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Acculturation and Asian Values as Moderators of the Relationship between Endorsement of Positive Asian Stereotypes and Asian's Subjective Overachievement, Psychological Distress, Well-being, and Attitudes toward Help Seeking: An Analysis of the Model Minority Myth

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To the Graduate Council:

I am submitting herewith a dissertation written by Arpana Gupta entitled "Acculturation and Asian Values as Moderators of the Relationship between Endorsement of Positive Asian Stereotypes and Asian's Subjective Overachievement, Psychological Distress, Well-being, and Attitudes toward Help Seeking: An Analysis of the Model Minority Myth." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Dawn Szymanski, Major Professor

We have read this dissertation and recommend its acceptance:

Brent Mallinckrodt, Jake Levy, Sharon Husch

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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A Dissertation
Presented for the
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Arpana Gupta
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DEDICATION

This dissertation is dedicated to my parents, Ajay Gupta and Shivani Gupta, without whom my education would not have been possible. My parents gave me strength, support, and encouragement throughout the whole process and made my journey to the United States possible. They always taught me to believe in the “dream” and strive for the best. My parents made it possible for me to be able to believe that I could accomplish anything. It is through them that I learnt the art of resilience.

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ABSTRACT

Stereotypes associated with Asian Americans are often positive as Asian Americans are viewed as the "model minority" group, with few problems. Endorsement of these stereotypes or belief in the Model Minority Stereotype might contribute to Asian American's psychosocial distress and their attitudes toward seeking mental health services. Thus, the purpose of this study was to examine the relationship between endorsement of positive Asian stereotypes and subjective overachievement, psychological distress, well-being, and attitudes toward help seeking among 291 Asian Americans. In addition, it examined the potential moderating roles of endorsement of Asian stereotypes in relation to self, acculturation, and adherence to Asian values in the relationship between endorsement of positive Asian stereotypes and subjective overachievement, psychological distress, well-being, and attitudes toward help seeking. Results indicated that higher levels of endorsement of positive Asian stereotypes were related to greater subjective overachievement, more somatic complaints, higher levels of psychological distress, and less favorable attitudes toward help seeking. Endorsement of positive Asian stereotypes was not related to well-being. In addition there was no evidence for the moderating roles of endorsement of positive Asian stereotypes about self, acculturation, and adherence to Asian values, except in the case of somatic symptoms. These results indicated that acculturation to the U.S. moderated the relationship between endorsement of positive Asian stereotypes and somatic complaints, with significant risk being associated with low acculturation to the U.S.

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CHAPTER I
INTRODUCTION

Asian Americans are one of the fastest growing groups in the United States. In 2002, there were 12.5 million Asians living in the United States and they comprised almost 4.4% of the country's total population. This number is estimated to reach the astounding number of 20 million by the year 2020 (U.S. Census Bureau, 2003). In addition, estimates indicate that by 2050 one out of ten people living in the United States will be able to trace their ancestry to Asia (Kim & Park, 2008). Asian Americans living in the United States are a diverse racial/ethnic group comprised of many different sub-populations including: 25.4% Chinese; 8.3% Japanese; 17.6% Asian Indian; 11.7% Vietnamese; 4.2% Pacific Islander, 19.3% Filipino, and 13.4% Other Asian (U.S. Bureau of the Census, 2002). As the demographics of the United States continue to change with regard to ethnic and racial diversity, it is becoming increasingly important for psychologists to address issues of mental health and well-being among racial/ethnic minorities. Furthermore, psychologists need to examine cultural influences and ethnic group characteristics that might influence racial/ethnic minorities' psychosocial health and willingness to seek mental health services in order to deal with them in culturally competent, effective, and sensitive ways (U.S. Department of Health and Human Services, 2001). Thus, the purpose of this study was to examine the cultural influence of endorsement of positive Asian stereotypes on Asian American's subjective overachievement, psychological distress, well-being, and attitudes towards help seeking. In addition, it will examine the potential moderating roles of endorsement of Asian stereotypes by self, acculturation, and adherence to Asian values in the relationship between endorsement of positive Asian stereotypes and subjective overachievement, psychological distress, well-being, and attitudes toward help seeking.

Stereotypes and Stereotype Threat

Usually each social group has certain stereotypes associated with that group membership. For instance, African Americans are considered to have low cognitive ability and come from low socioeconomic statuses (Steele, 1997), women are believed to have inferior math abilities (Spencer, Steele, & Quinn, 1999), and Asian Americans are considered ambitious, hardworking, intelligent, and self-disciplined (Cheryan & Monin, 1995). Activation of these stereotypes usually leads individuals to behave in certain ways that confirms the stereotypes (Levy, 1996; & Steele, 1997), affects individuals by changing how they are perceived and treated by others, and directly affects those individuals to whom the stereotypes apply (Steele & Aronson, 1995; Steele, Spencer & Aronson, 2002). This phenomenon is known as stereotype threat. Stereotype threat research has assessed this construct in two main ways: (1) via some sort of experimental activation or deactivation of the stereotype and (2) through endorsement of stereotypes about a group that one belongs to. The literature provides many examples of the detrimental effects of these race/ethnicity/gender based stereotypes on their respective minority groups.

Research has shown that priming negative stereotypes in stigmatized individuals can lead to lower performance levels on cognitive/intellectual tests (Steele; 1997). Steele, Spencer, and Aronson (2003) demonstrated that in stereotype free contexts, group differences on cognitive performance tests are eliminated. Relatedly, Schmader and Johns (2003) found that when negative stereotypes are activated in women and Latinos (e.g. poor math performance and inability to process multiple tasks while solving mathematical equations) their test performance on math and word recall tests tasks was lowered. Furthermore, Ben-Zeev, Fein and Inzlicht (2005) demonstrated that stereotype threat can produce arousal levels that in the end effect

performance especially related to intellectual abilities in women. Activation of the stereotype was accomplished by telling the women that they would be participating in a series of cognitive tasks which would be followed by a "difficult" math test. The researchers demonstrated the importance of arousal by subjecting women to a hard test and an easy one and saw that women performed worse on the difficult test compared to their counterparts who were not subjected to a threat.

Wicherts, Dolan, and Hessen (2005) demonstrated that stereotype threat does activate gender and racial differences in performance on achievement and intelligence test scores. This study highlighted the adverse effects of stereotype threat on test performance of individuals that identify strongly with the groups associated with the particular stereotypes being activated (e.g. women and racial minorities are intellectually inferior to men and whites and when activated this results in decreases in achievement and intelligence scores). Stereotypes were activated by priming participants by having them fill out relevant ethnicity/culture questionnaires before they took the intelligence tests. Activation of the stereotypes resulted in measurement bias and poorer performance on the intelligence and mathematics tests. This study suggests that the generalizability of stereotype threat effects and measurement bias can be seen in real-life and/or high-stake testing situations that could lead to poor outcome performance levels.

Stereotype threat has been investigated within the dimensions of other contexts. For instance, Stone, Lynch, Sjomeling and Darley (1999) investigated the effects of stereotype threats on the performance of both Black and White athletes. Local media and current culture suggests that Black athletes outperform White athletes in both natural ability and technique. Two experiments were conducted where the athletic task was framed in such a way that negative

racial stereotypes (e.g., when the golf task was negatively framed as a "sports intelligence" test versus being framed as a "natural athletic ability" task) were found to impede athletic performance for both groups. When the tasks were framed as a "natural athletic ability" the White ethnic group did worse than the control group. The study also highlighted the fact that stereotypes were also tied to the concept of self-worth in instances when individuals are more engaged in the perceived stereotypes associated with those domains being investigated.

In another study, women's vulnerability was assessed to the exposure of TV commercials on women taking leadership roles (Davies, Spencer, & Steele, 2005). These authors found that the negative stereotypes induced by the TV commercials did in fact undermine these women's aspirations to leadership roles. However, they also found that this effect was moderated by the women's identity safety status, in that vulnerability to stereotypes was eliminated or reduced despite exposure to threatening situational cues that were found to prime towards certain social women identities and their corresponding women stereotypes. This women's identity safety status was created by providing participants with the following identity safe sentence: "There is a great deal of controversy in psychology surrounding the issue of gender-based differences in leadership and problem-solving ability; however, our research has revealed absolutely no gender differences in either ability on this particular task (p. 281)". This is because every individual has a social identity (e.g. gender, race, nationality, religion, career, etc) that is crucial to that person's functioning but that identity can become meaningless in other contexts. Which identity is salient is usually determined by society's attitude towards that attitude in that setting. This study also highlighted the fact that stereotype activation is linked to stereotype threat in that stereotype activation mediates the effects of stereotype threat in situations when individuals are at risk of

being affected by the stereotypes affecting their group based upon identity and this can lead to reduced levels of performances as a result of this identity/group stereotype exposure.

The above studies indicate that when an individual is exposed to negative stereotypes about their group, they are unlikely to perform to their potential (Steele, Spencer, Aronson, 2003). Recently, a few studies have begun to investigate how the activation of those stereotypes makes people feel and how they cope with the effects of those feelings arising from the activation of those stereotypes. For instance, in one study, 114 employees at an agency in Australia were found to use denial and/or impression management as a coping mechanism in order to deal with stereotype threats associated with incompetence in the job arena. This stereotype denial can occur in one of two ways: the collective strategy, whereby individuals deny the accuracy of the stereotype; and the individualistic strategy, whereby individuals deny the self-relevance of the stereotype. The authors also found ethnic group differences in the way denial/impression management is used as a coping mechanism. For instance, in ethnic groups where impression management is a big part of the culture (e.g. Asian Americans and African Americans) significant results were found when compared to their White employee counterparts. In comparison to Whites, African Americans used denial of cognitive incompetence as a coping mechanism/impression management tool to deal with the activation of intelligence stereotypes associated with their identity and Whites denied the importance of intelligence when they were compared to an Asian population during an IQ testing task (von Hippel, von Hippel, Conway, Preacher, Schooler, & Radvansky, 2005). This study is an example of how stereotype activation is linked to stereotype threats as a function of ethnic identity and how stereotype threat affects outcomes in some ethnic groups. Although this is a good start, more studies are needed to look at

the effects of this phenomenon in relation to salience of identity in various ethnic groups and in domains other than cognitive functioning.

The above literature review also demonstrates that the effects of stereotype threat are real and can be detrimental to those individuals involved. It is not only the activation of these stereotypes that leads to detrimental effects, but the endorsement of these stereotypes in some individuals, under certain circumstances that can also lead to negative effects (Dijksterhuis, Aarts, Bargh, & van Knippenberg, 2000). In order to better understand the mechanisms underlying the activation and endorsement of stereotype threat among diverse groups many researchers have investigated social identity in greater depth. For example, Cheryan and Monin (2005) investigated the presence of identity denial in Asian Americans. They described identity denial as a process by which individuals feel less part of the dominant major ethnic group and in this case this was White Americans. These authors discovered that this identity denial was present in daily life occurrences and was used as a way to explain group dynamics whereby which they were able to be recognized by their within group fellow members. This identity denial could suggest the presence/absence of the need of group association underlying the relevance and the effects of stereotype activation and endorsement in certain ethnic groups and certain individuals. Clearly, more information is needed to better understand the mechanisms of these factors.

In another study, Schmader (2002) demonstrated how gender identification moderates the effects of stereotype threat on the performance of mathematics in women. In other words, depending upon the extent to which individuals identify with the group to which the stereotypes apply, the more likely they will exhibit performance inhibiting effects of the stereotype threat. It

was seen that when performance on mathemetics tests was linked to gender identity, the women with higher levels of gender identification performed worse than the men, but if the women had a lower gender identity, they performed at the same level on the mathematics test as the men. When gender identity was not linked to test performance then the women performed equally as well as the men, regardless of their level of gender identity.

Similarly in another study, Nosek, Banaji, and Greenwald (2002) demonstrated that group membership, group identity, and endorsement of gender stereotypes could lead to negative performance and aspirations in the mathematics fields for women. The authors demonstrated that the stereotype of mathematics and science being associated with males, lead to both implicit and explicit attitude differences for women and men. Women were found to have negative attitudes towards these fields whereas men were found to have more positive attitudes This study highlights both the perceived barriers/constraints and preferences/opportunities associated with career choices in the traditionally male dominated fields of math and science for women based upon social, gender and group identity. In other words personal choice and preference are not synonymous with free choice, in that they can be influenced by factors outside the conscious awareness or control of the individual, such as group identity, group membership, and the stereotypes associated with those.

Schmader, Johns and Barquissau (2004) also demonstrated that the degree of stereotype endorsement by a group of women affected their self-perceptions, career intentions, and susceptibility to the negative effects of the stereotype threat in the math domain. The women who believed that there were significant differences in math performance abilities between the sexes were more likely to endorse those negative stereotypes and were consequently likely to

perform inadequately in those domains. These studies suggest that in addition to the activation of stereotype threat, endorsement of stereotypes about a group that one belongs to, can also negatively impact an individual's feelings about themselves, academic performance, and career aspirations.

As can be seen from the above discussion, many researchers have provided powerful evidence of the negative effects of stereotype threat and endorsement of stereotypes about one's groups among ethnic and racial minorities and women, especially with regard to underperforming in the intellectual arenas (Steele, 1997 and Steele, Spencer & Aronson, 2002) and especially when the stereotypes activated or endorsed are negative. A smaller pool of research has begun to examine the effects of positive stereotypes or the endorsement of positive stereotypes.

Shih, Ambady, Richeson, Fujita and Gray (2002) investigated the effects of positive stereotype threat and found that positive stereotype threat actually boosts academic performance in a population of seventy three Asian American students enrolled in the Harvard Summer School**.** However, self relevance and the manner of the stereotype activation were relevant in mediating the effects of these positive stereotypes in target and non-target populations**.** For instance, if an individual is part of the target population the effects of self relevance become more prominent versus in non-target populations. However, the authors found that there was no clear cut direction of the effects of self relevance on the activation of stereotype threat. In fact the results were mixed and different studies demonstrated different results when the degree of the stereotype threat was varied. For instance, in two studies, stereotype threat activation lead to boosted performance results in cases of subtle activation versus blatant activation, suggesting

that an interaction between contextual (priming) and personal factors is taking place to create these effects. In another study when blatant stereotypes were activated in non-target populations, boosted performance results were more evident suggesting the importance of cognitive processes (i.e. self relevance) in mediating the effects of stereotypes in these cases (Shih, Ambady, Richeson, Fujita & Gray (2002).

Unlike negative stereotypes, positive stereotypes may appear desirable and may be perceived as a form of a compliment to the targeted groups/individuals (Czopp, 2008). Czopp conducted two studies in order to investigate how the targets of these positive stereotypes perceive and evaluate others who try to express these positive/complimentary stereotypes. Their findings indicated that Black participants evaluated the interracial interaction as more negatively than did the White participants. This suggests implications for various factors: interracial distrust and avoidance, social group identity, and self relevance to the stereotype. All these factors suggest that further investigations are needed in order to better understand the mechanisms involved in activating the negative effects of positive stereotypes.

Rosenthal and Crisp (2007) investigated the effects of two positive stereotypes (gender and school membership) on the performance of male mathematics students. These researchers found that when the dual positive stereotypes were present (i.e. gender and school affiliation), the male students choked under pressure, suggesting that positive stereotypes can have negative effects. However, the negative effects of a single stereotype (either gender or school affiliation) were not significant enough to contribute to those negative effects that were seen in the additive perspective. The students that did not identify with the stereotypes (dis-identified) did not exhibit

the negative effects of the stereotypes suggesting that self-perception is important with regard to group membership and in determining the effects of the positive stereotypes.

Similarly, in another study, Smith and Johnson (2006) pointed out that positive gender stereotypes (i.e. men are superior to women in math and computer science) can lead to negative effects on performance and motivation, when domain identification was significant to their identify (e.g. when gender stereotypes were activated versus nullified stereotyped conditions). In other words, regardless of stereotype valence, it is the interaction/combined effect of the expectancy of the stereotype and the value placed on a domain by an individual that will determine the influence on performance and motivation. These studies provided the basis for the current study, in highlighting the fact that positive stereotypes can lead to less desirable results. However, due to the nature of the findings, further investigation is required in order to determine the mechanisms underlying the circumstances under which positive stereotypes lead to positive effects in some individuals and under certain circumstances, but negative effects in other situations.

Asian Americans and the Model Minority Stereotype

Most of the research on stereotype threat has focused on African Americans and women. Stereotype threat has not been studied in depth among the Asian American population (Leyens, Desert, Croizet & Darcis, 2000). In addition, most of the research on stereotype threat has focused on negative stereotypes about minority groups; however, it is important to note that in contrast to the negative stereotypes associated with the various minority groups mentioned above (e.g., African Americans, women), stereotypes about Asian Americans are mainly positive (rather than negative). Asian Americans are perceived as being intelligent, self-disciplined,

industrious, and courteous, and these attitudes often illicit feelings of respect and admiration from other ethnic groups (Ho & Jackson, 2001). In fact, much of the general public and many mental health professionals view Asian Americans as having attained relatively high educational, occupational, and economic statues, and as having low criminal activity, low divorce rates, and few adjustment difficulties (Sue, Sue, Sue, & Takeuchi, 1995). This has lead to Asian Americans as being stereotyped as the "Model Minority" by suggesting that Asian Americans embody the modern day American success story, even though this is not true for many Asian Americans.

An in-depth investigation demonstrates that the notion of the "Model Minority" is in fact a myth for many Asian Americans. For example, although the proportion of Asian Americans who have a bachelor's or graduate degree is higher than any other ethnic group; it is also true that the proportion of Asian American and Pacific Islanders who have less than a 9^{th}-grade education is also almost twice that for European Americans (Kim & Park, 2008). Relatedly, the annual median income for Asian households in 2003 was about $53,635. Despite this moderate revenue, Asian Americans are more likely to be found to live in poverty when compared to other ethnic groups such as non-Hispanic Whites (U.S. Census Bureau, 2003). In addition, Asian Americans earn significantly less income than European Americans with the same educational levels (Bell, Harrison, & McLaughlin, 1997)

The Model Minority Myth has probably made Asian Americans one of the most underserved groups by mental health professionals (U.S. Department of Health & Human Services, 2001). This is a big contributing factor to what creates the disparities in health care towards this ethnic group. This is because it is assumed that since Asian Americans appear to be so successful, with moderate incomes, high levels of education, and report few mental health

problems, they do not need mental health services. This high achievement and success bias associated with Asian Americans makes it more likely that their needs will be ignored or not met in an adequate manner. The publication of landmark volumes like the Surgeon General's Report on Mental health: Culture, Race and Ethnicity - A supplement to mental health (U.S. Department of Health & Human Services, 2001) and Unequal Treatment: Confronting Racial and Ethnic Disparities in Mental Health (Smedley, Stith & Nelson, 2002), brought national attention to racial/ethnic health care disparities to underserved populations like Asian Americans.

Contrary to the model minority myth, an in depth investigation demonstrates that Asian Americans are in fact in dire need of services (U.S. Department of Health & Human Services, 2001). The prevalence of mental health problems among Asian Americans is not that much different from those of other American ethnic groups. Furthermore, nearly half of the Asian Americans in the United States have problems related to accessing culturally appropriate mental health services due to the fact that they have limited English proficiency and because mental health professionals lack the appropriate culture specific/sensitive skills (U.S. Department of Health & Human Services, 2001). The Surgeon General's report suggests that almost 21% of Asian Americans lack health insurance, and those who have low incomes and therefore, could qualify for Medicaid insurance, do so at a rate well below that of Whites from the same income bracket. Asian Americans utilize services at a rate that is far below that compared to Whites and this is characteristic of their ethnic group regardless of age, gender or geographic location (U.S. Department of Health & Human Services, 2001). The report shows that limited research has been done on the appropriateness and outcomes of treatments with Asian Americans (U.S. Department of Health & Human Services, 2001; Smedley, Stith & Nelson, 2002). All this suggests that if we

can better understand how to reduce the health disparities and psychosocial problems that exist with Asian Americans as a result of belonging to the "model" minority group we can in the end help improve the quality of life for this population.

Endorsement of Positive Asian Stereotypes and Subjective Overachievement, Psychological Distress, Well-being, and Attitudes toward Help Seeking

As can be seen from the discussion above, Asian Americans are considered a model minority group so the stereotypes associated with being part of a model minority group are often positive in nature. This is very different from how stereotype threat has been conceptualized in the past and is a direction that is worth investigating. It could be possible that the positive stereotypes associated with being Asian Americans could translate to a burden that they have to deal with and thus could lead to some negative outcomes in psychosocial well-being. In addition, stereotype threat has been studied within a limited domain such as academic and intellectual performance. It would be important to further investigate how stereotype threat translates to other domains. Thus, it is important to examine how endorsement of these positive Asian stereotypes or belief in the Model Minority Stereotype might contribute to Asian Americans subjective overachievement, psychological distress, well-being, and their attitudes toward seeking mental health services.

Apart from basic biological instincts, all humans have the drive for recognition and status (Allpost, 1960). In cultures, like the Asian American culture, where recognition is paramount to success, individuals can experience chronic doubt about their ability for success and this in turn can be debilitating. On the other hand, this debilitating doubt can also fuel excessive exertion in an effort to compensate for any perceived inadequacies. This is what is

known as subjective overachievement (Oleson, Poehlman, Yost, Lynch, & Arkin, 2000). Subjective achievement here is a combination of two constructs: self-doubt and concern about one's performance.

Chang, Arkin, Leong, Chan, and Leung (2004) suggest that chronic doubt can fuel excessive exertion if individuals are motivated by perceived internal inadequacies or on the other hand individuals will self-handicap as a way to impede their own performance. Both self-handicapping and overachievement are motivated by perceptions of self-doubt but they imply differences in level of exertion/effort that is required. Self-handicappers and overachievers also focus on different constructs. Self-handicappers focus on inherent talents and abilities whereas overachievers focus on performance outcomes. This means that self-handicappers are willing to forego positive performance in order to maintain their positive image, on the other hand, overachievers are concerned about performing well (Oleson et al., 2000).

Chang et al. (2004) demonstrated that Asian Asians display feelings of ambivalence towards the benefits of failure. Asian Americans are known to show higher levels of self-doubt and have the tendency to discount their ability when they were put under higher conditions of effort exertion. This suggests that positive stereotype endorsement about one's own ability may be perceived as a higher stressor for Asian American to exert themselves in situations where success is paramount. Since identification with the Asian group could suggest some level of endorsement of the Asian stereotypes, this could in turn lead to some internal need by Asian Americans to compensate and overachieve to the point that they display a high need for subjective overachievement. This is because intuitively we would assume that overachievers (as would be the case among those Asian Americans who strongly endorse the Asian stereotypes)

are applying a considerable amount of effort to have positive performance outcomes. In other words this excessive effort would suggest higher levels of overachievement and hence a positive relationship between Asian stereotype endorsements and level of subjective overachievement.

The Model Minority Stereotype can also place extreme pressure on Asian Americans to conform to high educational, occupational, and economic expectations. Attempts and/or failure to meet these expectations can lead to feelings of inadequacy and self-doubt, psychological problems, and suicide (Kim & Park, 2008). Furthermore, the Model Minority Stereotype can encourage Asian Americans to either ignore or minimize their own psychosocial difficulties. The Model Minority Stereotype might contribute to negative attitudes toward and unwillingness to seek mental health services among Asian Americans if they believe that all Asian Americans are well adjusted and have no psychological problems. A recent qualitative study found that many Asian Americans indicated that they would see a counselor only as the last resort, with family and friends as being first sources of help (Kim, Brenner, Liang, & Asay, 2003). Asian Americans who do finally seek services have often reached the point where their problems are serious and unbearable. Issues such as shame, stigma, discrimination, sexism, and racism can deter Asian Americans from seeking and then utilizing services. Thus, endorsement of positive Asian stereotypes may be related to more psychological distress, less well being, and more negative attitudes toward seeking mental health services.

Endorsement of Positive Asian Stereotypes About "Self", Acculturation, and Adherence to Asian Values as Potential Moderators.

Drawing from by Rosenthal and Crisp (2007) findings concerning the importance of stereotype self relevance and Schmader's (2002) findings indicating that the more an individual

identifies with the group to which the stereotypes apply, the more likely they will exhibit performance inhibiting and/or negative effects of the stereotype threat, endorsement of Asian stereotypes about the self, acculturation, and adherence to Asian cultural values, were identified as three important potential moderators in the link between endorsement of positive Asian stereotypes and subjective overachievement, psychological distress, well-being and attitudes toward help seeking. Moderators address the question of under what circumstances does a variable most strongly predict an outcome variable (Frazier, Tix, & Barron, 2004). Thus, moderators are variables which could potentially buffer or exacerbate the theorized negative effects of endorsement of positive Asian stereotypes endorsement on mental health and attitudes toward help seeking. Research on potential moderators of the link between Asian stereotype endorsement and psychosocial health might identify subgroups of Asian Americans for whom this link may be more pronounced, which could ultimately inform interventions targeted to these individuals.

In this study the endorsement of Asian stereotypes about the self will be examined in relationship to the endorsement of stereotypes about the Asian population in general. It is important to incorporate and assess for these Asian stereotypes about self, because similar to the study conducted by Rosenthal and Crisp (2007) where self relevance was considered a significant predictor of negative outcomes of the stereotypes, examining stereotypes about the self in terms of the Asian stereotypes might moderate the negative effects of those stereotypes. In other words self-perception is important with regard to group membership and in determining the effects of the stereotypes. This study suggests that attitudes about self compared to attitudes about the group one belongs to are significant in moderating the detrimental effects of activated

stereotypes. For example, someone who endorses the positive Asian stereotypes but doesn't endorse them about the self (i.e. who is dis-identified from the group) is likely to have more signs of subjective overachievement, distress, and less favorable attitudes toward help seeking because they believe in the model minority myth but are not measuring up to it. On the other hand, those who endorse the Asian stereotypes about self or who endorse both the stereotypes about self and the Asian population in general may have more negative effects of the model minority myth as they perceive more pressure to measure up to those positive stereotypes.

Acculturation has been defined as the multidimensional change and adjustment process that occurs when two cultures or individuals come into contact with each other, interact, and then change (Chun, Organista, & Marin, 2003). The change process involved in acculturation is integral to the processes of ethnic identity, and can occur at two levels: At the individual level and over the lifespan or at the group level across generations (Leong & Chou, 1994; & Tata & Leong, 1994). According to Moyerman and Forman (1991), acculturation cannot be limited to one single dimension of human experiencing. This is because it can be found to involve cognitions, attitudes, behaviors and/or cultural values. In the process of acculturation, an individual might maintain some of their original culture's expressions and norms and might also take on values and preferences of the new culture.

Acculturation used to be considered within simplistic terms as a unidirectional process, moving from low acculturation to hi acculturation (Berry, Trimble & Olmedo, 1986). In depth analysis of acculturation has lead to a better and more comprehensive understanding of this concept. Currently, acculturation is recognized as being a complex, multifaceted and multidimensional process that involves examining the extent to which ethnic minorities maintain

their traditional culture and/or the extent to which ethnic minorities abandon their traditional culture in order to embrace the host culture (Berry, 1980; Berry et al., 1987). Thus, acculturation levels are an indication of how strongly an Asian American identifies with the Asian culture. Lower levels of acculturation as evidenced by strong identification towards Asian culture and low identification with U.S. culture indicate stronger identification with the Asian culture. Past research has highlighted the importance that acculturation can have on cultural identity, adjustment, well-being, and willingness to seek out mental health services among Asian Americans (e.g. Atkinson & Gim, 1989, Liem, Lim & Liem, 2000; Kim, Brenner, Liang, & Asay, 2003; Suzuki & Greenfield, 2002). For example, acculturation levels among Asian Americans have predicted differences in severity associated with personal problems (Gim, Atkinson, & Whiteley, 1990; Yeh, 2003), depression (Hwang, Chun, Takeuchi, Myers, & Siddarth, 2005), and suicide risk (Lau, Jernewall, Zane, & Meyers, 2002). Relatedly, Asian Americans with high identification with U.S. culture were more willing to seek out professional mental health than those with low identification with U.S. culture (Atkinson & Gim, 1989). Thus, it may be that Asian Americans who strongly identify with the Asian American group via low levels of acculturation will be more likely than those with high levels of acculturation to experience the theorized negative effects of endorsement of positive Asian stereotypes and poorer mental health and more negative attitudes toward help seeking.

In addition to examining levels of acculturation, another important way of assessing how strongly an Asian American identifies with Asian culture is to measure their level of adherence to Asian cultural values. Asian cultural values, such as emotional self –control and restraint, placing others needs ahead of one's own, conformity to family and social norms and

expectations, and the importance of educational and occupational achievement, might exacerbate the relationship between endorsement of positive Asian stereotypes and subjective overachievement, psychological distress, and well-being (Kim & Park, 2008). In addition, Asian cultural values, such as avoidance of family shame and the ability to hide psychological problems, might also contribute to Asian Americans unwillingness to seek mental health services (Kim, Atkinson, & Yang, 1999). Thus, strong adherence to Asian cultural values might exacerbate the relationship between endorsement of positive Asian stereotypes and negative attitudes toward help seeking.

Summary of the Current Study

In sum, research suggests that both stereotype threat activation, as well as endorsement of stereotypes about a group that one belongs to, can negatively impact an individual's feelings about themselves, academic performance, and career aspirations (Dijksterhuis, Aarts, Bargh, & van Knippenberg, 2000; Nosek, Banaji, & Greenwald, 2002; Schmader, Johns & Barquissau (2004a). In addition, some research suggests that even when these stereotypes are positive they may have detrimental effects (Rosenthal & Crisp, 2007; Smith & Johnson, 2006). Theory related to Asian Americans and the Model Minority Myth suggests that stereotype threat via endorsement of positive Asian stereotypes may also be related to poorer psychosocial health and negative attitudes toward help seeking among Asian Americans. Furthermore, research indicates that the more an individual identifies with the group to which the stereotypes apply, the more likely they will exhibit performance inhibiting and/or negative effects of the stereotype threat (Schmader, 2002). That is, Asian Americans who strongly identify with the Asian American group via high endorsement of the positive Asian stereotypes in relation to themselves, who exhibit low levels of

acculturation and high adherence to Asian cultural values will be more likely than those with low levels of endorsement of Asian stereotypes, high levels of acculturation and low adherence to Asian cultural values to experience the theorized negative effects of endorsement of positive Asian stereotypes and poorer psychosocial health and attitudes toward help seeking. Thus, in this study the following hypotheses will be examined:

Hypothesis 1: Endorsement of positive Asian stereotypes (towards the Asian group) is negatively correlated with wellbeing and attitudes toward help seeking, and positively correlated with subjective overachievement and psychological distress (Figure 1).

Hypothesis 2: Endorsement of positive Asian stereotypes about the self will moderate the relationships between stereotype endorsement and subjective overachievement, psychological distress, well being, and attitudes toward help seeking among Asian Americans (Figure 1).

Hypothesis 3: Acculturation levels will moderate the relationships between stereotype endorsement and subjective overachievement, psychological distress, well being, and attitudes toward help seeking among Asian Americans (Figure 1).

Hypothesis 4: Asian cultural values will moderate the relationships between stereotype endorsement and subjective overachievement, psychological distress, well being, and attitudes toward help seeking among Asian Americans (Figure 1).

CHAPTER II
METHOD

Participants

Participants consisted of 291 self-identified Asian Americans. Twelve participants who identified as both living outside the United States and who were not American citizens, and nine participants who identified as below 18 years old, were dropped from the sample and not included in any of the analyses. Participants ranged in age from 18 to 79 years, with a mean age of 29.9 years (SD=8.95). The sample was 25% male (n=74) and 75% female (n=217). Ethnicities included 27% Chinese (n=77), 6% Filipino (n=18), .7% Hawaiian (n=2), 31% Indian (n=91), 8% Japanese (n=24), 11% Korean (n=31), 3% Pakistani (n=8), 7% South Asian (n=21), 7% Taiwanese (n=19), 7% Vietnamese (n=21), and 8% other (n=22; e.g., Thai,Burmese, Malaysian, biracial). Sexual orientations identified included: 3% lesbian (n=10), 2% gay (n=7), 5% bisexual (n=13), 89% heterosexual (n=251), and 1% not sure (n=2). Level of education completed was 5% high school diploma (n=15), 14% some college (n=40), 21% 4-year college (n=62), 50% graduate (n=146), 8% professional school (n=22) and 2% other (n=6). The sample was comprised of 221 non students and 70 students, with 2% (n=5) 1st year undergraduates, 6% (n=16) Sophomore, 8% (n=23) Junior, and 9% (n=26) Senior. If participants were in school or had recently completed their schooling their reported GPA's ranged from 0 to 4.00, with a mean GPA of 3.56 (*SD*=.61). Total household incomes reported were 26% (n=75) under $29,999, 19% (n=55) $30,000-$59,999, 18% (n=53) $60,000-$89,999, and 37% (n=108) $90,000 or more. Self-reported social class included 1% (n=4) upper, 46% (n=134) upper middle, 30% (n=86) lower middle, 16% (n=47) working, and 7% (n=20) poor.

Identified areas of "current" residence of the participants included: 35% (n=101) Northeast, 19% (n=54) Midwest, 11% (n=31) South, 35% (n=102) West, and 1% (n=3) outside the USA such as India, Egypt and Canada. Participants were 81% (n=235) United States citizens and 19% (n=56) were non-citizens. Participants were 51% (n=120) 1st generation Asian American, 35% (n=82) 2nd generation Asian American, 4% (n=9) 3rd generation Asian American, 3% (n=8) 4th generation Asian American, 6% (n=15) other (e.g. immigrants, adopted, 1.5 generation Asian American, differing generations on each parents side, and 5th generation Asian American) and the remaining chose not to respond to this question. Home countries for the non citizens were varied (e.g. Bangladesh, Canada, China, India, Japan, Kenya, Korea, Malaysia, Pakistan, Philippines, Portugal, Singapore, Taiwan, Thailand, Vietnam, and Zambia). To assess the length of residence in the United States, all participants were asked to "indicate the length of time they had been staying in the U.S." via the number of years and months. This time ranged from .25 years to 65 years, with a mean time of 21.51 years (SD = 10.482) Due to rounding, percentages may not add up to 100%.

Measures

Endorsement of Positive Asian Stereotypes. The 11 item positive stereotype attitudes subscale of the Attitude Towards Asian Scale (ATA; Ho & Jackson, 2001) was used to assess participants endorsement of positive Asian stereotypes (ATA-Asian). These Asian stereotypical attitudes are measured on a 6 point Likert scale that ranges from 1 (*strongly disagree*) to 6 (*strongly agree*). A sample item is "Generally Asian Americans are smart." Higher mean scores indicate greater endorsement of positive Asian stereotypes. Reported internal consistency of scores on the positive stereotypes subscale was .91. Validity was supported via exploratory

factor analysis, by demonstrating that the positive ATA subscale was positively correlated with the protestant work ethic but the negative ATA subscale was not, by demonstrating that negative attitudes towards Asian Americans were positively correlated with having negative attitudes toward African Americans, and by demonstrating that the ATA was not related to social desirability. Alpha for scores for the current sample on the ATA-Asian was .94.

Endorsement of Positive Asian Stereotypes about the Self. The aforementioned 11 item positive stereotype attitudes subscale of the Attitude Towards Asian Scale (Ho & Jackson, 2001) was modified and also used to assess participants endorsement of positive Asian stereotypes about the self (ATA-Self). The 11 items were reworded to assess participants endorsement of positive "self Asian" stereotypes (e.g., "I am smart"). Higher mean scores indicate greater endorsement of positive Asian stereotypes about the self. Alpha for scores for the current sample on the ATA-Self was .85.

Acculturation. Past research has often used the Suinn Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Richard-Figueroa, Lew, & Vigil, 1987) in order to assess acculturation levels among Asian Americans. However, due to the fact that acculturation is a complex multidimensional and multifaceted process that the SL-ASIA does not seem to tap into completely, the Acculturation Index (AI; Ward & Kennedy, 1994) was used instead to assess acculturation level among Asian Americans. The AI was used in this study as it taps into the two orthogonal dimensions of acculturation based upon Berry et al.'s model (1987). In other words the two dimensions of acculturation attitude being assessed are: (a) attitudes toward the home (Asian) culture (AI-Asian) and (b) attitudes toward the host culture (e.g., the dominant culture in the United States-AI-US). The AI consists of 21 items that measure constructs such as values,

cognitions, and behavior (e.g., religion, food preference, recreational activities, life rigor/pace are measured). The AI asks participants to respond to two questions: (i) "How similar are your experiences and behaviors to those of people sharing your culture of origin?" and (ii) "How similar are your experiences and behaviors to those of European Americans in the U.S.?" Each item on the AI scale is measured on a 6-point Likert scale ranging from 1(*not at all similar*) to 6 (*very similar*).

The AI yields two independent scores, with mean higher scores indicating either a strong cultural identification towards the home (Asian) culture or high acculturation towards the host (U.S.) culture. For the purposes of this study the two subscales will be used (identification towards Asian/home culture versus acculturation towards the US culture). Reported reliabilities (coefficient alpha) for scores on the AI scale were between .91 to .94 for the home (Asian) culture and between .89 to .97 for the host (U.S) culture (Ward & Kennedy, 1994; Ward & Rena-Deuba, 1999). Validity was supported by both exploratory and confirmatory factor analyses and by significant correlations between the AI and other measures of acculturation such as participants' self-reported espousal of traditional values (Ward & Kennedy, 1994). Alpha for scores for the current sample on the AI-Asian was .93 and AI-US was .95.

Asian Cultural Values. The Asian American Values Scale-Multidimensional (AAVS-M; Kim, Li, & Ng, 2005) was used as another measure of the acculturation process among Asian Americans, but more specifically as a way to measure the participants' espousal of values enculturated by Asian Americans. The AAVS-M is a 42-item scale assesses the degree to which adherence to cultural Asian values has been maintained and reflects five factors: collectivism, confirmity to norms, emotional self-control, family recognition through achievment, and

humility. Sample items from the scale include: "One should achieve academically since it reflects on one's family" and "It is better to show emotions than suffer quietly." Items are measured on a 7-point rating scale ranging from 1(*strongly disagree*) to 7 (*strongly agree*). Higher mean scores indicate greater adherence to Asian values. Reported internal consistencies for scores on the AAVS-M was .92.and test-retest reliability was .92, Validity was supported via exploratory and confirmatory factor analysess, by significant theorized correlations with another Asian values measure, culutral identification, loss of face, and less favorable attitudes toward help seeking, and by demonstratig that it was conceptually distinct from self-esteem and social desirability (Kim et al., 2005). Alpha for scores on the AAVS-M for the current sample was .91.

Subjective Overachievement. Subjective overachievement was assessed with the Subjective Overachievement scale (Oleson et al., 2000), which consists of 17 items tapping concern with performance and self-doubt. Sample items include: "It is important that I succeed in all that I do," and "I doubt my family members can help me succeed in the things I want to do." Items on the scale are measured using a six point Likert Scale from 1 (*disagree very much*) to 6 (*agree very much*). Higher mean scores indicate more concern with performance and greater self-doubt. Internal consistency of scores on the two subscales was .76 for concern with performance and .82 and .83 for self-doubt. Test-retest reliabilities were .64 and .72 for scores on the concern with performance subscale .65 and .68 for scores on the self-doubt subscale. Validity of scores on the two subscales (i.e. concern with performance and self-doubt respectively) was supported by correlating them with other measures assessing achievement motivation, defensive pessimism, self-handicapping, self-esteem, and social anxiety. Alpha for

scores for the current sample was .77 for the concern with performance subscale and .87 for the self doubt subscale.

Psychological Distress: Since psychological distress among Asian Americans can manifest as psychological and somatic symptoms, it was assessed using two measures: the "somatization" sub-scale of the Hopkins Symptom Checklist (HSCL; Derogatis et al., 1974) and the Outcome Questionnaire-45; Lambert, Hansen, et al., 1996). The somatization subscale of the Hopkins Symptom Checklist (HSCL; Derogatis et al., 1974) consists of 12 items reflecting psychological distress arising from perceptions of bodily dysfunction. Examples of items include "Headaches" and "Pains in the lower part of your back." Participants indicate how often they have felt each symptom during the past several days using a 4-point Likert scale from 1 (*not at all*) to 4 *(extremely*). Higher mean scores indicate greater psychological distress as manifested via somatization of symptoms. Reported alpha for scores on the somatization subscale was .87 and test-retest reliability was .82. Validity of the HSCL full scale and subscales was supported by studies reflecting the factorial invariance of HSCL symptom dimensions, between group differences, and the HSCL's sensitivity to the use of psychotherapeutic drugs (Derogatis et al.). Alpha for scores on the HSCL somatic symptoms subscale for the current sample was .91.

Since the Outcome Questionnaire-45 (OQ45; Lambert, Hansen, et al., 1996) is one of the instruments designed to evaluate self-reported psychological functioning and quality of life, it was the second instrument used. This scale consists of 45 items that ask clients to rate their feelings on a 6-point Likert scale ranging from 0 (*never*) to 5 (*almost always*) in three main content domains: symptomatic distress, interpersonal relations, and social role performance.

Sample items from each of the respective three content constructs include: “I feel hopeless about the future,” “I feel lonely,” and “I have too many disagreements at work/school.” General psychological functioning is assessed using composite scores from all the three domains (ranging from 0 to 180). These scores are based on a continuum with non-clinical/normal scores being at the low end and high scores indicating clinical/disturbed functioning (Lambert, Hansen, et al., 1996). Studies have indicated acceptable reliability estimates for scores on the OQ45 with coefficient alphas being in the low .90’s and test-retest coefficients in the low .80’s (Lambert, Burlingame, et al., 1996). The OQ45 also demonstrates moderate to high concurrent validity (*r’s* ranging from 0.50–0.85) when it was correlated with other measures that tap into psychotherapy outcomes (Lambert et al., 2004). Alpha for scores on the OQ-45 for the current sample was .96.

Well-being. Well-being was assessed with the Satisfaction with Life Scale (SWLS), which consists of 5 items reflecting well-being and life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). Examples of items include “If I could live my life over, I would change almost nothing.” and “In most ways my life is close to my ideal.” Each item is rated on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher mean scores indicate greater well- being. Reported internal consistency and test-retest reliabilities for scores on the SWLS were .87 and .82, respectively. Validity was supported by correlating the SWLS with measures assessing self-esteem, affective balance, and well-being. Alpha for scores on the SWLS for the current sample was .92.

Attitudes Towards Help Seeking. Attitudes towards help seeking was assessed with the short form of the Attitudes Toward Seeking Professional Psychological Help Scale (Ang, Lau, Tan & Lim, 2007; Fischer & Farina,1995; Fishcer & Turner, 1970),which consists of 9 items

that were cross validated from the short 10 version scale using 2 separate Asian samples. Sample scale items include "If I believed I was having a mental breakdown, my first inclination would be to get professional attention." Items are rated on a 4 point Likert scale from (*disagree*) to 4 (*agree*). Negatively stated items are reverse scored. Higher means socresI indicate positive attitudes towards professional psychological help seeking. Reported internal consistency and test-retest reliabilities for the scale were .84 and .80 respectively. Validity was supported by positive correlations with previous use of professional help for a problem and intentions to seek counseling, and negatively with self-concealment tendencies. Alpha for scores on the ATHS for the current sample was .87.

Procedures

A web-based Internet survey was used to collect the data. As an incentive to participate, all participants were given the chance to enter a raffle drawing of $100 awarded to one person. Procedures for this website survey were based on published suggestions (Buchanan & Smith, 1999; Michalak & Szabo, 1998; Schmidt, 1997) and included methods for protecting confidentiality (i.e., having participants access the research survey via a hypertext link rather than e-mail to ensure participant anonymity and the use of a separate raffle database so there is no way to connect a person's on-line raffle submission with his/her submitted survey) and methods for ensuring data integrity (i.e., use of a secure server protected with a firewall to prevent tampering with data and programs by "hackers" and inadvertent access to confidential information by research participants). Gosling, Vazire, Srivastava, and John (2004) reported that results from Internet studies are consistent with findings obtained from traditional pen-and-paper methods and are not adversely affected by repeat or non-serious responders.

An e-mail announcement of the study was sent to the list owner/contact person of a variety of Asian American listerves, general listserves and community organizations, university centers, University registrar offices, and University Asian studies programs and organizations. The list owner/contact person was asked to distribute the research announcement to their listserve and to their Asian American friends, colleagues, and students. The research announcement was also printed as flyers to be posted at and/or mailed to a variety of Asian American groups, establishments, and organizations. A follow-up reminder e-mail was sent three weeks after the initial email.

The research announcement was also posted to the listserves of the following: American Psychological Association (APA) Division 45 (racial/ethnic minority psychology), APA Division 17 (counseling psychology) racial/ethnic minority section, American Psychological Association for Graduate Students (APAGS), Asian Psychological Association, and South Asian Psychology Network Association. Participants used a hypertext link to access the survey website. After reading an informed consent, participants were instructed to complete the online survey, which included demographic information and the aforementioned measures. All of the measures were randomly ordered in the survey.

CHAPTER III
RESULTS

Skewness and kurtosis among all continuous variables was assessed in this study. Although skew and/or kurtosis values for main study variables departed somewhat from normality (see Table 1), they are unlikely to make a substantive difference in the analyses given this study's large sample size (Tabachnick & Fidell, 2001). To test hypothesis 1, correlations were conducted in order to determine if endorsement of positive Asian stereotypes was a significant predictor of subjective overachievement, psychological distress, well-being, and favorable attitudes toward help seeking. Means, standard deviations, and inter-correlations for all continuous variables assessed in this study are shown in Table 2. As hypothesized, the endorsement of positive Asian stereotypes about the "Asian" culture was significantly positively correlated with subjective overachievement on the performance subscale (r = .26), psychological distress as measured by HSCL somatic symptoms subscale (r = .19) and the OQ-45 (r = .10). In addition, the endorsement of positive Asian stereotypes regarding the "Asian" culture was significantly negatively correlated with attitudes towards help seeking (r = -.17). Thus, higher levels of endorsement of positive Asian stereotypes was related to greater concern with one's performance, more somatic complaints, higher levels of psychological distress, and less favorable attitudes toward help seeking. Contrary to hypothesis 1, the endorsement of positive Asian stereotypes regarding the "Asian" culture was not related to subjective overachievement-self-doubt or well-being.

Correlations shown in Table 2 also indicated that age, gender, length of time in the United States, and U.S. citizenship were significantly correlated with several of the variables in

this study, thereby, supporting a decision to control for the effects of age, gender, length of residence, and citizenship status in examining the relationships between the endorsement of Asian stereotypes and the above mentioned outcomes, as a function of ATA-self, acculturation, and adherence to Asian values.

To test hypotheses 2, 3, and 4 concerning the moderating roles of ATA-self, acculturation, and adherence to Asian values a series of simultaneous multiple regression analyses were conducted. According to Aiken and West (1991; p. 164, Table 8.5) reported sample power analyses suggest that when moderator and predictor variables are measured with reliability of .80, variance accounted for by the main effects is .20, and inter-predictor correlations are .50, sample sizes of 52, 108, and 752 are needed to achieve statistical power of .80 in detecting an interaction for large, moderate, and small effect sizes, respectively. Thus, the sample size (n = 291) in this study was powerful enough to detect a large and moderate effect size but under what is need to detect a small effect size.

Prior to the analysis, scores for measures of endorsed positive Asian stereotypes, ATA-self, acculturation, and Asian cultural values were centered (i.e., put into deviation units by subtracting their sample means to produce revised sample means of zero) to reduce multicollinearity between the interaction terms and the predictor variables. The centered scores were used to create the interaction terms (Frazier, Tix, & Barron, 2004). Correlations between predictor variables, variance inflation factors, and largest condition index values were examined to determine if multicollinearity is a problem or not. Absolute value correlations were all below .90, condition indexes were all below 30, and variance inflation factors were all below 10 indicating that multicollinearity was not a problem (Myers, 1990; Tabachnick & Fidell, 2001).

In the first step of each analysis, age, gender, length of stay in the United States, and U.S. citizenship status were entered as control variables. In the second step of each analysis, a block of five main effects variables were entered: endorsement of Asian stereotypes about the Asian population (ATA-Asian), endorsement of Asian stereotypes about the self as an Asian (ATA-Self), identification with the Asian culture (AI-Asian), acculturation to the United States (AI-US), and adherence to Asian values (AAVS-M). The third step of each multiple regression examined the four hypothesized 2- way interaction effects (i.e. ATA-Asian X ATA-Self, ATA-Asian X AI-Asian, ATA-Asian X AI-US, ATA-Asian X AAVS-M). Evidence for a moderator effect is noted at Step 3 by a statistically significant increment in R^2 and beta weight.

The results of the analysis predicting subjective overachievement- concern with performance are shown in Table 3. The control variables at Step 1, accounted for 4% of the variance, $F(4, 285) = 3.19$, $p < .01$, and the main effects at Step 2 accounted for an additional 9% of the variance $F(5, 280) = 5.50$, $p < .01$. The interaction effects were not significant at Step 3. Examination of the beta weights in the final model of each analysis indicated that citizenship status ($\beta = .18$) and ATA-Asian ($\beta = .16$) were the only significant predictors of subjective overachievement-concern with performance. That is, being a U.S. citizen and more endorsement of positive Asian stereotypes was associated with higher concerns with performance. Age, gender, length of stay, ATA-Self, identification with Asian culture, acculturation to U.S., adherence to Asian values, and the interaction effects (i.e., ATA-Asian X ATA-Self, ATA-Asian X AI-Asian, ATA-Asian X AI-US, ATA-Asian X AAVS-M) were not significant predictors of concern with performance.

The results of the analysis predicting subjective overachievement-self doubt are shown in Table 4. The control variables at Step 1, accounted for 8% of the variance, $F (4, 285) = 6.20$, $p < .01$, and the main effects at Step 2 accounted for an additional 13% of the variance $F (5, 280) = 9.52$, $p < .01$. The interaction effects were not significant at Step 3. Examination of the beta weights in the final model of each analysis indicated that age ($\beta = -.24$), gender ($\beta = -.13$), ATA-Asian ($\beta = .20$), ATA-Self ($\beta = -.31$), and Asian values ($\beta = .24$) were the only significant predictors of subjective overachievement self doubt. That is, younger individuals, being female, more endorsement of positive Asian stereotypes, less endorsement of positive Asian stereotypes about the self, and greater adherence to Asian values were associated with higher concerns with self doubt. Length of stay, citizenship status, identification with Asian culture, acculturation to U.S., and the interaction effects (i.e., ATA-Asian X ATA-Self, ATA-Asian X AI-Asian, ATA-Asian X AI-US, ATA-Asian X AAVS-M) were not significant predictors of self doubt.

The results of the analysis predicting psychological distress via HSCL somatic symptoms subscale are shown in Table 5. The control variables at Step 1 were not significant. The main effects at Step 2 were significant, accounting for 13% of the variance $F (5, 280) = 8.87$, $p < .01$. Examination of the beta weights indicated that ATA-Asian ($\beta = .15$) and adherence to Asian values ($\beta = .26$) were the only significant predictors of somatic symptoms. That is, greater endorsement of positive Asian stereotypes and greater adherence to Asian cultural values were related to more somatic symptoms. The interaction effects at Step 3 were also significant, accounting for an additional 3% of the variance, $F (5, 280) = 2.33$, $p < .05$. Examination of the beta weights indicated that the interaction of endorsement of positive Asian stereotypes and acculturation to the U. S. ($\beta = -.14$) was the only significant predictor of somatic complaints.

To interpret the statistically significant interaction, regression lines for the full sample were plotted using an equation which included terms for the variables not involved in the significant interaction (i.e., age, gender, length of stay, citizenship status, ATA-Self, AI-Asia, AAVS-M, ATA-Asian X ATA self, ATA Asian X AI-Asian, and ATA-Asian X AAVS-M); variable means multiplied by their corresponding unstandardized regression weights), the two main effects (endorsement of positive Asian stereotypes and acculturation to the U. S.), and the interaction term (endorsement of positive Asian stereotypes X acculturation to the U. S.), along with the corresponding unstandardized regression coefficients and regression constant (Aiken & West, 1991; Cohen & Cohen, 1983).

As recommended by Aiken and West (1991), somatic symptom scores for endorsement of positive Asian stereotypes scores of one standard deviation below and above the mean and low acculturation to the U. S. (one standard deviation below the mean) versus high acculturation to the U. S. (one standard deviation above the mean) were plotted on a graph (see Figure 1). Aiken and West's (1991) simple slope analysis showed that endorsement of positive Asian stereotypes did not predict somatic symptoms for Asian Americans with high acculturation to the U.S.; whereas, endorsement of positive Asian stereotypes predicted somatic complaints for Asian Americans with low acculturation to the U. S., $\beta = .28$, $t = 3.237$, $p < .01$.

The results of the analysis predicting psychological distress via the OQ-45 are shown in Table 6. The control variables at Step 1 were not significant. The main effects at Step 2, accounted for 17% of the variance, $F(5, 280) = 12.21$, $p < .01$. The interaction effects at Step 3 were not significant. Examination of the beta weights in the final model of each analysis indicated that ATA-Asian ($\beta = .16$), ATA-Self ($\beta = -.21$), identification with Asian culture ($\beta =$ -

.14), acculturation to U.S. culture (β = -.15), and adherence to Asian values (β = .26) were the only significant predictors of psychological distress. That is, more endorsement of positive Asian stereotypes, less endorsement of positive Asian stereotypes about self, less adherence to the Asian culture, less acculturation to the U.S. culture, and greater adherence to Asian values were associated with higher levels of psychological distress. Age, gender, length of stay, citizenship status, and the interaction effects (i.e., ATA-Asian X ATA-Self, ATA-Asian X AI-Asian, ATA-Asian X AI-US, ATA-Asian X AAVS-M) were not significant predictors of psychological distress.

The results of the analysis predicting well- being are shown in Table 7. The control variables at Step 1 were not significant. The main effects at Step 2, accounted for 8% of the variance, F (5, 280) = 4.74, $p < .01$. The interaction effects at Step 3 were not significant. Examination of the beta weights in the final model of each analysis indicated that ATA-Self (β = .14), acculturation to U.S. culture (β = .12), and adherence to Asian values (β = -.17) were the only significant predictors of well-being. That is, more endorsement of positive Asian stereotypes about self, more acculturation to the U.S. culture, and less adherence to Asian values was associated with higher levels of well-being. Age, gender, length of stay, citizenship status, endorsement of positive Asian stereotypes, identification with Asian culture, and the interaction effects (i.e., ATA-Asian X ATA-Self, ATA-Asian X AI-Asian, ATA-Asian X AI-US, ATA-Asian X AAVS-M) were not significant predictors of psychological distress.

The results of the analysis predicting favorable attitudes toward help seeking are shown in Table 8. The control variables at Step 1, accounted for 9% of the variance, F (4, 285) = 7.15, $p < .01$, and the main effects at Step 2 accounted for an additional 14% of the variance F (5, 280) =

9.87, $p < .01$. The interaction effects were not significant at Step 3. Examination of the beta weights in the final model of each analysis indicated that gender (β = -.13), length of stay in the U.S. (β = .28), citizenship status (β = -.17), ATA-Asian (β = -.13), ATA-Self (β =.12), and adherence to Asian values (β = -.31) were the only significant predictors of attitudes towards help seeking. That is, being female,having stayed in the U.S. for a longer period of time, being a non U.S. citizen, less endorsement of positive Asian stereotypes, more endorsement of positive Asian stereotypes about self, and less adherence to Asian values were associated with favorable attitudes towards help seeking. Age, identification with Asian culture, acculturation to U.S., and the interaction effects (i.e., ATA-Asian X ATA-Self, ATA-Asian X AI-Asian, ATA-Asian X AI-US, ATA-Asian X AAVS-M) were not significant predictors of favorable attitudes toward help seeking.

CHAPTER IV
DISCUSSION

The present study aimed to add to the current literature by first studying the phenomenon of stereotype threat via endorsement of positive stereotypes in a population of Asian Americans, which has been understudied in the past. The findings of this study revealed that higher levels of endorsement of positive Asian stereotypes were related to greater subjective-overachievement, more somatic complaints, higher levels of psychological distress, and less favorable attitudes toward help seeking. These findings are consistent with the theory proposed in this study and the current literature in suggesting that Asians who endorsed positive Asian stereotypes believe in the model minority myth, which may lead to potentially detrimental psychological effects and preventing them from seeking professional help for their psychological difficulties. Furthermore, the relationship between endorsement of positive Asian stereotypes and these outcome variables emerged as unique and significant in the context of considering several other important cultural constructs (i.e., acculturation and adherence to Asian cultural values). This persistence of the endorsement of positive Asian stereotypes-psychosocial distress/help seeking attitudes links when other important variables are considered underscores the importance of this relationship. In addition, these results suggest that the endorsement of positive stereotypes can have similar negative effects as the endorsement of negative stereotypes. Furthermore, these results provide evidence that the negative effects of endorsed stereotypes extends beyond intelligence and cognitive domains. Contrary to my hypothesis, the endorsement of positive Asian stereotypes was not related to well-being. Given that distress and wellbeing are not opposite ends of one pole, it may be that endorsement of positive Asian stereotypes is more important in predicting aspects of psychosocial distress rather than general well being.

The present study also examined the potential moderating roles of endorsement of positive Asian stereotypes about self, acculturation, and adherence to Asian values in the relationship between endorsement of positive Asian stereotypes and subjective overachievement, psychological distress, well being, and attitudes toward help seeking among Asian Americans. Contrary to theory and research related to stereotype self-relevance and group identification with stereotypes (e.g., Rosenthal & Crisp, 2007; Schmader, 2002), the findings revealed that endorsement of positive Asian stereotypes did not interact with endorsement of positive Asian stereotypes about self, acculturation, non adherence to Asian values in accounting for variance in subjective overachievement, global psychological distress, well being, and attitudes toward help seeking among Asian Americans. These findings suggest that among Asian American, endorsement of positive Asian stereotypes are predictive of poorer psychosocial health and less favorable attitudes concerning help seeking regardless of an individual's self-belief in those stereotypes and their level of acculturation and adherence to Asian values. These results are consistent with Wang and Mallinckrodt's (2006) study that found no support for the moderating role of acculturation in the link between Chinese international students' attachment and socio-cultural adjustment difficulties and psychological distress.

The present study found support for the moderating role of acculturation to the U. S. in the link between endorsement of positive Asian stereotypes and somatic complaints, with significant risk being associated with low acculturation to the U.S. That is, low acculturation to the U. S. exacerbates the relationship between endorsement of positive Asian stereotypes and somatic complaints among Asian Americans. This moderated model suggests that practitioners working with clients with low acculturation to the U. S. should be concerned with those who

have high levels of endorsement of positive Asian stereotypes, and to utilize treatment strategies aimed at ameliorating the negative impact of endorsement of positive Asian stereotypes on their clients' somatization perhaps through increasing their acculturation to the U.S.

I would also like to highlight some additional findings of this study. First, endorsement of Asian stereotypes about the self was a significant predictor of subjective overachievement-self doubt, global psychological distress, well being, and attitudes toward help seeking. These results suggest that individuals who do not endorse the Asian stereotypes about the self may feel they are not meeting the expectations associated with the Model Minority and thus may experience psychosocial distress, less well being, and less willingness to seek help as a result of feeling inadequate. Second, the two dimensions of acculturation (both identification with Asian culture and acculturation to U. S. culture) were significant predictors of psychological distress via OQ-45. That is, Asian American with low identification with the Asian culture and low acculturation to U. S. culture reported experiencing more global psychological distress. These findings are consistent with Berry's theory of acculturation and relevant research indicating that individuals who are marginalized from both cultures experience more stress and adjustment difficulties and individuals who are integrated and have proficiency in both cultures experience less stress and better adjustment (Berry, 1980; Berry et al., 1987). Furthermore, they are consistent with Ward & Rena-Deuba's (1999) finding that individuals who weakly identified with their home culture experienced more psychological adjustment problems, and with Wang and Mallinckrodt's (2006) finding that low acculturation to the U. S. was related to psychological distress among Chinese international students. The findings suggest the

importance of being able to incorporate and navigate both cultures without overly identifying with one and rejecting the other.

Finally, adherence to Asian cultural values was a significant predictor of subjective overachievement-self doubt, somatic symptoms, global psychological distress, less well being, and unfavorable attitudes toward help seeking. It may be that certain Asian cultural values conflict with expectations and experiences associated with being in the United States and may lead to poorer psychosocial health. It may also be that some Asian values place individuals at risk for psychosocial difficulties. For example, an individual who values emotional self –control and restraint may having difficulty expressing and fully process their feelings. Relatedly, an individual who values family recognition through achievement may experience stress related to pressures related to attaining high educational, occupational, and economic expectations so their family can be proud of them and give their family a good reputation. In addition, the finding that adherence to Asian cultural values is related to less favorable attitudes toward help seeking is consistent with a number of studies examining similar relationships (e.g. Kim, Li, & Ng, 2005; Kim & Omizo, 2003).

Limitations and Directions for Future Research

This study is limited by a moderate response rate, sampling method, self-report measures, and a correlational design. This study investigated the moderating effects of endorsement of positive Asian stereotypes about the self, acculturation levels, and adherence to Asian values between the endorsement of positive Asian stereotypes and various outcome variables (subjective overachievement, psychological distress, wellbeing, and attitudes towards help seeking). Based upon the fact that there was only slight evidence in support of hypotheses 2, 3,

and 4, and that further studies are needed, future research can be geared towards investigating the mediating versus moderating effects of acculturation and adherence to Asian values. It could be possible that there is an additive effect between acculturation and adherence to Asian values , especially since acculturation is a very complex phenomenon among Asian Americans and the literature suggests that measuring acculturation is often difficult and inaccurate.

Furthermore, respondents were recruited largely from their connection to the Asian communities may be biased in some way (e.g., being more homogeneous than the larger target population; having lower levels of psychological distress than the larger target population). Additionally, Asian Americans were examined as a homogenous group. However, it is important to note that Asian Americans are a diverse group, consisting of various subgroups (e.g. Chinese, Japanese, Indian), divided by factors such as language, religion, values, norms, and belief systems. Therefore, any conclusions made from this study need to be extrapolated with caution especially with regard to within group differences. If a large enough sample could be collected these within subgroup comparisons would be valuable in establishing particular trends and patterns. Future research could be geared towards making between group comparisons between Asians and Whites and other ethnic populations. This would provide comparison data that may be helpful in designing and implementing interventions for Asian Americans. As data on the effects of stereotypes among Asian Americans is accumulated and compared to the data for White European Americans and other ethnic groups using this framework, it can then be used to determine where similar prevention and treatment approaches would be effective. At the same time, this comparative method of research could display divergence in the results that could help identify where a culturally accommodated model (CAM) would need to be utilized to identify

appropriate prevention, treatment, or research approaches for Asian Americans in general. Also comparison between females and males could be made to assess for gender related differences among Asians, which could lead to a better understanding of endorsement of stereotypes and then effective development of interventions and corrective/preventive strategies to prevent the adverse effects of these stereotypes.

In addition, if possible future efforts need to be geared at extending the sample collection beyond college students or highly educated individuals, where the assumption is that these individuals would be more familiar or cognizant of issues around stereotypes and would be more willing to fight against these barriers towards certain ethnic groups. In order to get a more realistic picture it may be more appropriate to collect data among Asians from various domains and situations.

The literature suggests that there is a lack of in depth information regarding stereotypes among Asian Americans, which means that measures, scales and the phenomenon are currently underdeveloped and minimally understood among Asian Americans. A qualitative study would be beneficial in providing accurate data about what stereotypes exist about Asian Americans by their own ethnic group and by other ethnic groups. Scales, measures and techniques specifically developed for assessing stereotypes among Asian Americans need to be developed and would portray a more accurate picture versus using and modifying pre-existing scales that may not capture the true essence of stereotype threat among Asian Americans.

Clinical Implications

The results of this study provides clinicians with valuable information regarding how endorsement of positive Asian stereotypes can still be detrimental in a population that despite

popular belief does have needs for services. According to the results of this study it will be especially important for clinicians to pay attention to those individuals who do not willingly seek services (i.e. males, U.S. citizens, those individuals who have lived in the U.S. for shorter periods of time, those who have lower acculturation levels to the U.S./or higher levels of adherence to Asian values, and those who believe in the model minority myth by endorsing the positive Asian stereotypes in general). Understanding the difficulties involved with measuring up to the model minority myth and acknowledging the cultural stigma associated with seeking psychological help, will help clinicians connect better to their clients in ways that helps them provide more culturally appropriate and effective services. In addition, these sensitivity and understanding will also help clinicians understand the high service dropout rates that are associated with Asian Americans, so that they can safeguard this from happening.

In conclusion, the current study adds to the accumulating body of research demonstrating the negative impact that stereotype threat via endorsement of stereotypes can have on individuals. This study extends prior research by focusing on an understudied population, examining endorsement of positive rather than negative stereotypes, investigating the impact of stereotype threat on non-cognitive domains, and by examining third variables that might explain the relationship between endorsement of positive Asian stereotypes and Asian Americans psychosocial difficulties and attitudes toward help seeking. Results underscore the importance of attending to cultural variables that might influence that might influence Asian Americans' psychosocial health and willingness to seek mental health services.

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APPENDIX

APPENDIX A: Tables

Table 1 *Skewness and Kurtosis Statistics for All Main Variables*

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
1. ATA-Asian	-.413	.143	.489	.285
2. ATA-Self	-.116	.143	.203	.285
3. Acculturation Asian	-.058	.143	-.155	.285
4. Acculturation US	-.034	.143	.273	.285
5. Asian Values	.141	.143	.711	.285
6. SO-Performance	.101	.143	-.379	.285
7. SO-Self Doubt	.111	.143	-.239	.285
8. Somatic Symptoms	1.439	.143	1.710	.285
9. OQ-45	.607	.143	.246	.285
10. Well-being	-.579	.143	-.258	.285
11. Help Seeking Attitudes	-.312	.143	-.753	.285

Note. N = 291, ATA-Asian = Attitudes Towards Asian Scale “Asian”, ATA-Self = Attitudes Towards Asian Scale “Self”; SO = Subjective Overachievement

Table 2 *Means, Standard Deviations, and Correlations for All Study Variables*

VARIABLE	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
ATA-Asian	4.11	1.04	---	.53*	.17*	.14*	.37*	.26*	.08	.19*	.09*	-.03	-.17*	.13*	-.01	-.02	-.02
ATA-Self	4.14	.85	---	-----	.15*	.13*	.19*	.22*	-.20*	.04	-.13*	.13*	.03	.23*	-.05	.08	-.03
Acculturation-Asian	3.70	1.00	---	-----	-----	.01	.19*	-.04	-.01	-.02	-.12*	.09	-.12*	.05	.02	.05	.01
Acculturation-US	3.49	.85	---	-----	-----	-----	-.09*	.09*	-.08	-.16*	-.19*	.11*	.09	-.05	.09	.19*	.23*
Asian Values	3.94	.72	---	-----	-----	-----	-----	.15*	.24*	.31*	.28*	-.14*	-.38*	-.04	.15*	-.07	-.03
SO-Performance	4.18	.78	---	-----	-----	-----	-----	-----	-.02	.08	.00	-.10	-.03	.11	-.08	.09	.14*
SO-Self Doubt	3.27	1.06	---	-----	-----	-----	-----	-----	-----	.44*	.65*	-.45*	-.07	-.27*	-.09	-.04	.06
Somatic Symptoms	1.52	.54	---	-----	-----	-----	-----	-----	-----	-----	.69**	-.43*	-.04	-.01	-.11	-.06	-.06
OQ-45	53.58	24.89	---	-----	-----	-----	-----	-----	-----	-----	-----	-.66*	-.03	-.15*	-.05	-.07	-.06
Well-being	4.59	1.41	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	.08	.12*	.11	-.02	-.07
Help Seeking Attitudes	2.83	.74	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.09	-.19*	.24*	.05
Age	29.90	9.00	---	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.03	.32*	-.05
Gender	------	-----	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-.12*	-.09
Length of Stay	21.51	10.48	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.65*
Citizenship	.81	.395	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Note. N = 291, *p <.05, ATA-Asian = Attitudes Towards Asian Scale "Asian", ATA-Self = Attitudes Towards Asian Scale "Self"; SO = Subjective Overachievement; Gender coded (1= male, 2 = female); Citizenship coded (1- citizen, 2 = non-citizen)

Table 3: Multiple Regression Predicting Subjective Overachievement-Performance

Step / Variables Entered	R	R^2	Adjusted R^2	Change in R^2	F	df	B	SE	β	$t(90)$
1. Control Variables	.207	.043	.029	.043	3.194**	(4, 285)				
2. Main Effects	.359	.129	.101	.086	5.503**	(5, 280)				
3. Interaction Effects	.379	.144	.103	.015	1.214	(4, 276)				
Final Model										
Control variables										
Age							.009	.006	.104	1.571
Gender							- .131	.106	-.072	-1.232
Length of Stay							-.004	.006	-.053	-.619
Citizenship Status							.365	.161	.182	2.267*
Main effects										
Endorsement of Asian Stereotypes-Asian (ATA-Asian)							.120	.055	.157	2.191*
Endorsement of Asian Stereotypes-Self (ATA-Self)							.102	.064	.109	1.589
Identification with Asian culture (AI-Asia)							-.077	.046	-.096	-1.653
Acculturation to U.S. Culture (AI-US)							.070	.058	.074	1.210
Adherence to Asian Values (AAVS-M)							.109	.070	.099	1.555
Interactions										
ATA-Asian X ATA-Self							.076	.051	.102	1.510
ATA-Asian X AI-Asian							.002	.040	.002	.038
ATA-Asian X AI-US							-.015	.053	-.018	-.281
ATA-Asian X AAVS-M							.046	.062	.047	.733

Note. $N = 291$, $^*p < .05$, $^{**}p < .01$

Table 4: Multiple Regression Predicting Subjective Overachievement-Self Doubt

Step / Variables Entered	*R*	R^2	Adjusted R^2	Change in R^2	*F*	*df*	*B*	*SE*	*β*	*t(90)*
1. Control Variables	.283	.080	.067	.080	6.203**	(4, 285)				
2. Main Effects	.462	.214	.188	.134	9.521**	(5, 280)				
3. Interaction Effects	.469	.220	.184	.006	.573	(4, 276)				
Final Model										
Control variables										
Age							-.028	.007	-.235	3.723**
Gender							-.302	.135	-.125	-2.237*
Length of Stay							.008	.008	.080	.981
Citizenship Status							-.013	.204	-.005	-.063
Main effects										
Endorsement of Asian Stereotypes-Asian (ATA-Asian)							.201	.070	.198	2.888**
Endorsement of Asian Stereotypes-Self (ATA-Self)							-.383	.081	-.308	-4.718**
Identification with Asian culture (AI-Asia)							-.038	.059	-.036	-.650
Acculturation to U.S. Culture (AI-US)							-.079	.074	-.062	-1.067
Adherence to Asian Values (AAVS-M)							.354	.089	.241	3.960**
Interaction Effects										
ATA-Asian X ATA-Self							-.044	.064	-.044	-.686
ATA-Asian X AI-Asian							-.036	.051	-.038	-.692
ATA-Asian X AI-US							-.033	.067	-.030	-.495
ATA-Asian X AAVS-M							-.021	.079	-.016	-.259

Note. $N = 291$, $^*p < .05$, $^{**}p < .01$

Table 5: Multiple Regression Predicting Psychological Distress via HSCL somatic symptoms subscale

Step / Variables Entered	*R*	R^2	Adjusted R^2	Change in R^2	*F*	*df*	*B*	*SE*	*β*	*t(90)*
1. Control Variables	.131	.017	.003	.017	1.243	(4, 285)				
2. Main Effects	.389	.151	.124	.134	8.865**	(5, 280)				
3. Interaction Effects	.423	.179	.141	.028	2.333*	(4, 276)				

Note. $N = 291$, $^*p < .05$, $^{**}p < .01$

Final Model

Control variables				
Age	.000	.004	-.013	-.201
Gender	-.171	.071	-.137	-2.393**
Length of Stay	.002	.004	.039	.467
Citizenship Status	-.060	.108	-.044	-.558
Main effects				
Endorsement of Asian Stereotypes-Asian (ATA-Asian)	.076	.037	.145	2.066*
Endorsement of Asian Stereotypes-Self (ATA-Self)	-.046	.043	-.072	-1.708
Identification with Asian culture (AI-Asia)	-.044	.031	-.080	-1.405
Acculturation to U.S. Culture (AI-US)	-.056	.039	-.086	-1.428
Adherence to Asian Values (AAVS-M)	.197	.047	.260	4.161**
Interaction Effects				
ATA-Asian X ATA-Self	.019	.034	.037	.568
ATA-Asian X AI-Asian	-.020	.027	-.041	-.732
ATA-Asian X AI-US	-.081	.036	-.139	-2.273*
ATA-Asian X AAVS-M	.059	.042	.088	1.403

Table 6: Multiple Regression Predicting Psychological Distress via OQ-45

Step / Variables Entered	*R*	R^2	Adjusted R^2	Change in R^2	*F*	*df*	*B*	*SE*	*β*	*t(90)*
1. Control Variables	.173	.030	.016	.030	2.187	(4, 285)				
2. Main Effects	.451	.203	.178	.174	12.214**	(5, 280)				
3. Interaction Effects	.472	.223	.186	.020	1.740	(4, 276)				

Note. $N = 291$, $^*p < .05$, $^{**}p < .01$

Final Model

Control variables				
Age	-.418	.175	-.150	-2.387**
Gender	-3.931	3.179	-.069	-1.237
Length of Stay	.322	.194	.136	1.662
Citizenship Status	-6.845	4.807	-.109	-1.424
Main effects				
Endorsement of Asian Stereotypes-Asian (ATA-Asian)	3.872	1.641	.162	2.360**
Endorsement of Asian Stereotypes-Self (ATA-Self)	-6.627	1.908	-.214	-3.284**
Identification with Asian culture (AI-Asia)	-3.579	1.383	-.144	-2.587**
Acculturation to U.S. Culture (AI-US)	-4.371	1.740	-.147	-2.512**
Adherence to Asian Values (AAVS-M)	9.517	2.102	.275	4.527**
Interactions				
ATA-Asian X ATA-Self	2.412	1.509	.103	1.598
ATA-Asian X AI-Asian	-1.636	1.208	-.075	-1.355
ATA-Asian X AI-US	-3.150	1.587	-.118	-1.895*
ATA-Asian X AAVS-M	-.351	1.866	-.012	-.188

Table 7: Multiple Regression Predicting Wellbeing

Step / Variables Entered	*R*	R^2	Adjusted R^2	Change in R^2	*F*	*df*	*B*	*SE*	*β*	*t(90)*
1. Control Variables	.168	.028	.014	.028	2.058	(4, 285)				
2. Main Effects	.322	.104	.075	.076	4.744**	(5, 280)				
3. Interaction Effects	.362	.131	.090	.027	2.164	(4, 276)				
Final Model										
Control variables										
Age							.018	.010	.114	1.713
Gender							.290	.190	.090	1.525
Length of Stay							-.012	.012	-.094	-1.094
Citizenship Status							-.122	.287	-.034	-.425
Main effects										
Endorsement of Asian Stereotypes-Asian (ATA-Asian)							-.114	.098	-.084	-1.159
Endorsement of Asian Stereotypes-Self (ATA-Self)							.235	.114	.142	2.059*
Identification with Asian culture (AI-Asia)							.151	.083	.107	1.821
Acculturation to U.S. Culture (AI-US)							.201	.104	.119	1.931*
Adherence to Asian Values (AAVS-M)							-.338	.126	-.173	-2.694**
Interactions										
ATA-Asian X ATA-Self							-.245	.090	-.185	-2.721**
ATA-Asian X AI-Asian							-.064	.072	-.052	-.892
ATA-Asian X AI-US							-.119	.095	.079	1.252
ATA-Asian X AAVS-M							.128	.112	.074	1.145

Note. $N = 291$, $^*p < .05$, $^{**}p < .01$

Table 8: Multiple Regression Predicting Attitudes Towards Help Seeking

Step / Variables Entered	*R*	R^2	Adjusted R^2	Change in R^2	*F*	*df*	*B*	*SE*	*β*	*t(90)*
1. Control Variables	.302	.091	.078	.091	7.151**	(4, 285)				
2. Main Effects	.477	.227	.203	.136	9.871**	(5, 280)				
3. Interaction Effects	.496	.246	.210	.018	1.674	(4, 276)				
Final Model										
Control variables										
Age							.000	.005	-.010	-.168
Gender							-.219	.093	-.129	-2.358**
Length of Stay							.020	.006	.283	3.516**
Citizenship Status							-.316	.140	-.169	-2.252*
Main effects										
Endorsement of Asian Stereotypes-Asian (ATA-Asian)							-.093	.048	-.131	-1.942*
Endorsement of Asian Stereotypes-Self (ATA-Self)							.105	.056	.121	1.894*
Identification with Asian culture (AI-Asia)							-.042	.040	-.056	-1.029
Acculturation to U.S. Culture (AI-US)							.055	.051	.062	1.080
Adherence to Asian Values (AAVS-M)							-.314	.061	-.307	-5.130**
Interactions										
ATA-Asian X ATA-Self							.007	.044	.010	.151
ATA-Asian X AI-Asian							-.053	.035	-.082	-1.508
ATA-Asian X AI-US							-.068	.046	-.087	-1.476
ATA-Asian X AAVS-M							-.057	.054	-.063	-1.040

Note. $N = 291$, $^*p < .05$, $^{**}p < .01$

APPENDIX B: Figures

Figure 1: *Model of Study Analysis*

(Relations among variables for the moderated model of endorsement of Asian stereotypes to and subjective overachievement, psychological distress, well-being, and attitudes towards help seeking as a function of acculturation and adherence to Asian values)

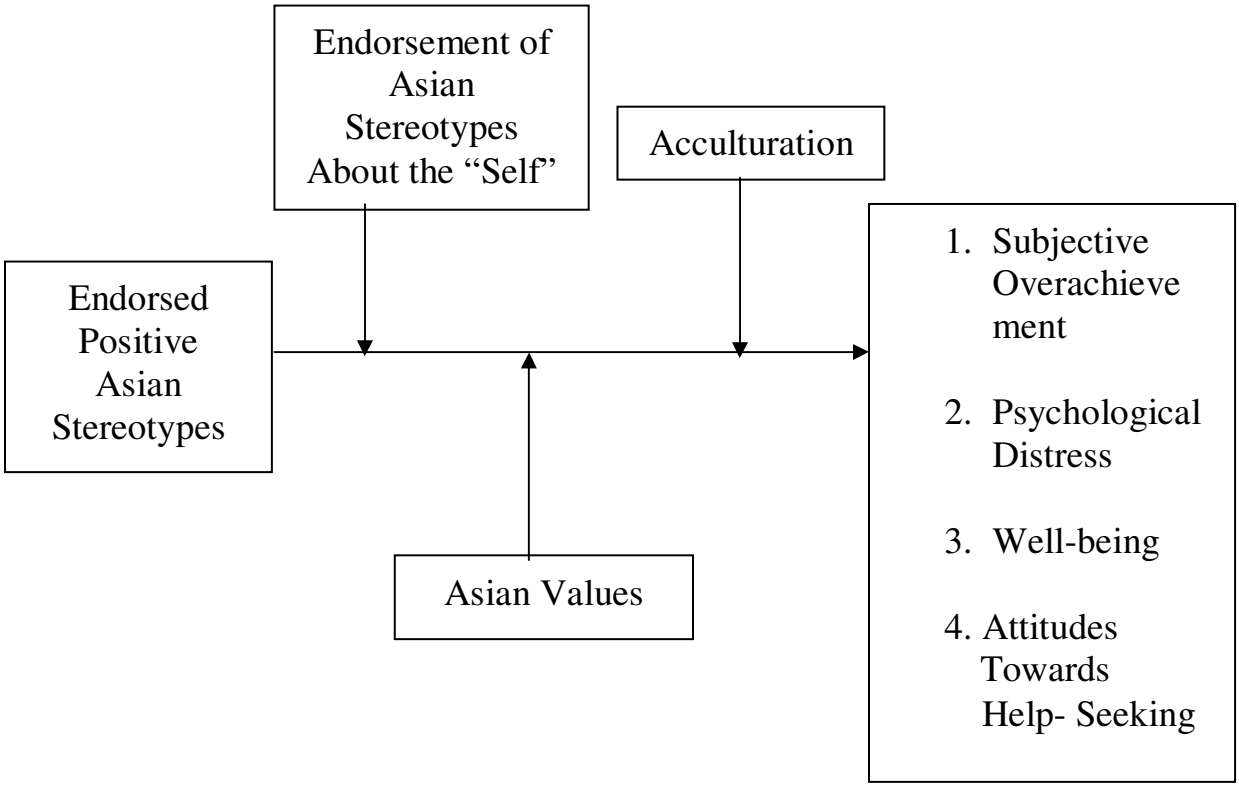
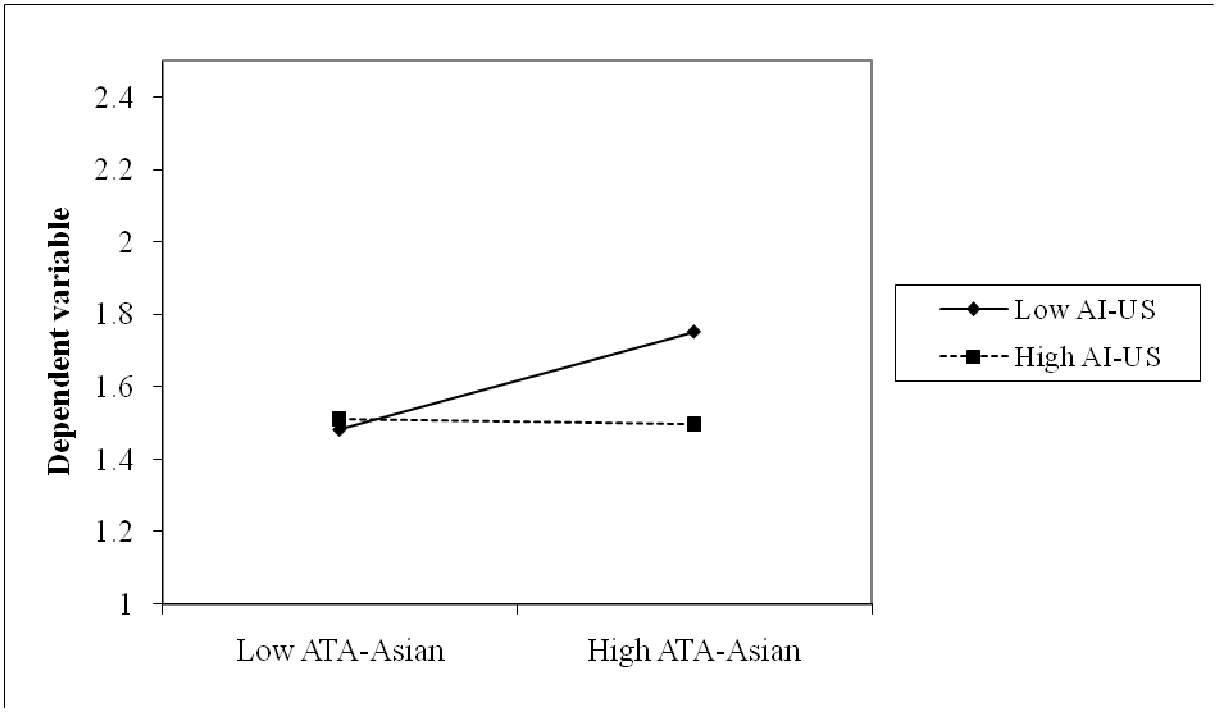


Figure 2

Interaction of Endorsement of Positive Asian Stereotypes and Acculturation to the U. S. on Somatic Symptoms



VITA

Arpana "Annie" Gupta was born in Lusaka, Zambia on April 13th, 1975. She was raised in Kitwe, Zambia and went to boarding school (Mussoorie International School for Girls) in India at the age of 11years old. She completed her high school and her Associates degree in London, UK at Rochestor Tutors College. She graduated from Edinboro University of Pennsylvania, PA and received a B.Sc in Nuclear Medicine Technology in 1998. From there in 1998 she went to George Washington University in Washington, to complete her internship and certification in Nuclear Medicine Technology. Annie worked at Georgetown University Hospital, Washington, DC as a Nuclear Medicine Technologist up until 2000. Then from, 2000 to 2001 she worked as a Nuclear Medicine Technologist till 2001 at Bowman Gray Hospital in Winston Salem, NC. Annie went on to obtain a M.Ed. in Community Counseling from Wake Forest University, NC in 2003. She worked for a year after her degree at two outpatient psychological facilities in Charlottesville, VA (Empowering Families Program and Psychology Associates). Annie then went on to enter her doctoral program in Counseling Psychology at the University of Tennessee in Knoxville, TN in the Fall of 2004. Annie is currently in pursuit of her Ph.D. within this program and her anticipated graduation date is during the Summer of 2010. She is currently on a one year APA accredited internship at Harvard-Massachusetts General Hospital in Boston, MA.