, the majority compared themselves to Mexican immigrants in the U.S. In the overall, individuals compared themselves to mainstream U.S. society than to those in their country of origin. Given that their sample included Mexican-origin individuals in low-income communities of Texas, the findings are not generalizable to Asian American populations. However, their study illustrates the need to identify different criteria's and reference groups to better understand how individuals' rank their social status.

## **Conclusion**

In general, results indicated that perceived discrimination was related to increased psychological distress within all four Asian American samples. These findings underscore the importance of considering the impact of perceived discrimination on mental health. However, when introducing moderators and mediators in the relationship, different patterns emerged within each Asian ethnic group and for the aggregate sample. Although there are some shared experiences, ethnic groups differences often go unnoticed when analyzing aggregated racial group responses. Given that Filipinos, Vietnamese and Chinese Americans differ in contexts of exit and reception, language, educational attainment, and other factors, their lived experiences in family, neighborhood, or U.S. context will differ. The results of this study may have implications for understanding how the complex relationship between perceived discrimination and mental health

vary within each subgroup. With this, it is imperative to interpret this association within the groups' unique experience. The tendency to aggregate across Asian populations may also lose information about high-risk groups resulting in missed opportunities for developing culturally sensitive intervention programs. Thus, the results also have implications for mental health providers who work with different subpopulations of Asian Americans.

The findings in the study suggested that analyzing aggregated Asian racial group data may yield significant findings, however, examining ethnic group responses may provide a more nuanced understanding of each group's unique experience. It is important to note that perhaps there was more power in the larger or total sample of Asian Americans' to detect significant effects. The NLAAS oversampled for Vietnamese, Chinese and Filipinos, but did not have sufficient representation of major Asian American ethnic groups such as Japanese, Korean and Cambodians. The other groups in the NLAAS may have added additional variation in the sample given that they come from different sociohistorical contexts. However, given the smaller sample size it's unlikely they significantly biased the estimates. As indicated earlier, despite tremendous diversity within the Asian race, sociocultural and economic variation is veiled because between-group comparisons focus on group averages. For example, Asians are often categorized as a high SES groups but there is variation in the Asian group such that the Indians and Japanese have very different socioeconomic background from Southeast Asians such as Laotians and Cambodians.

Research on minority mental health and discrimination have underemphasized the ways in which structural arrangements of society influence psychological well-being. Scholars employing the transaction model of stress and coping by Lazarus and Folkman (1984), often examine individual level factors (e.g. ethnic identity, sense of mastery, self-esteem) as moderators or mediators in the relationship between perceived discrimination and mental health. However,

sociological models of stress have focused on social contexts that give stressors their meaning. The study, therefore, highlighted the role of social context, particularly family and neighborhood, in modifying or conditioning the relationship between perceived discrimination and psychological distress.

An important contribution of this study is that it also provides a possible mechanism for understanding the connection between psychological distress, subjective SES and stressful life experiences such as discrimination. Although research on subjective SES and health seems to be growing, there is a dearth of studies investigating the sociocultural or structural determinants of subjective SES measures such as SSS and community-SSS. Specifically, the finding that subjective SES measures may mediate the link between perceived discrimination and mental health in Asian Americans remains largely unexamined in the literature. As discussed earlier, this association may be especially pertinent for Asian Americans, who are socioeconomically diverse and experience unique immigration and race related challenges.

**Limitations.** There were several limitations in the current study that future research could address. First, the study was based on cross-sectional data and did not allow for casual inferences. There is a need for longitudinal studies to understand the temporal sequencing between perceived discrimination, family and neighborhood context to better understand how family and neighborhood processes contribute to discrimination and its consequences. Second, the study focused on three Asian sub-groups (i.e., Vietnamese, Filipinos, and Chinese). Other major Asian sub-groups such as Asian Indians, Korean, Japanese, or Cambodians were categorized as ‘Other Asians’ in the NLAAS. The small sample sizes did not allow for within-group analyses. Third, the findings on the unique role of social context variables in the relationship between perceived discrimination and psychological distress in each subgroup are based on self-reported quantitative

data. Qualitative methods are better suited to unpack the complex associations between the study variables. Lastly, the study used a discrimination measure (i.e., Everyday Discrimination Scale) developed with African American samples (Feagin and Sikes, 1994; Williams & Mohammed, 2009). The scale has demonstrated adequate validity and reliability among Asian American subgroups (Feagin and Sikes, 1994; Williams & Mohammed, 2009). However, this scale may not adequately capture Asian Americans' experiences with unique forms of discrimination related to model minority stereotype, accent, or being assumed a foreigner regardless of citizenship. These are commonly noted experiences of microaggressions in the lives of Asian Americans (Sue et al., 2007). Failure to include these items may underestimate the prevalence of self-reported discrimination (Gee et al., 2009) leading to continued calls for accurate measures of discrimination (Gee et al., 2009; Williams & Mohammed, 2009). The same scholars, however, acknowledge that no optimal measure of perceived discrimination exists and a continual process of "identifying strategies to address the limitations of the currently used measures" is needed (Williams and Mohammed 2009, p. 36; see Gee et al. 2009).

## APPENDIX

Table 1. Demographic characteristics for aggregated and disaggregated sample.

	<b>Asian American (<i>n</i> = 2095)</b>	<b>Chinese American (<i>n</i> = 600)</b>	<b>Filipino American (<i>n</i> = 508)</b>	<b>Vietnamese American (<i>n</i> = 520)</b>
<b>Characteristic</b>	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
<b>Age</b>	41.22 (.32)	41.59 (.60)	41.9 (.70)	43.05 (.60)
	% (N)	% (N)	% (N)	% (N)
<b>Sex</b>				
Male	47.60%	47.3%	46.3%	43.70%
Female	52.40%	52.7%	53.7%	53.30%
<b>Marital Status</b>				
Married	70.2%	69%	68.1%	74%
Unmarried	29.8%	31%	31.9%	26.2%
<b>Region</b>				
Northeast	7.3%	8.7%	4.1%	6.50%
Midwest	4.3%	4.5%	4.5%	6%
South	6.9%	3.5%	6.1%	14.8%
West	81.5%	83.3%	85.2%	78.10%
<b>Employment</b>				
Employed	66.1%	68%	67.3%	62.7%
Unemployed	33.9%	32%	32.7%	37.3%
<b>Education</b>				
Less than college degree (<16 yrs)	58.1%	49.7%	62.6%	76.30%
College degree or more (>16 yrs)	49.1%	50.3%	37.4%	23.70%
<b>Household Income</b>				
<\$15,000	17.9%	18.7%	12.4%	26.20%
\$14,999-\$34,999	14.8%	13.7%	11.6%	22.70%
\$35,000-\$74,999	26.5%	23.8%	24.8%	25.80%
>\$75,000	40.8%	43.8%	49.2%	25.40%



Table 1 (cont'd).

	<b>Asian American (<i>n</i> = 2095)</b>	<b>Chinese American (<i>n</i> = 600)</b>	<b>Filipino American (<i>n</i> = 508)</b>	<b>Vietnamese American (<i>n</i> = 520)</b>
<b>Characteristic</b>	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
<b>Language</b>				
Cannot speak English	9.6%	10.1%	0.8%	26.6%
Fair/ Poor	20.4%	27.1%	9.2%	30.6%
Good/ Excellent	70.4%	62.8%	90%	42.9%
<b>Citizenship</b>				
No	29.9%	32%	21.7%	25.6%
Yes	70.1%	68%	78.3%	74.4%
<b>Nativity/Years in the U.S.</b>				
U.S. born	22%	21%	32%	3.5%
Less than 10 years	28.80%	24.5%	17.9%	40.4%
11-20 years	25.40%	30.6%	22.3%	29%
20+ years	24.10%	23.1%	28.4%	27.1%

Table 2. Study variable descriptive statistics for aggregated and disaggregated sample.

<b>Asian American (n = 2095)</b>	<i>m</i>	<i>SE</i>	<i>min</i>	<i>max</i>
Psychological distress	1.36	0.01	1	4
Perceived discrimination	1.77	0.02	1	6
Family cohesion	3.69	0.01	1	4
Family conflict	1.3	0.01	1	3
Neighborhood cohesion	3.16	0.01	1	4
SSS	5.78	0.04	0	10
Community-SSS	6.18	0.04	0	10
<b>Chinese American (n = 600)</b>				
Psychological distress	1.42	0.02	1	4
Perceived discrimination	1.78	0.03	1	5.11
Family cohesion	3.58	0.02	1	4
Family conflict	1.3	0.01	1	3
Neighborhood cohesion	3.09	0.02	1	4
SSS	5.77	0.08	0	10
Community-SSS	6.07	0.08	0	10
<b>Filipino American (n = 508)</b>				
Psychological distress	1.33	0.02	1	3
Perceived discrimination	1.99	0.03	1	5.78
Family cohesion	3.70	0.02	1.4	4
Family conflict	1.32	0.02	1	3
Neighborhood cohesion	3.23	0.03	1	4
SSS	6.21	0.07	0	10
Community-SSS	6.58	0.08	0	10
<b>Vietnamese American (n = 520)</b>				
Psychological distress	1.33	0.02	1	4
Perceived discrimination	1.44	0.03	1	6
Family cohesion	3.79	0.02	1	4
Family conflict	1.23	0.02	1	3
Neighborhood cohesion	3.17	0.03	1	4
SSS	4.81	0.10	0	1
Community-SSS	5.36	0.10	0	1

Table 3. Bivariate correlations for full Asian sample.

	1	2	3	4	5	6	7	8	9	10
1. Psychological distress										
2. Perceived discrimination	0.21**									
3. Family cohesion	-0.25**	-0.24*								
4. Family conflict	0.34**	0.32**	-0.47**							
5. Neighborhood cohesion	-0.11**	-0.15**	0.20**	-0.14**						
5. SSS	-0.15**	0.10**	0.02	0.01	0.10**					
6. Community-SSS	-0.14**	0.07**	0.05*	0.02	0.10**	0.71**				
7. Vietnamese	-0.04	-0.26**	0.13**	-0.09**	0.01	-0.28**	-0.24**			
8. Filipino	-0.03	0.17**	0.01	0.05*	0.07**	0.13**	0.12**	-0.33**		
9. Other Asian	-0.02	0.08**	0.02	0.01	-0.01	0.16**	0.16**	-0.31**	-0.30**	
10. Sex	-0.04*	0.12**	0.02	-0.05*	0.03	-0.02	0.00	-0.01	-0.02	0.03
11. Age	-0.01	-0.23**	0.14**	-0.10**	0.14**	-0.16**	-0.14**	0.07**	0.03	-0.12**
12. Marital status	-0.10**	-0.14**	0.24**	-0.13**	0.11**	0.02	0.01	0.05*	-0.03	0.00
13. Midwest	0.00	0.06**	0.02	0.01	0.00	0.04	0.04	-0.11**	0.01	0.10**
14. South	-0.01	-0.05*	-0.01	0.03	-0.04	0.02	0.06**	0.18**	-0.02	-0.07**
15. West	-0.01	0.00	0.01	-0.05*	0.06**	-0.04	-0.05*	-0.05*	0.06*	-0.04
16. Employment status	-0.07**	0.07**	0.00	-0.02	0.01	0.12**	0.09**	-0.04	0.01	0.00
17. Education	-0.07**	0.10**	-0.01	0.05*	0.02	0.29**	0.25**	-0.21**	-0.05*	0.16**
18. Household income	-0.08**	0.15**	0.05*	0.04*	0.12**	0.31**	0.24**	-0.20**	0.11**	0.08**
19. English proficiency	-0.06**	0.28**	-0.10**	0.12**	0.01	0.46**	0.37**	-0.39**	0.25**	0.23**
20. Citizenship	-0.02	0.09**	-0.11**	0.01	0.10**	0.08**	0.03	0.06*	0.10**	-0.13**
21. Nativity/Years in U.S.	0.02	-0.10**	0.08**	0.05*	0.00	-0.05*	-0.06**	0.15**	-0.02	-0.16**

Note. \*\*  $p < .01$ ; \*  $p < .05$ . SSS = subjective social status.

Table 3 (cont'd).

	11	12	13	14	15	16	17	18	19	20	21
11. Age	0.00										
12. Marital status	0.01	0.28**									
13. Midwest	0.03	-0.03	0.02								
14. South	-0.02	0.02	0.02	-0.06**							
15. West	-0.02	0.02	-0.02	-0.45**	-0.57**						
16. Employment status	0.16**	-0.15**	0.08**	0.02	0.02	-0.01					
17. Education	0.08**	-0.12**	0.06*	-0.01	-0.09**	0.05*	0.10**				
18. Household income	0.08**	-0.07**	0.26**	0.04*	-0.03	0.01	0.31**	0.26**			
19. English proficiency	0.08**	-0.31**	-0.13**	0.03	-0.03	0.02	0.14**	0.30**	0.31**		
20. Citizenship	0.02	0.14**	-0.05*	0.00	0.02	0.05*	0.05*	-0.08**	0.09**	0.20**	
21. Nativity/Years in U.S.	0.01	0.31**	0.19**	0.02	0.06**	-0.08**	0.02	0.02	0.08**	-0.10**	0.10**

Note. \*\*  $p < .01$ ; \*  $p < .05$ . SSS = subjective social status.

Table 4. Bivariate correlations for full Chinese sample.

	1	2	3	4	5	6	7	8	9	10
1. Psychological distress										
2. Perceived discrimination	0.11**									
3. Family cohesion	-0.18**	-0.21**								
4. Family conflict	0.33**	0.31**	-0.47**							
5. Neighborhood cohesion	-0.06	-0.06	0.19**	-0.07						
6. SSS	-0.14**	0.10*	0.02	0.03	0.12**					
7. Community-SSS	-0.13**	0.06	0.09*	0.01	0.13**	0.68**				
8. Sex	-0.11**	0.11**	0.04	-0.04	0.08*	0.02	-0.01			
9. Age	0.01	-0.27**	0.07	-0.06	0.07	-0.19**	-0.17**	0.00		
10. Marital status	-0.09*	-0.18**	0.22**	-0.17**	0.10*	0.01	-0.01	0.07	0.27**	
11. Midwest	0.04	-0.04	0.05	-0.01	0.03	-0.08	-0.06	-0.01	0.05	0.08
12. South	0.05	0.02	0.03	0.08	-0.02	0.05	0.06	-0.04	0.04	0.07
13. West	-0.03	0.02	0.01	-0.06	0.10*	0.06	0.06	-0.04	0.00	-0.07
14. Employment status	-0.08*	0.07	0.06	-0.02	0.04	0.12**	0.08*	0.17**	-0.13**	0.17**
15. Education	-.012**	0.14**	0.00	0.07	0.086*	0.32**	0.28**	0.11**	-0.23**	0.03
16. Household income	-0.08*	0.17**	0.06	0.03	0.14**	0.31**	0.24**	0.12**	-0.12**	0.29**
17. English proficiency	-0.10*	0.25**	-0.08	0.14**	0.06	0.47**	0.37**	0.07	-0.33**	-0.16**
18. Citizenship	-0.03	0.10*	-0.14**	0.03	0.07	0.11*	0.02	0.03	0.15**	-0.08*
19. Nativity/Years in U.S.	0.08	-0.12**	0.02	0.04	-0.09*	-0.15**	-0.18**	0.01	0.27**	0.19**

Note. \*\*  $p < .01$ ; \*  $p < .05$ . SSS = subjective social status.

Table 4 (cont'd).

	11	12	13	14	15	16	17	18
12. South	-0.04							
13. West	-0.49**	-0.43**						
14. Employment status	0.01	-0.02	0.05					
15. Education	-0.04	0.04	0.04	0.11**				
16. Household income	-0.03	0.08*	0.01	0.44**	0.32**			
17. English proficiency	-0.14**	0.04	0.18**	0.07	0.38**	0.29**		
18. Citizenship	-0.08	-0.01	0.11**	0.03	-0.06	0.10*	0.29**	
19. Nativity/Years in U.S.	0.03	0.05	-0.06	0.03	-0.09*	0.03	-0.16**	0.09*

Note. \*\*  $p < .01$ ; \*  $p < .05$ .

Table 5. Bivariate correlations for full Filipino sample.

	1	2	3	4	5	6	7	8	9	10
1. Psychological distress										
2. Perceived discrimination	0.37**									
3. Family cohesion	-0.21**	-0.24**								
4. Family conflict	0.31**	0.34**	-0.41**							
5. Neighborhood cohesion	-0.12**	-0.23**	0.20**	-0.19**						
6. SSS	-0.17**	-0.06	0.04	-0.09*	0.08					
7. Community-SSS	-0.08	-0.05	0.01	0.04	0.05	0.62**				
8. Sex	0.05	0.17**	0.00	-0.09*	0.03	-0.09*	-0.04			
9. Age	-0.10*	-0.18**	0.28**	-0.10*	0.09*	0.01	-0.01	0.00		
10. Marital status	-0.11*	-0.01	0.28**	-0.04	0.03	0.09*	0.05	0.08	0.31**	
11. Midwest	0.01	0.08	0.07	-0.01	-0.05	0.05	0.10*	0.03	-0.03	0.01
12. South	0.00	0.00	-0.02	0.06	-0.04	0.02	0.03	-0.02	0.00	0.05
13. West	-0.02	-0.01	-0.02	-0.07	0.10*	-0.05	-0.05	0.01	0.00	-0.03
14. Employment status	-0.06	0.04	0.07	-0.11*	0.02	0.03	-0.03	0.05	-0.17**	0.05
15. Education	-0.13**	0.02	0.05	-0.02	0.05	0.17**	0.13**	0.00	0.02	0.10*
16. Household income	-0.06	0.08	0.11*	0.04	0.05	0.18**	0.14**	0.13**	-0.01	0.28**
17. English proficiency	-0.07	0.13**	-0.16**	0.09*	-0.05	0.18**	0.17**	0.00	-0.28**	-0.08
18. Citizenship	-0.08	0.06	-0.14**	-0.01	0.08	0.10*	0.07	0.03	0.04	-0.11*
19. Nativity/Years in U.S.	-0.10*	-0.10*	0.21**	0.01	0.00	0.07	0.06	-0.02	0.44**	0.24**

Note. \*\*  $p < .01$ ; \*  $p < .05$ . SSS = subjective social status.

Table 5 (cont'd).

	11	12	13	14	15	16	17	18
12. South	-0.06							
13. West	-0.52**	-0.61**						
14. Employment status	0.05	-0.05	-0.01					
15. Education	-0.05	-0.01	0.00	0.07				
16. Household income	0.12**	-0.05	-0.03	0.30**	0.18**			
17. English proficiency	0.04	-0.02	0.02	0.15**	0.16**	0.22**		
18. Citizenship	-0.05	0.05	0.04	-0.02	-0.03	0.07	0.18**	
19. Nativity/Years in U.S.	0.03	0.05	-0.07	0.00	0.09*	0.17**	-0.08	0.05
Note. ** $p < .01$ ; * $p < .05$ .								



Table 6. Bivariate correlations for full Vietnamese sample.

	1	2	3	4	5	6	7	8	9	10
1. Psychological distress										
2. Perceived discrimination	0.18**									
3. Family cohesion	-0.31**	-0.32**								
4. Family conflict	0.33**	0.41**	-0.61**							
5. Neighborhood cohesion	-0.08	-0.28**	0.22**	-0.16**						
6. SSS	-0.14**	0.09	0.00	0.06	0.08					
7. Community-SSS	-0.12**	0.06	0.03	0.04	0.10*	0.76**				
8. Sex	-0.01	0.17**	0.00	0.02	0.00	-0.04	0.02			
9. Age	0.07	-0.28**	0.19**	-0.20**	0.21**	-0.29**	-0.21**	0.02		
10. Marital status	-0.17**	-0.22**	0.26**	-0.24**	0.17**	-0.04	-0.02	-0.02	0.31**	
11. Midwest	-0.05	-0.01	0.02	-0.04	0.03	0.10*	0.10*	0.03	-0.03	-0.01
12. South	-0.02	-0.03	-0.13**	0.07	-0.09*	0.15**	0.18**	0.01	-0.02	-0.07
13. West	0.03	0.00	0.12**	-0.06	0.05	-0.26**	-0.27**	-0.01	0.01	0.04
14. Employment status	-0.09*	0.03	0.01	0.03	-0.01	0.23**	0.18**	0.16**	-0.22**	0.10*
15. Education	-0.03	0.14**	-0.04	0.08	0.04	0.28**	0.22**	0.15**	-0.12**	0.03
16. Household income	-0.07	0.15**	-0.01	0.10*	0.12**	0.30**	0.22**	0.06	-0.14**	0.23**
17. English proficiency	-0.07	0.27**	-0.12**	0.15**	-0.04	0.48**	0.36**	0.16**	-0.47**	-0.16**
18. Citizenship	0.00	0.12**	-0.03	0.05	0.12**	0.20**	0.17**	0.06	0.04	0.09*
19. Nativity/Years in U.S.	0.06	0.07	-0.02	0.07	0.11*	0.15**	0.90*	0.12**	0.19**	0.15**

Note. \*\*  $p < .01$ ; \*  $p < .05$ . SSS = subjective social status.

Table 6 (cont'd).

	11	12	13	14	15	16	17	18
12. South	-0.03							
13. West	-0.14**	-0.79**						
14. Employment status	0.01	0.14**	-0.13**					
15. Education	0.14**	-0.16**	0.10*	0.12**				
16. Household income	0.01	-0.02	0.00	0.33**	0.28**			
17. English proficiency	0.08	0.07	-0.15**	0.24**	0.35**	0.33**		
18. Citizenship	0.04	-0.05	0.06	0.12**	0.16**	0.25**	0.30**	
19. Nativity/Years in U.S.	-0.01	-0.05	0.02	0.11*	0.28**	0.29**	0.20**	0.30**

Note. \*\*  $p < .01$ ; \*  $p < .05$ .

Table 7. Adjusted linear regression results for perceived discrimination predicting psychological distress for Asian American sample.

Predictor	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>
Intercept	1.35*	0.06		0.00
Perceived discrimination	0.18*	0.01	0.28	0.00
Vietnamese	-0.08*	0.03	-0.06	0.02
Filipino	-0.09*	0.03	-0.08	0.00
Other Asian	-0.07*	0.03	-0.07	0.01
Sex	-0.06*	0.02	-0.07	0.00
Age	0.00	0.00	0.02	0.47
Marital status	-0.07*	0.02	-0.07	0.00
Midwest	-0.06	0.04	-0.03	0.17
South	0.05	0.04	0.03	0.29
West	-0.04	0.03	-0.04	0.16
Employment status	0.00	0.02	0.00	0.94
Education	-0.01	0.02	-0.01	0.54
Household income	-0.02*	0.01	-0.06	0.02
English proficiency	-0.06*	0.02	-0.07	0.01
Citizenship	-0.05*	0.02	-0.05	0.03
Nativity/Years in U.S.	0.01	0.01	0.03	0.13

Note:  $R^2 = 0.10$ , \*  $p < 0.05$ .  $n = 2095$

Table 8. Adjusted moderated multiple regression results for perceived discrimination predicting psychological distress for Asian American sample.

Predictor	Model 1				Model 2				Model 3			
	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>
Intercept	1.69*	0.06		0.00	1.54*	0.06		0.00	1.53*	0.05		0.00
Vietnamese	-0.12*	0.04	-0.09	0.00	-0.07*	0.03	-0.05	0.04	-0.06*	0.03	-0.05	0.05
Filipino	-0.07*	0.03	-0.06	0.03	-0.07*	0.03	-0.06	0.01	-0.07*	0.03	-0.07	0.01
Other Asians	-0.06*	0.03	-0.06	0.04	-0.05*	0.03	-0.05	0.05	-0.05*	0.03	-0.05	0.05
Sex	-0.03	0.02	-0.04	0.11	-0.05*	0.02	-0.05	0.02	-0.05*	0.02	-0.05	0.02
Age	0.00	0.00	-0.03	0.21	0.00	0.00	0.02	0.45	0.00	0.00	0.02	0.50
Marital Status	-0.10*	0.03	-0.09	0.00	-0.03	0.02	-0.03	0.17	-0.03	0.02	-0.03	0.14
Midwest	-0.05	0.04	-0.03	0.26	-0.03	0.04	-0.02	0.53	-0.01	0.04	-0.01	0.80
South	0.03	0.05	0.02	0.47	0.06	0.04	0.04	0.14	0.07	0.04	0.04	0.11
West	-0.04	0.03	-0.04	0.15	-0.02	0.03	-0.02	0.53	-0.01	0.03	-0.01	0.78
Employment Status	0.01	0.02	0.01	0.78	0.00	0.02	0.00	0.85	0.00	0.02	0.00	0.98
Education	-0.01	0.02	-0.01	0.74	-0.02	0.02	-0.02	0.45	-0.02	0.02	-0.02	0.42
Household Income	-0.02*	0.01	-0.05	0.05	-0.01	0.01	-0.03	0.16	-0.01	0.01	-0.03	0.27
English Proficiency	-0.05*	0.02	-0.06	0.04	-0.03	0.02	-0.04	0.13	-0.04	0.02	-0.05	0.07
Citizenship	-0.03	0.02	-0.03	0.17	-0.04	0.02	-0.04	0.07	-0.03	0.02	-0.03	0.18
Nativity/Years in US	0.01	0.01	0.03	0.15	0.00	0.01	0.00	0.87	0.00	0.01	0.00	0.82
PD					0.11*	0.01	0.17	0.00	0.11*	0.01	0.18	0.00
FCoh					-0.08*	0.02	-0.08	0.00	-0.09*	0.03	-0.09	0.00
FCon					0.34*	0.03	0.26	0.00	0.28*	0.03	0.22	0.00
NC					-0.01	0.02	-0.01	0.52	-0.01	0.02	-0.02	0.38
SSS					-0.01	0.01	-0.05	0.09	-0.02*	0.01	-0.06	0.03
CSSS					-0.02*	0.01	-0.08	0.01	-0.02*	0.01	-0.06	0.02
PD x FCoh									0.07*	0.03	0.06	0.02
PD x FCon									0.19*	0.04	0.12	0.00
PD x NC									0.02	0.02	0.03	0.19
PD x SSS									-0.01	0.01	-0.03	0.22

Table 8 (cont'd).

Predictor	Model 1				Model 2				Model 3			
	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>
PD x CSSS									-0.03*	0.01	-0.09	0.00
Total $R^2$				0.03				0.20				0.22
Note: PD = perceived discrimination; FCoh = family cohesion; FCon = family conflict; NC = neighborhood cohesion; CSSS = Community-SSS; SSS = subjective social status. $n = 2095$												

Table 9. Mediation model (perceived discrimination → SSS → psychological distress) for Asian American sample.

<b>Outcome: Subjective social status</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Perceived Discrimination	-0.17*	0.06	0.00	-0.28	-0.06
Vietnamese	-0.44*	0.11	0.00	-0.65	-0.22
Filipino	0.13	0.11	0.22	-0.08	0.34
Other Asians	0.17	0.11	0.12	-0.04	0.38
Sex	-0.29*	0.07	0.00	-0.44	-0.14
Age	0.00	0.00	0.10	-0.01	0.00
Marital Status	0.13	0.09	0.15	-0.05	0.30
Midwest	0.02	0.22	0.91	-0.41	0.46
South	0.33	0.20	0.09	-0.06	0.73
West	-0.17	0.14	0.24	-0.45	0.11
Employment Status	0.08	0.08	0.33	-0.08	0.25
Education	0.57*	0.08	0.00	0.41	0.73
Household Income	0.24*	0.04	0.00	0.17	0.32
English Proficiency	0.97*	0.07	0.00	0.82	1.11
Citizenship	0.18*	0.09	0.05	0.00	0.35
Nativity/Years in US	-0.03	0.04	0.42	-0.10	0.04
<b>Outcome: Psychological Distress</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
SSS	-0.03*	0.01	0.00	-0.04	-0.02
Perceived Discrimination	0.17*	0.02	0.00	0.14	0.20
Vietnamese	-0.10*	0.03	0.00	-0.16	-0.04
Filipino	-0.10*	0.03	0.00	-0.15	-0.04
Other Asians	-0.05	0.03	0.13	-0.10	0.01
Sex	-0.05*	0.02	0.03	-0.09	-0.01
Age	0.00	0.00	0.52	0.00	0.00
Marital Status	-0.08*	0.03	0.00	-0.12	-0.03
Midwest	-0.03	0.06	0.63	-0.15	0.09
South	-0.01	0.06	0.91	-0.12	0.10
West	-0.03	0.04	0.52	-0.10	0.05
Employment Status	-0.05*	0.02	0.05	-0.09	0.00
Education	-0.04	0.02	0.07	-0.09	0.00
Household Income	-0.02	0.01	0.16	-0.04	0.01
English Proficiency	-0.04*	0.02	0.05	-0.08	0.00
Citizenship	-0.03	0.02	0.29	-0.07	0.02
Nativity/Years in US	0.02*	0.01	0.03	0.00	0.04

Table 9 (cont'd).

Indirect effect	<i>Est.</i>	<i>SE</i>	<i>LL</i>	<i>UL</i>
Perceived discrimination → SSS → psychological distress	0.005*	0.002	0.002	0.011

Note. Regression coefficients reported are unstandardized. Est. = estimate of indirect effect based on 5,000 bootstrap samples. LL = 95% lower limit confidence interval. UL = 95% upper limit confidence interval.

Table 10. Mediation model (perceived discrimination → Community-SSS → psychological distress) for Asian American sample.

<b>Outcome: Community-SSS.</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Perceived Discrimination	-0.20*	0.06	0.00	-0.32	-0.08
Vietnamese	-0.32*	0.12	0.01	-0.55	-0.09
Filipino	0.30*	0.11	0.01	0.07	0.52
Other Asians	0.34*	0.12	0.00	0.11	0.57
Sex	-0.11	0.08	0.16	-0.27	0.05
Age	0.00	0.00	0.13	-0.01	0.00
Marital Status	0.09	0.10	0.35	-0.10	0.28
Midwest	0.24	0.24	0.32	-0.23	0.71
South	0.77*	0.22	0.00	0.34	1.19
West	-0.01	0.16	0.95	-0.31	0.29
Employment Status	0.01	0.09	0.93	-0.17	0.19
Education	0.51*	0.09	0.00	0.34	0.68
Household Income	0.20*	0.04	0.00	0.12	0.28
English Proficiency	0.76*	0.08	0.00	0.60	0.92
Citizenship	0.02	0.09	0.81	-0.16	0.21
Nativity/Years in US	-0.07	0.04	0.10	-0.14	0.01
<b>Outcome: Psychological Distress</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Community-SSS	-0.03*	0.01	0.00	-0.04	-0.02
Perceived Discrimination	0.17*	0.02	0.00	0.14	0.20
Vietnamese	-0.10*	0.03	0.00	-0.16	-0.04
Filipino	-0.10*	0.03	0.00	-0.16	-0.04
Other Asians	-0.05	0.03	0.09	-0.11	0.01
Sex	-0.05*	0.02	0.01	-0.09	-0.01
Age	0.00	0.00	0.54	0.00	0.00
Marital Status	-0.08*	0.02	0.00	-0.12	-0.03
Midwest	-0.03	0.06	0.59	-0.16	0.09
South	-0.02	0.06	0.76	-0.13	0.09
West	-0.03	0.04	0.44	-0.11	0.05
Employment Status	-0.04	0.02	0.08	-0.09	0.01
Education	-0.04	0.02	0.11	-0.08	0.01
Household Income	-0.01	0.01	0.21	-0.04	0.01
English Proficiency	-0.03	0.02	0.12	-0.08	0.01
Citizenship	-0.02	0.02	0.36	-0.07	0.03
Nativity/Years in US	0.02*	0.01	0.02	0.00	0.04



Table 10 (cont'd).

Indirect effect	<i>Est.</i>	<i>SE</i>	<i>LL</i>	<i>UL</i>
Perceived discrimination				
→ Community-SSS	0.005*	0.002	0.002	0.011
→ psychological distress				
Note. Regression coefficients reported are unstandardized. Est. = estimate of indirect effect based on 5,000 bootstrap samples. LL = 95% lower limit confidence interval. UL = 95% upper limit confidence interval. SSS = subjective social status.				

Table 11. Adjusted linear regression results for perceived discrimination predicting psychological distress for Chinese sample.

Predictor	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>
Intercept	1.38*	0.11		0.00
Perceived Discrimination	0.12*	0.03	0.17	0.00
Sex	-0.08	0.04	-0.08	0.06
Age	0.00	0.00	-0.05	0.36
Marital Status	-0.10*	0.05	-0.10	0.03
Midwest	0.18*	0.08	0.10	0.03
South	0.35*	0.11	0.14	0.00
West	0.10	0.05	0.10	0.06
Employment Status	-0.03	0.05	-0.03	0.49
Education	-0.08	0.04	-0.09	0.06
Household Income	0.01	0.02	0.03	0.58
English Proficiency	-0.06	0.04	-0.09	0.10
Citizenship	-0.04	0.05	-0.04	0.35
Nativity/Years in U.S.	0.03	0.02	0.08	0.08

Note:  $R^2 = 0.08$ ,  $p < 0.05$ .  $n = 600$

Table 12. Adjusted moderated multiple regression results for perceived discrimination predicting psychological distress for Chinese sample.

Predictor	Model 1				Model 2				Model 3			
	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>
Intercept	1.59*	0.10		0.00	1.58*	0.10		0.00	1.57*	0.10		0.00
Sex	-0.06	0.04	-0.06	0.15	-0.06	0.04	-0.07	0.10	-0.06	0.04	-0.07	0.11
Age	0.00	0.00	-0.08	0.12	0.00	0.00	-0.08	0.10	0.00	0.00	-0.08	0.13
Marital Status	-0.12*	0.05	-0.13	0.01	-0.05	0.05	-0.05	0.30	-0.05	0.05	-0.05	0.31
Midwest	0.18*	0.09	0.10	0.04	0.18*	0.08	0.10	0.03	0.18*	0.08	0.10	0.03
South	0.37*	0.11	0.15	0.00	0.36*	0.11	0.15	0.00	0.36*	0.11	0.15	0.00
West	0.11*	0.05	0.11	0.05	0.11*	0.05	0.11	0.03	0.11*	0.05	0.11	0.04
Employment Status	-0.03	0.05	-0.03	0.54	-0.03	0.04	-0.03	0.54	-0.02	0.05	-0.02	0.61
Education	-0.08	0.04	-0.08	0.08	-0.09*	0.04	-0.09	0.04	-0.08*	0.04	-0.09	0.05
Household Income	0.02	0.02	0.05	0.39	0.02	0.02	0.04	0.39	0.02	0.02	0.04	0.45
English Proficiency	-0.05	0.04	-0.07	0.17	-0.05	0.04	-0.08	0.18	-0.05	0.04	-0.08	0.14
Citizenship	-0.03	0.05	-0.03	0.56	-0.03	0.05	-0.03	0.56	-0.01	0.05	-0.02	0.75
Nativity/Years in US	0.04	0.02	0.08	0.07	0.02	0.02	0.04	0.42	0.02	0.02	0.03	0.43
PD					0.04	0.03	0.06	0.17	0.05	0.03	0.07	0.15
FCoh					-0.03	0.04	-0.04	0.45	-0.04	0.04	-0.04	0.36
FCon					0.38*	0.06	0.30	0.00	0.36*	0.06	0.28	0.00
NC					0.00	0.03	0.00	0.99	0.00	0.03	0.00	0.97
SSS					0.00	0.01	-0.01	0.81	0.00	0.01	-0.01	0.80
CSSS					-0.02	0.01	-0.10	0.08	-0.02	0.01	-0.09	0.09
PD x FCoh									0.08	0.05	0.07	0.13
PD x FCon									0.09	0.09	0.05	0.29
PD x NC									-0.05	0.05	-0.04	0.29
PD x SSS									-0.01	0.02	-0.02	0.70
PD x CSSS									-0.02	0.02	-0.04	0.40

Table 12 (cont'd).			
Total $R^2$	0.06	0.18	0.18
Note: PD = perceived discrimination; FCoh = family cohesion; FCon = family conflict; NC = neighborhood cohesion; CSSS = Community-SSS; SSS = subjective social status. $n = 600$ .			

Table 13. Mediation model (perceived discrimination → SSS → psychological distress for Chinese sample.

<b>Outcome: Subjective social status</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Perceived Discrimination	-0.10	0.11	0.36	-0.32	0.11
Sex	-0.18	0.14	0.19	-0.46	0.09
Age	0.00	0.01	0.65	-0.01	0.01
Marital Status	0.11	0.17	0.52	-0.22	0.43
Midwest	0.01	0.40	0.99	-0.78	0.79
South	0.37	0.44	0.40	-0.50	1.24
West	0.10	0.25	0.68	-0.39	0.60
Employment Status	0.08	0.17	0.63	-0.25	0.41
Education	0.46*	0.15	0.00	0.16	0.77
Household Income	0.27*	0.08	0.00	0.12	0.41
English Proficiency	1.02*	0.13	0.00	0.76	1.27
Citizenship	0.14	0.16	0.39	-0.18	0.46
Nativity/Years in US	-0.17*	0.07	0.01	-0.30	-0.04
<b>Outcome: Psychological Distress</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
SSS	-0.02	0.01	0.06	-0.05	0.00
Perceived Discrimination	0.11*	0.03	0.00	0.05	0.17
Sex	-0.09*	0.04	0.03	-0.17	-0.01
Age	0.00	0.00	0.79	0.00	0.00
Marital Status	-0.08	0.05	0.08	-0.18	0.01
Midwest	0.12	0.12	0.29	-0.11	0.36
South	0.21	0.13	0.10	-0.04	0.47
West	0.05	0.07	0.54	-0.10	0.19
Employment Status	-0.05	0.05	0.35	-0.14	0.05
Education	-0.08	0.05	0.10	-0.17	0.01
Household Income	0.00	0.02	0.83	-0.04	0.05
English Proficiency	-0.04	0.04	0.36	-0.12	0.04
Citizenship	-0.03	0.05	0.55	-0.12	0.07
Nativity/Years in US	0.04*	0.02	0.04	0.00	0.08
Indirect effect	<i>Est.</i>	<i>SE</i>		<i>LL</i>	<i>UL</i>
Perceived discrimination → SSS → psychological distress	0.002	0.004		-0.002	0.017
Note. Regression coefficients reported are unstandardized. Est. = estimate of indirect effect based on 5,000 bootstrap samples. LL = 95% lower limit confidence interval. UL = 95% upper limit confidence interval.					

Table 14. Mediation model (perceived discrimination → Community-SSS → psychological distress) for Chinese participants.

<b>Outcome: Community-SSS</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Perceived Discrimination	-0.15	0.12	0.22	-0.38	0.09
Sex	-0.19	0.15	0.21	-0.48	0.11
Age	0.00	0.01	0.84	-0.01	0.01
Marital Status	0.06	0.18	0.72	-0.29	0.42
Midwest	0.14	0.42	0.74	-0.69	0.98
South	0.62	0.48	0.19	-0.31	1.56
West	0.16	0.27	0.56	-0.37	0.69
Employment Status	0.02	0.18	0.90	-0.33	0.38
Education	0.47*	0.17	0.01	0.14	0.79
Household Income	0.23*	0.08	0.01	0.07	0.39
English Proficiency	0.83*	0.14	0.00	0.55	1.10
Citizenship	-0.17	0.18	0.34	-0.51	0.18
Nativity/Years in US	-0.23*	0.07	0.00	-0.37	-0.09
<b>Outcome: Psychological Distress</b>					
Predictor	<i>B</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
CSSS	-0.02*	0.01	0.04	-0.05	0.00
Perceived Discrimination	0.11*	0.03	0.00	0.04	0.17
Sex	-0.09*	0.04	0.03	-0.17	-0.01
Age	0.00	0.00	0.76	0.00	0.00
Marital Status	-0.08	0.05	0.13	-0.17	0.02
Midwest	0.12	0.12	0.30	-0.11	0.35
South	0.22	0.13	0.10	-0.04	0.47
West	0.05	0.07	0.53	-0.10	0.19
Employment Status	-0.06	0.05	0.26	-0.15	0.04
Education	-0.08	0.05	0.08	-0.17	0.01
Household Income	0.01	0.02	0.78	-0.04	0.05
English Proficiency	-0.04	0.04	0.30	-0.12	0.04
Citizenship	-0.03	0.05	0.58	-0.12	0.07
Nativity/Years in US	0.04	0.02	0.06	0.00	0.08
Indirect effect	<i>Est.</i>	<i>SE</i>		<i>LL</i>	<i>UL</i>
Perceived discrimination → Community-SSS → psychological distress	0.004	0.004		-0.001	0.015
Note. Regression coefficients reported are unstandardized. Est. = estimate of indirect effect based on 5,000 bootstrap samples. LL = 95% lower limit confidence interval. UL = 95% upper limit confidence interval. SSS = subjective social status.					

Table 15. Adjusted linear regression results for perceived discrimination predicting psychological distress for Filipino sample.

Predictor	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>
Intercept	1.57*	0.13		0.00
Perceived Discrimination	0.19*	0.02	0.37	0.00
Sex	-0.01	0.03	-0.01	0.76
Age	0.00	0.00	-0.04	0.44
Marital Status	-0.10*	0.04	-0.12	0.01
Midwest	-0.18*	0.09	-0.11	0.04
South	-0.12	0.08	-0.08	0.14
West	-0.16*	0.06	-0.17	0.01
Employment Status	-0.06	0.04	-0.07	0.10
Education	-0.09*	0.03	-0.11	0.01
Household Income	0.01	0.02	0.03	0.57
English Proficiency	-0.11*	0.05	-0.10	0.04
Citizenship	-0.11*	0.04	-0.12	0.01
Nativity/Years in U.S.	-0.01	0.02	-0.02	0.60

Note:  $R^2 = 0.19$ ,  $p < 0.05$ .  $n = 508$

Table 16. Adjusted moderated multiple regression results for perceived discrimination predicting psychological distress for Filipino sample.

Predictor	Model 1				Model 2				Model 3			
	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>
Intercept	1.85*	0.14		0.00	1.87*	0.13		0.00	1.90*	0.13		0.00
Sex	0.03	0.04	0.04	0.34	0.01	0.03	0.01	0.79	0.01	0.03	0.01	0.81
Age	0.00	0.00	-0.09	0.10	0.00	0.00	-0.01	0.87	0.00	0.00	0.00	0.94
Marital Status	-0.09*	0.04	-0.11	0.03	-0.09*	0.04	-0.10	0.03	-0.11*	0.04	-0.13	0.01
Midwest	-0.07	0.09	-0.04	0.46	-0.12	0.09	-0.07	0.19	-0.09	0.09	-0.06	0.31
South	-0.09	0.09	-0.06	0.33	-0.11	0.08	-0.07	0.20	-0.09	0.08	-0.06	0.26
West	-0.11	0.07	-0.12	0.10	-0.12	0.06	-0.13	0.06	-0.12	0.06	-0.12	0.06
Employment Status	-0.07	0.04	-0.08	0.10	-0.02	0.04	-0.03	0.53	-0.02	0.04	-0.03	0.56
Education	-0.07*	0.04	-0.09	0.05	-0.08*	0.03	-0.09	0.03	-0.08*	0.03	-0.10	0.02
Household Income	0.01	0.02	0.03	0.59	0.01	0.02	0.02	0.67	0.01	0.02	0.02	0.74
English Proficiency	-0.08	0.06	-0.07	0.15	-0.13*	0.05	-0.11	0.02	-0.13*	0.05	-0.12	0.01
Citizenship	-0.09*	0.04	-0.09	0.05	-0.09*	0.04	-0.10	0.02	-0.11*	0.04	-0.11	0.01
Nativity/Years in US	-0.01	0.02	-0.04	0.38	-0.01	0.02	-0.04	0.36	-0.01	0.02	-0.04	0.40
PD					0.15*	0.02	0.29	0.00	0.16*	0.02	0.31	0.00
FCoh					-0.05	0.05	-0.05	0.28	-0.06	0.05	-0.06	0.23
FCon					0.18*	0.05	0.17	0.00	0.17*	0.05	0.16	0.00
NC					-0.01	0.03	-0.02	0.66	-0.02	0.03	-0.02	0.59
SSS					-0.02	0.01	-0.07	0.23	-0.01	0.01	-0.06	0.31
CSSS					0.01	0.01	0.02	0.68	0.00	0.01	0.02	0.75
PD x FCoh									0.06	0.06	0.05	0.28
PD x FCon									0.13	0.07	0.09	0.07
PD x NC									0.07*	0.03	0.11	0.01
PD x SSS									0.04*	0.02	0.13	0.02
PD x CSSS									-0.05*	0.02	-0.17	0.00



Table 16 (cont'd).			
Total $R^2$	0.06	0.23	0.25
Note: PD = perceived discrimination; FCoh = family cohesion; FCon = family conflict; NC = neighborhood cohesion; CSSS = Community subjective social status; SSS = subjective social status. $n = 508$ .			

Table 17. Mediation model (perceived discrimination → SSS → psychological distress) for Filipino sample.

<b>Outcome: Subjective social status</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Perceived Discrimination	-0.16	0.09	0.09	-0.34	0.02
Sex	-0.37*	0.14	0.01	-0.65	-0.08
Age	0.00	0.01	0.98	-0.01	0.01
Marital Status	0.26	0.17	0.12	-0.07	0.60
Midwest	0.35	0.48	0.47	-0.59	1.28
South	0.03	0.44	0.94	-0.84	0.90
West	-0.09	0.35	0.80	-0.78	0.60
Employment Status	-0.07	0.16	0.68	-0.38	0.25
Education	0.41*	0.15	0.01	0.11	0.70
Household Income	0.18*	0.08	0.02	0.03	0.33
English Proficiency	0.64*	0.23	0.01	0.19	1.10
Citizenship	0.38*	0.18	0.03	0.04	0.73
Nativity/Years in US	0.03	0.07	0.67	-0.10	0.16
<b>Outcome: Psychological Distress</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
SSS	-0.03*	0.01	0.02	-0.05	0.00
Perceived Discrimination	0.20*	0.02	0.00	0.16	0.25
Sex	-0.02	0.04	0.67	-0.08	0.05
Age	0.00	0.00	0.72	0.00	0.00
Marital Status	-0.08	0.04	0.06	-0.16	0.00
Midwest	-0.15	0.12	0.20	-0.38	0.08
South	-0.10	0.11	0.37	-0.31	0.12
West	-0.12	0.09	0.18	-0.28	0.05
Employment Status	-0.05	0.04	0.17	-0.13	0.02
Education	-0.08*	0.04	0.04	-0.15	0.00
Household Income	0.01	0.02	0.62	-0.03	0.05
English Proficiency	-0.11*	0.06	0.05	-0.23	0.00
Citizenship	-0.07	0.04	0.11	-0.15	0.02
Nativity/Years in US	-0.01	0.02	0.57	-0.04	0.02
Indirect effect	<i>Est.</i>	<i>SE</i>		<i>LL</i>	<i>UL</i>
Perceived discrimination → SSS → psychological distress	0.004	0.003		0.000	0.013

Note. Regression coefficients reported are unstandardized. Est. = estimate of indirect effect based on 5,000 bootstrap samples. LL = 95% lower limit confidence interval. UL = 95% upper limit confidence interval.

Table 18. Mediation model (perceived discrimination → Community-SSS → psychological distress) for Filipino participants.

<b>Outcome: Community-SSS</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Perceived Discrimination	-0.17	0.10	0.08	-0.36	0.02
Sex	-0.18	0.15	0.24	-0.48	0.12
Age	0.00	0.01	0.70	-0.01	0.01
Marital Status	0.15	0.18	0.41	-0.20	0.50
Midwest	1.22*	0.50	0.02	0.23	2.21
South	0.62	0.47	0.19	-0.30	1.55
West	0.42	0.37	0.25	-0.31	1.15
Employment Status	-0.30	0.17	0.08	-0.63	0.03
Education	0.34*	0.16	0.03	0.03	0.65
Household Income	0.17*	0.08	0.04	0.00	0.33
English Proficiency	0.71*	0.25	0.00	0.23	1.19
Citizenship	0.24	0.19	0.20	-0.13	0.61
Nativity/Years in US	0.04	0.07	0.57	-0.10	0.18
<b>Outcome: Psychological Distress</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
CSSS	0.00	0.01	0.66	-0.03	0.02
Perceived Discrimination	0.21*	0.02	0.00	0.16	0.25
Sex	-0.01	0.04	0.87	-0.08	0.06
Age	0.00	0.00	0.70	0.00	0.00
Marital Status	-0.09*	0.04	0.04	-0.17	0.00
Midwest	-0.15	0.12	0.20	-0.38	0.08
South	-0.10	0.11	0.38	-0.31	0.12
West	-0.11	0.09	0.20	-0.28	0.06
Employment Status	-0.06	0.04	0.16	-0.13	0.02
Education	-0.09*	0.04	0.02	-0.16	-0.01
Household Income	0.01	0.02	0.77	-0.03	0.04
English Proficiency	-0.13*	0.06	0.03	-0.24	-0.01
Citizenship	-0.08	0.04	0.07	-0.16	0.01
Nativity/Years in US	-0.01	0.02	0.55	-0.04	0.02
Indirect effect	<i>Est.</i>	<i>SE</i>		<i>LL</i>	<i>UL</i>
Perceived discrimination → Community-SSS → psychological distress	0.001	0.002		-0.003	0.007
Note. Regression coefficients reported are unstandardized. Est. = estimate of indirect effect based on 5,000 bootstrap samples. LL = 95% lower limit confidence interval. UL = 95% upper limit confidence interval. SSS = subjective social status.					

Table 19. Adjusted linear regression results for perceived discrimination predicting psychological distress for Vietnamese sample.

Predictor	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>
Intercept	1.15*	0.15		0.00
Perceived Discrimination	0.13*	0.04	0.16	0.00
Sex	-0.06	0.05	-0.06	0.20
Age	0.00	0.00	0.09	0.11
Marital Status	-0.28*	0.06	-0.23	0.00
Midwest	-0.25	0.17	-0.07	0.15
South	0.12	0.08	0.08	0.15
West	0.07	0.07	0.06	0.33
Employment Status	-0.01	0.05	-0.01	0.84
Education	0.07	0.06	0.05	0.30
Household Income	-0.02	0.02	-0.04	0.48
English Proficiency	-0.07	0.04	-0.10	0.08
Citizenship	0.04	0.06	0.03	0.53
Nativity/Years in U.S.	0.06*	0.03	0.10	0.03

Note:  $R^2 = 0.12$ ,  $p < 0.05$ .  $n = 520$

Table 20. Adjusted moderated multiple regression results for perceived discrimination predicting psychological distress for Vietnamese sample.

Predictor	Model 1				Model 2				Model 3			
	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>B</i>	<i>p</i>
Intercept	1.37*	0.14		0.00	1.21*	0.13		0.00	1.24*	0.13		0.00
Sex	-0.04	0.05	-0.04	0.38	-0.07	0.05	-0.06	0.15	-0.08	0.05	-0.07	0.12
Age	0.00	0.00	0.07	0.26	0.00*	0.00	0.13	0.02	0.01*	0.00	0.15	0.01
Marital Status	-0.33*	0.06	-0.27	0.00	-0.17*	0.06	-0.14	0.01	-0.17*	0.06	-0.14	0.01
Midwest	-0.32	0.18	-0.09	0.08	-0.15	0.17	-0.04	0.38	-0.16	0.17	-0.04	0.34
South	0.10	0.09	0.07	0.25	0.02	0.08	0.01	0.85	-0.03	0.08	-0.02	0.70
West	0.06	0.07	0.05	0.40	0.05	0.07	0.04	0.49	0.02	0.07	0.02	0.76
Employment Status	-0.02	0.06	-0.01	0.77	0.02	0.05	0.02	0.72	0.02	0.05	0.02	0.72
Education	0.08	0.07	0.06	0.22	0.03	0.06	0.03	0.59	0.03	0.06	0.02	0.65
Household Income	-0.01	0.03	-0.02	0.64	-0.02	0.02	-0.04	0.43	-0.02	0.02	-0.04	0.46
English Proficiency	-0.07	0.04	-0.10	0.11	-0.04	0.04	-0.05	0.38	-0.03	0.04	-0.05	0.42
Citizenship	0.05	0.06	0.04	0.38	0.02	0.06	0.02	0.70	0.03	0.06	0.02	0.66
Nativity/Years in US	0.07*	0.03	0.11	0.03	0.05	0.03	0.08	0.08	0.04	0.03	0.07	0.14
PD					0.04	0.04	0.06	0.25	0.14*	0.05	0.18	0.01
FCoh					-0.31*	0.07	-0.25	0.00	-0.33*	0.07	-0.26	0.00
FCon					0.22*	0.08	0.15	0.01	0.22*	0.09	0.16	0.01
NC					0.01	0.04	0.02	0.74	0.00	0.04	0.00	0.93
SSS					-0.03	0.02	-0.13	0.08	-0.02	0.02	-0.10	0.18
CSSS					0.01	0.02	0.05	0.40	0.00	0.02	0.01	0.89
PD x FCoh									0.06	0.09	0.04	0.49
PD x FCon									-0.06	0.10	-0.04	0.55
PD x NC									0.09*	0.04	0.14	0.02
PD x SSS									-0.06*	0.03	-0.16	0.02
PD x CSSS									0.02	0.03	0.05	0.51

Table 20 (cont'd).

Total $R^2$	0.09	0.22	0.25
Note: PD = perceived discrimination; FCoh = family cohesion; FCon = family conflict; NC = neighborhood cohesion; CSSS = community subjective social status; SSS = subjective social status. $n = 520$ .			

Table 21. Mediation model (perceived discrimination → SSS → psychological distress) for Vietnamese sample.

<b>Outcome: Subjective social status</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Perceived Discrimination	-0.25	0.15	0.10	-0.54	0.05
Sex	-0.54*	0.17	0.00	-0.88	-0.19
Age	-0.02*	0.01	0.01	-0.03	0.00
Marital Status	0.00	0.21	0.99	-0.42	0.41
Midwest	0.26	1.10	0.81	-1.90	2.42
South	-0.42	0.40	0.29	-1.20	0.36
West	-1.48*	0.35	0.00	-2.16	-0.79
Employment Status	0.25	0.19	0.19	-0.13	0.62
Education	0.69*	0.22	0.00	0.27	1.12
Household Income	0.23*	0.09	0.01	0.05	0.40
English Proficiency	0.79*	0.14	0.00	0.52	1.06
Citizenship	0.44*	0.21	0.04	0.02	0.86
Nativity/Years in US	0.05	0.11	0.66	-0.16	0.26
<b>Outcome: Psychological Distress</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
SSS	-0.03*	0.01	0.05	-0.05	0.00
Perceived Discrimination	0.17*	0.04	0.00	0.09	0.25
Sex	-0.02	0.05	0.65	-0.12	0.07
Age	0.00*	0.00	0.05	0.00	0.01
Marital Status	-0.24*	0.06	0.00	-0.36	-0.13
Midwest	-0.26	0.30	0.39	-0.85	0.34
South	-0.08	0.11	0.44	-0.30	0.13
West	-0.06	0.10	0.57	-0.25	0.14
Employment Status	-0.02	0.05	0.67	-0.13	0.08
Education	0.02	0.06	0.72	-0.10	0.14
Household Income	-0.02	0.02	0.53	-0.06	0.03
English Proficiency	-0.04	0.04	0.27	-0.12	0.03
Citizenship	0.02	0.06	0.77	-0.10	0.13
Nativity/Years in US	0.04	0.03	0.24	-0.02	0.09
Indirect effect	<i>Est.</i>	<i>SE</i>		<i>LL</i>	<i>UL</i>
Perceived discrimination → SSS → psychological distress	0.006	0.005		0.000	0.012

Note. Regression coefficients reported are unstandardized. Est. = estimate of indirect effect based on 5,000 bootstrap samples. LL = 95% lower limit confidence interval. UL = 95% upper limit confidence interval.

Table 22. Mediation model (perceived discrimination → Community-SSS → psychological distress) for Vietnamese participants.

<b>Outcome: Community-SSS</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Perceived Discrimination	-0.25	0.16	0.13	-0.57	0.07
Sex	-0.12	0.19	0.52	-0.50	0.25
Age	-0.01	0.01	0.12	-0.03	0.00
Marital Status	0.02	0.23	0.93	-0.44	0.48
Midwest	0.34	1.20	0.78	-2.03	2.70
South	-0.11	0.44	0.80	-0.97	0.75
West	-1.44*	0.38	0.00	-2.18	-0.69
Employment Status	0.17	0.21	0.42	-0.24	0.58
Education	0.61*	0.24	0.01	0.14	1.07
Household Income	0.18	0.10	0.06	-0.01	0.37
English Proficiency	0.55*	0.15	0.00	0.26	0.85
Citizenship	0.45*	0.23	0.05	0.00	0.91
Nativity/Years in US	-0.06	0.12	0.59	-0.30	0.17
<b>Outcome: Psychological Distress</b>					
Predictor	<i>b</i>	<i>SE</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
CSSS	-0.02	0.01	0.07	-0.04	0.00
Perceived Discrimination	0.17*	0.04	0.00	0.09	0.25
Sex	-0.01	0.05	0.79	-0.11	0.08
Age	0.00*	0.00	0.03	0.00	0.01
Marital Status	-0.24*	0.06	0.00	-0.36	-0.13
Midwest	-0.26	0.30	0.40	-0.85	0.34
South	-0.07	0.11	0.50	-0.29	0.14
West	-0.05	0.10	0.63	-0.24	0.14
Employment Status	-0.02	0.05	0.65	-0.13	0.08
Education	0.02	0.06	0.78	-0.10	0.13
Household Income	-0.02	0.02	0.49	-0.06	0.03
English Proficiency	-0.05	0.04	0.23	-0.12	0.03
Citizenship	0.01	0.06	0.84	-0.10	0.13
Nativity/Years in US	0.03	0.03	0.28	-0.03	0.09
Indirect effect	<i>Est.</i>	<i>SE</i>		<i>LL</i>	<i>UL</i>
Perceived discrimination → Community-SSS → psychological distress	0.005	0.005		-0.001	0.021
Note. Regression coefficients reported are unstandardized. Est. = estimate of indirect effect based on 5,000 bootstrap samples. LL = 95% lower limit confidence interval. UL = 95% upper limit confidence interval. SSS = subjective social status.					



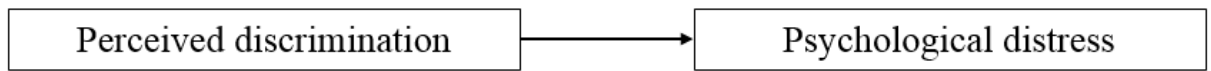


Figure 1. Hypothetical model for Hypothesis 1.

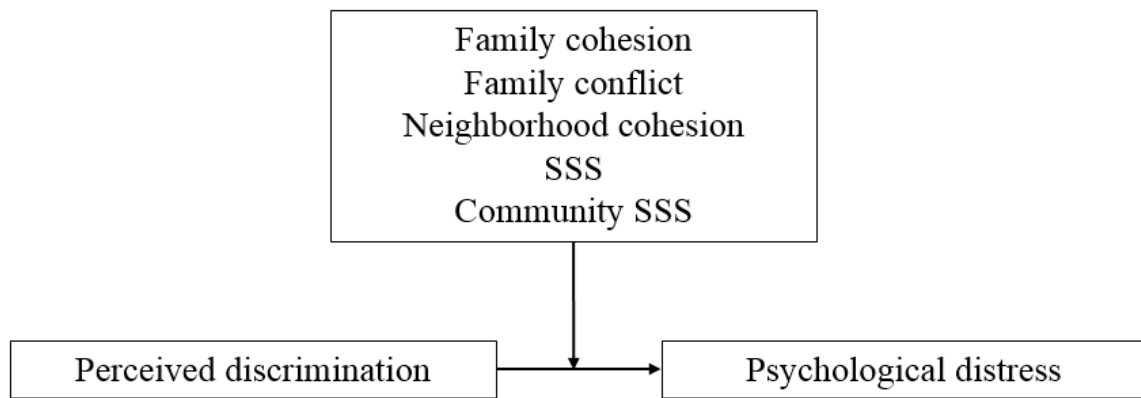


Figure 2. Hypothetical model for Hypothesis 2.

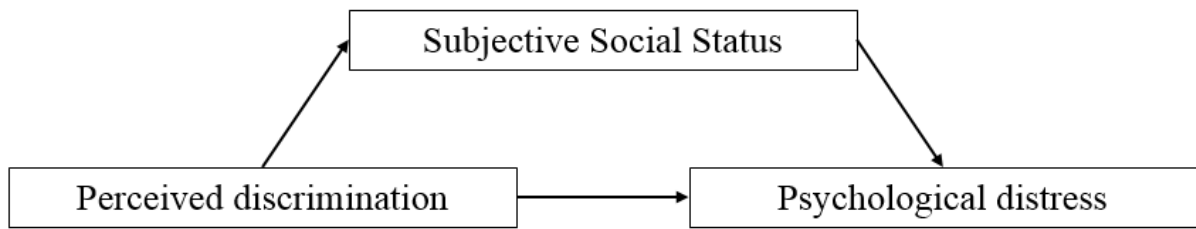


Figure 3. Hypothetical model for Hypothesis 3.

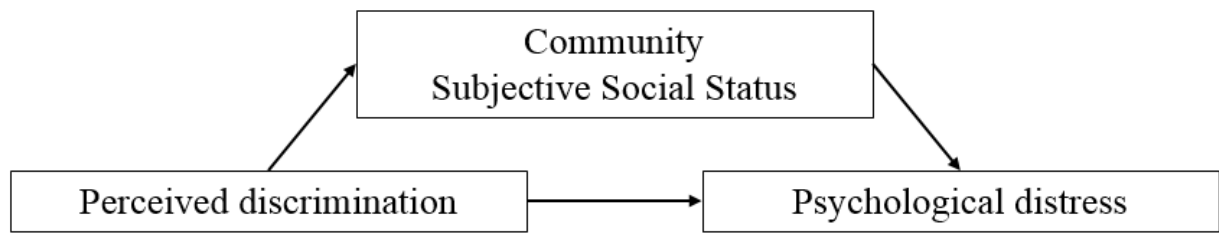


Figure 4. Hypothetical model for Hypothesis 4.

Grouped Scatter of Composite score for K10 by Composite score for PD by Using uncentered family cohesion-high and low levels

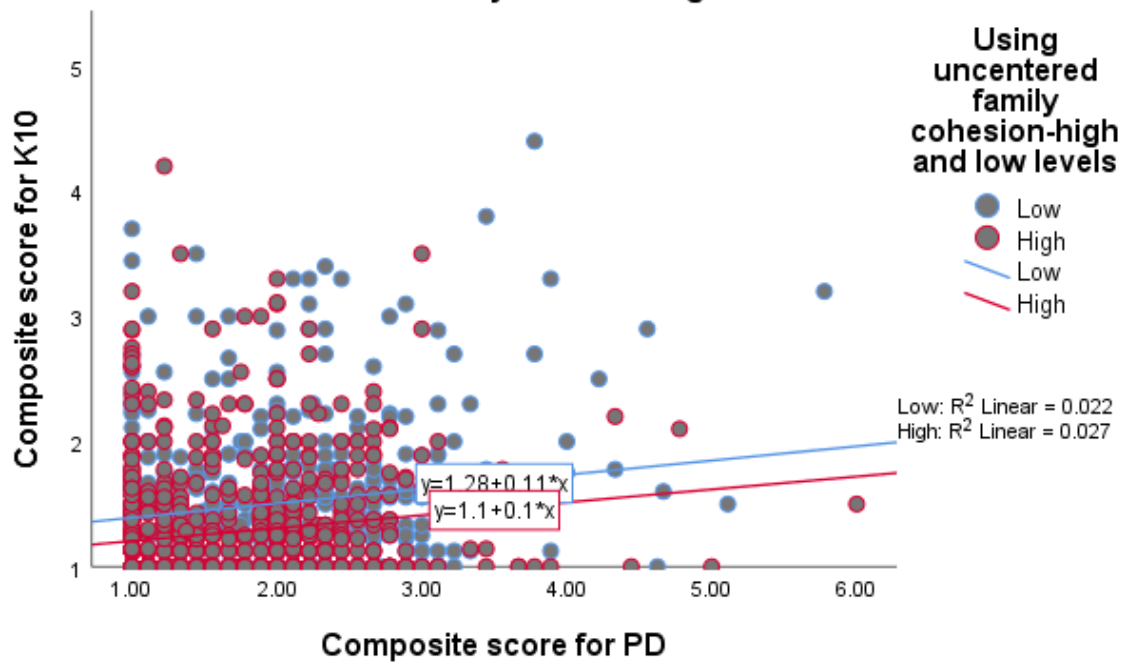


Figure 5. Significant interaction of perceived discrimination and family cohesion (Asian American sample).

Grouped Scatter of Composite score for K10 by Composite score for PD by High and low level of family conflict

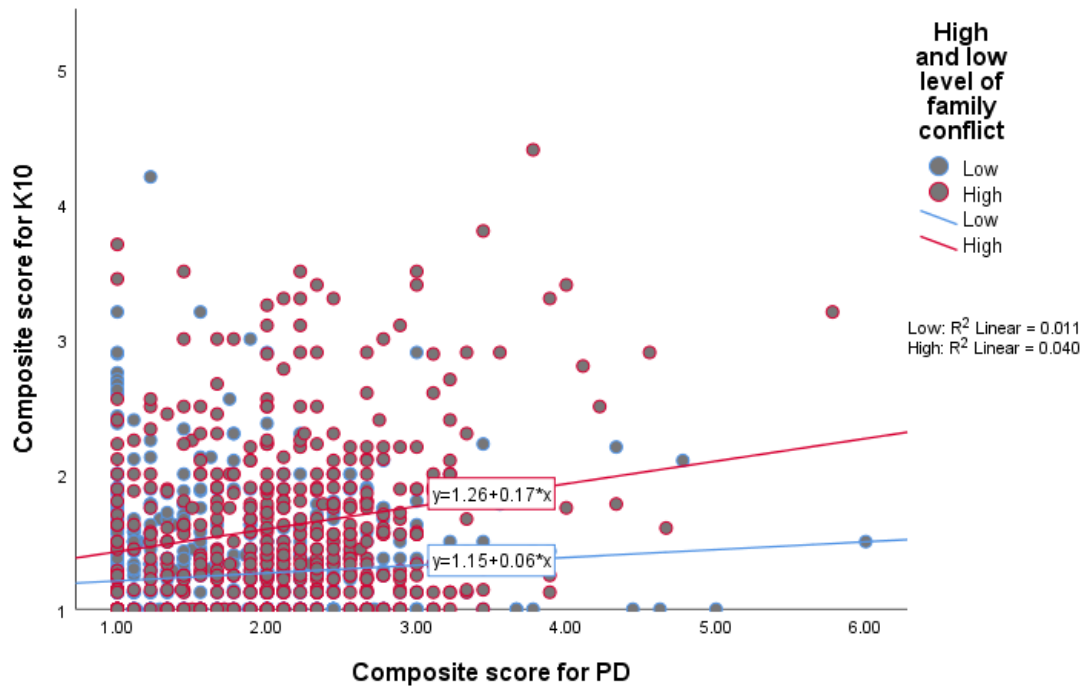


Figure 6. Significant interaction of perceived discrimination and family conflict (Asian American sample).

Grouped Scatter of Composite score for K10 by Composite score for PD by High and Low of Community SSS-AA sample

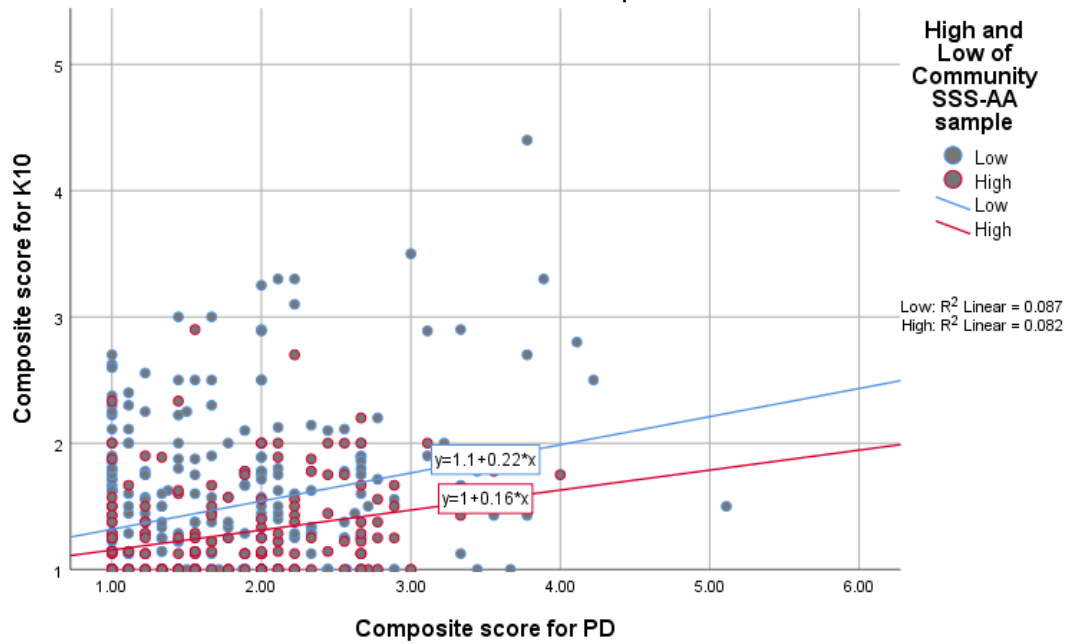


Figure 7. Significant interaction of perceived discrimination and Community-SSS (Asian American sample).

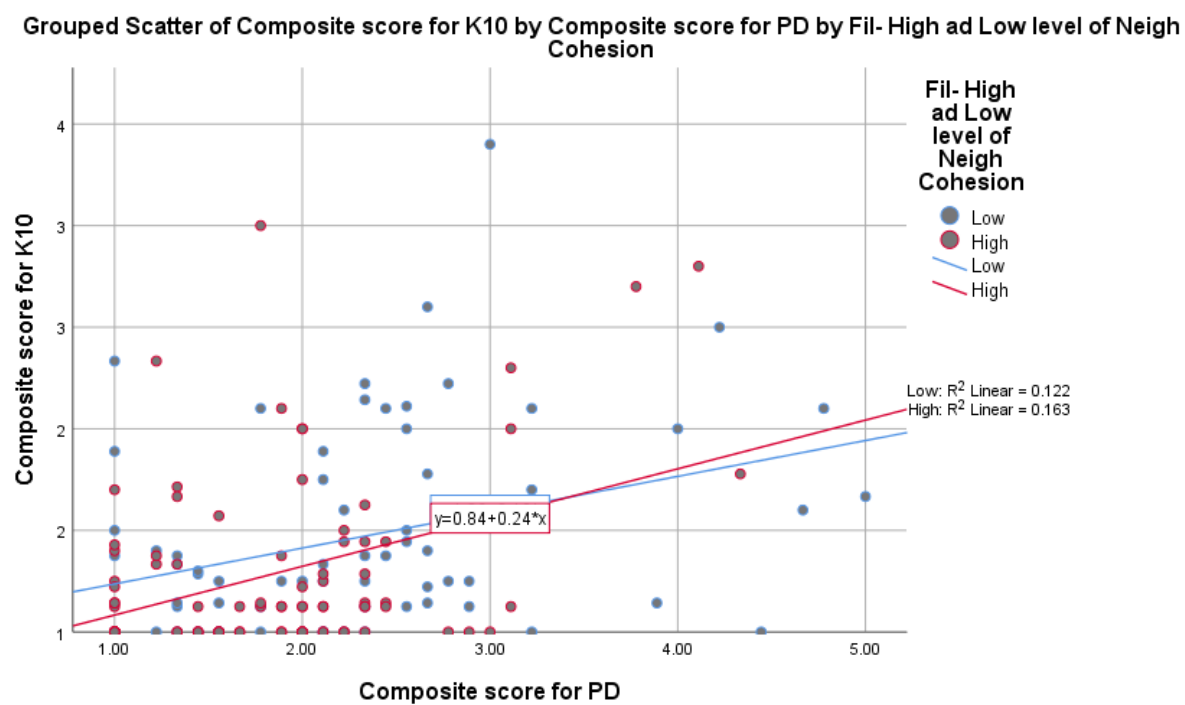


Figure 8. Significant interaction of perceived discrimination and neighborhood cohesion (Filipino American sample).



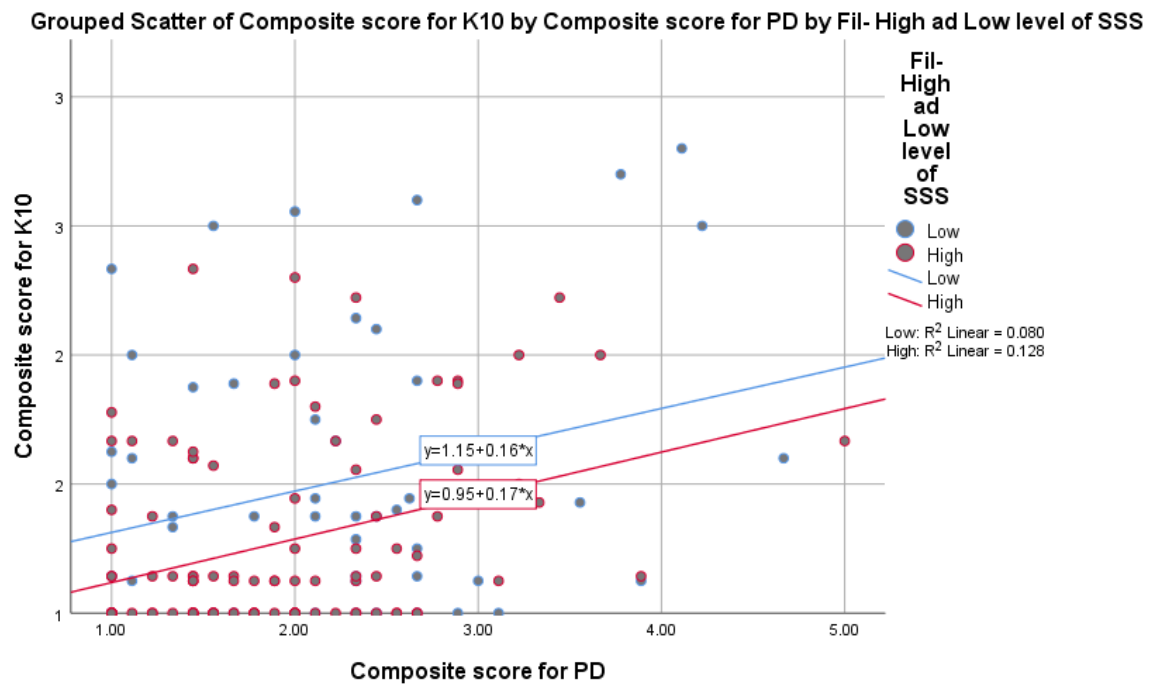


Figure 9. Significant interaction of perceived discrimination and SSS (Filipino American sample).

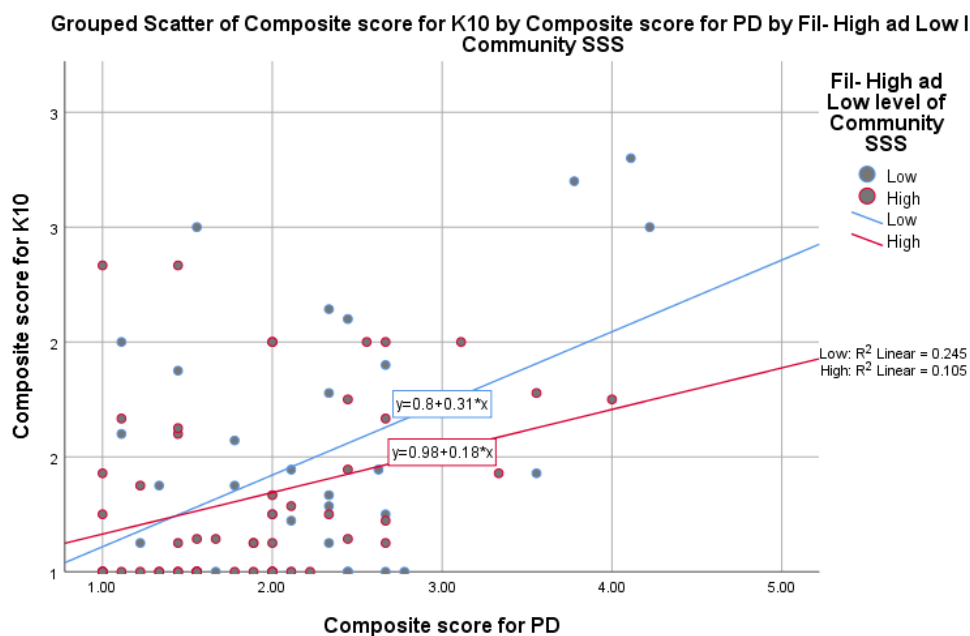


Figure 10. Significant interaction of perceived discrimination and Community-SSS (Filipino American sample).

Grouped Scatter of Composite score for K10 by Composite score for PD by Viet-Low and High level of neigh cohesion 1/2 std

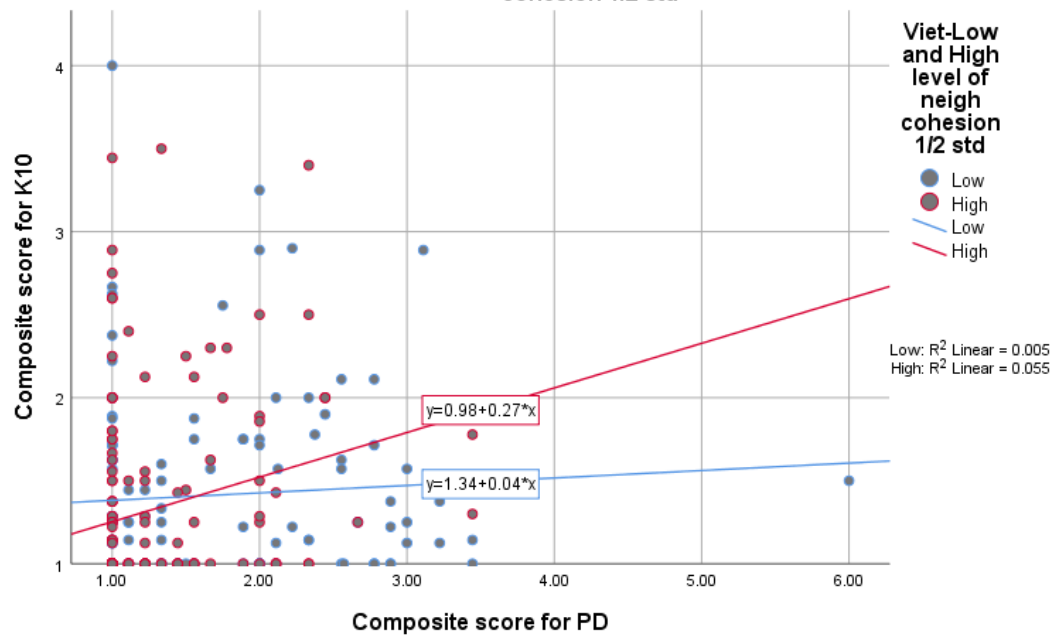


Figure 11. Significant interaction of perceived discrimination and neighborhood cohesion (Vietnamese American sample).

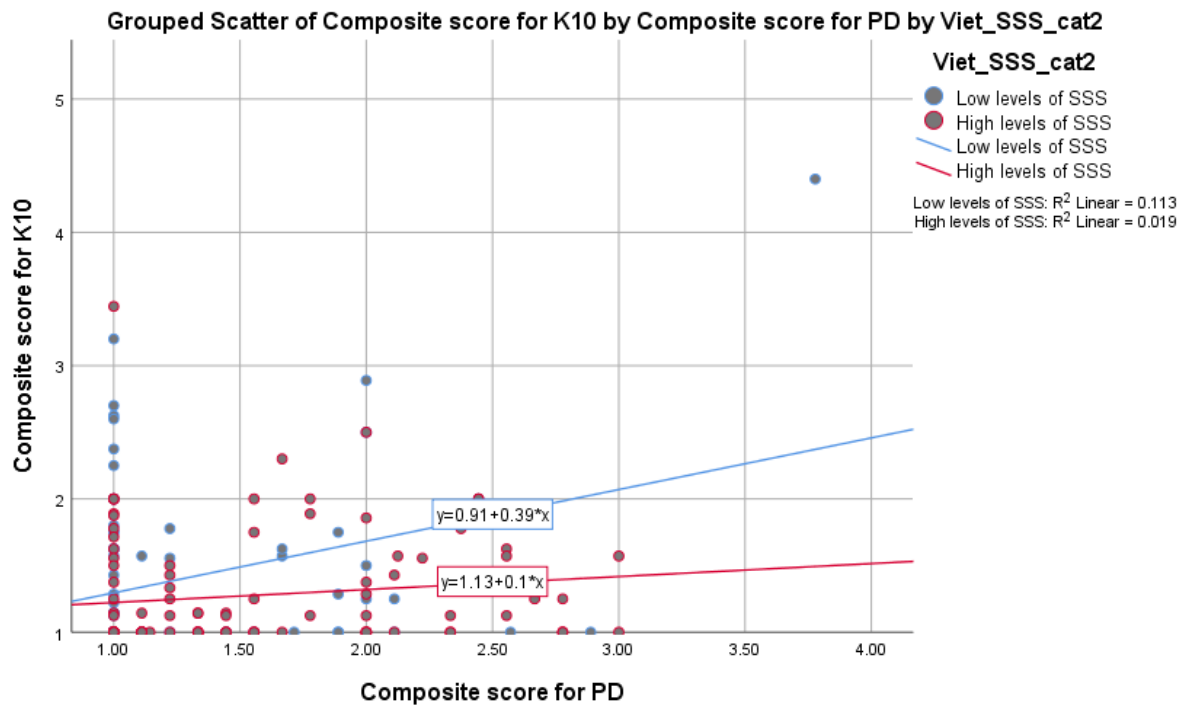


Figure 12. Significant interaction of perceived discrimination and SSS (Vietnamese American sample).

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