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A Structural Model of Leadership Self-Efficacy for Asian American Students: Examining Influences of Collective Racial Esteem and Resilience

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A STRUCTURAL MODEL OF LEADERSHIP SELF-EFFICACY FOR ASIAN

AMERICAN STUDENTS: EXAMINING INFLUENCES OF COLLECTIVE RACIAL

ESTEEM AND RESILIENCE

A DISSERTATION SUBMITTED TO

THE FACULTY OF THE GRADUATE SCHOOL

IN CANDIDACY FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

PROGRAM IN HIGHER EDUCATION ADMINISTRATION

BY

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To Richard, Kevin, and Mari

PREFACE

Previous to returning to Loyola for my doctorate, I worked almost exclusively with Asian American college students at the Asian American Resource and Cultural Center (AARCC) at the University of Illinois at Chicago. During that time, I watched the growth and development of a number of Asian American student leaders, some who came to college naturally inclined to get involved in leadership, others who warily became more engaged with issues and fellow students as they progressed in college. One thing that stood out to me was these students' reluctance to get involved in campus-wide leadership opportunities outside of the Asian American sphere, including both training (e.g., leadership retreat, workshop, certificate program) as well as what might be considered more traditional campus-wide leadership positions (e.g., orientation leader, resident advisor, student government). No matter how much the AARCC staff promoted these opportunities or suggested the potential gains for students, they were rarely interested in engaging in these pursuits.

Yet despite this reluctance to get involved in campus-wide leadership activities, these students were heavily involved in identity-based organizations as well as leadership-related activities sponsored by AARCC such as the planning of Asian American Awareness Month or the annual Asian American organizations leadership retreat. I also found that many of the students who came through AARCC were involved

in off-campus leadership activities, whether through church, community-based organizations, or issue-based or political campaigns.

Another observation was that a high percentage of the students who participated in our peer mentor program (generally composed of a different group of students than the organization leaders) became active leaders both on and off campus in a variety of ways, but particularly in areas related to social justice. I started to wonder exactly what was happening in our mentor program that developed such leaders given that it was not billed as a "leadership program" per se. Many of the students joined the program because they felt they needed help in adjusting to college, not because they wanted to become a student leader. That same leadership development occurred in our student workers regardless of which position they held in our office, as many of them moved on to social justice-related internships or careers.

As I returned to graduate school and began studying leadership development in depth, I discovered that many of the programs we did at AARCC were utilizing what are now understood to be some of the "best practices" for developing leadership, particularly among students of color (Dugan & Komives, 2010; Dugan, Kodama, & Gebhardt, 2012; Kodama & Dugan, 2013). These included mentoring by students, staff, and faculty (particularly those who were also Asian American), engagement in sociocultural conversations, as well as explicit attention to racial identity. These components, which were carefully thought through in terms of identity consciousness, community building, and psychosocial development, I realized were also building leadership skills and values.

However, as I reviewed the literature on Asian American leadership development, a recurring theme in the research was a lack of self-belief or self-identification as a leader. I recalled that this was something I had noticed in many of my AARCC students as well, their reluctance to self-identify as a leader regardless of their levels of engagement, activism, or positional roles as well as their lack of interest in campus-wide leadership activities. I watched student organizations nearly fold because no student wanted to identify in name as the "president" (or other officer position) necessary for student organization forms, despite their clear leadership role in the group. I often had to ask students why they did not include leadership roles on resumes or scholarship applications and encouraged them to "brag a little" about their leadership activities on paper. The contrast between their lack of identification as a leader with the effective leadership skills I saw these students demonstrating each day was reflected in the literature and made me want to better understand what seemed to be this disconnect between belief and action. I wondered what experiences might influence leadership self-efficacy for Asian American student leaders, given that it often seemed low despite their demonstrated leadership abilities and effectiveness.

Luckily, this interest fit with the direction of research that I was conducting in my graduate assistantship with the Multi-Institutional Study of Leadership (MSL). Our research focused on disaggregating data by race in quantitative studies on socially responsible leadership using MSL survey data. Specific projects focused on the role of collective self-esteem in the development of socially responsible leadership capacity as well as leadership self-efficacy and predictors of resilience for students of color.

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Findings from each of these projects started to fill in some of the gaps in existing

knowledge around leadership development for students of color, and I became interested

in digging deeper to explore these issues in more detail with Asian Americans

specifically. Coupled with my comprehensive exam topic of higher education research

on Asian Pacific Islander Americans, I soon realized that each of these projects was a

step towards my future dissertation, as the studies fit well together and eventually

informed my chosen topic of investigating the relationships between campus culture,

collective racial esteem, resilience, and leadership self-efficacy.

This dissertation continues the line of research I began as a masters' student at the

University of Maryland and is in some ways an opportunity to revisit student

development of Asian Americans with an additional decade of literature and practice to

draw upon. Thus, the content of my dissertation builds upon research I have done in both

the recent and more distant past on Asian American student development, racial identity

choices, and leadership development, but with a more complex quantitative methodology.

With this research, I hope to inform not just the literature base on Asian American

college students, but also that of college student leadership development and higher

education literature in general. In addition, one of my primary goals in conducting any

research is to inform practice, given my identity as a scholar-practitioner. I believe the

content of this dissertation is most relevant to inform not only the functional area of

student leadership, but also Asian American-based programs and cultural centers,

multicultural programs, and general student development departments. For example, I

am often asked by my professional colleagues in these functional areas for new research

on Asian American leadership development. Additionally, MSL school contacts have often asked for more information on developing leadership self-efficacy for Asian Americans given their scores are often low in their reports. However, given the lack of empirical, published research on Asian Americans and leadership, I have not had any information to share with them in a format they can readily use, other than referring them to dissertations or single-campus studies. This dissertation is an attempt to fill this gap.

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GLOSSARY

Asian American/Asian American Pacific Islander/Asian Pacific Islander American

For the purposes of this study, multiple terms are used to most accurately reflect the populations being discussed. For example, in reviewing the literature the term "Asian American" will most often be used given that the overwhelming majority of higher education scholarship does not address or include Pacific Islanders. However, the Asian American population in specific studies will be referenced using the same term as used by the authors of these studies, which may also include "Asian Pacific American" (APA), "Asian American and Pacific Islander" (AAPI), and "Asian Pacific Islander Desi American" (APIDA, with an explicit inclusion of South Asians). The 2010 U.S. Census collected Asian American data for seven response categories: Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and Other Asian, which allowed more specific write-in responses, resulting in recording of 24 ethnic groups total (Hoeffel et al., 2012; Vidal, Hoeffel, & Jones, 2012). Additionally, there were four response categories for Native Hawaiian/Pacific Islander groups: Native Hawaiian, Guamanian or Chamorro, Samoan, or Other Pacific Islander. However, in referring to the present study, the term "Asian American" will be used given that the analyses here did not include Pacific Islanders due to lack of sufficient sample size, and also the reality that Asian American and Pacific Islander experiences may represent unique social constructions.

Collective Racial Esteem

CRE examines four components of how an individual constructs meaning around their affiliation with their racial group (Crocker et al., 1994). Private CRE refers to one's internal assessment of the value of their racial group. Public CRE refers to one's perceptions of how others view their racial group. Identity Salience CRE reflects the degree to which this racial group membership is central to their overall self-concept. Membership CRE relates to individuals' beliefs about how well they function as a member of their racial group.

Effect Size

An effect size is an interpretation of the strength and thus the meaningful effect of a particular statistical analyses. According to Cohen (1988), the effect sizes for standardized path coefficient are as follows: trivial (<.10), small (.10-.29), medium (.30-.49), and large (.50-1.0). Effect sizes for the squared multiple correlations (R^2) are small (.01-.09), medium (.09-.25), and large (>.25).

Endogenous Variable

In the language of structural equation modeling (SEM), endogenous variables are considered the dependent variables, which components in the SEM model seek to explain. However, endogenous variables can also influence other endogenous variables.

Ethnic Category

Ethnic category refers to a further disaggregated categorical marker of race to specific ethnic group based on cultural heritage. For example, a Japanese American may check "Asian American" for racial category, but "Japanese" or "Japanese American" for

ethnic category. The 2010 U.S. census measured over 20 Asian ethnic categories and at least four Pacific Islander categories, but calls them all "race" categories (Hoeffel et al., 2012). In the dataset used for the present study, Asian American data are partially aggregated into seven different categories: Chinese, Indian/Pakistani, Japanese, Korean, Filipino, Pacific Islander, Vietnamese, and Other Asian.

Exogenous Variables

In the language of SEM, exogenous variables refer to the independent variables, that is, the variables which are hypothesized to influence the model's outcome variables.

Identity-Based Experiences

Identity-based experiences refer to college experiences which are organized around membership in a social identity group, most typically race or ethnicity. For purposes of the present study, this included involvement with Asian American student organizations, being an ethnic studies major, or having a mentor from the same-race background.

Leadership Self-Efficacy

Self-efficacy is defined as a belief in one's capabilities to act successfully in a desired way to reach a particular result (Bandura, 1997). Thus, LSE reflects self-beliefs in one's knowledge, skills, and abilities to successfully engage in leadership (Hannah et al., 2008).

Racial Category

Racial category refers to the groupings of racial group membership which are typically determined by students checking a box on a self-identification form. In most

higher education research five categories are used (though with varying nomenclature): African American/Black, Asian/Pacific American, Hispanic/Latino, White/Caucasian, Multiracial or Other. These groups are then often compared with one another in studies to assess the potential differential impact of race on college inputs and/or outcomes.

Racial Identity

Racial identity is defined in inconsistent ways across the literature base and seems to be continually shifting (Quintana, 2007). However, for purposes of this study, racial identity is defined as an individual's attachment to the racial group to which they belong. Racial identity assumes a developmental process of meaning making which typically contains both a cognitive and affective component and may shift over time (Quintana, 2007). Racial identity may impact the ways in which individuals claim affiliation with their racial group, explore various aspects of their racial heritage, and associate with others from the same (and different) racial groups.

Resilience

Connor and Davidson (2003) define resilience as "the personal qualities that enable one to thrive in the face of adversity" (p. 76) and a "measure of successful stress-coping ability" (p. 77). Given the multiple definitions of the construct across the literature, Resilience with a capital R will refer to the latent factor used in the present study, while resilience with a small r will refer to other definitions that may differ from Connor and Davidson's (2003) construct.

CHAPTER ONE

INTRODUCTION AND BACKGROUND

Asian Americans are a rapidly-growing percentage of today's college students (National Commission on Asian American and Pacific Islander Research in Education "CARE," 2010). Their growth, once concentrated in a select few states and a few types of institutions, is broadening to include more geographical regions and sectors of higher education (CARE, 2008, 2010). However, despite their increasing numbers, Asian Americans continue to be left out of much of the discourse in higher education. For example, a recent literature review showed only 1% of articles in the major higher education peer-reviewed journals addressed Asian American issues (Museus, 2009).

Although there is a general lack of attention to Asian American college students in the higher education literature, limited research has demonstrated unique influences on student development for Asian Americans due to cultural differences which frequently are overlooked in both theory and practice (Maramba, 2008; McEwen, Kodama, Alvarez, Lee, & Liang, 2002). Findings from these studies suggest the importance of reexamining developmental processes of college students using data disaggregated by racial group to more appropriately understand diverse populations (Dugan et al., 2012; Dugan, Komives, & Segar, 2008; Museus & Chang, 2009; Teranishi, 2010). One such developmental process is that of leadership development, which is often stated as a key outcome of higher education (Astin & Astin, 2000; Keeling 2004; Komives, Dugan, Owen, Slack, &

Wagner, 2011). There is a well-established base of literature on leadership development

(Komives et al., 2011), but scant attention to issues unique to Asian American students.

Though there are some considerations of international cultural differences (e.g., peoples

living in Asia) in the leadership studies literature, there is limited research on Asian

Americans including in the scholarship on college leadership development. In fact, to

date there is not a single peer-reviewed publication specifically dedicated to addressing

Asian American college student leadership development.

Given the above limitations, there are two primary challenges to understanding

the appropriateness of the scholarship on leadership development in relation to Asian

American students. First, given the lack of research, it is difficult to interpret findings

from the leadership literature since it does not address Asian American leadership

development specifically. Second, the research which does exist often portrays Asian

Americans as lacking in leadership skills due to low scores on leadership outcome

measures, though it is not entirely clear why this is the case (Balón, 2005; Dugan &

Komives, 2010; Kodama & Dugan, 2013).

Despite these challenges in understanding Asian American leadership

development through the larger body of leadership literature, however, some research has

shown unique influences on leadership development for Asian Americans that lay the

foundation for more complex studies (Balón, 2004; Dugan et al., 2012; Dugan et al.,

2008; Kwon, 2009; Lo, 2011). These studies have highlighted the importance of

leadership self-efficacy (LSE), racial identity, and the social context in understanding

leadership development for Asian Americans. Thus, the purpose of the present study is

to build upon these findings in order to explore potential influences on the development of LSE for Asian American college students.

This chapter provides background information and context to set up the present dissertation study. First, an introduction to Asian American students will be given, as well as a justification for the importance of studying leadership development for this population. The purpose of the research and problem statement will be highlighted, as well as an overview of the key topics for this dissertation, including leadership self-efficacy, racial identity, and resilience. Second, the significance of the study for both research and practice will be addressed. Third, definitions for the key terms in the study will be provided. Finally, an overview of the study's methods will be outlined to set up the literature review and methods chapters.

Statement of the Problem

What is LSE and Why is it Important for Asian Americans?

LSE reflects individuals' "levels of confidence in the knowledge, skills, and abilities associated with leading others" (Hannah, Avoilio, Luthans, & Harms, 2008, p. 1). LSE is derived from Bandura's (1997) theory of general self-efficacy, which posits the importance of self-beliefs to future behavior and development. Research on LSE reports its positive role in shaping leadership development including capacity, behaviors, aspirations, and effectiveness (Hannah et al., 2008; Machida & Schaubroeck, 2011).

LSE seems to be particularly important for Asian American students who often do not perceive themselves as leaders (Arminio et al., 2000; Balón, 2005; Liang, Lee, & Ting, 2002). The research has consistently shown low LSE among Asian Americans

(Balón, 2005; Dugan et al., 2008; Dugan & Komives, 2010; Dugan, Fath, Howes, Lavelle, & Polanin, 2013; Kodama & Dugan, 2013), yet also the importance of LSE as a key predictor of leadership capacity (Dugan, 2011; Dugan & Komives, 2010; Hannah et al., 2008). Dugan and Komives (2010) found this influence was particularly important for Asian Americans, as LSE mediated the otherwise negative influence associated with Asian American racial group membership on socially responsible leadership outcomes.

However, despite research emphasizing the importance of LSE to overall leadership development, there is limited research on what predicts LSE and in particular how LSE may operate uniquely for diverse populations such as Asian Americans. For example, Kodama and Dugan (2013) investigated influences on LSE for a diverse sample of college students, and found that both levels and predictors of LSE varied by racial group. One such predictor was the psychological construct of collective racial esteem (CRE), which was used as a measure of racial identity. Kodama and Dugan (2013) suggested that further research on LSE including measures of additional psychological constructs may influence LSE and other leadership outcomes for students of color.

The Role of Race and Racial Identity in Leadership Development

Leadership development does not occur in a vacuum. Research has demonstrated the importance of both racial identity and the racial context on student development for students of color generally (Maramba & Velasquez, 2010; Pope, 2000; Torres, Jones, & Renn, 2009) and Asian Americans specifically (Kodama, McEwen, Liang, & Lee, 2001, 2002; Maramba, 2008; Museus & Park, in press). Museus and Park (in press) developed a typology of nine different ways in which race and racism influenced Asian Americans'

college experiences including pressures to racially segregate and/or assimilate, racial isolation, and outright racial harassment.

In terms of leadership specifically, research has shown the impact of racial identity on students' engagement and leadership development (Inkelas, 2004; Kwon, 2009; Lo, 2011; Poon, 2013). Other studies have found racial differences in self-perceptions and confidence around leadership as well as the factors which influenced those outcomes (Arminio et al., 2000; Kezar & Moriarty, 2000). Balón (2005) found that Asian American students were the least likely of all racial groups to self-identify as a leader and felt culturally marginalized from leadership and the leader role. Kwon (2009) found that while Asian American students did feel comfortable with leadership roles, their identity as leaders differed by type of organization (e.g., Asian American vs. non-Asian American) as well as campus climate (e.g., lower vs. higher percentage of Asian Americans on campus). Perhaps more importantly, Kwon (2009) found that racial stereotypes had a great influence on how and why Asian Americans became student leaders as well as how they felt non-Asian Americans evaluated their leadership abilities.

The above findings are closely related to the development of LSE given the emphasis on self-beliefs related to leadership. For example, Bandura (1997) mentions ethnic or racial affiliation as a type of group membership that can influence self-efficacy through values and social practices, as well as how people are perceived and/or treated by others. Kodama and Dugan (2013) found differences in both levels and predictors of LSE for different racial groups. That same study showed a significant, albeit small influence on LSE from CRE, a construct that has been successfully used as a measure of

racial identity in quantitative research, particularly with Asian Americans (Alvarez & Helms 2001; Iwamoto & Liu, 2010: Kim & Omizo, 2005; Liang & Fassinger, 2008). In fact, Asian Americans were the only group for which all four aspects of CRE were significantly predictive of LSE (Kodama & Dugan, 2013). Thus, continued investigation of the impact of racial identity on LSE may be an important contribution to better understanding leadership development processes for this population.

Any investigation of racial identity for Asian Americans, however, should pay attention to the ethnic diversity of this population in order to best understand the inherent complexities of racial and/or ethnic identification. The U.S. Census collects data on 24 Asian American ethnic groups, plus four Native Hawaiian/Pacific Islander groups (Hoeffel, Rastogi, Kim, & Shahid, 2012). These ethnic groups have different immigration histories and experiences in the U.S, which in turn may impact racial identity development (Accapadi, 2012; Nadal, 2004; Museus, Vue, Nguyen, & Yeung, 2013). Research shows a variety of ways in which Asian American and Pacific Islander ethnic groups differ in their identification with a pan-Asian identity, which may in turn impact their sense of affiliation with other Asian American students, involvement with identity-based organizations, and other college experiences (Chuuon & Hudley, 2010; Kibria, 2002; Kodama & Ebreo, 2009; Maramba, 2008; Museus & Maramba, 2010; Nadal, 2004; Wong, 2010).

Additionally, given the ethnic diversity within the Asian American population, and the importance of disaggregating data by racial group to better understand influences on leadership development, the same logic may apply to the need to disaggregate Asian

American data by ethnic group. Studies that disaggregate Asian American data have provided a more complex view of Asian American student experiences that is missed when ethnic differences are ignored. Thus, this study seeks to investigate not only specific components of the leadership development process for Asian Americans as a whole, but by ethnic group as well.

The Potential Influence of Resilience

Another developmental construct which has been suggested as having mutual influences with both racial identity and leadership is resilience. Though defined in inconsistent ways throughout the literature, this study will use the definition by Connor and Davidson (2003): "the personal qualities that enable one to thrive in the face of adversity" (p. 76) and a "measure of successful stress-coping ability" (p. 77). Not only is resilience developmental, but researchers also suggest that it may vary based on context, time, age, gender, cultural origin, and life circumstances (Connor & Davidson, 2003), suggesting its importance for study among diverse groups.

Resilience has been both implicitly and explicitly linked to the leadership process, particularly as aiding leaders in their ability to persist in challenging environments, navigating complex systems and resources, deconstructing power and authority, dealing with ambiguity, and adapting to human behavior (Heifetz, 1994; Heifetz & Linsky, 2002; Luthans, Norman, & Hughes, 2006; Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000). Resilience thus helps leaders develop the skills necessary to adapt to diverse and changing environments.

Resilience has also been linked to the impact of race and development of racial identity (Brown, 2008; Poon, 2013). For example, resilience has been discussed in the literature as a protective factor for people of color to overcome the barriers encountered in daily life in a racist society (Clauss-Ehlers, 2004, 2008; Lee, 2005). It has also been suggested that ethnic and racial identity (including as measured by CRE) are important in the development of resilience (Crocker, Luthanen, Blaine, & Broadnax, 1994), though there has been little research investigating resilience for students of color in higher education (Dugan, Kodama, Loredo, & Derringer, 2013).

In relation to Asian American students specifically, only two studies have addressed resilience but not as a central variable (Lee, 2005; Poon, 2013). Lee (2005) found only partial support for the hypothesis that ethnic identity would contribute to resilience against racial discrimination for Korean Americans, but suggested the need for more complex studies. Poon (2013), however, found that racial identity helped Asian American students develop the resilience necessary to deal with negative racial incidents. Given these mixed findings, it is possible that there is a link between racial identity and resilience, as well as between resilience and LSE. Thus, further exploration of the relationship between racial identity, resilience, and LSE may be useful in understanding the ways in which psychological constructs may influence college outcomes such as leadership development.

Research Questions

Given the positioning of leadership as a critical college outcome (Astin & Astin, 2000; Komives et al., 2011) as well as a body of research with a limited view of Asian

Americans as leaders, this study sought to investigate the relationship between racial identity, resiliency, and leadership self-efficacy for Asian American students specifically. Thus, the primary research questions were:

1. What is the relationship between collective racial esteem and resiliency on the outcome of leadership self-efficacy for Asian American students?
2. Do these relationships differ by ethnic group and/ or gender?

Significance of the Study

Given the limited research on both Asian Americans and LSE, this study offers important contributions to the higher education literature. First, the use of quantitative methods with a large-scale, national dataset fills a gap given the limited extant research on Asian American college leadership development has been primarily qualitative (Kwon, 2009; Lo, 2011; Poon, 2013). The size of the dataset used for this study makes it possible to conduct complex, quantitative analyses such as structural equation modeling (SEM) in the examination of psychological constructs, college experiences, and leadership outcomes. Additionally, results from these analyses can be disaggregated by ethnic group, an important refinement in the research literature which typically treats Asian Americans as a monolithic group, particularly in quantitative studies (Museus, 2009; Teranishi, 2010).

Second, this study will contribute to the investigation of the relationship between psychological constructs such as resiliency, CRE, and LSE on leadership development. In fact, this study may be the first to utilize the Connor-Davidson resiliency scale

(Campbell-Sills & Stein, 2007) with an Asian American sample. In particular, this study will add to the continued investigation of CRE as an appropriate construct in assessing the impact of race in quantitative research (Dugan et al., 2012). Significant findings would broaden the scope of leadership development literature which has to date primarily focused on the influence of direct experiences from the college environment.

Third, this research has important implications for practice in higher education, where leadership development efforts are often treated as a "one size fits all" approach without attending to potential differences due to race (Dugan et al., 2012; Munin & Dugan, 2011). Rather than assume that Asian Americans are not inclined to be leaders, a closer investigation of how LSE develops among this population is an important research inquiry to better understand how best to develop future college leaders from diverse backgrounds. This may inform an understanding of more appropriate ways to serve not only Asian Americans, but other students of color amidst leadership development frameworks which were developed without them in mind. This is imperative if higher education wants to fulfill its goal of developing future leaders who both reflect the nation's changing demographics and are equipped to deal with today's leadership challenges (Astin & Astin, 2000).

Overview of Methods

Conceptual Framework

The conceptual framework draws on two theoretical frames: self-efficacy theory (Bandura, 1997) and Asian American psychosocial development (Kodama et al., 2002). Bandura's (1997) theory of self-efficacy emphasizes the importance of self-efficacy in

exercising agency in future behaviors in a variety of contexts (e.g., leadership). Bandura

(1997) specifies a variety of ways in which an individual may develop self-efficacy,

aspects of which can be assessed in the college environment and thus hypothesized to

have a relationship with the development of LSE for college students. For purposes of

this study, the focus was on Bandura's (1997) fourth source of self-efficacy:

physiological, and emotional states or arousal. Kodama et al. (2002) framed a model of

development for Asian American students within two external domains of Western

values (society, including most college campuses) and Asian values (family). These

domains serve as contexts in which Asian American student development may occur in

different ways, which for the purposes of this study focused on leadership development.

The combination of Bandura's (1997) and Kodama et al.'s (2002) theoretical

frames is particularly appropriate to inform the examination of leadership self-efficacy

for Asian American students, an understudied population which may have unique

influences in student development that are relevant to the present study. These theories

were integrated by paying explicit attention to racial identity in the development of

leadership self-efficacy for Asian Americans, given the centrality of identity during the

college years. The interpretation of the findings related to predictors of LSE will also be

related to how they fit into Bandura's (1997) framework, but also the importance of

social contexts in which they occur which Kodama et al. (2002) suggested as particularly

important for Asian Americans. Together, then, these theories should best inform the

unique development of Asian American leadership self-efficacy.

The selection of key variables of interest for this study was based on Bandura's (1997) and Kodama et al.'s (2002) theoretical frameworks, as well as determined by previous research on Asian American students' leadership development, CRE, resiliency, and particularly LSE. However, this study seeks to go beyond the extant research which has found positive influences of college experiences such as mentoring relationships, participation in student organizations and/or off-campus organizations, participation in sociocultural conversations, leadership training, and holding positional leadership roles on LSE (Dugan & Komives, 2010; Dugan et al., 2008; Dugan et al, 2012). Instead, given the emphasis on psychological constructs, the primary goal of this study seeks to investigate and perhaps extend the notion of Bandura's (1997) fourth source of self-efficacy, that of affective states that may influence self-efficacy through emotional, physiological, and cognitive self-appraisals.

Of particular interest are participation in identity-based organizations, having an Asian American mentor, and being an ethnic studies major given previous research which has established their positive influence on racial identity development (Inkelas, 2004; Kibria, 2002; Lo, 2011; Museus, 2008). These identity-based college experiences help students to learn about, express, and develop a sense of community around shared identity, as well as gain leadership experience in a safe space, thus impacting both racial identity and leadership development. These experiences will also be combined into a factor reflecting identity-based experiences.

This quantitative study utilized the analytic technique of structural equation modeling (SEM). The goal was to test a theoretically and empirically derived model that

was hypothesized to represent the relationship between both the observed and latent variables on the outcome of LSE for Asian Americans. Gender has also been shown to impact leadership development for Asian Americans (Kawahara, Esnil, & Hsu, 2007; Kwon, 2009), while ethnicity has been demonstrated to differentially impact both identity and other college outcomes (Kibria, 2002; Museus & Maramba, 2010; Teranishi, 2010; Wong, 2010). Thus, the final structural model will be tested for invariance across gender and ethnic groups.

Summary

This chapter provided an introduction to the topic of Asian American college student leadership development highlighting the importance of LSE for a population that is often overlooked as leaders. An overview of relevant scholarship included specific attention to racial identity and resilience as potential influences on LSE, the primary constructs of interest for the present study. This research fills a gap in both the leadership literature as well as the Asian American college student literature, providing a complex examination of the influence of psychological constructs on leadership outcomes. A brief overview of the diversity of the Asian American population was also presented to highlight the importance of disaggregating data in Asian American higher education research, including in this study. Finally, an overview of the methods has been outlined to guide the direction of the present study.

CHAPTER TWO

LITERATURE REVIEW

Given that the purpose of this research was to examine the relationship between collective racial esteem (CRE) and resilience on leadership self-efficacy (LSE) for Asian American college students, this chapter provides an overview of the extant literature that informs the variables of interest for this study. This literature review begins with an overview of the research on college student leadership focused on evolving conceptualizations of leadership and the role of LSE. Second, this literature review examines the research which addresses leadership development for racially diverse populations. Third, the few studies (all doctoral dissertations) which examine Asian American leadership development are summarized. Themes from these studies are reviewed in more detail and framed in terms of the role of race and racial identity in leadership development, specifically as related to LSE, identity-based organizations, and campus climate. The last section of the literature review examines the constructs of CRE and resilience, psychological constructs with emerging importance to leadership development. Finally, this review concludes by identifying gaps in the literature and providing justification for the hypotheses and methods used in the present study.

Evolving Conceptualizations of Leadership

Leadership development has often been stated as a key outcome of higher education, which is reflected in both a growing literature base as well as an increase of

leadership programs on today's campuses (Komives, 2011). However, there have been many different approaches to leadership development over the years. Both theoretical and empirical research have led to a shift in conceptualizations of leadership from views of leadership as inherent, trait-based, and individualistic to contemporary views which are developmental, values-based, and relational. Leadership paradigms have also moved from somewhat static, highly structured, and hierarchical models to dynamic, process-oriented, nonhierarchical models (Kezar, Carducci, & Contreras-McGavin, 2006). These different notions of leadership have often reflected the social context in which leadership research took place, and thus evolving views better reflect the growing diversity of the world in which leadership is manifest.

A brief review of the changing nature of leadership is important background for understanding how leadership development is presently addressed and also perceived by college educators and students. These evolving theories and models of leadership development differ in the ways they define leadership, the most appropriate skills and/or values necessary to be an effective leader, and the processes which are suggested to build effective leadership. These shifting paradigms are based on changing social contexts as well as new scholarship and practice (Kezar et al., 2006).

Industrial Paradigm

The industrial paradigm reflects conventional views of leadership focused on individuals as leaders, optimizing productivity and management, and leadership as represented by positional authority (Northouse, 2010). The industrial paradigm is characterized by trait-based models that suggested individuals were born with certain

characteristics that made them effective leaders, such as extroversion, charisma, and decisiveness (Dugan & Komives, 2011; Northhouse, 2010). Based on these valued characteristics and skills, these leader-centric models privileged White, upper-class males as the prototypical leader. This also reflects the populations which were studied in the development of these leadership models, as well as the audience they were directed toward, which were primarily business leaders (Dugan & Komives, 2011). Thus, the industrial paradigm of leadership portrayed a narrow view of who could become leaders and specific personality traits that were central to effective leadership.

Eventually, the focus of leadership theories shifted from an emphasis on inherent traits to desired behaviors that characterized effective leadership. Though the focus was less on personal characteristics, these theories still suggested that there was one best way to lead based on effective task-oriented behaviors (Komives, Lucas, & McMahon, 2007; Northhouse, 2010). Some of these behavioral models were situational in nature, acknowledging how specific situations may require different leadership types of skills and behaviors. In other words, leaders needed to be aware of and somewhat adaptable to different types of followers and their motivations in order to select the right approach for effective leadership (Dugan & Komives, 2011). Thus, the industrial paradigm shifted somewhat but remained leader-centric and management-focused.

Post-Industrial Paradigm

In the late 1970s, there began a shift in the conceptualization of leadership as less about positional authority and more about values-based processes that engage and inspire others (Dugan & Komives, 2011). Post-industrial leadership approaches included the

idea of leadership as relational, shared between leaders and followers, and within the context of complex systems that are sometimes difficult to navigate and understand (Komives et al., 2007). Three of the major groupings of postindustrial theories are: (a) transformational theories, which focused on the development of followers and the pursuit of shared goals for helping others; (b) adaptive/complexity theories, which included systems-based approaches that required flexibility and adaptation for changing contexts; and (c) authentic leadership, a construct derived from positive psychology focused on self-awareness and mutual development of leaders and followers (Northhouse, 2010).

Derived from the post-industrial paradigm are leadership theories and models that were designed with the college student context in mind, beginning in the 1990s (Dugan & Komives, 2011). These new models began a shift toward student leadership development and how to more intentionally develop appropriate leadership skills and values during the college years. These models emphasize the developmental nature of leadership and that anyone has the potential to be a leader (Astin & Astin, 2000). Additionally, these models recognized that the process of leadership is relational rather than individual and that values were as important to explore as learning behaviors.

Models created specifically for college students include the social change model of leadership development (SCM, Higher Education Research Institute, 1996), the relational leadership model (Komives et al., 1997), and the leadership identity development model (Komives, Owen, Longerbeam, Mainella, & Osteen, 2005). These models emphasize the developmental process of leadership that may be influenced by college experiences highlighting the idea that anyone can be a leader. For purposes of this

literature review, the SCM will be explained in more detail as it informed the framework for the present study.

The SCM (HERI, 1996) was developed by college educators specifically to address leadership development for college students. The SCM defines leadership as "a purposeful, collaborative, values-based process that results in positive social change" (Komives, Wagner, & Associates, 2009, p.xii). In other words, leadership is not about positions but process, leadership should be directed toward a common good, and values are a central component of this developmental process (Astin, 1996). The SCM sets forth "seven Cs" of leadership values, categorized into three domains that are important to develop in order to actualize socially responsible leadership. Values in the individual domain include consciousness of self (self-awareness), congruence (consistency in values and beliefs), and commitment (having passion, energy, and investment in an idea or person). Group values include collaboration, common purpose, and controversy with civility (understanding that differences are inevitable and should be discussed openly and civilly). A societal value is citizenship (a sense of responsibility to and interdependence with community). These values interact to develop socially responsible leadership (Astin, 1996). The SCM thus attends to both personal and interpersonal aspects of leadership in order to develop collaborative action for positive social change (Astin, 1996).

Key Themes From Contemporary Models

Because of the number of different leadership theories and models, it can be difficult to interpret the many nuances between them. However, there are some common themes from contemporary theories that reflect broader, shared conceptualizations of

central components of leadership. These include: (a) the importance of self-awareness in understanding oneself in relation with others; (b) ethics, moral leadership, and social responsibility in framing leadership as directed toward a positive, common outcome; and (c) redistribution of power and shared leadership, reflecting a partnership-oriented approach in leadership efforts (Komives & Dugan, 2010).

However, while leadership theories provide conceptual frameworks for understanding leadership development, empirical research has also provided important contributions in understanding the process of how leadership is developed and actualized within these frameworks. More sophisticated understandings of leadership distinguish between the different concepts of leadership capacity, one's ability to be a leader based on knowledge, skills, and values, versus leadership self-efficacy, one's self-belief in one's leadership ability, which can inhibit or enhance capacity (Dugan, 2011; Dugan et al., 2012). One of the most important concepts to come from the recent leadership literature is the role of leadership self-efficacy in leadership development.

Leadership Self-Efficacy

Self-efficacy is a construct from social cognitive theory, which focuses on the interdependence between social structures and personal and collective agency. Self-efficacy is defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments (Bandura, 1997, p. 3). In other words, self-efficacy refers to one's self-beliefs in being able to act in a way that will reach a particular result. People's beliefs of self-efficacy have wide-ranging effects on their

aspirations, behavioral choices, mobilization, motivation, maintenance of efforts, and affective reactions (Bandura, 1997).

Self-efficacy is often discussed in general terms and has been applied to a wide variety of situations. However, Bandura (1997) emphasized the importance of studying self-efficacy within specific domains to be most meaningful, as it may be possible to have high self-efficacy in one area and not another (Bandura, 1997). Though there is some debate in the literature regarding differences between leadership self-efficacy and leader self-efficacy (Hannah et al. 2008), they are often defined similarly in research and practice. For example, Hannah et al. (2008) describe *leadership* self-efficacy as the ways in which individuals have confidence in their ability to exercise agency in the leadership domain, while Machida and Schaubroeck (2011) define *leader* self-efficacy as "leaders' confidence in their abilities, knowledge, and skills in areas needed to lead others effectively" (p. 460). Regardless of the nuances in these definitions, however, the concept of leader self-efficacy is most relevant to the focus of the present study.

Hannah et al. (2008) suggest there are four components to LSE which need to be present for effective leadership. These include (a) LSE for behaviors, which is necessary to exercise agency; (b) LSE for thought, focusing on the cognitive processes necessary for generating effective solutions and visualizing success; (c) LSE for motivation, which contributes to goal setting and action; (d) LSE for means, referring to perceptions of an enabling environment which allows one to draw on external resources in order to act. Most of the LSE literature focuses on the behavioral aspect, though Hannah et al. (2008) suggest more attention should be paid to the other components as well.

LSE in Leadership Development

The leadership research has highlighted the importance of distinguishing between the development of leadership knowledge and skills (i.e., capacity) and one's leadership self-confidence (i.e., LSE) in research (Anderson, Krajewski, Goffin, & Jackson, 2008; Dugan et al., 2008; Hannah et al., 2008). Hannah et al. (2008) emphasize that LSE involves leaders' "perception both of their capabilities and how those capabilities can be used in a given task and context" (p. 19). Thus LSE has utility in predicting, understanding, and developing leadership effectiveness or capacity (Anderson et al., 2008; Dugan & Komives, 2010). For example, Anderson et al.'s (2008) study developed an LSE taxonomy that found differential relationships between specific aspects of LSE and leadership effectiveness, demonstrating the uniqueness of the two constructs.

Given the influence of self-efficacy on aspirations, motivation, and perseverance (Bandura, 1997), LSE then should play a role in predicting, understanding, and developing effective leadership (Anderson et al., 2008; Hannah et al., 2008). An extensive review of the literature emphasized LSE's "relevant and comprehensive nature in meeting today's leadership challenges" (Hannah et al., 2008, p. 1). These include the positive influence on LSE on a variety of leadership outcomes, including leadership engagement, performance, potential, leadership identification, and self-ratings as well as ratings by others (Hannah et al., 2008). Hannah et al. (2008) suggest that LSE influences the way in which individuals: (a) perform leadership tasks; (b) interpret meanings of leadership challenges; and (c) see themselves as capable enough to motivate them to act in leadership situations.

Machida and Schaubroeck (2011) described four ways in which self-efficacy influences leader development: (a) preparatory self-efficacy, one's self-efficacy for completing tasks in a preparatory or learning context rather than an actual performance situation; (b) efficacy spirals, patterns of fluctuation in self-efficacy beliefs that may be upward, downward, or self-correcting in relation to changes in performance; (c) learning self-efficacy, confidence about one's ability to learn a skill and accomplish a task; and (d) resilient self-efficacy, self-efficacy beliefs that remain strong in the face of adversity. In particular, Machida and Schaubroeck (2011) highlighted the importance of resilient learning self-efficacy, which helps leaders to maintain motivation to continue improving their leadership skills, and prevent them from experiencing downward efficacy spirals in response to challenging experiences.

In the college student leadership literature, LSE has been shown to have positive influences on a variety of leadership outcomes, including leadership engagement, effectiveness, and socially responsible leadership capacity (Anderson et al., 2008; Dugan & Komives, 2010; Hannah et al., 2008; Kezar & Moriarty, 2000; McCormick, Tanguma, & Lopez-Forment,2002). Astin and Astin (2000) also suggested that students' self-beliefs around their ability to be (or not be) leaders is a crucial component of whether or not students will develop leadership skills.

A single-campus study of 223 college juniors and seniors demonstrated that LSE was shown to be highly and positively correlated with the willingness and frequency in which students attempted a leadership role (McCormick et al., 2002). In their study of 14,252 college seniors from 50 institutions, Dugan and Komives (2010) found LSE to be

a positive, significant predictor of socially responsible leadership capacity, contributing between 8%-12% of the variance explained. This portion of variance was above and beyond the cumulative influences of the collegiate environment. Similarly, research on the impact of efficacy on socially responsible leadership led Dugan and Komives (2010) to suggest that it may be just as important to develop college students' LSE as it is to build their leadership capacity.

Levels of LSE have been shown to differ by racial group in studies which have disaggregated data (Balón, 2004; Dugan & Komives, 2010; Kezar & Moriarty, 2000; Kodama & Dugan, 2013). In most of these studies Asian Americans have reported the lowest levels of LSE compared to other groups (Balón, 2004; Dugan & Komives, 2010; Kodama & Dugan, 2013). For example, Dugan and Komives (2010) found that the influence of LSE was particularly notable for Asian American students, as including LSE in the equation mediated the otherwise negative influence of Asian American group membership on socially responsible leadership outcomes (Dugan & Komives, 2010). Given the importance of LSE to Asian American student leadership development, it is notable that few studies have investigated this concept directly with Asian American samples. However, several studies of Asian American student leadership development have investigated constructs closely related to LSE such as leadership identity and self-concept (Balón, 2004; Lowe, 2011).

Predictors of LSE

Both the broader leadership studies literature and student leadership development literature have determined the importance of LSE in leadership development, but few

studies have investigated the factors that actually influence LSE development (Kodama & Dugan, 2013; Lester, Hannah, Harms, Vogelgesang, & Avolio, 2011; Machida & Schaubroeck, 2011).

Bandura (1997) suggested four important sources of self-efficacy: (a) enactive mastery experiences, which allow individuals to practice and learn from leadership experiences; (b) vicarious learning, the observation of others and role modeling; (c) social persuasion and feedback from valued others; (d) physiological and emotional states or arousal that can be both positive or negative. These categories encompass experiences in the college environment that have been assessed in prior research.

Dugan et al. (2008) investigated predictors of LSE among commuter students, and found socio-cultural conversations with peers, positional leadership roles in college organizations, and employer mentoring as significant, positive predictors. McCormick et al. (2008) also found previous leadership role experience to be a strong, positive predictor of LSE. Kodama and Dugan (2013) investigated the predictors of LSE for different racial groups and found similar results for sociocultural conversations and positional leadership roles, but did not find mentoring to be significant. However, they discovered unique predictors of LSE for different racial groups, suggesting there may be differences in how LSE is manifested across diverse populations. For example, the results for Asian Americans showed community service to be a positive predictor of LSE, while being employed on campus was a negative predictor. The impact of these experiences may be affected by the racial context in which they occur, given some research indicated the importance of racial context in LSE development for Asian Americans (Kwon, 2009; Lo,

2011). Additional research should investigate the role of these and other specific influences on LSE development for Asian Americans, however, given the limited evidence to date.

Gender has also been shown as a negative predictor of LSE. McCormick et al. (2002) found that women had lower LSE even though they had many of the same leadership experiences as men. Conversely, Kodama and Dugan (2013) found gender to be a positive predictor of LSE for Latino students only, and non-significant for other racial groups. For Asian Americans specifically, Balón (2004) and Kwon (2009) both found that women were less likely to believe they could be a leader. Thus, it appears gender impacts LSE development, though specific findings differ by racial group.

The Role of Race in Leadership Development

In addition to the influential role of LSE, recent research has also established the importance of social context to the leadership development process, particularly for women and people of color (Ayman & Korabik, 2010; Dugan et al., 2012; Ospina & Foldy, 2009). Yet, despite a growing percentage of racial minorities in U.S. society as well as on today's college campuses (CARE, 2011), the research on leadership development has not evolved in terms of giving much attention to potentially unique influences and differences for diverse populations (Eagly & Chin, 2010; Ospina & Foldy, 2009). Most of the leadership literature situates Whiteness as normative, without considering whether or not the same theories, perspectives, and interventions are broadly applicable to diverse populations (Dugan et al., 2012; Eagly & Chin, 2010; Ospina & Foldy, 2009).

Limited scholarship has indeed demonstrated differences in leadership development among racial groups as well as varying influences of race (Arminio et al., 2000; Dugan et al., 2008, 2012; Kezar & Moriarty, 2000; Kodama & Dugan, 2013). Yet, the idea of leadership development is treated as a "one-size-fits-all" concept in both research and practice (Dugan & Munin, 2011; Dugan et al., 2012). This disconnect between changing demographics but traditional understandings of leadership development is a disservice both to students whose leadership potential may not be appropriately developed as well as society, which could benefit from the talents of these future leaders (Eagly & Chin, 2010).

Dugan et al. (2008), in a quantitative study of over 50,000 students, found different levels of socially responsible leadership outcomes by racial group and gender, with African Americans generally showing higher levels and Asian Americans showing lower levels. Dugan et al. (2008) emphasized the importance of disaggregating data by racial group and gender, and suggested future research looking at predictors of these outcomes as well as the potential influence of racial identity above and beyond simple indicators of racial group membership.

A follow-up study using a similar dataset found not only differences in levels of socially responsible leadership, but different predictors of these outcomes when disaggregated by racial group and including the construct of collective racial esteem (Luthanen & Crocker, 1992) used to assess racial identity (Dugan et al., 2012). Some predictors which had previously been considered as important influences for leadership development for all students such as community service, faculty mentoring, and

internships (Dugan & Komives, 2010) were now found to be influential only for certain racial groups, and unique predictors emerged for specific racial groups as well. For example, faculty mentoring, often considered an important influence on leadership development (Dugan & Komives, 2010), was found to be positively predictive for only White and Asian American students, while peer mentoring was significant only for Latino students (Dugan et al., 2012). For Asian American students specifically, membership in on- as well as off-campus organizations were positive predictors, though leadership positions in off-campus organizations was a negative predictor.

Race has also been shown to influence self-perceptions and confidence in oneself as a leader (Arminio et al., 2000; Kezar & Moriarty, 2000; Renn & Ozaki, 2010), which is related to LSE, the focus of the present study. Arminio et al. (2000), in a qualitative study of students of color at predominantly White institutions, found that most of these students, even while heavily involved in leadership roles in campus organizations, did not consider themselves leaders nor did they like others to refer to them using that term. These students felt that the "leader" term distanced them from their communities of color, created perceptions among peers that they had bought-into a system of oppression given their positional roles, and pressured them to be role models for younger students of color.

As a result, Arminio et al. (2000) emphasized the unique toll that leadership positions may take on students of color on predominantly White campuses given the dissonance between their racial identity and perceptions of student leadership roles. Arminio et al.'s study suggested the importance of understanding how definitions of leadership may be intertwined with racial identity and also differ between racial groups.

Thus, disaggregating data by racial groups to further investigate both the impact of and influences on efficacy may be an important step in further understanding how to effectively develop leadership capacity for a diverse range of students (Dugan & Komives, 2010).

In examining the literature on race and leadership the absence of empirical research on Asian American student leadership development is particularly notable. There is not a single, peer-reviewed, published study that explicitly focuses on leadership development of Asian American college students and few that address Asian American students within studies comparing different racial groups.   The studies that do exist, including dissertation studies, indicate lower levels of leadership outcomes for Asian American students (Balón, 2004; Dugan & Komives, 2010; Dugan et al., 2008; Kodama & Dugan, 2013), unique influences on leadership development (Dugan et al., 2012; Kodama & Dugan, 2013; Lin, 2010) as well as a strong influence of race and racial identity (Balón, 2004; Kwon, 2009; Lo, 2011; Poon, 2013). Thus, the next section will summarize the extant research which examines Asian American student leadership specifically in order to provide background and context for the present study.

Overview of Asian American Leadership Development Research

Virtually all of the empirical research on Asian American leadership development exists in dissertation studies, which though not peer-reviewed, provide a foundation from which to begin the present investigation. Four studies provided important and unique contributions in understanding Asian American leadership development: Balón (2004)*;*

Kwon (2009); Lin (2010); and Lo (2011). Each of these studies will be examined in detail to provide context for the present study.

Balón (2004)

One of the first dissertations to examine Asian American college students and leadership was Balón's (2004) quantitative study of 270 incoming Asian Pacific American (APA) freshmen compared with a general sample of 1,964 incoming students from diverse racial backgrounds at a large, public university on the East coast. Note that Balón used the term "APA" but did not have Pacific Islanders in his study. Balón (2004) examined whether or not perceptions of leadership and leadership self-identity differed by racial, ethnic, or gender group. Balón (2004) used an original survey instrument made up of nine leadership perception items included on a new student survey during orientation programs. These perceptions were grouped into three categories: (a) leadership and the role of culture, (b) controlling for diversity leadership from a social change and social justice perspective; and (c) leadership self-identity. Using the analytical technique of MANCOVA, Balón (2004) controlled for diversity awareness with the Universal-Diverse Orientation (UDO) scale (Fuertes, Miville, Mohr, Sedlacek, & Gretchen, 2000) in assessing possible racial, ethnic, and gender differences on the leadership perception outcome variables.

Balón (2004) found Asian American students were the least likely of all racial groups to think of individuals from their cultural backgrounds as excellent leaders, to self-identify with the leader role, or to think they could individually make a difference in the community, all of which are linked to LSE (though he did not use that construct

explicitly). Participants also did not believe that Asian Americans in general were considered excellent leaders. Asian American women had higher levels of diversity awareness and were more likely than men to think that cross-cultural skills were required for effective leadership. Balón (2004) suggested that Asian American students had internalized negative racial stereotypes that were antithetical to being seen as a leader and thus felt culturally marginalized from leadership and the leader role. The author also concluded that leadership is seen as socially constructed, culturally based, and related to social change.

Strengths of Balón's (2004) study were the partial disaggregation of Asian American data by four ethnic groups: (a) Chinese/Taiwanese; (b) Filipino; (c) Indian; and (d) Korean Americans. However, despite this disaggregation, he found minimal ethnic differences in the outcomes, and no significant differences on the outcome of leadership self-identification, the construct most closely related to LSE.

The biggest limitation of Balón's (2004) study was that the sample was composed of incoming first year students who had not yet had experiences at college which could have influenced identity or leadership development. Thus, findings from Balón's (2004) study cannot be connected to the impact of campus experiences or the campus context necessarily. Additionally, Balón's research was a single-campus study so results may not be generalizable to a broader Asian American college population.

Kwon (2009)

Kwon (2009) investigated how Asian American college student leaders experienced, interpreted, and perceived their race as playing a role in their leadership

participation. Participants in Kwon's (2009) qualitative study were 24 Asian American

college leaders of a variety of student organizations, as well as 12 influential staff and

faculty who worked closely with these students. Participants were recruited from two

different selective, public campuses in California, one where Asian Americans were a

minority at 11% of the campus population, and one where they were a plurality at 35%.

Students were mostly seniors and juniors, and from a wide range of academic majors.

The term "Asian American" included Cambodian, Chinese, Japanese, Korean, Pacific

Islander, Pilipino, Taiwanese, Thai, and Vietnamese, but did not include Indian and

Pakistani students.

Kwon (2009) used a critical race theory framework to investigate the impact of

race, and specifically the model minority stereotype, on student leaders. She collected

data through semi-structured interviews, and also used the Asian Values Scale (Kim,

Atkinson, & Yang, 1999) to assess how closely participants adhered to traditional Asian

values that could be seen as less compatible with dominant views of leadership. She

grouped her findings into six themes: (a) entry into leadership; (b) levels of support; (c)

campus; (d) being Asian American; (e) the model minority; and (f) Asian American

leadership. Her participants believed the Model Minority stereotype caused others to

have a negative view of Asian Americans as leaders, which students used to motivate

themselves in their own leadership development. Kwon (2009) also found that the two

different campus climates had a differential impact on student leaders' experiences, with

participants from the predominantly White campus experiencing more institutional

racism. Kwon (2009) concluded that race as well as campus racial climate influenced

leadership development for Asian American students in a variety of ways, from the organizations and leadership roles students chose to get involved in, the mentors they sought out, and the reasons they became leaders.

The strengths of Kwon's (2009) study were her explicit attention to the impact of two different campus climates, as well as the triangulation of students' responses with staff and faculty input. However, it is important to note that both these campuses were located in California, which may not be representative of other campus contexts across the United States. Additionally, there were several conceptual limitations such as the lack of clarity around the use of the Asian Values Scale, the combining of race and racial identity in her interpretation of findings, and a mixing of her college student leadership findings with general societal perceptions of leadership in her organizational framework.

Lin (2010)

Lin (2010) examined the development of social change leadership for a random Asian American sample of 727 students from 65 institutions using data from the Cooperative Institutional Research Program (CIRP). Her study was longitudinal, as participants completed both the 2003 Freshmen Survey and the 2007 College Senior Survey (CSS). Her quantitative study used structural equation modeling to both develop a measure of social change leadership as well as examine relationships between social change leadership and college experiences.

Lin (2010) found direct effects of faculty mentoring, positive cross-racial peer interaction, and leadership training on the outcome of socially responsible leadership, similar to other research (Dugan & Komives, 2007, 2010). Contrary to her expectations,

cultural factors had no significant effect on socially responsible leadership, nor did racial consciousness-raising experiences. She also found a negative effect of gender on socially responsible leadership, contrary to previous research showing greater levels of socially responsible leadership for women (Dugan & Komives, 2010; Dugan et al, 2013).

The strength of Lin's (2010) study was her sample, as her study was the first large-scale, national study on Asian American leadership development specifically. However, 90% of the colleges in her study were private institutions, so the students in the sample are not representative of the broader Asian American student population, given that the greatest number of Asian American students are in public institutions and community colleges (CARE, 2008). The greatest limitation of Lin's (2010) study was that she created her own measure of socially responsible leadership from an existing instrument that was not based on a theoretical framework intended to measure leadership specifically. In other words, her outcome measure of socially responsible leadership did not use the actual SRLS scale (Tyree, 1998). Additionally, she was not able to disaggregate Asian American ethnic groups from her data, which could have better informed her findings, particularly given such a large sample size.

Lo (2011)

Through a qualitative dissertation study, Lo (2011) investigated the leadership self-concept of first- and second-generation AAPI college students and the influences that shaped their leadership perspectives and experiences. Lo (2011) based her findings on semi-structured interviews and focus groups with 14 junior and senior participants who were diverse in terms of ethnic representation and a wide range of experiences with

leadership (e.g., not all participants held formal leadership roles). Lo's (2011) study was the only one which explicitly included Pacific Islanders and contrasted their experiences with Asian American participants.

She found that only half of her 14 participants self-identified as leaders, and of those, most offered a variety of disclaimers in describing what it meant to be a leader and how it did or did not fit who they were. Lo (2011) found that these students felt a disconnect between their own experiences and the social construction of "leadership" which they saw as based on traditional traits and ideas of a White male-dominated society. For that reason, AAPI students expressed that they did not want to associate with the term leader or leadership (even those who had been engaged in leadership experiences), while at the same time lamenting the need for AAPIs to be recognized as capable leaders.

Based on her study findings, Lo (2011) suggested the need for a more multidimensional model of leadership development that takes into account situational and contextual variables such as family, various campus communities, and larger society which influence AAPI leadership experiences and perceptions. Lo (2011) encouraged educators to "turn the rhetoric of post-industrial leadership perspectives into reality" (p. 145) in finding new ways to engage with students in a leadership discourse that is less culturally bound to whiteness.

Strengths of Lo's (2011) study were the inclusion of Pacific Islanders as well as participants who were both involved and not involved on campus to gain different

perspectives. Limitations of the study included a small sample size, making it difficult to generalize beyond her sample and specific campus.

Themes from the Research on Asian American Leadership Development

In synthesizing the research on the role of race in leadership development across populations, as well as findings from studies on Asian American populations specifically, this section will highlight important themes from the literature. These studies have consistently shown an influence of race on leadership development, reflecting the growing recognition of the role of race in the college experience and student development for Asian American students (Kodama et al., 2002; Maramba & Velasquez, 2010; Museus & Park, in press). Race has been shown to influence the types of leadership roles students engage in as well as how Asian Americans think of themselves as leaders (Arminio et al., 2000; Balón, 2004; Kwon, 2009; Lo, 2011). Some studies have taken the disaggregation of data one step further, and found differences in leadership development by Asian American and Pacific Islander ethnic groups as well (Balón, 2004; Lo, 2011).

However, a critique of the literature is that some of the studies do not make a distinction between racial category and racial identity, nor between leadership capacity and LSE. Thus, a critical review is necessary in order to clarify the constructs of interest as well as findings of these studies. The next section will review in more detail the role of race on Asian American leadership development by examining three primary themes from the extant literature: (a) Asian American students' lack of identification with leadership; (b) the importance of race-based experiences in leadership development; and (c) the need to consider the social context and campus racial climate.

Theme #1: Asian Americans Do Not Perceive Themselves as Leaders

A consistent theme in the literature is that Asian American students often do not perceive themselves as leaders (Arminio et al., 2000; Balón, 2005; Lo, 2011), and that they believe that others do not perceive them as leaders as well because of their race (Balón, 2005; Hyun, 2005; Kwon, 2009; Lo, 2011; Sy et al., 2010). These perceptions were true even for students who held leadership roles and would typically be considered as "student leaders" (Arminio et al., 2000; Kwon, 2009; Lo, 2011). This theme reflects the centrality of LSE in Asian American leadership development, though not all of the research used the language of LSE specifically. In fact, Lo's (2011) participants expressed the importance of self-confidence, a parallel concept to LSE, in their ability to claim a leadership identity for themselves.

Regardless of how Asian American students self-identified as a leader, studies showed they overwhelmingly perceived a negative societal perspective on Asian American leadership as either invisible or ineffective (Balón, 2004; Kwon, 2009; Lo, 2011). Even the Asian American students who felt supported in their own leadership development did not feel that society valued the talents or contributions of Asian American leaders (Kwon, 2009; Lo, 2011). For some students, these negative perceptions by others actually fueled their desire to become leaders to change these misconceptions of Asian American's leadership abilities (Kwon, 2009). More importantly, Asian American students have consistently attributed these perceptions of Asian Americans as ineffective leaders to the negative influence of racial stereotypes (Kwon, 2009; Lo, 2011).

Stereotypes and the racialization of leadership. In particular, students felt the

Model Minority stereotype, which characterizes Asian Americans as quiet and

submissive, strongly influenced why Asian Americans were not seen as capable leaders

(Balón, 2004; Kwon, 2009; Lo, 2011). For example, though the Model Minority

stereotype is often seen as positive in in the academic arena, it is often seen as negative in

the domain of leadership. This is because the Model Minority stereotype connotes not

just hard work, but also introversion and even social awkwardness (Choi, 2010), which

contrasts with the typical image of leaders as assertive, charismatic, and risk-taking

proliferated in dominant culture (Eagly & Chin, 2010; Sy et al., 2010). Coupled with the

additional Asian American stereotype of being foreign (Suzuki, 2002), Asian Americans

are thus negatively viewed as capable leaders in U.S. society. This is supported by the

research of Sy et al. (2010), who found that Asian American professionals were

perceived as less competent leaders than Caucasian Americans in both engineering and

sales occupations,and both by college students and working professionals.

This impact of racial stereotypes on perceptions of Asian Americans as leaders

and LSE, however, also reflects the racialization of the meaning of leadership for Asian

American students. Regardless of their own leadership experiences, Asian Americans

often narrowly defined leadership in terms of idealized Western traits, marginalizing

themselves in the process (Arminio et al., 2000; Kwon, 2009; Lo, 2011). Asian

American students, like other students of color, are often not comfortable with the term

"leadership" or "leadership development" in relation to themselves, largely because they

associated those terms with dominant traits and characteristics of middle-upper class,

White, males as well as traditional conceptions of leadership including authority, assertiveness, and outspokenness (Arminio et al., 2000; Lo, 2011). In fact, Lo's (2011) study participants believed that the development of assertiveness skills was critical for leadership development, even though it felt uncomfortable and they felt they had to change their personality and leadership style to do so. This reflected their perceptions of leadership as culturally bound and not universally applicable, and particularly not applicable to Asian Americans.

For example, Asian American students viewed involvement in predominately White organizations as a way to gain more ideal or advanced leadership skills that would better benefit them in the real world as compared to experiences in race-based organizations (Kibria, 2002; Kwon, 2009; Lo, 2011). This often resulted in students placing a greater value and importance on involvement in non-identity-based groups as they seemed to fit with more widely accepted views of effective leadership (Kibria, 2002; Lo, 2011). This is similar to Arminio et al.'s (2000) findings that students of color seemed to join identity-based organizations for comfort, camaraderie, and to express their cultural heritage, while they joined predominantly White organizations for an "ideal" or "traditional" leadership experience (p. 502-503).

These findings reflect the ways in which Asian Americans have internalized dominant definitions of leadership as based on White, male, dominant norms. Even while recognizing that these conceptions of leadership do not fit with their own cultural values, Asian American students often feel the need to aspire to them in order to be considered a "real" leader (Kibria, 2002; Lo, 2011). This racialization of leadership then

becomes intertwined with students' racial identity, specifically the meaning they make around whether or not Asian Americans can be leaders, potentially influencing Asian American students' sense of LSE.

A similar connection can be made between Asian American students' racial identity and their unwillingness to be involved with race- or ethnic based organizations. Some studies have found Asian American students who were not comfortable with a pan-Asian identity intentionally avoided any affiliation with race-based organizations (Kibria, 2002; Lo, 2011) and held negative views of those organizations as artificial, cliquey, or "stifling" (Kibria, p. 125). Lo (2011) and Kibria (2002) also found most of the Asian American students who avoided identity-based organizations grew up in predominantly White environments and thus may not have been as comfortable with identifying as Asian American. These findings suggest that racial identity plays a role in Asian American students' involvement in, and perceptions of, race-based organizations and their role in leadership development (Kibria, 2002; Kwon, 2009; Lo, 2011).

This finding is similar to results from Arminio et al.'s (2000) study, which found that students of color were not comfortable identifying as leaders as they felt it distanced themselves from their communities and conveyed a sense of selling out and becoming part of the predominantly White campus culture. Thus, the idea of "leadership" becomes racialized, and inferred to mean White males (and conversely, excludes Asian Americans), influencing how Asian American students think of themselves as leaders and intertwined with their racial identity (Balón, 2004, 2005; Kwon, 2009; Lo, 2011). These

authors have asserted the need to study racial and social identities when examining influences on leadership development of Asian Americans (Balón, 2004; Lo, 2011).

Lack of Asian American leadership role models. Another reason given by Asian American students for their belief that Asian Americans cannot be leaders is a lack of role models or mentors who share their cultural background (Kwon, 2009; Lo, 2011). Mentoring has been shown to have a positive influence on Asian American student leadership development, whether from staff, faculty, and/ or peers (Dugan et al., 2012; Kibria, 2002; Kwon, 2009; Lin, 2010). Mentors from a shared Asian American cultural background have been shown to be particularly important as students were more comfortable in establishing relationships with them as they believed that fellow Asian Americans shared similar cultures and experience (Kibria, 2002; Kwon, 2009; Liang et al., 2002). The desire for same-race mentors may be particularly important to Asian American students on predominantly White campuses where Asian American students may have difficulty in establishing meaningful relationships with faculty (Kim, Chang, & Park, 2009) and where they may also be stereotyped by student affairs staff (Liang & Sedlacek, 2003).

Overwhelmingly, Asian American students have reported difficulty in identifying Asian American role models on campus, in their community, and in the larger society (Arminio et al., 2000; Balón, 2004; Kwon, 2009; Lo, 2011; Poon, 2013). Asian Americans in Kwon's (2009) study were particularly cognizant of a lack of Asian Americans in campus administration, especially when compared to the percentage of Asian American students. This lack of leadership role models has contributed to

students' perceptions that Asian Americans are invisible in the leadership sphere and thus not seen as leaders by either the campus community or larger society (Balón, 2004; Kwon, 2009; Lo, 2011).

In addition, Kwon (2009) interviewed Asian American staff and faculty who work with Asian American student leaders and discovered that they made a conscious effort to mentor Asian American students in their leadership development because of challenges due to racial stereotyping as well as a lack of Asian American role models (Kwon, 2009). These faculty and staff did feel more qualified to help out Asian American students because of a shared understanding of Asian American experiences in college and leadership development, and specifically sought them out to provide an encouraging and supportive relationship. These staff and faculty also described racial identity as a key factor in students being able to see themselves as leaders (Kwon, 2009).

The above findings reflect how race and racial identity play a particularly important role in Asian American students' perceptions of leadership, influencing (typically negatively) how they feel about self-identifying as a leader, how they view Asian Americans as leaders in general, and how they perceive others' views of Asian Americans as leaders (Balón, 2004; Kwon, 2009; Lo, 2011). Negative racial stereotypes and a lack of role models influence racial identity as well as contribute to the racialization of leadership resulting in Asian American students' perceptions that they are not fit to be leaders. However, racial identity is also influenced by engagement with identity-based experiences on campus, which is the focus of the next section.

Theme #2: Ethnic- and Race-Based Experiences are Influential

Another theme in the literature is the importance of ethnic- and race-based experiences to leadership development for Asian American students. Similar to research on other students of color (Arminio et al., 2000; Harper & Quaye, 2007), same-race organizations have been found to often serve as important sources of cultural connection and community for Asian American students (Arminio et al., 2000; Kwon, 2009; Liang et al., 2002; Lo, 2011; Museus, 2008). Museus (2008) described how race-based organizations served as sources for: (a) cultural familiarity where peers of similar cultural backgrounds could connect; (b) cultural expression and advocacy facilitating a process through which students could explore their identity and learn how to advocate for their communities; and (c) cultural validation providing a safe space where students felt supported and understood on a predominantly White campus. Museus (2008) suggested that these three constructs worked together in helping Asian American students to adjust to a predominantly White campus and facilitated "educationally purposeful engagement" (p. 584). Kwon's (2009) study also found that students who joined culturally-based organizations did so because they were invited by their Asian American friends, wanted to meet others similar to them, give back to the Asian American community, learn more about their cultural identity, or were passionate about Asian American issues. These results reflect the ways in which these organizations may help to develop racial identity by allowing students to explore meaning making around group affiliation.

Some studies have explicitly made the link between racial identity and race-based organizations (Kibria, 2002; Poon, 2013) in relation to understanding their identity and developing pride in being Asian American. For example, Kibria (2002) found a direct

and mutually influential relationship between racial identity and involvement in pan-Asian organizations in her study of second-generation Chinese and Korean American college students. She discovered that involvement in pan-Asian organizations was often a significant, transformational event in students' more positive identifications with their racial identity, which then motivated them to work towards social change in their community. Additionally, those students who already identified strongly with an Asian American racial identity were most heavily involved in race- or ethnic-based organizations. However, Lo (2011) discovered that same-race organizations and their role in cultural support were only explicitly described as important by Pacific Islander students as compared to Asian American students from other ethnic backgrounds, which she attributed to a stronger need for cultural connection, reflecting different levels of racial identity salience for certain students.

In a longitudinal study of 184 Midwest Asian American college students, Inkelas (2004) also found a relationship between involvement in race- or ethnic-based organizations and racial/ethnic awareness and understanding. There was a strong correlation between students who were involved in ethnic-based organizations or political/activist organizations and gains in racial/ethnic commitment even when controlling for other variables in the collegiate environment. However, the examination of an intermediate outcome of racial identity salience suggested a shared influence with ethnic-based organizations on gains in racial/ethnic awareness and understanding. Inkelas (2004) suggested a closer examination of the relationships among racial identity, college environments, and diversity.

Racial identity is intertwined with the ways these organizations were perceived by students who chose to engage with them and the benefits that they took away. Students who were less comfortable with their racial identity often avoided race-based organizations, while those who had a stronger sense of their racial identity were more engaged in them (Kibria, 2002; Kwon, 2009; Lo, 2011). As a result, Kwon (2009) found that students tended to participate in either Asian American or non-Asian American organizations, but rarely both. Lo (2011), however, found that students who did participate in both types of organizations did so for different reasons: they joined Asian American-based organizations for friendship, support, and identity exploration, but "mainstream" organizations for what they perceived as more accepted and valued leadership skill development.

Additionally, not all race-based organizations were perceived as the same by students in relation to their mission and cultural connection (Kibria, 2002; Lo, 2011, Wong, 2010). Researchers found that students made distinctions between race-based organizations that were professional or academic in nature versus those that were cultural or identity-based as well as those that were cultural versus political (Kibria, 2002; Lo, 2011; Wong, 2010). Kibria (2002) also found that some Asian American students felt pan-Asian organizations specifically were problematic rather than ethnic-based organizations as they did not believe in the construct of a broader racial identity across different Asian ethnic groups. Thus, it may be difficult to assess the meaning behind same-race organizations in leadership and identity development given potential differences in the centrality or meaning of race in these organizations' missions.

Ethnic studies courses have also demonstrated a powerful impact on leadership development for Asian American students because of the ways in they helped students to recognize the influence of the racial contexts around them, take pride in their own history, and learn about leaders from similar ethnic and racial backgrounds (Kwon, 2009; Poon, 2013). This impact was most evident as a motivator for Asian American students to further engage in their own leadership and their desire to make social change (Kwon, 2009; Poon, 2013). Lo (2011) found that some of the same outcomes from ethnic studies courses, such as learning about social justice and human rights, had a positive influence on leadership development. She also found that this knowledge often did not happen in formal coursework but through informal conversations outside the classroom.

In addition to the influence of identity-based organizations, same-race friendships and peer mentoring have also been an influential source of leadership development for Asian American students (Kwon 2009; Poon, 2013). Though students did not always use the term or framework of mentoring specifically, Kwon (2009) found not only did most of the Asian American student leaders join an organization because their friends were in it, but the large majority of those holding leadership positions did so because they were invited to by others, not because they sought it out themselves. Once in these organizations, Asian American students developed leadership skills and experiences that they came to value. Additionally, some Asian American students have expressed the importance of same-race peers and organizations because of the marginalization they felt on their campus or their difficulty in developing meaningful relationships with non-Asian

peers, staff, and/or faculty (Kibria, 2002; Kwon, 2009; Lo, 2011; Poon, 2013). This also reflects the importance of campus climate, which is addressed in the next section.

Theme #3: Racial Context Matters

A third theme from the literature was the impact of social context, specifically campus racial climate (Kwon, 2009; Lo, 2011), on leadership development of Asian American students. Research has found differences in leadership involvement, experiences, and perceptions between Asian Americans on campus environments with different percentages of Asian American students as well as between Asian American and predominantly White organizations (Kibria, 2002; Kwon, 2009; Lo, 2011). This influence is particularly notable on their sense of LSE.

For example, Kwon (2009) found that Asian Americans on a campus where they were a distinct minority expressed challenges with campus climate, and most of the student leaders were involved in identity-based organizations for social support within a culture where they often felt marginalized and alienated. These student leaders also felt a sense of obligation in joining these identity-based organizations because of the low numbers in their community and the desire to support other Asian American students. They also felt less supported in their leadership pursuits and that Asian American students could only be leaders of Asian American organizations rather than other types of student groups.

Students from the campus with a critical mass of Asian American students, however, were involved in a broader range of organizations, felt more supported in their leadership development, and more comfortable expressing and learning about their

cultural identity (Kwon, 2009). Because Asian Americans were such a large percentage on campus (35%), it was assumed that they would take on leadership roles in a variety of organizations just because of their sheer numbers. Kibria (2002) also suggested that racial demographics may have influenced students' choices of campus involvement, though with a slightly different explanation. The majority of the students who did not engage in pan-Asian organizations in her study attended college in California where there is a large percentage of Asian Americans. She suggested that the greater numbers of Asian Americans created a social context where students did not feel as much need to engage in identity-based organizations on campus as they had other sources of cultural and identity support.

Lo (2011) extended a similar argument to the different social contexts within a campus, specifically the difference between experiences with Asian American and non-Asian American organizations. For example, despite the greater value placed on predominantly White organizations because of racialized notions of leadership, both Lo's (2011) and Kwon's (2009) participants felt less comfortable in those environments and often experienced racial stereotyping and tokenizing within those groups. Some students felt they had to change their personality and behaviors to fit in and be accepted due to cultural differences in leadership behaviors.

Lo (2011) concluded that these varying racial contexts of student organizations influenced AAPI students' leadership development as the students in AAPI organizations felt more confident in their leadership roles and abilities, while those involved in predominantly White organizations felt like they were not viewed as (or allowed by

others to be) legitimate leaders. Lo (2011) concluded that these students felt a positive sense of LSE in the context of their family or AAPI campus community, but in the broader social context these students could not recognize themselves as leaders largely because they felt that society did not allow them to be.

These findings reflect the ways in which Asian American students' LSE was directly influenced by campus racial climate and cultural contexts of organizations. It appears a more positive climate on campus as well as within Asian American-based organizations provided the support and broader views of leadership that positively influenced LSE. On the other hand, campus or organizational climates within which Asian Americans were stereotyped, misunderstood, and overlooked as having leadership potential negatively influenced the development of LSE.

Asian American Ethnic Differences in Leadership Development

Given the ethnic diversity of the Asian American population, it seems that there may be differences in the development of leadership by ethnic group, though only two studies have disaggregated Asian American data in the leadership research (Balón, 2004; Lo, 2011). For example, Lo (2011) found that her Pacific Islander participants were the only ones to emphasize the importance of identity-based organizations for cultural connections and community. Though only two of 14 participants were Pacific Islander, this finding is significant given that it is the only study which has specifically addressed leadership development for this population. It appears that these Pacific Islander students had stronger ties to their cultural heritage when compared to other Asian American

students, and also may have felt more marginalized in the college environment given their low numbers on campus.

Balón (2004) also found differences by Asian ethnic group (no Pacific Islanders were included in the sample) on the outcome of *leadership from a social change and social justice perspective*: Indian Americans were more likely to emphasize the importance of leadership for social change and social justice as compared to Korean Americans. Also, Filipino Americans felt less strongly than both Chinese/Taiwanese Americans and Indian Americans in believing that they as individuals could make a difference, which is related to the present study and LSE. However, Balón (2004) found no significant differences by ethnicity in *leadership and the role of culture* as well as *leader self-identification*, the other two primary outcomes of his study. Balón (2004) suggested the lack of ethnic differences in these outcomes reflected the racialization of leadership perceptions that are common to many Asian Americans regardless of ethnic background.

Kibria (2002) also found differences by ethnic group between second generation college students' involvement in race-based organizations, with Chinese American students more likely to be involved in pan-Asian organizations compared to Korean Americans. These studies demonstrated potential ethnic differences in both perceptions and development of leadership which should be investigated further with larger samples and different Asian ethnic groups.

The Role of Racial Identity in Asian American Leadership Development

The themes of LSE, the role of identity-based organizations, and the impact of campus climate all have one thing in common: the centrality of racial identity in Asian American leadership development. Given the demonstrated impact of race on leadership outcomes for Asian American students, research has suggested greater attention to not just racial group membership, but racial identity as well (Balón, 2004; Dugan et al., 2008; Dugan et al., 2012; Kwon, 2009; Lo, 2011). These findings from the leadership literature are also supported by research in identity development, which has explicitly linked racial identity and leadership engagement and/or outcomes (Inkelas, 2004; Kibria, 2002; Poon, 2013). Thus, racial identity reflects the meaning that racial group membership and affiliation holds for individuals, including the ways in which it frames perceptions and experiences around leadership.

Racial identity development is complicated for Asian Americans because of several factors: the various ethnic groups that make up this population; the difference between ethnic-specific and pan-Asian frameworks; the intersection of race and ethnicity; and the unique ways in which Asian Americans are racialized. Not all Asian ethnic groups experience racism similarly, nor identify with the "Asian American" umbrella identity in the same way (Accapadi, 2012; Chuuon & Hudley, 2010; Museus et al., 2013; Nadal, 2004). One way to assess the impact of race is not by using a racial category alone, but assessing racial identity as well (Dugan et al., 2012). Additionally, disaggregating data by Asian American ethnic group will shed light on potential ethnic differences around the impact of race and racial identity.

Collective Racial Esteem

Qualitative studies have consistently highlighted the link between racial identity and leadership (Arminio et al., 2000; Kibria, 2002; Kwon, 2009; Lo, 2011; Poon, 2013), though the impact of racial identity has been harder to assess in quantitative research (Balón, 2004; Dugan et al., 2012; Kodama & Dugan, 2013). However, one nuanced way to examine the concept and impact of racial identity quantitatively is via the construct of collective self-esteem (CSE), which refers to the ways in which individuals feel about belonging to a particular social group in relationship to others (Luhtanen & Crocker, 1992). CSE can be further refined to assess specific social identities such as racial groups (Crocker et al., 1994), which can be labeled as collective *racial* esteem, or CRE. Empirical research has established relationships between CRE and either racial and/or ethnic identity development including specifically for Asian Americans (Alvarez & Helms, 2001; Iwamoto & Liu, 2010; Kim & Omizo, 2005; Liang & Fassinger, 2008). This approach to measuring racial identity has shown promising results in being able to capture the impact of race on college student outcomes in quantitative research (Dugan et al., 2012) and may be an interesting way to examine Asian American identity and its complexities.

There are four dimensions of CRE that assess one's meaning making regarding their racial group: (a) Private CRE, an internal assessment of the value of one's racial group; (b) Public CRE, beliefs regarding how others view one's racial group; (c) Identity salience, the degree of centrality of racial group membership to one's self-concept; and (d) membership affiliation, personal beliefs about how well one functions as a member of

one's racial group. These four subscales have been shown to add nuance to the study of racial identity taking into account not only individual perspectives, but the social context as well (Crocker et al., 1994). This attention to the social context through CRE is particularly relevant for Asian American students, who have been shown to be particularly influenced by external sources as well as internal beliefs (Kim & Lee, 2011; Kodama et al., 2002; Monzon, 2013). Additionally, each of these dimensions have been shown to measure distinctly different concepts, which have different relationships with psychological outcomes as well as across different racial groups (Crocker et al., 1994; Dugan et al., 2012), demonstrating the importance of studying these subscales of CRE both separately and together as well as with diverse populations.

For example, Crocker et al. (1994) found that CRE operates uniquely for Asian Americans, as the public subscale was significantly correlated with all other CRE subscales. This was the only racial group for which this was true. This may reflect the value that some Asian Americans place on external judgments in shaping their own self-perceptions (Alvarez & Helms, 2001; Crocker et al., 1994). The relationship between public and identity CRE scores led Crocker et al. (1994) to suggest that Asian American students "may disidentify with groups that they believe are negatively evaluated by others" (p. 510), which has been reflected in other research (Choi, 2010; Kibria, 2000; Pyke & Dang, 2003). Race-specific CSE also had a weaker relationship to their outcome of well-being than other racial groups (Crocker et al., 1994). The authors suggested the possibility of immigrant status being a factor as well as social desirability in responses. However, Crocker et al.'s (1994) study demonstrates the importance of examining

identity constructs by racial groups for more accurate understanding, and also evaluating the different aspects of CRE individually.

Dugan et al. (2012) investigated the impact of CRE on socially responsible leadership outcomes in a national, quantitative study of over 8,500 college students disaggregated by five racial groups. They discovered that CRE explained triple the variance than racial category alone, suggesting the utility of CRE in assessing the impact of race on leadership development. For the Asian American students, both private and public aspects of CRE were significant, positive predictors of socially responsible leadership with identity salience a negative predictor. Interestingly, Asian Americans were the only group for which membership CRE was <u>not</u> significant. Dugan et al. (2012) suggested the insignificance of membership CRE was the complexity of racial identity for Asian American students and perhaps a lack of clarity over what membership in that group identity means given the layers of ethnic and racial identification inherent for Asian American students.

A follow-up investigation on the impact of CRE on LSE with the same sample showed a significant, but very small effect, which suggested a need for further study (Kodama & Dugan, 2013). Private, public, and membership CRE were positive predictors of LSE, while identity salience was a negative predictor. They also found that Asian American students were the only racial group for which all four scales were significantly predictive, providing support for the use of CRE in the present study on LSE.

These different aspects of racial group affiliation may be particularly useful in investigating identity for Asian Americans, which has complex layers and varied meanings across different ethnic groups (Accapadi, 2012; Kibria, 2000, 2002; Museus et al., 2013; Wong, 2010). In particular, most research on Asian Americans has called for the disaggregation of Asian American data by ethnic group to uncover more accurate and meaningful findings on this diverse population (CARE, 2008, 2010; Maramba, 2011; Museus, 2009; Teranishi, 2010).

Resilience

In addition to racial identity, recent research suggests the potential influence of other psychological constructs on LSE development (Kodama & Dugan, 2013). One such construct is resilience, which has been stated as a central component to the leadership process (Heifetz & Linsky, 2002; Mumford et al., 2000). Scholars have posited the importance of resilience for leaders to deal with a variety of leadership challenges including the ability to navigate ambiguity and persist in the face of adversity (Heifitz & Linsky, 2002; Luthans, Youssef, & Avolio, 2007). However, despite these stated relationships, resilience has rarely been empirically studied in relationship to leadership development (Dugan, Houze, LeBlanc, & Odegard, 2014). Additionally, resilience has been defined in a variety of ways throughout the literature, making it difficult to interpret research findings.

Resilience has also been linked to the development of self-efficacy both explicitly and implicitly. Bandura (1997) described the importance of having resilient self-efficacy in order to deal with adversities in life. Machida and Schaubroeck (2011) also discussed

the importance of "resilient learning self-efficacy" (p. 463) for optimal leader

development to withstand, overcome, and learn from challenging experiences. In other

words, the resiliency keeps leaders from becoming demoralized when their LSE is

temporarily reduced due to an obstacle and encourages them to keep going to improve

themselves (Machida & Schaubroeck, 2011). This is particularly relevant for college

students who are in the midst of their own leadership development through new

experiences in the college context. In fact, the college years have been suggested as a

crucial time to develop resiliency in order to help students cope with new challenges

(Galatzer-Levy, Burton, & Bonanno, 2012).

Resilience has been argued as particularly important as a protective factor for

people of color who may deal with recurring challenges due to navigating racial

discrimination (Brown, 2008; Clauss-Ehlers, 2004, 2008). Though the impact of race is

often overlooked in the study of Asian American college students, research has

demonstrated how these students do experience racism which may impact their

development in college (Choi, 2010; Museus & Maramba, 2010; Museus & Park, in

press; Poon, 2013; Sue, Bucceri, Lin, Nadal, & Torino, 2007). Poon (2013) found the

importance of resilience for Asian American students in their ability to respond to racial

microaggressions, which refer to brief, commonplace slights or exchanges that denigrate

people of color as ethnic minorities (Sue et al., 2007).   Additionally, given the negative

influence of racial stereotyping on leadership development for Asian Americans (Balón,

2004, 2005; Kwon, 2009; Liang et al., 2002; Lo, 2011), resilience may also be a

particularly important concept to examine further in the study of leadership development.

It has been suggested that ethnic and racial identity (including as measured by CRE) are important in the development of resilience (Crocker et al., 1994; Dugan et al., 2013; Lee, 2005; Poon, 2013). Poon (2013) found that a strong sense of racial identity was important in developing resilience in order to withstand daily acts of racism. Students described how a strong racial identity allowed them to be secure in their own thoughts and actions to better understand and negotiate the social context around them, developing resilience in the process. This is supported by the literature on adaptive leadership in which resilience is central to navigating dissonance and deconstructing power and authority (Heifitz & Linsky, 2002), which may be particularly applicable to challenges related to racial stereotyping specifically. Thus, resilience may play a role in Asian American students' LSE development as it may help them to better understand and cope with the racial context in which they operate and thus provide a buffer so that they can develop self-confidence in their leadership abilities.

Influences from the College Environment on Asian American College Student Leadership Development

Though the primary focus of the present study is psychological constructs such as LSE, racial identity, and resilience, specific experiences from the college environment have also been shown to influence leadership development for Asian American students. Conversations across difference, community service, and faculty mentoring have been shown to be significant, positive influences on Asian American socially responsible leadership development in two separate studies using national datasets (Dugan et al., 2012; Lin, 2010). Dugan et al.'s (2012) study also found membership in on- and off-

campus organizations to be positive predictors of socially responsible leadership. The authors of those studies suggested that these positive influences help students to develop and clarify the individual, group, and community values and skill sets important in the development of socially responsible leadership. However, Dugan et al. (2012) also found that holding leadership positions in community organizations was a negative predictor, which contradicts other findings suggesting the importance of leadership roles (Dugan & Komives, 2010). Perhaps there is something different regarding the contrast in cultural contexts between campus and community that is influencing LSE development.

Qualitative studies have also supported the positive influence of positional leadership roles and involvement in student organizations on Asian American leadership development (Kwon, 2009; Lo, 2011). These experiences often differed by ethnic group and also by the racial context of where students grew up (Kwon. 2009; Lo, 2011).

Gender is an additional influence on leadership outcomes, not just for LSE as mentioned previously. Research has found differences in leadership development by gender (Dugan et al., 2008; Dugan et al., 2013; Eagly & Chin, 2010), including specifically for Asian Americans (Balón, 2004; Lin, 2010). Balón (2004) found that women were less likely to believe they could be leaders, but had higher levels of comfort with diversity in leadership. Women were also more likely than men to believe that cross-cultural skills were important to effective leadership (Balón, 2004). Lin (2010), however, found a significant, negative effect of gender on socially responsible leadership development, which is contrary to other research which has found women to have higher levels, though those samples were not disaggregated by race (Dugan & Komives, 2010;

Dugan et al., 2013). Additionally, Lin's (2010) measurement of socially responsible

leadership scale was not equivalent to the theoretically grounded approach typically

employed, making it somewhat difficult to interpret comparisons. Given the mixed

findings on the influence of gender, it will be important to consider gender differences in

the present study on the development of LSE.

Summary of Literature

The present review of literature highlighted the impact of race and the importance

of LSE in Asian American leadership development. Racial identity, in particular, seems

to have a mutually influential relationship with LSE for Asian American college students

(Balón, 2004; Kwon, 2009; Lo, 2011; Poon, 2013), and it has been shown to be

meaningfully assessed through the construct and measures of CRE in quantitative studies

of college leadership outcomes (Dugan et al., 2012; Kodama & Dugan, 2013).

Additionally, the psychological construct of resilience has been suggested as an important

coping mechanism for Asian American students in their ability to manage racialized

campus contexts and become transformative leaders (Poon, 2013), but has not been

investigated in detail. Limited empirical and theoretical research on Asian American

leadership development has suggested the potential influence of resilience and racial

identity on LSE (Dugan et al., 2013; Machida & Schaubroeck, 2011), though these three

concepts have not been investigated together.

In examining the literature on Asian American leadership development, there are

several limitations. First, there is a lack of published studies on Asian American student

leadership. Many of the studies cited in this literature review are dissertation studies,

which may not be of the same rigor compared to peer-reviewed journal articles. Also, several of these studies used small or limited samples: Lo's (2011) and Kwon's (2009) studies had 25 and 14 participants respectively, and Balón's (2004) sample was made up of only incoming first-year students. An extensive review of the literature uncovered only one large-scale, national quantitative study (also a dissertation) on Asian American student leadership (Lin, 2010), but it did not investigate LSE as a study variable and was not able to disaggregate by Asian ethnic group. Even the studies that address Asian American leadership development within the framework of comparison with other students of color are few in number (Arminio et al., 2000; Dugan et al., 2012; Dugan & Komives, 2010; Dugan et al., 2008).

Second, there is a lack of clarity in existing studies on Asian American leadership development. Many of the studies reviewed combined the influences of racial category, identity, and other race-based college experiences, nor did they distinguish between the outcomes of leadership capacity and LSE. Thus, this study seeks to provide clarity on the role of racial identity as well as other race-based influences (e.g., campus racial climate, identity-based experiences) on LSE specifically.

There is also a lack of research on the psychological constructs of interests in this study (LSE and resilience), and particularly in relation to Asian American students. Dissertation studies have examined similar concepts to LSE for Asian Americans, but not using that framework specifically. There is a particularly evident lack of research on Asian American students and resilience.

Finally, there is a lack of literature that disaggregates Asian American data by ethnic group despite research that shows ethnic differences on at least some leadership outcomes (Balón, 2004; Kibria, 2002; Lo, 2011). One of the biggest concerns in Asian American research today is that the majority of studies continue to use aggregated, pan-ethnic Asian samples (Chang & Kiang, 2002; Maramba, 2011; Museus, 2009; Okazaki, Kassem & Tan, 2011; Teranishi, 2010). Even in the psychological literature, which arguably contains the most research on Asian Americans, annual reviews of the published research show approximately half of the recent literature used aggregated data without listing the specific ethnicities that made up the study sample (Kim, Wong, & Maffini, 2010; Okazaki et al., 2011). In fact, most of the major college student survey instruments including the Cooperative Institutional Research Program (HERI, 2013) and National Student Survey of Engagement (NSSE, 2012) do not collect data on Asian American ethnic groups, thus making it impossible to study disaggregated samples (Chang, Park, Lin, Poon, & Nakanishi, 2007).

CHAPTER THREE

METHODOLOGY

The purpose of this chapter is to outline the research plan for this study. First, a restatement of the research questions and their respective hypotheses and justifications is provided. A description of the participants and sampling method follows. Next, a detailed description of the instrument and variables of interest is presented. Finally, the study design is described including data collection, analytic techniques, and the conceptual framework that informed the selection of variables and path model selected.

Research Questions

The purpose of the present research study was to examine the relationship between collective racial esteem (CRE), resilience, and leadership self-efficacy (LSE) for a diverse sample of Asian American college students. Thus, the two primary research questions were:

1. What is the relationship between collective racial esteem and resilience on the outcome of leadership self-efficacy for Asian American students?

2. Do these relationships differ by ethnic group or gender?

Hypotheses

The null hypotheses for these research questions were that there would be no relationships between the CRE, resilience, and LSE, nor would there be differences between ethnic group and gender. However, given that the purpose of this research was

to discover potential relationships between the variables of interest, as well as unique results by ethnicity and gender, alternative hypotheses are presented.

Hypothesis 1. The first hypothesis was that the four aspects of CRE would have a positive, significant relationship with resilience. This hypothesis was based on the literature which suggests the importance of racial identity in the development of resilient coping skills and self-esteem (Brown, 2008; Crocker et al., 1994; Phinney & Ong, 2007; Poon, 2013). A possible direct, positive relationship between aspects of CRE and LSE was also hypothesized, though previous research had found that relationship to be minimal (Kodama & Dugan, 2013).

Hypothesis 2. The second hypothesis was that resilience would have a positive, significant relationship with LSE. Though there was limited research to draw on, resilience has been stated as an important construct in the development of leadership (Dugan et al., 2014) as well as LSE (Bandura, 1997; Machida & Schaubroeck, 2011).

Hypothesis 3. Given previous research, it was hypothesized that the relationship between the four individual aspects of CRE (private, public, membership, and identity salience) and the outcome of LSE would differ as the four constructs have been shown to have different influences on leadership outcomes for Asian American students (Dugan et al., 2012; Kodama & Dugan, 2013). For example, in multiple regression analyses identity salience has been shown to be a negative predictor of socially responsible leadership capacity (Dugan et al., 2012) and LSE (Kodama & Dugan, 2013), suggesting it would have a negative relationship with LSE in this structural model as well. However, the private, public, and membership components of CRE were hypothesized to

have a significant, positive relationship with LSE based on previous research showing the importance of racial identity development on LSE (Kodama & Dugan, 2013; Lo, 2011).

Hypothesis 4. It was anticipated that the strength of the relationship between aspects of CRE and outcome variables would differ by ethnic group given the varied ways that racial identity is experienced for specific Asian American populations (Accapadi, 2012; Chuuon & Hudley, 2010; Kibria, 2000, 2002; Nadal, 2004).

Hypothesis 5. It was also hypothesized that there would be a different relationship between the variables of interest and the outcome of LSE for men and women given the evidence of gender-based differences in leadership (Ayman & Korabik, 2010; Eagly & Chin, 2010) including for Asian Americans specifically (Eng, 2000; Kawahara et al., 2007; Kwon, 2009).

Study Design

This study conducted secondary analyses of data from the Multi-Institutional Study of Leadership (MSL), an assessment instrument of college outcomes that has been administered at campuses across the United States. This study employed quantitative methodology and utilized the analytic technique of Structural Equation Modeling (SEM) in order to answer the proposed research questions.

Research Context and Participants

As this study used a national dataset, the research context was quite diverse. The dataset was from the 2012 MSL, a nationwide college outcomes instrument. Participants were from 82 different U.S. colleges and universities representing 26 different states. The characteristics of these institutions were as follows: (a) institutional control, 52% private,

48% public; (b) size, 41% large (>10,000 students), 43% medium (3,000-10,000 students), and 16% small (<3,000 students); and (c) affiliation, 38% religious, 62% secular.

Participant schools were recruited via a variety of higher education and leadership listserves and professional conferences. For each institution a random sample of up to 4,000 undergraduate students were selected. For campuses whose populations were less than 4,000 students, the entire undergraduate population was sampled. Sampling parameters were established in advance of conducting the study using power analyses.

Thus, the total sample size of the MSL was 275,682 students. Overall, the response rate for all schools combined in this study was 33.08%, resulting in a total number of completed cases of 77,148. The MSL 2012 national sample did not demonstrate any variation in non-response by major demographic categories.

For purposes of the present study, a subset of this collected data was used, specifically the data for students who self-reported as Asian American. Only students who identified solely as Asian American (not including international students) were selected, and not those who identified as multiracial. Students selected also needed to have data for the variables of interest in the study. For example, the CRE measures were part of a substudy and thus administered to a random sample of half of the total participants at each institution to reduce the length of the survey instrument. Students in this sample (CRE substudy) did not differ across major demographic groups from the full MSL sample. International students were also excluded given a primary variable interest is racial identity, which would manifest itself differently for international students given

different social contexts. Based on these selection criteria, the final dataset used for this

study was 2,223 Asian American students.

Participants were evenly distributed by class level, with 24% freshmen, 24%

sophomores, 24% juniors, and 27% seniors or above (totals not equal to 100% due to

rounding). Women composed more than half of the sample at 59%, which is consistent

with the higher enrollment of women in college today. Twenty percent of the

participants were first in their family to attend college.

Two demographic variables are particularly important to mention given their

importance in reflecting diversity among the Asian American population: immigration

status and ethnicity. In terms of generational status, 13% were permanent residents, 22%

were first generation Asian American, 59% were second generation, 3% were third

generation, and 4% were fourth generation. Responses to the six Asian ethnic categories

were distributed as follows: (a) Chinese (30%); (b) Indian/Pakistani (18%), (c) Japanese

(4%); (d) Korean (14%); (e) Filipino (9%); and (f) Vietnamese (7%). Though there is not

a comparable statistic to examine the ethnic breakdown of Asian American college

students on a national level, these percentages mirror those of the Asian American

applicants at UC Berkeley in 2010 (CARE, 2013). This comparison is appropriate given

that UC Berkeley has one of the highest populations of Asian American students in the

country, and also is one of the few that disaggregate data by ethnic group. The remaining

students in the sample identified with an Asian ethnicity not represented by the existing

categories or identified with more than one Asian ethnic group.

Data Collection

Data were collected in the spring of 2012. Data were collected entirely online

employing rigorous standards for web-based, survey research design (Groves et al.,

2004). Human subjects approval for the national dataset was granted by the Office of

Research Services at Loyola University Chicago. A variety of incentives were offered via

random raffle drawings to improve response rates with an overall response rate of 33%.

Instrument

The instrument used for this study was the MSL, a quantitative assessment of

cross-sectional design with a primary focus on measuring leadership development based

on the Socially Responsible Leadership Scale (SRLS; Tyree, 1999). The 2012 version of

the MSL, however, included a range of non-SRLS constructs from student development,

counseling psychology, and broader leadership studies literature that were hypothesized

to have a relationship with leadership development. Some of these constructs included

CRE, resilience, and LSE. It was these psychological factors which were the focus of the

present study. The MSL also included a variety of demographic and environmental

variables that were hypothesized to influence these outcomes both from the college and

community contexts. Significant psychometric testing has been conducted to ensure the

reliability and validity of the scales and variables assessed in the MSL instrument

(Dugan, Komives, & Associates, 2012).

The conceptual framework for the MSL is an adapted version of Astin's (1993)

"input-environment-outcome" (I-E-O) college impact model. This model seeks to explain

the development of college outcomes based on both pre-college characteristics (inputs)

and experiences from the college environment (environments). Adaptations to the model

for the MSL 2012 involve: (a) including environmental experiences from outside the

college context, given that these may influence students' development; (b), including

psychological constructs as intermediate outcomes (e.g., LSE, resilience, CRE) which

may influence outcomes but are also influenced by environments; and (c) adapting the I-

E-O format to fit a cross-sectional design given that the MSL collects data at a single

point in time. Thus, in order to assess some of the inputs (i.e., pre-college experiences),

retrospective questions were asked to obtain this information, a technique which is

supported by prior research in self-report studies on leadership outcomes. These type of

retrospective questions have been shown to be an accurate indication of student gains

given that cross-sectional designs tend to result in participants overestimating their pre-

college leadership capacities and thus the impact from environments will not be

overstated (Howard, 1980; Rohs, 2002; Rohs & Langone, 1997).

Conceptual Framework

As introduced previously, the conceptual framework was an integration of

Bandura's (1997) theory of self-efficacy and Kodama et al.'s (2002) theory of Asian

American student development. Bandura's (1997) theory of self-efficacy specified four

dimensions of importance when developing an individual's efficacy: a) enactive mastery

experiences (allowing individuals to practice their skills and learn from successes and

failures); b) vicarious experiences (learning from the modeling of others and social

comparisons); c) verbal persuasion and social influences (the ways in which significant

others express their faith in one's abilities, either direct or implied); and d) physiological

and affective states (such as levels of stress, fatigue, mood, or other somatic states which can impair physical and/or mental well-being). Thus, the variables of interest in this study could be categorized into these dimensions and were hypothesized to influence leadership self-efficacy specifically.

Kodama et al.'s (2002) theory of Asian American student development was created as an alternative to traditional psychosocial development theory and has been widely cited in the research literature as appropriate for this population (Evans, Forney, Guido, Patton, & Renn, 2010; Museus, 2009; Ng, Lee, & Pak, 2007; Pope, Reynolds, & Mueller, 2004). Kodama et al.'s (2002) model of Asian American student development highlighted the importance of social and cultural context in influencing student development during college, with a central issue for students being the need to learn how to navigate and negotiate these different spheres of influence. Kodama et al. (2002) also highlighted the importance of racial identity in students' understanding of themselves and the issues they face in college and fit well with the extant research highlighting the role of race and racial identity on leadership development for Asian American students.

Variables of Interest

The selection of variables for this study was informed by the conceptual framework as well as the extant research on Asian American leadership development. Means, standard deviations, and reliabilities for each scale were calculated for the present dataset (see Appendix A for details of variables included in the study).

Leadership self-efficacy (LSE). The dependent variable for this study, leadership self-efficacy, was derived from the work of Bandura (1997). The four item

composite measure was created using factor analytic techniques and asked participants to identify the extent to which they would be confident doing the following: leading others, organizing a group's tasks to accomplish a goal, taking initiative to improve something, and working with a team on a group project. The scale required students to respond on a 4-point, Likert-like continuum ranging from *not at all confident* (1) to *very confident* (4). Reliability levels for previous use of this scale were .87 or .88 for all racial groups (Dugan et al., 2012) consistent with the Cronbach alpha for the present dataset of .87.

Collective racial esteem (CRE). The independent variable of CRE used composite measures created by Luthanen and Crocker (1992) to assess the four core components of collective self-esteem (i.e., Public, Private, Membership Affiliation, and Identity Salience). Participants were asked to respond to statements regarding their opinions about their affiliation with the racial group to which they belong. Each scale was comprised of four items on which participants responded using a seven point continuum ranging from *strongly disagree* (1) to *strongly agree* (7). A significant body of research demonstrates the reliability of these scales (Bettencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999; Constantine, Robinson, Wilton, & Caldwell, 2002; Crocker et al., 1994; Kim & Omizo, 2005; Luthanen & Crocker, 1992). The Cronbach alphas for the present Asian American sample were .80 for Private, .73 for Public, .74 for Membership, and .79 for Identity Salience.

However, given the selection of structural equation modeling as the analytic technique for this study, confirmatory factor analyses were conducted to further test the appropriateness of the four CRE subscales for use in an SEM model. As will be

explained in more detail in Chapter 4, these analyses may be the first confirmatory factor analyses conducted on the CRE subscales and revealed different results than the typical reliability analyses reported in past publications.

The CRE scales were included based on Kodama et al.'s (2002) theoretical framework emphasizing the centrality of racial identity to Asian American students' development. The four subscales of CRE were particularly useful in getting at the various components of development which Kodama et al. also suggested are influenced by racial identity, including the sense of internal pride (CRE Private), opinions of others (CRE Public), relationships with peers and sense of belonging (CRE Membership), and different levels of identity salience (CRE Identity). Additionally, the extant research on Asian American leadership development demonstrated a strong influence of racial identity on students' experiences with and perceptions of leadership (Kwon, 2009; Liang, Lee, & Ting, 2002; Lo, 2011; Poon, 2013) supporting the use of CRE for this study.

Resilience. The variable of resilience was measured by the 10-item Connor Davidson Scale (CD-RISC; Campbell-Sills & Stein, 2007), which asked students their agreement with statements regarding their ability to manage stress and challenges in their lives in the last month. Responses were on a 5-point Likert scale from 1=*not at all true* to 5=*true nearly all the time*. The 10-item scale is derived from the 25-item CD-RISC (Connor & Davidson, 2003) and has demonstrated appropriate levels of construct validity and reliability (Campbell-Sills & Stein, 2003). For the present dataset, the Cronbach alpha of the CD-RISC scale was .91.

Bandura (1997) suggested the importance of resilience in the development of self-efficacy, and it fit into the dimension of physiological and affective states which may influence development. In other words, resilience may help an individual to develop more positive coping mechanisms for stress which create a more positive mental state in which one can develop LSE. Resilience also fits into Kodama et al.'s (2002) framework in helping an Asian American student to deal with racism and negotiate the different social contexts in which one may need to operate.

Identity-based experiences. Based on the conceptual framework of Kodama et al. (2002) emphasizing the role of race in college development, as well as previous research indicating the importance of race-based organizations on leadership development and LSE (Kwon, 2009; Lo, 2011; Poon, 2013; Renn & Ozaki, 2010), a factor was created to reflect identity-based experiences that may influence LSE. Of particular interest were participation in identity based organizations and/or ethnic studies courses given their demonstrated influence on racial identity, which is central to Asian American student development (Kodama et al., 2002) and a primary variable of interest in this study. Having a mentor of a similar racial background was also included in this factor,based on previous research showing the influences of Asian American mentors on Asian American students' leadership experiences (Kwon, 2009).

Thus, this item was composed of the summation of four variables available in the MSL dataset: (a) involvement in identity-based organizations, (b) involvement in multi-cultural fraternities and sororities, (c) being an ethnic, cultural studies, and area studies major, and (d) having an Asian American mentor.   The first three variables were

measured by a *yes-no* response. The mentoring variable was also recoded into a yes-no

response after factoring in whether or not the student was mentored at all, and then

whether or not the student's primary mentor was indicated to have an Asian American

background (as perceived by the student).

Each of the above items of the scale was recoded to indicate 0=*no* and 1=*yes* and

summed to create the Identity-Based Experiences variable. This composite scale had a

range in scores from 0 to 4, with higher numbers indicating participation in a greater

number of identity-based experiences.

Campus non-discriminatory climate. Previous research on Asian American

leadership development has also identified campus racial climate as an influential factor

on both leadership and LSE (Kwon, 2009; Lo, 2011; Poon, 2013). This supports Kodama

et al.'s (2002) assertion of the importance of cultural context in influencing student

development. Thus, a five-item scale assessing "non-discriminatory climate" was

included in the analyses as a potential influence on LSE. These questions asked

participants to respond on a 5-point Likert scale from (1) *strongly disagree* to (5) *strongly*

agree on the extent to which they have observed or experienced discrimination on

campus. Reliability for this scale with the present dataset was .87.

Data Analyses

Structural Equation Modeling

Structural equation modeling ("SEM") refers to a family of related procedures

that focuses on the structure and interrelationships among the data being analyzed

primarily using covariances (Kline, 2011). SEM techniques are largely a priori methods,

with analyses based on theory or extant research (Kline, 2011). The most common applications of SEM are: (a) confirmatory factor analysis (CFA), often referred to as measurement modeling using measured variables to construct latent variables; (b) path analysis, assessing relationships between variables; and (c) full structural regression models that combines CFA and path analysis, which will be the technique used for the present study.

Full structural regression models are syntheses of path models and measurement models and test hypotheses about effect priority (Kline, 2011). A strength of a SEM full model is that it allows for simultaneous analyses of both observed (specific items in dataset) and latent variables (constructs created by a combination of observed variables) in the same model. Another advantage is that these models have the ability to partial out measurement error, resulting in more accurate findings about the relationships between variables and constructs. Thus, in using SEM the goal of the present study was to test a theoretically and empirically derived model that is hypothesized to represent the relationship between both the observed and latent variables on the outcome of LSE for Asian Americans.

One of the challenges in using SEM in Asian American research is the need for large sample sizes in order to conduct complex and meaningful analyses. However, the dataset of 2,223 for this study was more than large enough to allow for the 11 parameters estimated in the proposed model (each parameter refers to a relationship between variables measured in the path model) given the suggested ratio is at least 20 participants per parameter (Kline, 2011). Complex statistical computer software is needed to run

large SEM analyses, such as LISREL (Jöreskog & Sörbom, 2001), which was used for the present study.

Invariance Testing

This large sample size also allowed for the further disaggregation of data in testing for invariance of the model by gender and ethnic group. Invariance refers to whether a construct or model means the same across different situations, in this case Asian American subpopulations. SEM methodology can be used to systematically test the appropriateness of use for a model across different groups**.**

Given that previous research has demonstrated some differences in Asian American leadership development by ethnic group (Balón, 2004; Lo, 2011) and gender (Kwon, 2009; Lin, 2010), analyses also examined whether there was invariance in the path model based on gender or Asian American ethnic group membership. Thus, the path model was tested for invariance for gender and ethnicity. For example, in testing for gender invariance, the path model for the overall sample was tested with the male and female data separately, to see if the model was an appropriate fit for both. Gender was treated as a binary in these analyses given the limited data representing Asian American transgender students. The next step was to run a multi-group analysis for men and women, setting the various paths in the model as equal for both groups and using significance tests to see if the relationships between the paths for men and women were different. If the invariance tests were significant, then additional analyses using equality constraints were conducted to determine the source of the variance in paths testing each path individually.

To examine ethnic group invariance, given the sample size requirements for robust SEM analyses (10-20 participants per parameter, the present model has 11 parameters), only the following groups were tested: Chinese ($n = 659$), Indian/Pakistani ($n = 405$), Korean ($n = 317$), Filipino ($n = 200$), and Vietnamese ($n = 164$). However, the full invariance testing procedure as described previously was not able to be employed with the ethnic group models due to the computer memory required to run a multi-group analyses of five groups (ethnic groups) rather than only two (gender). Instead, only the first step was employed, that is, a testing of the model separately for each ethnic group and examining fit statistics as well as the significance and strength of model paths. Though direct significance testing between ethnic groups was not able to be conducted, the results from the ethnic models provided evidence for potential invariance that could be tested further in future research with more sophisticated technology.

Proposed Structural Model

SEM analyses involve a series of procedures: specifying the model, estimating the model, assessing the fit of the model, and finally modifying the model.   To answer the proposed research questions, Anderson and Gerbing's (1988) two-step approach to testing SEM models was employed. Analyses first assessed the fit of an oblique (i.e., correlated factors), 7-factor confirmatory factor analysis (CFA) model with the full sample to confirm relationships between the factors of interest. This procedure also included individual CFA analyses for each latent factor with multiple indicators (e.g., each of the CRE subscales, Non-Discriminatory Climate, Resilience, and LSE) to

confirm adequate loadings and relationships between individual indicators and their factors.

The second step was to develop and assess the fit of a structural model, which was hypothesized to include seven factors with 11 paths among those factors (see Figure 1). The seven factors and their relationships were chosen based on the conceptual framework as well as extant literature on Asian American student leadership development.
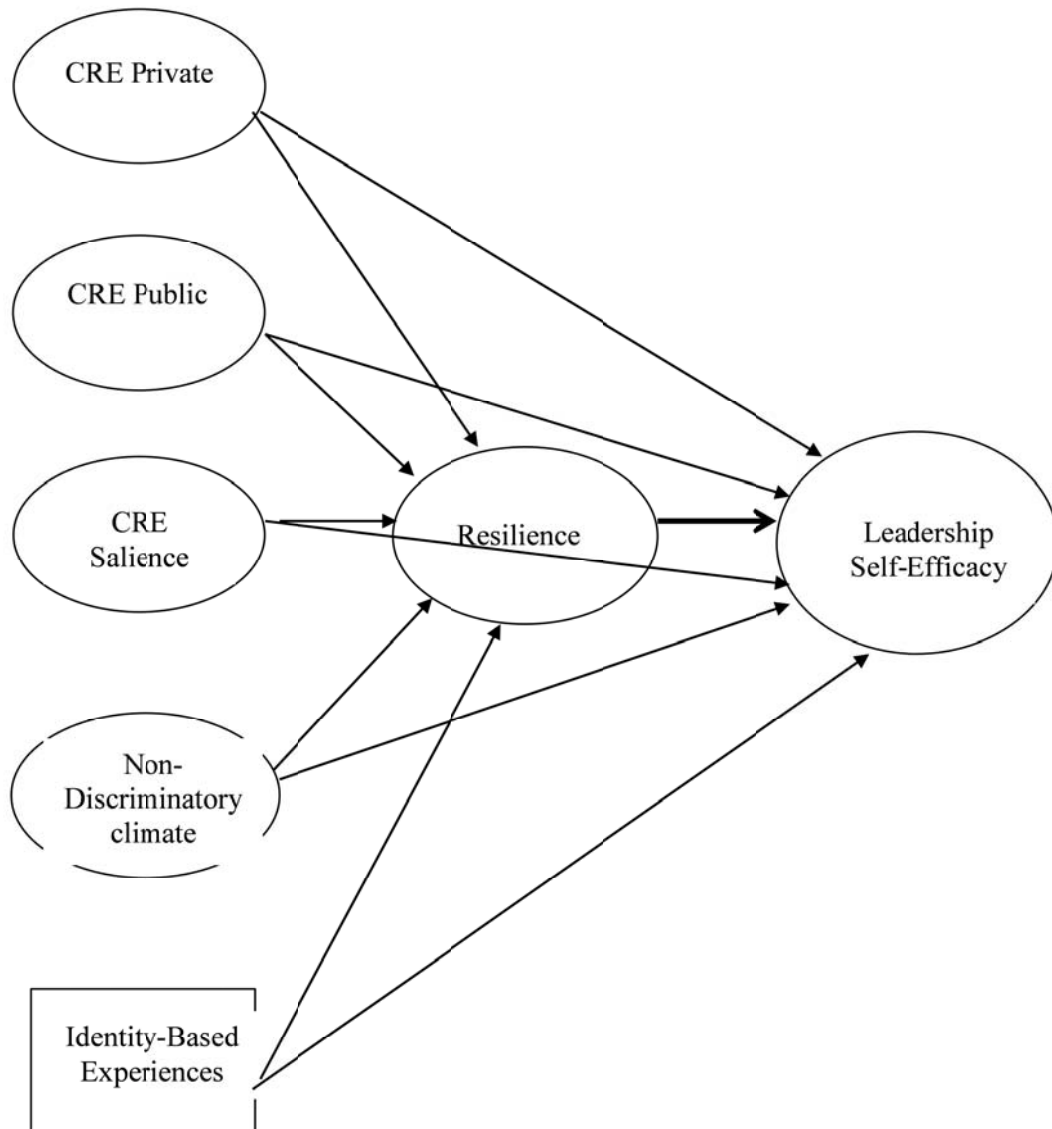
Figure 1. Proposed Structural Model for Leadership Self-Efficacy

Identity-Based Experiences on Resilience and LSE. In the original dissertation proposal additional paths were present. Specifically, four paths captured the hypothesized influences of Identity-Based Experiences on the four aspects of CRE, determined by the extant literature which shows the influence of identity-based organizations, ethnic studies courses, and same-race mentors on racial identity (Accapadi, 2012; Inkelas, 2004; Kwon, 2009; Lo, 2011; Museus, 2008; Poon, 2013). However, due to the specifications of the SEM methodology, it was not possible to test this direct influence as it would require complicated LISREL analyses beyond the scope of this study. Concerns for both parsimony of the model as well as adherence to analytic assumptions around under or over specification of models made inclusion untenable in this exploratory study. Instead, the factor of identity-based experiences was included as a fifth exogenous factor with an influence on LSE and allowed to correlate with the CRE subscales, which could reflect mutual influence, thus capturing a shared relationship without eliminating the relationships entirely. For appropriate inclusion in the final LISREL model, this scale was coded as a factor with one indicator only, with the error variance set at zero. Thus, this revised model would be able to reveal direct influences of participation in Identity-Based Experiences with LSE, a relationship also found in the literature (Kwon, 2009; Lo, 2011; Poon, 2013). There was also a direct path from Identity-Based Experiences to Resilience supported by research indicating the influence of group-oriented, identity-based experiences on resilience (Dugan et al., 2013; Poon, 2013).

CRE on LSE and Resilience. The model included four paths reflecting the influences of the four aspects of CRE on LSE given Bandura's (1997) suggested

influence of ethnic affiliation on self-efficacy. This path was also informed by the

literature which highlighted the role of racial identity on Asian American leadership

development (Balón, 2004; Dugan et al., 2011; Inkelas, 2004; Kwon, 2009; Lo, 2011). It

was determined that the CRE subscales should be included as correlated factors (rather

than one omnibus CRE factor) given research which has demonstrated that each of the

subscales are related, but conceptually distinct (Crocker & Luthanen, 1992; Dugan et al.,

2011). However, before including the CRE subscales in the final model, a series of

confirmatory factor analyses (CFA) were conducted to test the comparative fit of

subscales versus an omnibus CRE measure. Results of these analyses showed that the

best use of the CRE subscales was actually to use three subscales rather than the original

four as hypothesized. Details related to this decision are shared in Chapter Four.

The model also included paths indicating a relationship between the CRE

subscales and development of Resilience. This path was suggested by the conceptual

framework of Kodama et al. (2002) suggesting the importance of racial identity to college

development and supported by research demonstrating the importance of racial identity to

resilience (Lee, 2005; Poon, 2013).

Non-Discriminatory Climate on LSE and Resilience. Non-Discriminatory

Climate was included as a potential influence on LSE given recent research showing the

strong influence of campus climate on leadership development and LSE for Asian

American students (Kwon, 2009; Lowe, 2011). This variable also reflected Kodama et

al.'s (2002) suggestion that the campus climate and different cultural contexts may

impact Asian American students' development during college. A path was also included

between Non-Discriminatory Climate and Resilience, given the potential impact that campus climate experiences may have on as Asian Americans' ability to be resilient.

The factor of Non-Discriminatory Climate was also allowed to correlate with the CRE factors and Identity-based Experiences, revealing a mutual influence. This hypothesized relationship between CRE and Non-Discriminatory Climate may reflect how campus racial climate (particularly a negative one) could heighten the salience of one's racial identity if racial microaggressions or other incidents of discrimination are constant reminders of difference (Kodama et al., 2001; Poon, 2013; Sue et al., 2007). Additionally, some research has indicated that campus racial climate influenced students' involvement in identity-based organizations (Kwon, 2009; Lo, 2011; Wong, 2010). In particular, a discriminatory campus climate has resulted in a need by students to seek support, camaraderie, and comfort through identity-based organizations or other group experiences (Kwon, 2009; Lo, 2011; Maramba & Velasquez, 2010; Poon, 2013).

Resilience on LSE. Resilience was also hypothesized to have an influence on LSE based on Bandura's (1997) framework, which is supported by Machida and Schaubroeck (2011). Recent research has suggested the importance of resilience to the development of leadership capacity as well (Dugan et al., 2013). It has also been suggested that resilience is important to develop for LSE for Asian Americans specifically (Poon, 2013). A follow up analysis of the role of Resilience in relation to CRE assessed whether or not Resilience played a potential mediating role between CRE and LSE.

Interpreting SEM Results

Determining goodness of fit for SEM models is a somewhat complicated task

given the number of different fit indices that exist and can be used to assess model

results. There is no absolute criterion similar to a *p*-value used in many other quantitative

techniques nor complete agreement on which or how many statistics should be reported

(Kline, 2011). It is suggested that the best way to determine fit of a model is to report

multiple indices rather than relying on only one, as each of these indices have different

properties as well as advantages and disadvantages. Different fit indexes can be

influenced by sample size and/or model size as well. Based on the recommendations of

Kline (2011) and Bryant (2013), for the present study, six of the most widely accepted fit

indices will be reported for the SEM data analyses: (a) model chi-square; (b) Root Mean

Square Error of Approximation (RMSEA); (c) Non-Normed Fit Index (NNFI); (d)

Bentler Comparative Fit Index (CFI); (e) Joreskog-Sorbom Goodness-of-Fit Index (GFI);

and (f) Standardized Root Mean Square Residual (SRMR). Though a detailed explanation

of each of these fit indices is beyond the scope of this dissertation, a brief overview will

be presented.

The most basic model test statistic commonly reported in SEM research is the

model chi-square, including its accompanying *df* and *p*-value (which is calculated in the

LISREL program). However, the chi-square statistic is relatively sensitive to sample

size, with larger samples (e.g., a few thousand) resulting in nearly always significant chi-

square values (Bryant, 2013; Kline, 2011). Thus, given the large sample size of 2,223 for

this study's overall data analyses, the chi-square is not a reliable test for this study's

model and instead will be reported alongside other fit statistics as suggested (Bryant, 2013; Kline, 2011).

The RMSEA and SRMR are considered absolute measures of fit, with a value of 0 theoretically indicating perfect fit (Kenny, 2014; Kline, 2011). The RMSEA is the most popular measure of fit and is reported in nearly all papers using SEM (Kenny, 2014). The SRMR is defined as the standardized difference between the observed correlation and the predicted correlation. Both of these indexes are a positively biased measure and that bias is greater for small N and for low degrees of freedom (*df*) studies which was not the case for the present study. Though there is considerable debate over the meaning of different values of these indexes, generally a value less than .05 would be considered a good fit, less than .08 would be considered acceptable fit, and anything above 1.0 would be considered a poor fit (Bryant, 2013; Hu & Bentler, 1999; Kenny, 2014; Kline, 2011).

The NNFI is a revised version of the first SEM fit index proposed in the literature (NFI; Bentler & Bonett, 1980). It is considered an incremental fit index which theoretically assesses the improvement of the specified model over a baseline model. A value above .95 is considered a good fit, between .90 and .95 marginal, and below .90 a poor fitting model (Kenny, 2014). The GFI and CFI fit indexes also use a similar metric, with a value closer to 1.0 as the best fit, and values greater than .90 considered a good fit. The GFI is an absolute fit index which estimates the proportion of the sample data covariances explained by the model, but can be somewhat influenced by sample size (Kenny, 2014; Kline, 2011). The CFI is an incremental fit index that measures

improvement of the proposed model compared to a baseline model and is not affected much by sample size (Kenny, 2014).

Summary

This chapter has outlined the research plan and justification of methodology for the present study. SEM was selected as an appropriate analytic technique given the nature of the research questions and sufficient sample size of the dataset. Variables of interest were chosen based on previous research on LSE, CRE, and resilience, as well as the conceptual framework based on Bandura's work on self-efficacy (1997) and Kodama et al.'s (2002) model of Asian American student development. The model was tested both for an overall sample of 2,223 Asian American students, as well as tested separately for invariance by gender and ethnicity. Detailed results of these analyses appear in Chapter Four.

CHAPTER FOUR

RESULTS

This chapter will share the results of the data analyses. The first section will describe the results of confirmatory factor analyses (CFA) of the latent factors used as both exogenous (independent) and endogenous (dependent) variables in the full, structural model. The second section will share the results of the correlated, 7-factor CFA as a precursor to the final model that is the focus of this dissertation study. Results from the full, structural model (including CFA, path analysis, and mediation tests) will then be shared for the overall sample of 2,223 Asian American students. Finally, results of invariance testing for the full model will be shared, first by gender and then by ethnic group, including both fit statistics for the overall model as well as results from the comparison of specific paths in the model where differences were found.

Confirmatory Factor Analyses of Latent Factors

The first step in setting up a full, structural model is to confirm the measurement model, in other words, testing the latent factors as appropriate constructs for further analyses (Anderson & Gerbing, 1988). Thus, confirmatory factor analyses (CFA) were conducted on each of the latent factors used in the model: Private CRE, Public CRE, Identity Salience CRE, Membership CRE, Non-Discriminatory Climate, Resilience, and LSE. The final factor, Identity-Based Experiences, acts as a single-item scale since it is a

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measured variable rather than an actual scale, thus no CFA was necessary to test the loadings of that single-indicator factor.

Collective Racial Esteem Scales

The first set of SEM analyses involved testing the four CRE subscales to confirm their appropriateness for use as latent factors in a full LISREL model. Though the CRE scales have been used in many research studies, particularly in psychology, previous literature using CFA with these scales could not be found. Validity for these scales in previous research was justified by reporting alpha reliability coefficients as no study employed the technique of CFA using SEM.

Original, 4-factor correlated CRE. The CFA results for the 4-factor, correlated CRE scales with four indicators each (Model 1, see Table 1) used in previous research (Alvarez & Helms, 2001; Crocker et al., 1994; Luthanen & Crocker, 1992) demonstrated a poor fit despite a chi-square of 9448.96 ($p<.01$) with 98 df. In terms of model fit statistics, the RMSEA was .21, well above the maximum .10 limit that is generally accepted as an indicator of good fit (Kline, 2011). In terms of other fit statistics, the NNFI was .82, CFI was .85, and GFI was .85, which for a good fitting model should be over .90. The SRMR was .12, which is above the maximum suggested limit of .08. Thus, given that it is recommended to report multiple fit statistics, in this case all of them indicated a poor-fitting model. In examining the LISREL results, the negatively-worded items (two per subscale) had low loading coefficients as well as high error, which appeared to be the reason for the poor fit which was modified in further testing described in the next few pages.

Table 1. Fit Statistics and Chi-Square Differences for CFA of CRE Subscales

CRE Models	Df	X^2	$X^2 \Delta$	RMSEA	CFI	NNFI	GFI	SRMR
1. 4-item, 4 CRE subscales (original)	9448.96	98	N/A*	.207	.85	.82	.85	.12
2. 16-item omnibus CRE	12027.88	104	N/A*	.227	.77	.74	.60	.14
3. 3-item CRE subscales	2032.88	48	7416.08 50 *df*, *p*<.0001	.136	.93	.90	.87	.074
4. 3-item, 4 subscales (except 2-item membership)	1214.57	38	818.31 10 *df*, *p*<.0001	.118	.94	.92	.91	.065
5. 3 item, 3 subscales (no membership)	904.54	24	8544.42 74 *df*, *p*<.0001	.128	.93	.90	.92	.063
6. 2-item (no negatives), 4 CRE subscales	259.47	14	9189.49 84 *df*, *p*<.0001	.089	.98	.97	.97	.035
7. 8-item Private/Membership; 4-item Public and Identity Salience	9429.29	101	N/A*	.204	.84	.81	.65	.12
8. 8-item omnibus CRE (no negatives)	2088.04	20	7360.92 78 *df*, *p*<.0001	.215	.89	.84	.81	.089
9. 2-item, 3 CRE subscales (no membership)	49.86	6	9399.1 92 *df*, *p*<.0001	.057	.99	.99	.99	.014

*The $X^2 \Delta$ was not relevant for this particular comparison

Modified CRE subscales. As a result of the poor fit of the original 4-item, CRE subscales, subsequent CFAs were conducted to determine the most appropriate composition and combination of CRE subscales and items for further analyses. Using CFA is not an exact science, and thus researchers must use a combination of theory and statistical results to justify the most appropriate solution for use in a future SEM model (Kenny, 2014; Kline, 2011). The results of each of the analyses can then provide clues as to the best possible fit with modifications in a series of models tested. Thus, CFA offers a way in which different possible measurement models can be tested systematically in order to find the most appropriate fit of indicators, scales, and subscales for use in future research based on theory, fit statistics, and comparison of alternative models (Bryant & Baxter, 1997).

Thus, for the present study, this systematic approach included testing a 1-factor, omnibus CRE, as well as models using 3- and 2-indicator subscales (by dropping one or two of the negative indicators, respectively). Some models also introduced correlated error between the negatively worded items (when those items were kept, see below) in order to determine the most appropriate fit.

First, an omnibus, 16-item scale was tested (Model 2, see Table 1) as when testing a set of related subscales it is generally suggested to also test an omnibus to confirm the appropriateness of these subscales based on a better model fit (Bryant, personal communication, January 13, 2013). As expected, the omnibus model was a worse fit than the 4-subscale CRE with the same items both in terms of fit statistics and a significant chi-square difference test (see Table 1).

Next, an examination of the output for the original, 4-item subscales demonstrated low loadings and high error from the two negatively worded items on each subscale. Thus, the lowest loading negative item was removed from each subscale for the next series of testing, in other words 3-item subscales (Models 3 and 4, see Table 1). Though these tests were a statistically significant improvement over the original scale using the chi-square difference tests, the fit statistics were only marginally within acceptable ranges and the RMSEA was out of acceptable range completely.

Thus, based on the CFA results and in seeking to make the best compromise between robustness and fit statistics, another model was tested which did not include any of the negative individual items as indicators for each of the 4 CRE scales (Model 6, see Table 1). However, once the CRE subscales were reduced to two items each, results showed the Membership CRE scale became highly correlated with both the Private CRE (.89) and Identity Salience CRE (.88) scales, indicating that these scales may not have been measuring distinct concepts. Thus, additional testing was needed to determine whether or not Membership CRE should be combined with either Private CRE or Identity Salience CRE or eliminated altogether. CFA models were then tested which included three subscales only without Membership CRE (Model 5 and 9), which combined Membership CRE and Private CRE (Model 7), as well as an omnibus CRE scale with no negative indicators (Model 8). See Table 1 for all CFA results on the CRE scales.

Final 3-factor CRE. Results of all the CFA tests (see Table 1) indicated that virtually all of the modifications were a statistically significant improvement over the 16-item, 4-subscales of CRE based on the chi-square difference tests (except for Models 2

and 7). However, it was determined that the best fit was to eliminate the Membership CRE scale given its high correlation with both Private CRE and Identity Salience CRE, as the models combining Membership CRE with either Private CRE or Identity Salience CRE were poor fitting models. Though this left the scales with only two indicators, given the exploratory nature of this study, and the lack of prior research using SEM with the CRE scales, it was decided that a better-fitting model was more important than one with more indicators. Occasionally scales with few items can pose a problem in a LISREL model by producing unusual matrices or fit statistics, but the final model results showed that the two-indicator scales did not pose a problem in analyses.

Thus, the final model selected for use in further analyses includes three CRE subscales of Private, Public, and Identity Salience composed of two indicators apiece (Model 9, see Table 1). The fit statistics include a chi-square of 49.86 with 6 *df*, RMSEA of .057, and CFI/GFI/NNFI of .99. The correlations between the variables were as follows: (a) .62 between Private and Public; (b) .37 between Public and Identity Salience; and (c) .76 between Private and Identity Salience. Alpha reliability levels for these scales were .88 for Private, .73 for Public, and .87 for Identity Salience (see Appendix A).

Non-Discriminatory Climate

The first CFA for the 5-item Non-Discriminatory Climate Scale was an unacceptable fit with 1518.34 chi-square with 5 *df*, but an RMSEA of .39, NNFI of .61, CFI of .80, GFI of .77, and SRMR of .14 (see Table 2). However, an examination of the modification indices showed a possible correlation between the variables STAFFDIS ("I

have been discriminated against by staff") and FACDISC ("I have been discriminated against by faculty"). This result parallels previous use of this scale in a similar SEM study where these two items were problematic in relation to one another (Campbell, Fincher, Fink, Dugan, & Komives, 2014). Thus, a second CFA was conducted, allowing error between those variables to correlate. This modification significantly improved the model fit to acceptable levels with a chi-square of 85.54 ($p<.01$) with 4 *df*, RMSEA of .096, NNFI of .97, CFI of .99, GFI of .98, and SRMR of .032. The chi-square difference test was also significant at $p<.0001$, indicating a statistically significant improvement over the original model with uncorrelated error. Table 2 lists the detailed results for this CFA. This version of the Non-Discriminatory Climate Scale was used in the final LISREL model with an alpha reliability level of .87.

Table 2. CFA of Non-Discriminatory Climate Scale

Test	X^2	$X^2\Delta$	RMSEA	NNFI	GFI	CFI	SRMR
5-item Non-Discriminatory Climate scale	1676.4 (5*df*)		.387	.61	.77	.80	.14
5-item Non-Discriminatory Climate with correlated error	85.54 (4 *df*)	1590.86 (1 *df*, $p<.0001$)	.096	.97	.98	.99	.032

Endogenous Variables: Resilience and Leadership Self-Efficacy

The CFA for the two endogenous variables, Resilience and LSE, were good fits. The 10-item Resilience scale was a good fit with a chi-square of 724.92 (35 *df*, p<.001) , RMSEA of .096, NNFI of .96, GFI of .94, CFI of .97, and SRMR of .038 (see Table 3).

The CFA for the outcome variable, LSE (with four items), was also a good fit with a chi-square of 25.78 (2 *df*, *p*<.001), RMSEA of .073, NNFI and GFI of .99, CFI of 1.0, and SRMR of .008. These scales were included in the final LISREL model in their original version. Alpha reliabilities were .91 for Resilience and .87 for LSE (see Appendix A).

Table 3. CFA Fit Statistics for Resilience and LSE

Test	Chi-square	RMSEA	NNFI	GFI	CFI	SRMR
Resilience	724.92 (35*df*, *p*<.001)	.096	.96	.94	.97	.038
Leadership Self-Efficacy	25.78 (2 *df*, *p*<.001)	.073	.99	.99	1	.008

7-factor, Correlated CFA Model

The next step in developing a full, structural model was to first conduct a CFA of all latent factors correlated to confirm that they were related. Thus, a 7-factor, correlated CFA was run using the factors of Private CRE, Public CRE, Identity Salience CRE, Non-Discriminatory Climate, Identity-Based Experiences, Resilience, and LSE. This model demonstrated a good fit, with a chi-square of 1567.32 (*df*=278, *p*<.0001), an RMSEA of .046, NNFI of .98, CFI of .98, GFI of .95 and SRMR of .035 (see Table 4).

Table 4. Fit Statistics for 7-factor, Correlated CFA

	Chi-square	RMSEA	NNFI	GFI	CFI	SRMR
7-factor, correlated CFA	1567.32	.046	.98	.95	.98	.035

Results showed that all but two sets of factors were significantly correlated with each other: (a) Resilience and Non-Discriminatory Climate, and (b) Resilience and Identity-Based Experiences. The other factors were correlated with each other at varying levels ranging from a low of .06 (Identity-Based Experiences and Public CRE) to a high of .57 (Resilience and LSE) and are listed in Table 5. Correlation between factors in a CFA model is important in order to demonstrate a relationship that can be specified further in a structural model. Individual factor loadings ranged from .55 to .90 for the various constructs and are listed in Appendix B.

Table 5. Correlations Between Factors in 7-factor Correlated CFA

	Resilience	**LSE**
Private CRE	.27*	.21*
Public CRE	.26*	.19*
Identity Salience CRE	.12*	.14*
Non-discriminatory campus Climate	-.01	.-.05*
Identity-based experiences	.01	.05*

*p<.05

Full, Structural Model

The fit statistics for the full, structural were identical to those of the 7-factor correlated CFA model, given that the model had the same number of paths between variables as the correlated model. In other words, these models are considered equivalent so this was expected (see Table 6).

Table 6. Fit Statistics for 7-factor, Correlated Model

	Chi-square	RMSEA	NNFI	GFI	CFI	SRMR
7-factor, correlated model	1567.32	.046	.98	.95	.98	.035

Exogenous Variable Paths to Resilience

Results demonstrated that four of the five paths between the exogenous variables and Resilience were statistically significant: (a) Private CRE—Resilience (.34=medium effect size); (b) Public CRE—Resilience (.14=small effect size); (c) Identity Salience—Resilience (-.20=small effect size), and (d) Non-Discriminatory Climate—Resilience (.09=trivial effect size). The path between Identity-Based Experiences and Resilience was not statistically significant nor was there a meaningful effect. Private CRE and Public CRE had a positive influence on Resilience, while Identity Salience and Non-Discriminatory Climate had a negative influence. The proportion of variance explained by the structural model on the measure of resilience was 11%, which represented a moderate effect size (see Table 8). Path coefficients and statistical significance tests are reported in Table 7. A figure of the model with standardized coefficients is presented in Figure 2.

Table 7. Results From 7-factor, Full Structural Model

Causal Path	Unstandardized coefficient	Standardized coefficient beta	Z score
Private CRE—Resilience	.18	.35	6.31*
Public CRE—Resilience	.07	.14	3.77*
Identity Salience—Resilience	-.10	-.20	-4.39*
Non-Discriminatory Climate—Resilience	-.05	-.09	-3.73*
Identity-Based Experiences--Resilience	-.02	-.03	-1.30
Private CRE—LSE	.00	.00	.04
Public CRE—LSE	.03	.04	1.22
Identity Salience—LSE	.03	.04	1.01
Non-Discriminatory Climate—LSE	-.03	-.05	-2.19
Identity-Based Experiences--LSE	.03	.03	1.46
Resilience—LSE	.72	.56	21.30*

*$p<.05$
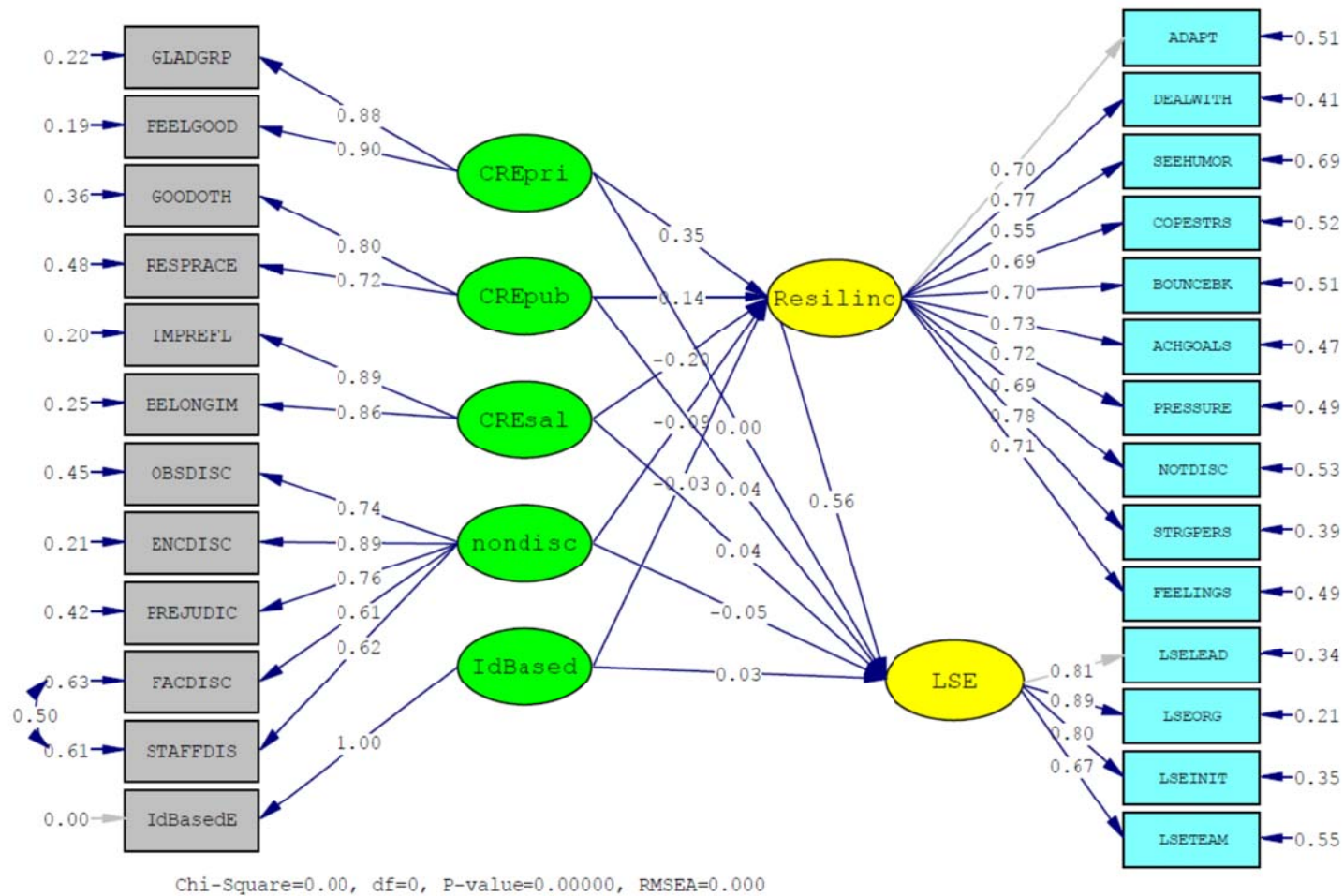
Figure 2. Final Structural Model for Asian American Leadership Self-Efficacy

Exogenous Variables to LSE

Model results showed that none of the paths between the exogenous variables and LSE were statistically significant. See Table 7 for details.

Endogenous Variable Paths

The path between Resilience and LSE was statistically significant. The standardized path coefficient was .56 representing a large effect size (see Table 7). This path, in combination with the exogenous variables mentioned previously, explained 34% of the variance for LSE (see Table 8), which is also considered a large effect size when considering the total variance explained.

Table 8. Percentage of Variance Explained by Exogenous Variables in Model

Endogenous Variable	Percentage Explained by Exogenous Variables in Model
Resilience	11%
Leadership Self-Efficacy	34%

Test of Resilience as a Mediator

In order to test whether Resilience functioned as a mediator in the model between the exogenous variables and LSE, mediation tests were conducted on each of the model paths using the method proposed by Baron and Kenny (1986). A variable is considered a mediator if (a) there is a relationship between an independent variable (in SEM, called an exogenous variable, in this case the CRE variables, Non-Discriminatory Climate, and Identity-Based Experiences) and the dependent variable (e.g., endogenous variable of LSE); (b) there is a relationship between the mediator (e.g., Resilience) and the outcome variable (LSE); (c) after controlling for the IV, the mediator still has a significant relationship with the outcome variable; (d) the relationship between the exogenous variable and endogenous variable is reduced once the mediator is included. Thus, systematic testing of each significant path to LSE was tested, with and without Resilience to determine its influence as a mediator for the exogenous variables.

Results from mediation tests demonstrated that Resilience did function as a mediator between the three CRE variables and LSE, as well as between Non-Discriminatory Climate and LSE. In each case, without Resilience in the model, the three CRE subscales and Non-Discriminatory Climate had a significant relationship with LSE, but once Resilience was introduced into the model, those direct paths were no longer significant, which is considered complete mediation (see Baron & Kenny, 1986). See Table 9 for detailed results of the mediation tests.

Table 9. Results for Tests of Resilience as Mediator

Paths between Exogenous and Endogenous Variables	Unstandardized value	Standard error	Standardized value	Z-score (* if significant *p<.05*)
Private CRE-Resilience (A1-B)	.22	.04	.42	7.56*
Private CRE--LSE (A1-C without B)	.21	.04	.31	5.45*
Private CRE—LSE with Resilience as mediator	.00	.03	.00	.04
SOBEL TEST				5.36*
Public CRE-Resilience (A2-B)	.08	.02	.15	4.0*
Public CRE-LSE (A2-C w/o B)	.08	.03	.12	3.28*
Public CRE—LSE WITH Resilience as Mediator	.03	.02	.04	1.22
SOBEL TEST				3.94*
Identity salience CRE-Resilience (A3-B)	-.15	.02	-.28	-6.03*
Identity Salience CRE-LSE (A3-C w/o B)	-.09	.02	-.18	-5.20*
Identity Salience CRE—LSE WITH Resilience as mediator	.03	.03	.04	1.01
SOBEL TEST				-7.16*
Non-Discriminatory Climate-Resilience (A4-B)	-.06	.02	-.12	-4.79*
Non-Discriminatory Climate-LSE (A4-C	0.09	.02	-.13	-5.2*

w/o B)				
Non-Discriminatory Climate-LSE WITH Resilience as Mediator	-.03	.02	-.05	-2.19
SOBEL TEST				-2.98*
Identity-Based Exp—Resillience (w/o B)	-.01	.01	-.03	-1.22
Identity-Based Exp—LSE	.01	.03	.02	.79
Identity-Based Exp –LSE WITH Resilience as Moderator	.02	.01	.03	1.46
Sobel Test				N/A

*p<.05

Gender Invariance Tests

To test possible differences in this model by gender, invariance tests were run on the full model and then on individual model paths where warranted. This was done by running the model separately for the male and female participants. The overall model was shown to have configural invariance, which means that the model is a good fit for both groups with the fit statistics for the male sample ($n = 905$) and female sample ($n = 1,317$) both at acceptable levels (see Table 10). Configural invariance allows for further meaningful testing of possible differences between specific paths in the model. Means and standard deviations for the variables, as well as factor loadings for the composite scales, are listed in Appendix B.

Table 10. Model Goodness of Fit Indices for Male and Female Invariance Testing

Data	X^2	RMSEA	NNFI	CFI	SRMR	GFI
Male	821.46	.047	.98	.98	.038	.93
Female	1005.10	.046	.98	.98	.038	.94

In examining the path coefficients, five paths were significant for the male sample: Private CRE-Resilience (.20=small effect size), Public CRE-Resilience (.20=small effect size), Public CRE-LSE (.14=small effect size), Identity Salience CRE-LSE (.17=small effect size), and LSE-Resilience (.55=large effect size). See Table 11 for detailed path coefficients. For the female sample, seven paths were significant: all five paths from the exogenous variables to Resilience as well as Non-Discriminatory Climate-LSE and Resilience-LSE (Table 13). Effect sizes varied for these paths: Private CRE-Resilience (.44=medium effect size), Public CRE-Resilience (.10=small effect), Identity

Salience CRE-Resilience (-.25=medium effect), Non-Discriminatory Climate-Resilience (-.10=small effect), Identity-Based Experiences-Resilience (-.03=trivial effect), Non-Discriminatory Climate-LSE (-.07=trivial effect), and Resilience-LSE (.55=large effect).

The percentage of variance explained by the endogenous variables was slightly different, with 9% of Resilience and 37% of LSE explained by the model for men (Table 12), and 13% of Resilience and 33% of LSE for women (Table 14). For both men and women, the results for Resilience were a medium effect, and for LSE a large effect.

Table 11. Male Data Path Coefficients

MALE DATA	Unstandardized value	Standard error	Standardized value	z-score and statistical significance
Private CRE-Resilience	.11	.05	.20	2.34*
Public CRE-Resilience	.11	.03	.20	3.30*
Identity Salience CRE-Resilience	-.06	.04	-.10	-1.39
Non-Discriminatory Climate-Resilience	-.05	.02	-.08	-2.04
Identity Based Experiences—Resilience	-.01	.02	-.02	-.59
Private CRE-LSE	-.08	.05	-.13	-1.63
Public CRE-LSE	.09	.04	.14	2.61*
Identity Salience CRE-LSE	.11	.04	.17	2.73*
Non-Discriminatory Climate—LSE	-.01	.02	-.02	-.54
Identity Based Experiences—LSE	.01	.02	.01	.29
Resilience--LSE	.65	.05	.55	13.73*

*$p=<.05$

Table 12. Proportion of Variance Explained by Exogenous Variables: Male Data

Endogenous Variable	Proportion of Variance Explained by model
Resilience	9%
LSE	37%

Table 13. Female Data Path Coefficients

FEMALE DATA	Unstandardized value	Standard error	Standardized value	z-score and statistical significance
Private CRE-Resilience	.22	.04	.44	6.20*
Public CRE-Resilience	.05	.02	.10	2.06*
Identity Salience CRE-Resilience	-.13	.03	-.25	-4.37*
Non-Discriminatory Climate-Resilience	-.05	.02	-.10	-3.14*
Identity-Based Experiences—Resilience	-.02	.01	-.03	-1.10*
Private CRE-LSE	.06	.04	.08	1.31
Public CRE-LSE	-.02	.03	-.02	-.51
Identity Salience CRE-LSE	-.03	.04	-.05	-.86
Non-Discriminatory Climate-LSE	-.05	.02	-.07	-2.55*
Identity-Based Experiences--LSE	.03	.02	.04	1.56
Resilience=LSE	.77	.05	.55	16.00*

*$p<.05$

Table 14. Proportion of Variance Explained by Exogenous Variables: Female Data

Endogenous Variable	Proportion of Variance Explained by Model
Resilience	13%
LSE	33%

Given the configural invariance of the model, next an invariance test was

conducted to examine whether or not the paths in the model (between the exogenous and

endogenous variables, as well as between Resilience and LSE) differed significantly by

gender. This was done by first running multigroup analyses testing the male and female models together, first running a baseline model and then a model with the paths of the male and female SEM model fixed to be equal, and seeing if there were significant chi-square differences between those models. This test of invariance for the paths between the exogenous and endogenous variables (called gamma paths) was significant, reflecting differences between males and females on at least some of those paths (see Table 15). A test of gender invariance between the endogenous variable paths (called beta paths) was shown to be non-significant, meaning that there was not a statistically significant difference between men and women on the relationship between Resilience and LSE.

Table 15. Chi-square Differences and Model Goodness of Fit Statistics For Nested Models Testing Gender Invariance

Models Tested	X^2	df	ΔX^2	Δ df	p value	RMSEA	NNFI	CFI	SRMR	GFI
Baseline Model	1826.56	556				.046	.98	.98	.042	.93
Invariant gamma paths	1845.55	566	18.99	10	<.05	.046	.98	.98	.04	.03
Invariant gamma & beta paths	1848.09	567	2.53	1	>.01	.046	.98	.98	.04	.93

Given the significance of the first invariance tests, post-hoc analyses examined each individual path between exogenous and endogenous variables to determine which specific paths were invariant by gender. Results showed that there were three paths that

differed significantly: (a) Private CRE on LSE (p<.05); (b) Public CRE on LSE (p<.05);

(c) Identity Salience CRE on LSE (p<.01). See Table 16 for details.

In referring back to the baseline results for those paths by gender, for women

none of those paths were statistically significant, while for men both the Public CRE—

LSE and Identity Salience—LSE were significant (See Tables 11 and 13, respectively).

Additionally, the standardized coefficients for those paths differed in direction between

men and women: for men, the Private CRE—LSE path was negative, but the Public

CRE—LSE and Identity Salience CRE—LSE paths were positive. The opposite was true

for women. Additionally, the strength of the path coefficients was higher for men than

women (-.13, 14, .17 versus .08, -.02, and -.05 respectively).

Table 16. Nested Chi-Square Comparisons for Path Invariance Tests By Gender

	Chi-square	Degrees of Freedom	Chi-square Change
Baseline model	1826.56	556	
Private CRE—Resilience	1829.60	557	3.04
Private CRE—LSE*	1830.93	557	4.37
Public CRE—Resilience	1828.98	557	2.42
Public CRE—LSE*	1832.06	557	5.5
Identity Salience CRE—Resilience	1828.59	557	.03
Identity Salience CRE—LSE**	1833.49	557	6.93
Path 1,4 Non-Discriminatory Climate--Resilience	1826.62	557	.06
Path 2,4 Non-Discriminatory Climate--LSE	1828.24	557	1.68
Path 1,5 Identity-based Experiences--Resilience	1826.59	557	.03
Path beta 2,5 Identity-based Experiences--LSE	1827.22	557	.66

*p<.05; **p<.01

However, given the large sample size for this study, effect size tests were run to examine if these statistical differences were meaningful for interpretation. Using the procedure suggested by Paternoster, Brame, Mazerolle, and Piquero (1998), results showed that all three of the significant paths for gender invariance had trivial effect sizes (e.g., Cohen's d <.2), thus indicating that the gender invariance was not meaningful (see Table 17).

Table 17. Results of Effect Size Testing for Significant Gender Invariance Paths

Path Tested	z-score for difference	Cohen's d
Private CRE-LSE	2.186	.09
Public CRE-LSE	2.475	.105
Identity Salience CRE-LSE	2.20	.093

Note: Effect size interpretation for d: >.8 large; .5-.8 medium; .2-.5 small, <.2 trivial

Ethnic Group Models

Analyses were also conducted using data disaggregated by ethnic group. Given sample size requirements, five Asian ethnic groups were of sufficient size to test for invariance: (a) Chinese; (b) Indian/Pakistani; (c) Korean; (d) Filipino; and (e) Vietnamese. The gender breakdown of these groups ranged from 55%-62% female, and the generational status was primarily 2nd generation for each group ranging from 52-67%. The specific percentages of gender and generational status of these groups are listed in

Table 18. Gender and Generational Status for Ethnic Group Samples

	Chinese	Indian/ Pakistani	Korean	Filipino	Vietnamese
Male	41%	43%	38%	41%	45%
Female	59%	57%	62%	59%	55%
1st generation (born in Asian)	38%	37%	46%	33%	32%
2nd generation (born in U.S.)	58%	63%	53%	61%	67%
3rd generation or more (parents born in U.S.)	4%	<1%	1%	7%	2%

The overall structural model was tested individually for each of these five groups. However, a multi-group analysis to test the statistical significance of these groups directly with each other was not possible, due to the complexities of the model and large sample sizes, which required more computer memory than was available for this study. Thus, individual paths of invariance between groups were not able to be tested. However, the fit statistics and path coefficients will be reported for each of the five separate analyses by ethnic group allowing for within group examination, but with caution in comparing or contrasting across ethnic groups.

First, the model was run separately for each of the five ethnic groups tested. All of the fit statistics were acceptable for each group, except for the GFI from the Korean, Filipino, and Vietnamese groups which were just under the threshold of .90 (.89, .86, and .86 respectively). However, it is possible this result may be a result of a smaller sample size for which GFI can be sensitive (Kline, 2011). Fit statistics for the separate model runs are listed in Table 19. Means and standard deviations for the variables for each

ethnic group, as well as factor loadings for the composite scales, are listed in Appendix

C.

Table 19. Fit Statistics for Structural Model By Ethnic Group

	Chinese	Indian/Pakistani	Korean	Filipino	Vietnamese
Chi-square	629.33	567.73	522.18	420.56	358.34
RMSEA	.044	.051	.053	.051	.042
NNFI	.98	.97	.96	.95	.93
CFI	.98	.98	.97	.96	.98
SRMR	.041	.05	.048	.058	.057
GFI	.93	.90	.89	.86	.86

Additionally, different amounts of variance were explained for Resilience and

LSE by the exogenous variables (See Table 20). The percentage of variance explained

for Resilience ranged from a low of 7% for the Korean sample (small effect size) to a

high of 20% (moderate effect size) for the Vietnamese sample. For LSE, the amount of

variance explained by the model ranged from 23% for the Filipino sample (moderate

effect size) to 41% for the Vietnamese sample (large effect size).

Table 20. Percentage of Variance of Endogenous Variables Explained by Model for
Different Ethnic Groups

Endogenous Variable	Chinese	Indian and Pakistani	Korean	Filipino	Vietnamese
Resilience	16%	17%	7%	12%	20%
LSE	36%	36%	31%	23%	41%

Path coefficients for these models, however, differed greatly by ethnic group, with

some paths significant for certain groups and not others (see Table 21). The path between

Private CRE and Resilience was significant for Chinese (.40=medium effect),

Indian/Pakistani (.48=medium effect), and Korean (.33=medium effect); between Public

CRE and Resilience significant for Chinese (.19=small effect), Indian/Pakistani

(.15=small effect), and Filipino (.43=medium effect); and between Identity Salience CRE

and Resilience for Chinese (-.28=small effect), Indian/Pakistani (-.22=small effect), and

Korean (-.35=medium effect). The path between Non-Discriminatory Climate and

Resilience was significant for Chinese (-.15=small effect) and Korean (-.15=small effect).

The path between identity-based experiences and Resilience was only significant for

Filipinos (-.17=small effect). The path between Resilience and LSE was the only path in

the model that was statistically significant for every ethnic group, with coefficients

ranging from .45 (Filipino) to .63 (Vietnamese), with >.50 considered a large effect size.

On the other hand, none of the paths between the exogenous variables and LSE were

significant for any ethnic group. The most paths (four) between exogenous and

endogenous variables were significant for Chinese, while for Vietnamese none of the

paths between the exogenous and endogenous variables were significant. A graphic of

the model with the ethnic group path coefficients is presented in Figure 3.

Table 21. Standardized Path Coefficients for Ethnic Group Separate Analyses

Standardized path coefficients	Chinese	Indian/Pakistani	Korean	Filipino	Vietnamese
Private CRE-Resilience	.40*	.48*	.33*	-.33	.39
Public CRE-Resilience	.19*	.15*	.06	.43*	.25
Identity Salience CRE-Resilience	-.28*	-.22*	-.35*	.15	-.23
Non-disc Climate-Resilience	-.15*	-.07	-.15*	-.04	-.17
Identity-Based Experiences-Resilience	-.01	-.06	-.05	-.17*	-.03
Private CRE-LSE	.06	-.03	-.09	-.16	-.06
Public CRE-LSE	.06	.02	.16	.09	.02
Identity Salience CRE-LSE	.00	.04	.04	.09	.13
Non-disc Climate-LSE	-.06	-.03	.04	-.07	.03
Identity-Based Experiences-LSE	.02	.05	.06	.07	.13
Resilience-LSE	.54*	.59*	.54*	.45*	.63*

*p<.05

Effect size interpretations: <.10=trivial; .10-.29=small; .30-.49=medium; >.50=large
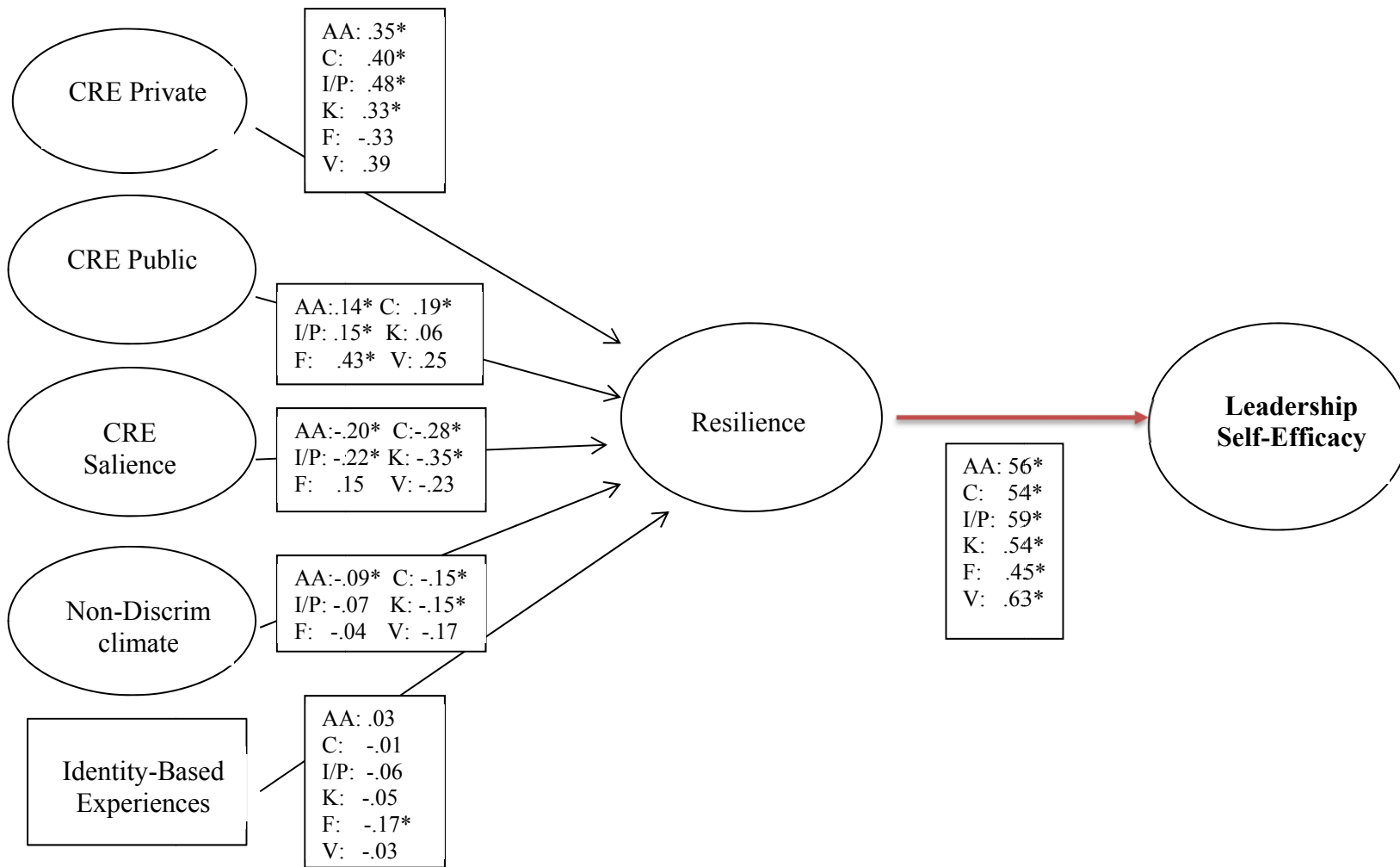
Figure 3. Structural Model with Overall and Ethnic Group Coefficients

Summary

This chapter reported the results from the LISREL analyses for the structural model for the overall sample of Asian Americans, a multigroup analysis by gender, and five separate models for different Asian American ethnic groups. Results demonstrated that the proposed structural model was a good fit for all of these groups. Gender invariance tests found only a trivial effect, thus leaving the original model intact. The ethnic group analyses revealed differences in the significance and strength of various model paths for individual groups though statistical invariance was not able to be tested. A more detailed discussion of these results and their implications will follow in Chapter Five.

CHAPTER FIVE

DISCUSSION

This chapter begins with brief summaries of the problem statement, literature informing the study, analytic methods, and overarching findings to frame the discussion and interpretation of results. Results are then examined for the overall sample of Asian American students and for the separate analyses for men and women and the five different Asian American ethnic groups (Chinese, Indian/Pakistani, Korean, Filipino, and Vietnamese). This is followed by a detailed examination of implications for practice as well as study limitations and topics for future research.

Statement of Problem

The purpose of this study was to examine the development of leadership self-efficacy (LSE) for Asian American college students. LSE is an important component of leadership development for diverse college populations, but particularly for Asian American students (Dugan & Komives, 2010; Dugan et al., 2008). Both theory and empirical research has linked LSE to greater leadership capacities, willingness to lead, and leadership effectiveness (Anderson et al., 2008; Dugan & Komives, 2010; Hannah et al., 2008; Machida & Schaubroeck, 2011).

However, research examining LSE (and leadership development in general) for Asian Americans has been limited in both the broader leadership studies literature and the college student leadership development literature, particularly among studies employing

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quantitative methodologies and/or large-scale datasets. This lack of attention to LSE, coupled with its demonstrated importance for this population (Dugan & Komives, 2010), is a significant gap hindering a complex understanding of the leadership development process for one of the fastest-growing racial groups on campuses across the United States (CARE, 2010).

Summary of Literature

A growing body of research has called for increased attention to the role of race in leadership development given an increasingly diverse student body and findings suggesting differential influences across racial group memberships (Arminio et al., 2000; Dugan et al., 2008, 2012; Lo, 2011; Ospina & Foldy, 2009; Renn & Ozaki, 2010). Yet, a review of the literature on college student leadership development yielded few studies focused on Asian Americans. Despite a limited knowledge base, common themes have emerged when triangulated with findings from dissertations and unpublished studies including: (a) Asian American often do not perceive themselves as leaders; (b) race-based experiences are typically influential in leadership development; and (c) social context and campus racial climate matter in the process of leadership development.

Review of Methods

This study tested a structural model of influences on LSE for Asian American students with a focus on psychological constructs given that existing research has already identified influences associated with direct college experiences (e.g., mentoring relationships, interactions across difference; Dugan & Komives, 2010; Dugan et al., 2008; Kodama & Dugan, 2013). The specific research questions included:

1. What is the relationship between collective racial esteem and resilience on the outcome of leadership self-efficacy for Asian American students?

2. Do these relationships differ by ethnic group or gender?

The first construct of interest was collective racial esteem (CRE), composed of measures assessing students' social identity in relation to their racial group that have been considered useful correlates of racial identity assessment in Asian American research (Fischer & Moradi, 2001; Kim & Lee, 2011; Kim & Omizo; 2005). A second construct of interest was resilience, which has been linked to growth in leadership development and also positive functioning for students of color in particular (Clauss-Ehlers, 2004, 2008; Dugan et al., 2014; Luthans, Youssef, & Avoilio, 2007). Other variables in the model were selected based on previous research on LSE and Asian American leadership development and included Non-Discriminatory Climate and Identity-Based Experiences. A test of these relationships with an Asian American sample thus established a new line of inquiry into the complex nature of leadership development for diverse populations.

The theoretical framework underlying this study was a combination of Bandura's (1997) self-efficacy theory as applied to leadership, as well as Kodama et al.'s (2002) student development theory of Asian Americans. These frameworks influenced both the development of the structural model as well as the interpretation of findings. Results supported the use of this integrated conceptual framework as a lens through which to view the complexity of Asian American leadership development.

For example, Bandura (1997) suggested four ways to develop self-efficacy: (a) enactive mastery experiences, which allow individuals to practice and learn by doing; (b)

vicarious learning, by observing others' behaviors; (c) encouragement and feedback from others; and (d) physiological and emotional states that may affect one's state of mind that may either facilitate or hinder self-efficacy. Most of the research on LSE has focused on the first three sources of self-efficacy (Dugan et al., 2008; Dugan & Komives, 2010; Lester et al., 2011; Machida & Schaubroeck, 2011). Thus, the goal of the present study was to examine the influences of psychological constructs on LSE development such as CRE and resilience.

Kodama et al.'s (2002) theory emphasized the role of racial and ethnic identity for Asian Americans' student development given the different contexts in which Asian American students may need to negotiate cultural dissonance. They suggested that student development research and practice that does not attend to the influence of race may be doing Asian American students a disservice given its central role in college experiences. Thus, the inclusion of CRE constructs, Non-Discriminatory Climate, and Identity-based experiences in the present study is a step toward better understanding potential race-related influences on the development of resilience and LSE for Asian Americans.

The study used structural equation modeling (SEM) to examine the research questions, an analytic technique which includes both measurement and structural models. Data were from the 2012 administration of the MSL, an international college outcomes survey, and included participants from 88 institutions across the United States. The sample contained 2,223 Asian American students, and this dataset was further disaggregated into five ethnic groups tested in more specific analyses: Chinese,

Indian/Pakistani, Korean, Filipino, and Vietnamese American. Analyses also calculated the structural model for invariance by gender.

Summary of Findings

Results showed the strong influence of Resilience on the development of LSE. There was a positive relationship between Private CRE and Public CRE on Resilience, and a negative relationship between Identity Salience CRE on Resilience. There were no direct influences of the exogenous variables (Private CRE, Public CRE, Identity Salience CRE, Non-Discriminatory campus climate, and Identity-Based Experiences) on LSE directly, though analyses showed that Resilience mediated these relationships. Data disaggregated by gender showed statistically significant differences in the model, though with only a trivial effect size. Models tested separately for the five ethnic groups looked quite different from each other, reflecting possible unique influences on LSE development within ethnic groups. Figure 4 provides a visual representation of the statistically significant paths for the overall Asian American model as well as the separate ethnic models.
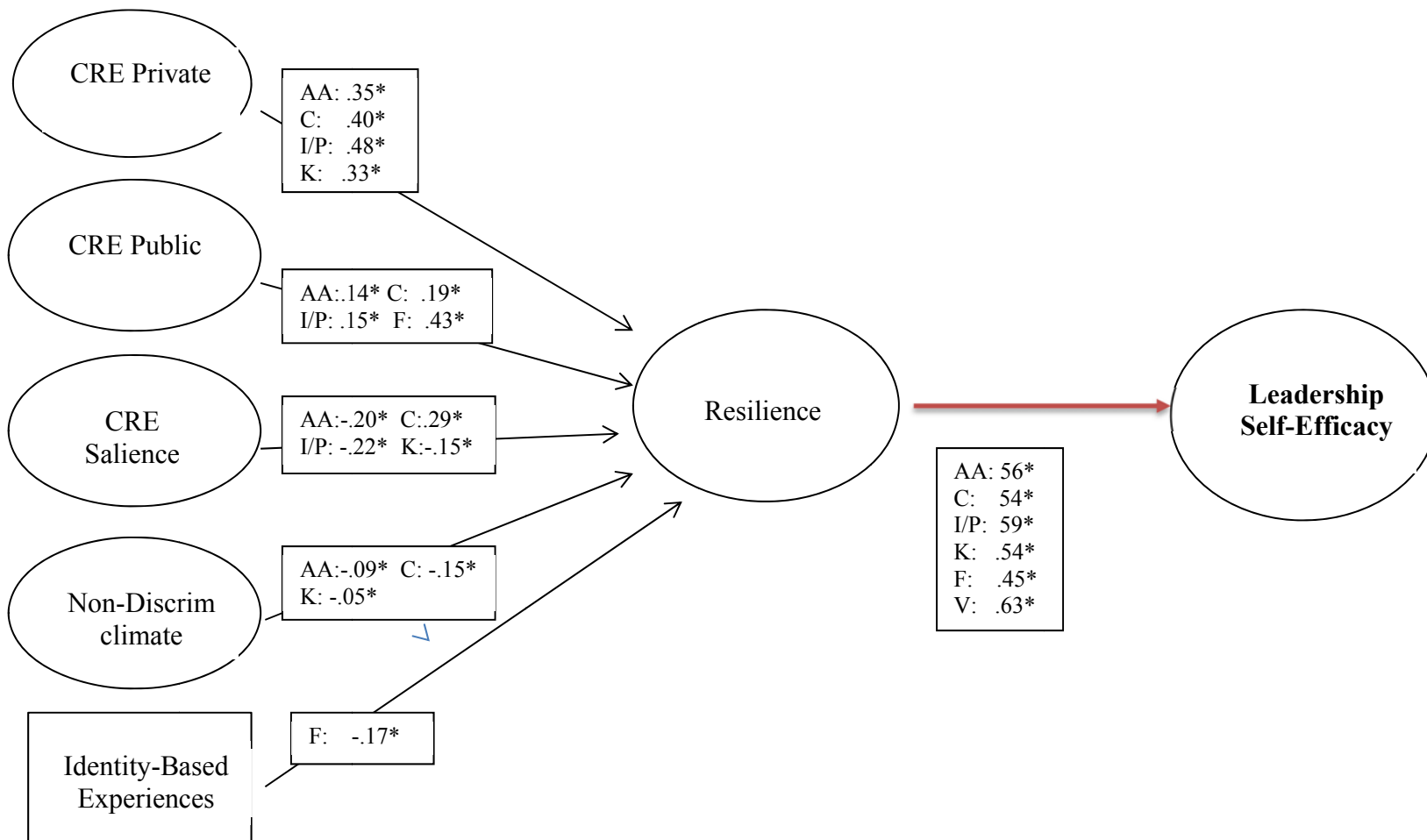
Figure 4. Structural Model With Significant Paths for Overall and Ethnic Group Models

Effect sizes: trivial=<.1; small=.1<.3; medium .3<.5; large >.5
Key: AA=Asian American; C=Chinese, I/P=Indian/Pakistani; K=Korean; F=Filipino; V=Vietnamese

Discussion of Results From the Preliminary CFAs

Before the actual testing of a SEM model, standard procedure required a series of confirmatory factor analyses (CFA) to test the latent factors (Resilience, CRE subscales, Non-Discriminatory Climate, LSE) for fit before inclusion in the final model. The alpha reliabilities of all of these scales were satisfactory in previous research, as well as for the current study, setting the stage for the CFA testing. Though not the primary focus of this study, the results from the preliminary CFAs were interesting and warrant discussion as they advance the understanding of measurement issues and their applications when working with Asian American college students.

CRE Subscales

The first CFA demonstrated poor fit for the original, 4-item, 4-subscale CRE measure with the study's Asian American sample. In other words, in their traditional configuration the CRE subscales were not accurately measuring what they suggested and thus psychometrically inappropriate for use in SEM models. This result was unexpected given the scales' use in a variety of previous studies, both with diverse populations and for Asian Americans specifically (Alvarez & Helms, 2001; Carter & Constantine, 2000; Crocker et al., 1994; Liang & Fassinger, 2005; Luthanen & Crocker, 1992; Kim & Omizo, 2005). Previous research using regression analyses and relying on alpha reliabilities suggested the appropriate use of the four CRE subscales selected for this study, but the CFAs conducted for these analyses suggested otherwise. This finding is likely a result of using SEM, a technique designed to be more precise than traditional

multivariate procedures in parceling out measurement error in measurement models

(Byrne, 1998).

In particular, the negative response item wording arose as problematic with low

loadings, high error, and stronger intercorrelations, necessitating their removal to

improve the fit of the model. This is not unusual given that negative items often pose

problems in scale development, but have been a popular tool in attempting to capture

accurate data (DeVellis, 2003). What is not clear, however, is whether the problematic

nature of the scales is unique to use with the Asian American population or would arise in

use with other populations as well.

Additionally, once negative response items were removed, the high correlations

between Membership CRE and the other CRE subscales was cause for concern and thus

Membership CRE was not included in this study's analyses. This result may help to

partially explain the findings of a similar study in which the results for Membership CRE

did not fit with hypothesized relationships based on theory and in fact seemed more

similar to those expected for Private CRE (Kodama & Dugan, 2013). Kodama and

Dugan's (2013) study also demonstrated that the results for Membership CRE were quite

different for Asian Americans than for other racial groups. Kodama and Dugan (2013)

suggested that racial membership affiliation for Asian Americans may be complicated by

tension between ethnic and racial identification and affiliation raised in much of the

Asian American identity research (Accapadi, 2012; Lien, Conway, & Wong, 2003;

Tummala-Narra, Inman, & Ettigi, 2011; Suyemoto, 2003). This interpretation would also

fit the results of the present study, reflecting Asian Americans' complex process of

identifying with their ethnic and/or racial groups in their identity development (David & Nadal, 2013; Kang, 2004; Pyke & Dang, 2003; Suyemoto, 2003). Thus, it may be that the Membership CRE subscale as currently comprised does not fit the experiences of Asian Americans, and should be revisited in future research as an appropriate construct for this population. Other research has also questioned the validity of the Membership scale for use when using CRE as the scale items seemed best suited for social groups joined voluntarily or which involved frequently working together rather than membership in an ethnic or racial group (Contrada et al., 2001).

Non-Discriminatory Climate

Another result of interest from the preliminary CFAs was that the Non-Discriminatory Climate scale required correlating the error of the faculty and staff items for the scale to meet fit specifications for the structural model. A similar intercorrelation of errors occurred in a study by Campbell et al. (2013), which resulted in the deletion of the faculty item, indicating that scale did not hold, though that study did not disaggregate by racial group. In the present case, perhaps Asian American students do not make distinctions between college faculty and other staff administrators due to cultural values around respecting elders and/or authority, and/or the challenges they have in developing meaningful relationships between faculty and staff (Kim et al., 2009; Kodama et al., 2001; Liang & Sedlacek, 2003).

Thus, surveys which have questions making distinctions between staff and faculty should be explicit in defining who those titles refer to perhaps even giving examples for students to understand. Without explicit distinctions, it will be difficult to tell whether or

not there is a meaningful difference between staff and faculty influences on students.

This may be an important nuance in the literature, as some leadership studies have found

positive influences of faculty but not staff (Dugan & Komives, 2010; Dugan et al., 2012),

while others have emphasized the importance of staff (Kwon, 2009).

Discussion of the Overall Structural Model for Asian Americans

Once the appropriate composition of the latent factors was determined, the

structural model was tested for the overall sample of 2,223 Asian American students.

The following will discuss the results showing significant, direct relationships between

the CRE variables and Resilience, as well as between Resilience and LSE. Though direct

relationships were not found between the exogenous variables and LSE, this section will

also discuss how Resilience functioned as a mediator between the CRE variables and

LSE. The first step, however, will be a discussion of the total variance explained for the

endogenous variables in the model.

Total Variance of the Endogenous Variables Explained by Model

LSE. The variables in the model explained 34% of Leadership Self-Efficacy. The

34% explained for the outcome variable, LSE, is considered a large effect, suggesting the

influence of the variables in the model on LSE development for Asian American

students. This is evidenced particularly by Resilience's significant, direct relationship to

LSE, but also as a mediator between the other exogenous variables and LSE (to be

explained in more detail below). This effect is consistent with previous research using

multiple regressions which have explained between 34 and 42% of LSE by including the

influences of direct college experiences such as sociocultural conversations, faculty

mentoring, and positional leadership roles (Dugan et al., 2008; Kodama & Dugan, 2013).

Thus, future research should next develop a model including influences from both direct

college experiences as well as the psychological constructs used in the present study.

Resilience. The 11% of Resilience explained by the model is considered a

moderate effect, reflecting the significance of the exogenous variables in the model,

particularly CRE. Though there is limited research investigating influences on resilience,

particularly using the CD-RISC, some studies have suggested other variables that may

contribute to resilience for Asian Americans. These studies are mostly in the

psychological literature and include degree of acculturation to either (or both) Asian and

dominant American cultures, religious beliefs and practices, family and community

support, cultural practices, and overcoming hardships (Castillo, 2002; Clauss-Ehlers,

2004; Leong et al., 2007; Lin, 2011; Navsaria, 2008; Tummala-Narra, 2007). Thus, the

CRE variables fit conceptually with these other variables in a larger category of cultural

influences (e.g., identity, acculturation, religion) that have been suggested to influence

resilience (Clauss-Ehlers, 2004; Tummala-Narra, 2007). Given the importance of

cultural factors on resilience then, as well as the total variance explained by the present

structural model, attention will now be directed to the specific paths of influence between

the exogenous and endogenous variables.

Exogenous Variables and Resilience

Results showed that many of the exogenous variables had significant paths to

Resilience but with varying effect sizes: Private CRE (medium), Public CRE (small),

Identity Salience CRE (small), and Non-Discriminatory Climate (trivial). This adds

Resilience to the psychological outcomes influenced by CRE found in existing research (Liang & Fassinger, 2008). For example, Crocker et al. (1994) found a positive relationship between CRE and psychological well-being though did not assess resilience specifically.

The positive relationship of Private and Public CRE to Resilience may also reflect research which showed individuals with high collective self-esteem engaged in self- or group-enhancing strategies to cope with personal threats (Crocker & Luthanen, 1990) in essence seeking out opportunities that would contribute to resilience. Though Crocker and Luthanen (1990) did not use the race-specific version of CRE, their findings suggest a similar outcome. The influences of the CRE variables also reflect Tummala-Narra's (2007) suggestion of the importance of collective identity on the development of resilience for ethnic minorities in particular.

The influences of the CRE subscales on resilience also fit with the conceptual framework given Kodama et al.'s (2002) suggestion of the importance of race on Asian American students' development and as influential in their ability to negotiate cultural dissonance amidst different social contexts. This is an ability that may depend on a certain amount of resilience. Liang and Fassinger (2008) also suggested the idea of CRE as a tool for "cognitive framing," a lens through which Asian American students may interpret their experiences. Thus, higher levels of CRE may allow students to develop a more resilient outlook through which they can negotiate the college environment. This increased ability to negotiate college experiences could then eventually lead to greater LSE, reflecting the influence of Resilience on the outcome of LSE in this study. A more

detailed discussion of each of the CRE subscale relationships with Resilience is provided in the below sections.

Private CRE. The strength of the relationship of Private CRE with Resilience was the greatest of all the exogenous variable influences in the model, and nearly twice that of other aspects of CRE with a medium effect (coefficient of .35 for Private compared to .14 for Public and -.20 for Identity Salience, see Table 7). This strong influence of Private CRE on Resilience may reflect that an internal sense of pride in identity is particularly relevant to developing resilience, which is also an internally driven psychological construct. In other words, an internal sense of positivity regarding one's racial group may provide students with the self-confidence necessary to develop the resilient attitudes which help them to withstand and deal with external barriers and obstacles. Private CRE can also be seen as an element of self-awareness, another construct which has been linked to the positive development of Resilience (Dugan et al., 2014; Hippe, 2004) as well as leadership self-efficacy and capacity (Komives & Dugan, 2010).

The importance of Private CRE in developing a sense of Resilience was not surprising given results from research which suggested that a more positive sense of one's racial group may contribute to resilient behaviors and attitudes (Maramba & Velasquez, 2010; Poon, 2013; Tummala-Narra, 2007). The importance of internal pride in Asian American identity in developing resilience is particularly supported by Poon's (2013) study, which found that exposure to critical race pedagogy helped students to develop a more positive self-image, which helped them to be resilient against racist and

other oppressive experiences. In turn, this resiliency and internal pride in their racial affiliation resulted in campus engagement as transformative leaders.

Private CRE may be particularly important to developing Resilience because of the general lack of attention to the impact of race on Asian Americans. Much of the conversation around race in the United States tends to focus on a Black-White dichotomy and often portrays Asian Americans as either raceless or as "honorary Whites" (Tuan, 1998) who do not experience racism. Yet, research shows that Asian Americans experience a great deal of racism during the college years (Choi, 2010; Liang, Lee, & Kim, 2004; Museus, 2014; Museus & Park, in press; Poon, 2013; Sue et al., 2007), which often is minimized by others or goes unchecked. Thus, developing an internal, positive sense of one's racial identity may be important in contributing to students' resilience in handling negative racial experiences given a lack of external validation and/or support.

Public CRE. Results from this study showed that Public CRE also had a positive and significant relationship with Resilience, though to a smaller degree than Private CRE (coefficient of .14, which is considered a small effect). In other words, Asian American students' perceptions that others have a positive view of the Asian American racial group contributed to the development of Resilience. This may reflect the importance of external validation to Asian Americans that has arisen as an important component of racial and ethnic identity development for this group (Accapadi, 2012; Kodama et al., 2002; Nadal, 2011; Pyke & Dang, 2003).

Similar to the interpretation for the Private CRE results, perhaps the relative lack of attention to the racial identity of Asian Americans as well as Asian Americans'

continued exposure to racism may make perceptions of positive regard by others particularly powerful. The relationship between Public CRE and Resilience is particularly meaningful when considering the study's outcome variable of LSE, as other studies have shown that Asian Americans' perceptions and/ or adoptions of negative, external opinions of their racial group often led to internalization of decreased leadership ability (Balón, 2004; Kwon, 2009; Lo, 2011; Tran & Chang, 2013). Stereotypes of Asian Americans as quiet, subservient, and socially awkward are at odds with the prototype of an effective leader in American society, and these stereotypes have often been internalized by Asian Americans (Choi, 2010; Kodama et al., 2002; Lo, 2011; Tran & Chang, 2013), reflecting this influence of Public CRE on not just Resilience, but LSE as well. Thus, there appears to be a complicated relationship between Asian Americans' realistic appraisal of social dynamics around race and influences of this resilience. This relationship is made more complex when considering ethnic differences within the Asian American population, given a study showing that perceived discrimination (as well as its effects) from a particular racial and/or ethnic context (e.g., predominantly White, predominantly Asian American, or predominantly of one's own ethnic group) differed by ethnic group (Syed & Juan, 2012).

The significance of Public CRE to Resilience also fits with the theoretical framework of Bandura (1997), who highlighted the importance of social comparisons and role modeling on the development of resilience and self-efficacy. Bandura (1997) stated that cultural stereotyping and preconceptions of ability linked to racial and ethnic background can influence comparative self-appraisals for ethnic minorities. In other

words, who one is being compared to may impact an individual's sense of efficacy and resilience to persist in terms of believing that they can succeed within a particular context. Kodama et al. (2002) also suggested that the racial stereotypes inherent in social comparisons influence Asian Americans' sense of self and self-confidence, as well as how they negotiate cultural dissonance.

Identity Salience CRE. The relationship between Identity Salience CRE and Resilience was negative with a small effect indicating that Asian Americans with higher levels of Identity Salience had lower levels of Resilience. This may reflect that students with high racial identity salience may exhibit characteristics similar to those posed by Helms' (1995) racial identity status of *immersion*, which include a strong in versus out group mentality and hypersensitivity to racism. In other words, while this intense connection or affiliation to one's racial group may be individually empowering and validating for students, it may also make it difficult for students to develop internal coping skills such as resilience that require more flexibility and an internal sense of personal accountability. High identity salience could lead to the adoption of coping skills primarily dependent on in-group support that may not be present across all environments, particularly at predominantly white institutions. This could lead to feeling subject to racialized experiences in some contexts but resilient in others depending on the degree of in-group representation and support (Syed & Juan, 2012). Furthermore, it could contribute to the compartmentalization of resilience and/ or perception that it is not internally derived but dependent on external support.

An alternative interpretation of the negative relationship between high Identity Salience and lower Resilience might focus on the psychological tolls associated with navigating racism. If high Identity Salience as captured in the survey is episodic and a function of the mindset at the time of administration, it may reflect triggering associated with racist encounters. The response to this may require a great deal of psychological energy, depleting the students' overall coping mechanisms associated with resilience. Continued exposure to racism, whether microaggressions or more overt situations, is taxing on students' psychological states (Kodama et al., 2002; Sue et al., 2007), thus resulting in a lowered resilience regardless of a strong sense of racial identity.

Results from studies examining influences of identity salience yield a range of results with some suggesting high salience (though not necessarily as assessed with CRE) contributes to positive outcomes and others suggesting negative outcomes (Alvarez & Helms, 2001; Crocker & Luthanen, 1990; Dugan et al., 2012; Lee, 2005; Maramba & Velasquez, 2010; Poon, 2013; Syed & Juan, 2012; Tummala-Narra, 2007). A possible explanation for the negative influences may be that the construct could simultaneously be capturing two different stages of racial identity as conceived by Helms' (1995) theory: Immersion/Emersion as well as Integration. The lack of thresholds or cut-points associated with use of the measure make it difficult to determine whether high salience is a function of subjectivity to racial experiences or an internally validated sense of self less dependent on external influences. The findings from the present study seem most indicative of the Immersion/Emersion stage in terms of the negative influence on Resilience, reflecting the possible hypersensitivity to racism and

strong in- vs. out-group distinctions (Alvarez & Helms, 2001; Helms, 1995), which may hinder the development of positive coping skills such as resilience.

Non-Discriminatory Climate. Results from the structural model indicate that Non-Discriminatory Climate was negatively related to the development of Resilience. In other words, students who perceived a less discriminatory climate had lower levels of Resilience. However, the beta coefficient was only -.09, which reflects a trivial effect size (e.g., <.10), so the effect of this path was not considered meaningful.

Identity-Based Experiences. The non-significance of Identity-Based Experiences on Resilience was somewhat unexpected given a recent study showing the importance of these types of experiences in developing resilient behaviors and attitudes (Poon, 2013). However, Poon's (2013) study did not use the CD-RISC scale and was not focused specifically on resilience as a primary outcome of research, so the outcome may not be directly comparable. For example, Poon's (2013) concept of resilience was connected to the idea of transformative resistance (i.e., being able to stand up against negative stereotyping and persist as a social change agent specifically). Other research has suggested the importance of identity-based experiences on positive psychological outcomes such as persistence, well-being, and sense of belonging that imply components of resilience, but did not address the concept of resilience specifically (Maramba & Velasquez, 2010; Museus & Maramba, 2010; Rodriguez, 2003).

Perhaps the Identity-Based experiences factor in this study did not contain enough of, or the right kind of, experiences that have influence. Specifically, this factor could not capture the experience of taking an ethnic studies class, which is one of the most

influential identity-based experiences cited in the literature (Alvarez & Liu, 2002; Kwon, 2009; Lo, 2011; Poon, 2013). The closest indicator of this in the survey instrument was the indication of ethnic studies as a major, which was the case for only four participants (out of 2,223). This may be both because most campuses do not actually have ethnic studies programs, or because students may not have chosen this major but may still have enrolled in occasional ethnic studies courses. This factor also could not capture whether or not students attended an Asian American event on campus, which may also have been a significant experience for students in their development of resilience. It may also be that the relative quality of these experiences may vary considerably from institution to institution given the use of a national dataset, which may have canceled out any meaningful effects in the aggregate. Finally, the mean level of participation in Identity-Based experiences was very low (less than 1 out of a possible 4, see Appendix A), which may have made it difficult to detect a relevant path in the analyses.

Additionally, Identity-Based Experiences may influence Resilience indirectly, by having a role in developing aspects of CRE instead, which in turn influence Resilience. In other words, the relationship between Identity-Based Experiences and Resilience may be slightly different than hypothesized for this study. This indirect relationship has been supported by the literature showing the impact of identity-based experiences (particularly student organizations) on the salience of racial identity as well as a more positive sense of one's racial group (Harper & Quaye, 2008; Inkelas, 2004; Maramba & Velasquez, 2010; Museus, 2008; Poon, 2013; Renn & Ozaki, 2010).

Non-Significance of Exogenous Variables and LSE

Results from this study show that none of the variables in the model had a significant, *direct* relationship with the development of LSE for either the overall sample or when disaggregated by ethnicity. This lack of a direct effect was slightly unexpected, based on the leadership literature which has suggested a possible influence of racial identity, non-discriminatory climate, and/or identity based experiences on LSE (Balón, 2004; Kodama & Dugan, 2013; Kwon, 2009; Lowe, 2011; Poon, 2009).

However, many of these variables were significant when run in a model not including Resilience, which demonstrated the role of Resilience as a mediator between the exogenous variables and LSE. Thus, the impact that CRE, Non-discriminatory campus climate, and Identity-Based experiences have on LSE was *indirect* through resilience as opposed to directly on LSE. In other words, these factors still contribute to the development of LSE and point to the important role of intermediate outcomes in shaping leadership development. These results may partially explain why a previous study found only minimal influences of CRE subscales on LSE for a diverse sample of college students, as that study did not include Resilience which was such a strong mediator and direct path to LSE in the present study (Kodama & Dugan, 2013).

Resilience and LSE

The only direct influence on LSE in the model was from Resilience, providing empirical support to the importance of resilience as a key component of self-efficacy (Bandura, 1997; Luthans et al., 2007; Machida & Schaubroeck, 2011). This path coefficient was also the largest of any of the paths in the model (.54 versus .35 for Private

CRE) reflecting a large effect. That Resilience has such a strong relationship with LSE is supported by the conceptual writing on leadership, which suggests the important role of resilience in dealing with leadership challenges (Heifitz & Linsky, 2002; Howard & Irving, 2013; Luthans et al., 2007).

Resilience may be important to Asian Americans' LSE development for a number of reasons. First, the relationship between Resilience and LSE found in this study may be reflective of what Bandura (1997) and Machida and Schaubroeck (2011) refer to as *resilient self-efficacy*, an important component of general self-efficacy that allows leaders to withstand and overcome challenges and "assists them in initiating self-correcting cycles…wherein lowered leader efficacy is followed by increased efficacy and performance" (Machida & Schaubroeck, 2011, p. 463). Bandura (1997) suggested this resilience contributes to an individual's stability of self-efficacy beliefs that allows them to persist when difficult situations arise. This resilience may be particularly important for Asian Americans in the leadership context, given how Asian Americans may internalize messages questioning their ability as leaders (Balón, 2005; Kwon, 2009; Liang, Lee, & Ting, 2002; Lo, 2011).

A second possibility for the strong relationship of Resilience and LSE for Asian Americans is related to the ability to withstand racial stereotyping in regards to leadership roles. For example, in the leadership literature one of the most common themes was Asian Americans' frustrations at being stereotyped as non-leaders (Balón, 2004; Kwon, 2009; Lowe, 2011). Resilience may be the key to helping Asian Americans overcome this negative stereotyping to continue to develop strong self-beliefs in their ability to be

leaders despite a negative societal context. This interpretation fits with other research on resilience suggesting its importance as a buffer for people of color in navigating challenges related to racial stereotyping, (Brown, 2008; Clauss-Ehlers, 2004, 2008).

Finally, Bandura (1997) posited that LSE is a self-concept based phenomena, and thus resilience may contribute to how Asian Americans interpret their self-concept in the face of obstacles. Research in positive psychology has also suggested the mutual influence of resilience and self-efficacy (along with hope and optimism) within a larger construct of "psychological capital" (Luthans et al., 2007) which has a positive influence on leadership outcomes. In revisiting the framework of Bandura (1997), this influence of resilience fits into the category of physiological and emotional arousal that Bandura posits as a way to develop self-efficacy, however this aspect has rarely been studied (Machida & Schaubroeck, 2011). In other words, the psychological construct of resilience may contribute to a more generally positive mental state which has a positive impact on the ways that Asian Americans interpret and manage daily events in order to develop higher levels of self-efficacy.

Gender Invariance

In addition to testing a structural model for Asian Americans as an aggregated group, one of the goals for this study was to test potential differences in the model by gender. The results from the gender invariance tests showed that the overall fit statistics were similar, but the significance as well as strength of paths in the model differed. After significance testing on each of those paths, three were determined to be statistically, significantly different: (a) Private CRE and LSE; (b) Public CRE and LSE; and (c)

Identity Salience CRE and LSE. However, given the need to consider effect sizes in comparing differences with a large sample size, results from effect size tests reflected only trivial effects, in essence erasing the importance of these differences. As such, they will not be discussed in significant detail.

The non-significance of the gender differences was somewhat surprising given extant research showing differences in both racialization and leadership development for men and women (Ayman & Korabik, 2010; Kawahara et al., 2007; Kwon, 2009). However, the differences reported have often been based not on different structural models, but the outcome scores on constructs such as LSE. Thus, it may not be that the relevant developmental pathways influencing LSE are different between men and women, but the experiential predictors from the collegiate environment and/ or actual acquisition levels of the constructs may differ. Thus, the question becomes why there are differences in lower or higher levels of CRE or Resilience or LSE between men and women and how to build those more equitably across gender through greater attention to learning opportunities than the psychological factors explored here.

Disaggregation by Ethnic Group

Given the diversity of the Asian American population as well as to respond to the need for research disaggregated by ethnic group, the original structural model was also tested separately for five ethnic groups: Chinese, Indian/Pakistani, Korean, Filipino, and Vietnamese. It was hypothesized that there would be some differences given the distinct ways in which these ethnic groups experience race and racial identity as Asian Americans as well as previous research that has indicated potential differences in leadership

development by ethnic group (Balón, 2004; Lo, 2011). These individual models did reveal variations in both the significance and strength of path coefficients, though these differences were not able to be tested directly with each other in a multi-group model due to limitations in computing power. However, results from these individual models shed light on possible differences in the ways in which these ethnic groups view the relationship between racial identity, resilience, and LSE.

Chinese American Students

The Chinese American group's analyses had nearly identical results to that of the overall Asian American sample with the same paths significant in the same direction, with one exception, that is the small, negative effect of Non-Discriminatory Climate on Resilience (a trivial effect in the overall model). The similar results may make sense given that Chinese Americans were the largest group in the dataset, which is true for much of the higher education research given their demographic as one of the largest Asian American ethnic groups as well as a large percentage of Asian American college students (CARE, 2010, 2013). However, this raises the question of whether much of what is considered research on "Asian Americans" is really a representation of Chinese Americans instead? This is an issue which has been a topic of discussion in the Asian American literature given the dominance of East Asian subjects in most research (Museus, 2014), though rarely is data disaggregated to test this claim. Additionally, because of changing demographics, given that Indians and Filipinos are the fastest growing Asian ethnic groups (Hoeffel et al., 2012), this dominance of Chinese American students in the higher education research may not be appropriate samples to reflect the

reality of Asian American students. Thus, the similarity of the Chinese American and overall Asian American models is a good reminder to scholars and practitioners to take a close look at study samples before generalizing results to the broader Asian American population.

The importance of CRE to Resilience for Chinese American students adds to the findings by Lin's (2011) dissertation study, which found an influence of cultural constructs on resilience as well. Lin found that while acculturation to other (non-Chinese) Asian American cultures had a positive, direct relationship with resilience, this relationship was mediated by acculturation to Chinese culture. Lin suggested that Chinese Americans may draw strength from their cultural identity and then use that in developing a shared identity and broader community of support with other Asian Americans that helped to develop resilience.

However, the negative influence of Non-Discriminatory Climate on Resilience reflects that Chinese (and also Korean) American students experiencing a *less* discriminatory climate had *lower* levels of resilience. This at first may seem counterintuitive, but perhaps this finding reflects the research that demonstrates that overcoming obstacles may be necessary in order to develop resilient skills (Howard & Irving, 2013). In other words, negotiating a challenging, discriminatory environment may result in the necessity of students learning from those experiences and developing relevant coping mechanisms and resilient behaviors. It could also be that there is an interaction between racial identity and Non-Discriminatory climate. For example, a student who has a "colorblind" view of the world may not necessarily be able to

recognize a negative climate or racism that would foster the development of resilient coping skills. This was reflected in a recent dissertation study by Pendakur (2014), who found a predominance of color-blind views among Asian American students who could not name or recognize racial discrimination as more than isolated, personal experiences. Finally, the influence of Non-Discriminatory climate in this model may actually be a direct influence on Identity Salience instead of Resilience, as research has suggested that a negative campus climate may heighten the salience of racial identity (Kim & Lee, 2011; Kodama et al., 2002; Kwon, 2009; Maramba & Velasquez, 2010).

Indian and Pakistani American Students

The results for the Indian/Pakistani American model were similar to the overall Asian American model, with Private CRE and Public CRE having a positive relationship with Resilience, Identity Salience having a negative relationship, and Resilience being significantly related to LSE. Despite a model that largely reflected that of Asian American students overall, unique differences emerged for Indian/ Pakistani American students particularly related to the magnitude of path effects. The Indian/Pakistani American group had the highest path coefficient of all ethnic groups (.48, which is approaching a large effect compared to .40 for Chinese and .34 for the overall model) for the relationship between Private CRE and Resilience, though it was not possible to test these differences for statistical significance due to computational limits.

The positive influence of Private CRE and negative influence of Identity Salience in this study suggest the importance of identity to the development of Resilience for Indian/Pakistani American students, though some studies have suggested that ethnic

identity is the primary frame of reference rather than racial (Gupta, 1998; Navsaria, 2008; Pendakur, 2014; Tummala-Narra et al., 2011). Private CRE may be particularly important for developing resilience among South Asian Americans because of the ways in which this group has been negatively stereotyped and racialized post-9/11, which has been shown to be a strong influence on Indian Americans' identity development (Iwamoto, Negi, Partiali, & Creswell, 2012). This same research showed that the college years were a time when Indian Americans were best able to appreciate and take pride in their ethnic and racial identity (Iwamoto et al., 2012). This internal pride, then, may be particularly important to navigate the racism exhibited by society and cultivate resilience at a pivotal time in their identity development. This finding fits with results from a dissertation study by Navsaria (2008) that showed religious beliefs and practices as well as close ties to the Indian culture positively influenced resilience.

Korean American Students

Two results in particular stood out from the Korean American group analyses. First was the non-significance of Public CRE on Resilience, a relationship which was significant for Chinese, Indian/Pakistani, and Filipino groups. A possible explanation for this may be the strong ethnic identity of Korean Americans which has been described as somewhat insular, with Korean Americans less likely to intermarry, strong in- versus out-group distinctions related to race, and a high level of engagement with Korean specific groups, particularly churches (Ecklund, 2006; Palmer, 2007; Park, 1999). It may be that Korean Americans are not as concerned with what non-Koreans think about their racial group of Asian Americans given their strong ethnic pride. In fact, some evidence is that

Korean Americans are more concerned with opinions from and comparisons within their ethnic group than from outside (Ecklund, 2006; Kang, 2004; Lee, 1996; Palmer, 2007).

Additionally, Korean Americans often are less likely to identify with a pan-Asian identity and feel an affinity with other Asian American ethnic groups (Lee, 1996; Wong, 2013). Given that the CRE questions in this study were related to race rather than ethnicity, it may be that Koreans are less concerned with opinions about Asian Americans as they do not feel a strong affinity to the label itself. Thus, Public CRE may not be a relevant influence as public sentiment about racial identity does not represent a potential threat to self-concept which may be more based on ethnic identity.

Another interesting finding from the Korean American model was that it explained the lowest amount variance on the measure of Resilience (7%, a small effect size) compared to the other ethnic groups whose results reflected a medium effect. This reflects that the exogenous variables do not contribute as much to the development of Resilience despite their significant relationships. This highlights the importance of further exploration of influences. One possible influence on Resilience for Korean Americans that was not included in this model is religiosity. Numerous researchers report the importance of Korean American churches to both the development of community and ethnic identity as well as its central role in Korean American life (Ecklund, 2006; Park, 1999; Park, Lew, & Chiang, 2013). Given Koreans' strong affiliation with organized religion and attendance at Korean-American specific churches (Ecklund, 2006; Park, 1999), it is likely that religion may have a strong influence on the development of Resilience for Korean Americans.

Filipino American Students

The Filipino American model of LSE looked quite different from the models for the other ethnic groups tested. Only two of the exogenous variable paths were significant: (a) Public CRE to Resilience; and (b) Identity-Based Experiences to Resilience. Additionally, the path from Public CRE had a coefficient of .43 (medium effect), twice that of Chinese (.19=small effect), and nearly triple that of Indians/Pakistani (.15=small effect) and the overall model (.14=small effect).

The importance of Public CRE on LSE for Filipino Americans may be a reflection of their unique racialization process as a result of the Philippines colonial history which is quite different from that of other Asian nations (David & Nadal, 2013; Maramba & Bonus, 2013; Nadal, 2011). Research has suggested that this history created a colonial mentality among Filipinos (including Filipino Americans) that manifests itself in internalized oppression and a history of looking to others for approval (David & Nadal, 2013; Nadal, 2011). Thus, Filipino and Filipino American identity development may occur within the context of comparison to others and often valuing characteristics more reflecting dominant, White culture. A need for greater external validation of one's racial group born from colonialism, coupled with a cultural value of the importance of social acceptance (Monzon, 2003; Nadal, 2011) would potentially fit with Public CRE having a strong influence on Resilience for Filipino Americans.

Influences associated with colonization and its effects on self-concept and identity construction may also explain the non-significance of Private CRE and Identity Salience CRE on Resilience. For example, if external validation is particularly important to

Filipino Americans in the development of resilience, it is possible that the internal

validation associated with Private CRE might just not be as important. Additionally,

Filipino Americans have often struggled with their affiliation to a larger pan-Asian

identity given the differences in history, culture, and physical appearances compared to

East Asian groups which can also render a sense of invisibility (Andersen, 2013;

Maramba & Bonus, 2013; Nadal, 2004, 2011). Thus, a positive internal sense of Asian

American identity and the relative salience of an Asian American identity may not be

connected to the development of Resilience. It may also be that Private CRE and Identity

Salience for Filipino Americans holds different meanings in relation to resilience than for

other Asian ethnic groups given the strong influence of American, Spanish, and Catholic

identities in Filipino culture (Maramba & Bonus, 2013; Nadal, 2004, 2011).

Finally, Filipino Americans was the only group for which Identity-Based

Experiences had a significant relationship with Resilience, but in a negative direction.

That is, the *more* Identity-Based experiences that Filipino Americans participated in, the

less their Resilience. The explanation for this result could be similar for that of Identity

Salience, in that students who participated in more identity-based experiences may have a

heightened awareness of racism, resulting in lowered levels of resilience. Other research

has suggested that participation in Filipino-based activities which often increase *ethnic*

identity does not necessarily coincide with higher levels of *racial* consciousness

(Rodriguez, 2003), and thus may not contribute to the awareness or tools to develop

resilient coping skills. This same study found that most of the Filipino American student

participants exhibited attitudes characteristic of the immersion/emersion stage

(Rodriguez, 2003), which as previously described may contribute to lowered resilience due to hypersensitivity to racism and a possible tendency to blame negative experiences on external forces beyond one's control (Alvarez & Helms, 2001; Helms & Cook, 1995). Monzon (2013) also found a mixed influence of ethnic based organizations for Filipino Americans, as those who were involved reported higher levels of Identity Salience, but lower levels of personal self-esteem.

Vietnamese American Students

Results from this study suggest that Vietnamese American students may have a very different developmental path than other Asian American students, at least when considering the role of racial identity, the development of resilience, and the development of LSE. The Vietnamese American group had the fewest significant paths across all of the ethnic group models. In fact, none of the exogenous variable paths were significant. However, the path coefficient between Resilience and LSE was the highest of all ethnic groups (.62=large effect), reflecting the importance of resilience for Vietnamese American students' development of LSE.

Unfortunately, the higher education literature offers scant research on Vietnamese American students in higher education so there is little guidance in interpreting this subset of findings. The little research that is available focuses largely on degree attainment, not college outcomes such as leadership. Thus, results from this study raise the question of what we do not know regarding the development of Vietnamese American students, both in terms of leadership, but related student development and psychological outcomes in general.

It is notable that Vietnamese Americans is the only ethnic group analyzed in this study which is a refugee group to the U.S. (rather than voluntary immigrant), an immigration history and cultural background different from the other Asian American groups. The Vietnamese American population also has a lower socioeconomic and educational attainment profile compared to the other Asian American groups in this study (CARE, 2008; Hoeffel et al., 2012; Syed & Juan, 2012). Additionally, Vietnamese Americans have often been marginalized within the Asian American umbrella of identity and in fact may resent their inclusion in it (Lam, 2008; Syed & Juan, 2012). Thus, demographic differences as well as tensions between Vietnamese American and other Asian American ethnic groups may cause them to have conflicted affiliations with the pan-Asian racial group which form the basis for the CRE variables used in this study.

Resilience, though not necessarily as measured by the Connor-Davidson scale specifically, has often been noted as a strong characteristic of refugee populations like the Vietnamese who have overcome a great deal of struggle in their journey to and navigation of dominant norms in the United States (Xin et al., 2013). The idea of Vietnamese Americans as particularly resilient has been revived recently in relation to coverage of Vietnamese Americans living in New Orleans who were devastated by Hurricane Katrina but rebuilt quickly afterward and continue to persist amidst challenging circumstances (Leong, Airriess, Li, Chen, & Keith, 2007). However, that research gives little guidance in explaining how this resilience is developed, though studies outside of higher education have suggested the important role of religion, cultural orientation, family cohesiveness, and historical memory in developing resilience (Lam,

2008; Leong et al., 2007; Xin et al., 2013), variables not often studied in higher education. These studies highlighted the idea of a collective resilience that relies heavily on community identity and shared experiences rather than individual characteristics (Leong et al., 2007; Xin et al., 2013).   This fits with Tummala-Narra's (2007) call for resilience studies of ethnic minority populations, and suggests the importance of cultural and community factors as potential sources of resilience for these groups.

Limitations

Though this study adds significant contributions to the literature, like any research it has some limitations. First, quantitative research is limited in its ability to capture the dynamic process of racial identity (Ponterotto & Park-Taylor, 2007) given that it is inherently static.   However, the measures of CRE employed in this study have been demonstrated as sufficiently complex in their ability to assess correlates of racial identity which have been shown to be a meaningful and useful way to assess racial identity in quantitative research (Dugan et al. 2012). Additionally, this quantitative study was well-suited for testing across large and diverse samples, and thus the results shed light on differences between groups and conversely has greater generalizability across populations.

Another limitation of this study was the wording of the CRE scales which refers to one's racial group, which may be confusing (or at least conflicting) for Asian American students who may have a stronger affiliation to their ethnic group. Previous research has shown that ethnic and racial affiliations are often confounded for Asian American students, or at different times dependent on the context (Lee, 1996; Lien,

Conway, & Wong, 2003; Museus et al., 2013; Suyemoto, 2003; Wong, 2013). The CRE

questions were worded to refer to "your BROAD racial group membership" rather than

ethnicity (though participants were asked to list their ethnicity in a demographic

question). Thus, it is possible that responses to the CRE subscales may occasionally have

reflected the social identity related to ethnicity instead of race for some participants.

However, previous research has demonstrated that race may be the dominant frame of

reference in relation to leadership and LSE rather than ethnicity (Balón, 2004; Kwon,

2009), so the CRE framework is still appropriate for the present study.

A limitation of this study was the inability to analyze other ethnic groups besides

Chinese, Indian/Pakistani, Korean, Filipino, and Vietnamese American due to the sample

size required for the number of parameters in the SEM model. This was particularly

disappointing in the case of Pacific Islanders, a group for which there is a great need for

research as well as comparison with other Asian American populations. There is

currently great debate in higher education about the appropriateness of including Pacific

Islanders as part of a larger, umbrella Asian American and Pacific Islander group, as this

aggregation has been criticized for obscuring real differences between these groups

related to both demographic variables and campus experiences which may impact

educational outcomes (CARE, 2008, 2011; Museus & Chang, 2009; Riley, 2013).

However, for the concept of LSE, it is not clear if there are differences between Asian

Americans and Pacific Islanders, which is an area for future research.

The analytic technique of SEM also posed some limitations in this dissertation

study given the need for greater computing power in order to conduct some of the

analyses originally intended. Running multi-group analyses with more than two groups (e.g., ethnic groups in this study) is a complex procedure requiring greater memory capacity than a standard desktop, particularly given the number of variables and relatively large sample size. Thus, I was not able to test the results of the ethnic groups for statistical significance directly with each other. However, results from the individual testing of ethnic groups reflected differences in their models, and shed light on the need to continue to disaggregate Asian American data by ethnic group.

Future Research

As with most research, results from this study lead to more questions for future research. The first area for future research may be the continued investigation of the CRE subscales given the results from the CFA analyses that showed the commonly-used 4-item, 4-subscale version of CRE was not a good fit for Asian Americans when using SEM. Thus, future research should investigate the most appropriate version of the CRE subscales for Asian Americans, both in terms of number and content of categories. While an omnibus CRE was not appropriate, are there other aspects of identifying with one's racial group that might be relevant for Asian Americans that are not currently represented in the existing CRE model? Additionally, Membership Affiliation CRE is a construct which should be investigated more closely given that it was so highly correlated with other CRE scales and has been questioned for use with Asian Americans in other research as well given the tensions between ethnic and racial identification (Contrada et al., 2001; Dugan et al., 2012; Kodama & Dugan, 2013).   Future research should also test the CRE scales with diverse populations, as it is not clear whether the CFA results demonstrated

here represent a measurement issue unique to Asian Americans or if results would be the same for other populations as well.

Another future line of inquiry related to the CRE results would be a closer examination of the negative influence of Identity Salience CRE found in not just this, but other studies as well (Dugan et al., 2012; Kodama & Dugan, 2013). These results contradict other research that shows benefits for students who have a strong affiliation with their racial identity, though these studies were all qualitative in nature (Maramba & Velasquez, 2010; Poon, 2013). It may be that the key is to compare students with lower levels versus higher levels of Identity Salience CRE in conditioning the data before running quantitative analyses to examine potential differential influences on these groups. Another option would be to test levels of Identity Salience as a moderator in structural models such as the one tested in this study.

Results from this study demonstrated little to no meaningful significance of the relationship between Non-Discriminatory Climate on Resilience (based on the ethnic group examined). However, this does not mean that Non-Discriminatory Climate is not important there may be an interaction or correlation effect with Resilience and the CRE variables that caused this result in this particular structural model. There are also numerous ways to assess campus climate related to racism and discrimination (Milem, Clayton-Pedersen, Hurtado, & Allen, 1998) and thus it may be that alternative influences of campus climate should also be examined rather than assuming no influence based on the results from this study.

For example, results from this study reflected national norms of a diverse set of students. However, the analyses were not able to assess individual variations by campus or specific institutional factors which may have influenced the findings. For example, future research may want to consider the effects of the compositional diversity of campuses and/or surrounding community (e.g., percentage of Asian American students), which may have an interaction with Non-Discriminatory Climate or development of CRE variables. For example, the limited influence of Non-Discriminatory Climate may be a result of students finding support from campus or community Asian American groups, thus mediating a possible negative campus environment. Strong Asian American communities on- or off-campus may also help to develop various aspects of CRE as well, or perhaps mediate their influences on the outcome variables of Resilience and/or LSE.

The influence of Resilience (large effect for all groups except Filipino Americans) that emerged from this study also warrants further investigation into this psychological construct, both in terms of how it can be developed and what other college outcomes it may influence. Bandura's (1997) theory would suggest that resilience may have a relationship with other types of self-efficacy as well (e.g., academic, career) in addition to leadership. In particular, there is a need for better defined studies of what resilience means and how it is measured in both qualitative and quantitative research, given the inconsistency with which this term is used in the literature. Future research should also look at predictors or influences on the development of resilience for diverse populations, given the differential findings for the ethnic groups in this study. For example, the influence of CRE variables on Resilience found in this study lends support to previous

research suggesting the importance of cultural factors in the development of resilience for populations of color but have yet to be investigated thoroughly (Clauss-Ehlers, 2004, 2008; Tummala-Narra, 2007). It will be particularly important to consider specific influences by ethnic group, given the different influences found in this study, as well as the range of variance explained for Resilience (a low of 7% for Korean Americans to a high of 20% for Vietnamese Americans).

Finally, as with most Asian American research, future studies should continue to disaggregate data by ethnic group. Differential findings from this study suggest that results from other Asian American research may be misleading or inappropriate when applied to specific ethnic groups within the larger pan-Asian category. For example, the variation in the significance and strength of paths between ethnic groups in this study merit further exploration that was not possible given the computational limits. However, a challenge for quantitative researchers is to find ways to do these types of complex analyses with smaller populations given sample size requirements. For example, the present study was a large, national dataset yet still did not have enough Pacific Islander representation to allow disaggregated results given the complexity of the SEM model.

Implications for Research

Results from this study have important implications for how future research should be conducted. First is the importance of testing and retesting psychometric scales in light of new statistical procedures as well as with diverse populations. The use of CFA with the CRE scales revealed ways in which these scales may not hold together for Asian Americans as previously determined through alpha reliability analyses. Given other

studies which have found anomalies with specific CRE subscales but did not employ

CFA (Lam, 2008; Monzon, 2013; Tawa, Suyemoto, & Roemer, 2012), the need to

reexamine these scales seems particularly important for use in future research, as well as

to reassess findings from studies using these scales. Additionally, a closer examination

of the five ethnic models also showed differences in factor loadings on several of the

scales (see Appendix C), suggesting that even more specific psychometric testing may be

useful when using these scales with specific Asian American ethnic groups.

The need to more rigorously test commonly used psychological scales is

particularly important when considering those scales related to racial and/or ethnic

identity for use with Asian American populations given that some of them may have been

developed without the experiences of Asian Americans in mind (Iwamoto, Kendaichi, &

Miller, 2013). For example, a recent CFA testing of the People of Color Racial Identity

Attitudes Scale (PRIAS; Helms, 1995) with an Asian American sample resulted in a

considerably revised version of the scale suggested for use with Asian American

populations (Iwamoto et al., 2013).

A second implication for research is the reminder of the importance of

disaggregating quantitative datasets by gender and ethnicity—even within a single racial

group such as Asian Americans. Though researchers have called for disaggregation of

Asian American college student data again and again, few have followed through in

practice. The findings for gender invariance were only trivial in effect, but the

statistically significant results (as well as extant literature in leadership) suggest a

continued exploration of gender differences in leadership development as well.

Results from the disaggregated ethnic data showed five distinct profiles for Chinese, Indian/Pakistani, Korean, Filipino, and Vietnamese Americans on the relationships examined in this structural model, suggesting that one overall model may not be appropriate for understanding Asian American students' development. These results raise questions about what we think we know about Asian Americans based on existing research with aggregated datasets, which makes up the majority of the literature. How are we generalizing results from studies on aggregated Asian American datasets to specific populations for which those findings may not be true (or at least misleading)?

However, given that most campuses do not disaggregate Asian American data, practitioners and researchers alike should encourage their campuses and state higher education boards to move toward disaggregating data collection and reporting by Asian ethnic group (CARE, 2013). This call for disaggregated data should also be extended to national survey datasets which are accessed and used by a broad research audience.

Implications For Practice

Results from this study also have important implications for practice for higher education professionals in a wide range of campus departments including leadership development, student activities, and multicultural affairs. However, given the breadth of findings from this study, these implications are relevant to any college educator or administrator who works with Asian American students. Thus, practical implications from this study will be grouped into three primary categories: (a) linking resilience and LSE; (b) integrating identity and leadership development; and (c) working with a diverse Asian American student population.

Linking Resilience and LSE

The relationship between Resilience and LSE was substantial in this study. Not only was Resilience shown to have a large, positive influence on LSE directly, but it also served as a mediator between the CRE variables and LSE, linking those variables indirectly to LSE as well. Bandura (1997) consistently referred to resilience, both implicitly and explicitly, as a key component as well as outcome of self-efficacy. This study highlighted that the development of resilience is key for Asian American students, particularly given other research suggesting its importance for not just LSE but with positive psychological coping (Brown, 2008, 2011; Machida & Schaubroeck, 2011; Tugade, Frederickson, & Feldman-Barrett, 2004).

Thus, educators should consider how resilience building can be integrated into leadership development efforts. The present study focused on the contributions of racial identity to resilience, but other research has stressed the importance of appropriate developmental experiences in developing resilient LSE as well (Machida & Schaubroeck, 2011). For example, Machida and Schaubroeck (2011) highlighted the importance of providing learning challenges appropriate to leaders' ability levels so that they will not be overwhelmed by a task far beyond their capabilities, which may demoralize leaders' resilience for learning and in turn lower LSE. Additionally, Machida and Schaubroeck (2011) suggested that to develop this resilient LSE, the success of leadership development activities should be determined by focusing on the process (e.g., understanding the most appropriate problem-solving strategies) rather than the outcome (e.g., a specific goal). Another important component of the development of resilient LSE

is the need for supportive processing by mentors (and by extension, educators) of these leadership challenges or failures (Machida & Schaubroeck, 2011). They emphasized that "learning orientation and an incremental approach to abilities are positively related to resilient learning efficacy of leaders and the occurrence of self-correcting adjustment in leader efficacy" (Machida & Schaubroeck, 2011, p. 466). These suggestions of focusing on appropriate challenge and support fit with recent research suggesting the importance of developmental sequencing in leadership education (Dugan, Bohle, Woelker, & Cooney, 2014; Dugan, Kodama, Correia, & Associates, 2013). In other words, matching the level of activities and curriculum to the developmental levels of the audience will result in the most optimum leadership outcomes, rather than delivering the same content to all audiences across the board. Thus, developmental sequencing may not just be beneficial to developing leadership capacity, but resilience and LSE as well.

Integrating Identity and Leadership Development

Results from this study highlight the need to attend to racial identity in both student and leadership development as suggested by other scholars (Balón & Shek, 2013; Chin & Sanchez-Hucles, 2007; Dugan et al., 2008; Kodama et al., 2002; Lo, 2011; Poon, 2013). The significant relationship between aspects of CRE and Resilience highlights the important role that CRE can play in Asian American students' development.

A first step in linking racial identity and leadership development is to consider how Asian Americans are portrayed (or not) in campus leadership programs. Practitioners should make sure that Asian Americans are represented in the content of leadership programs, such as highlighting Asian American leaders and activists or using

examples of Asian American social movements and leadership accomplishments in the curriculum. Speakers for leadership workshops or conferences should include Asian Americans among them, and not just for conferences that are targeted to students of color necessarily. Asian American leaders are often invisible in American society, and thus including them as examples of exemplary leadership (just as is often done with Martin Luther King Jr., or Cesar Chavez) may help Asian American students to feel a stronger sense of pride in their racial group (Private CRE). This is particularly true given that previous research has demonstrated that this lack of Asian American leadership representation has negatively influenced Asian American students' perceptions of their own abilities as leaders (Balòn, 2004; Kwon, 2009; Lo, 2011). Learning this alongside of non-Asian American student peers may also help develop a stronger Public CRE, as Asian Americans see others learning about the positive examples from and accomplishments of their racial group in mainstream society as well. As results from this study show, this increased Private and Public CRE can then contribute to the development of resilience to overcome challenges as well as self-efficacy for leadership.

Thus, given the importance of Private and Public CRE to Resilience, educators should find ways to bolster those aspects of CRE for Asian American students. Though predictors of CRE were not tested in this study, other research has suggested that participation in ethnic studies courses, identity-based student organizations, and Asian American-targeted campus and community events may contribute to identity development similar to that represented in Private and Public CRE (Inkelas, 2004; Kwon, 2009; Maramba & Velasquez, 2010; Rodriguez, 2003).

Though Identity-Based Experiences did not demonstrate a significant influence on Resilience or LSE directly in this study, Asian American cultural centers, Asian American studies programs, and Asian American organizations have been identified as places where Asian American students from a variety of backgrounds have been able to develop a stronger sense of identity, competence, and also LSE (Inkelas, 2004; Kwon, 2009; Liang, Lee, & Ting, 2002; Lo, 2011; Poon, 2013; Tran & Chang, 2013). However, they are few and far between. In other words, campuses should assess whether they have these types of resources and safe spaces for Asian American students in which to attend to racial identity and campus climate issues.

However, leadership educators should not leave the responsibility of attending to racial identity issues solely to diversity or multicultural departments. Given the importance of racial identity to the development of leadership, educators should also provide opportunities within leadership programs to help students make the link between racial (and ethnic) identity and leadership development. Discussions could be facilitated which help Asian American students connect the development of CRE and resilience by encouraging them to share how their pride in their ethnic and racial affiliation may help them become more resilient. It may also be important to give explicit attention to handling racial stereotypes and microaggressions or difficult situations related to students' racial affiliation to develop coping skills such as resilience. These discussions also reflect a type of sociocultural conversations shown to have a positive impact on both LSE and leadership capacity (Dugan & Komives, 2010; Dugan et al., 2008; Dugan et al., 2012, Kodama & Dugan, 2013). It is important for these conversations to happen in a

variety of social contexts, as mono-racial environments may provide a safe space for support to develop Private CRE, while multiracial environments may help students increase Public CRE by allowing Asian Americans to see non-Asian Americans develop an understanding and more positive view of their racial group. In turn, higher levels of Private and Public CRE can then help to develop higher levels of resilience.

These types of program and curricular development are an opportunity for leadership educators to partner with staff from multicultural centers or other diversity-targeted departments to provide holistic development for students (and a professional development opportunity for staff as well). A similar partnership could be developed with Asian American racial and ethnic student organizations as well given that identity-based organizations have been shown to increase the positive sense of self as well as salience of racial and ethnic identities (Inkelas, 2004; Kwon, 2009; Lo, 2011; Poon, 2013; Renn & Ozaki, 2010).

However, as students develop a stronger racial affiliation, educators need to be aware of the ways in which a race-centric viewpoint may impact students' ability to be resilient given the negative influence of Identity Salience found in this study. These students may need some guidance in how to channel their (perhaps newfound) sense of racial cohesion, pride, and commitment to their racial group in positive ways and to help them develop perspectives that can still acknowledge the external forces of racism while also helping them develop skills to allow them to be resilient. Educators can help students "connect the dots" between their experiences in identity-based orgs and the development of resilient coping skills, as well as how that prepares them for leadership opportunities in

the future. It may be particularly important to address leadership stereotypes and the conflicting opinions Asian American students have expressed between identity-based and mainstream leadership development experiences (Arminio et al., 2001; Kwon, 2009; Lo, 2011; Museus, 2008).

Examples of programs that connect identity and leadership development for Asian American students may be curricular, co-curricular, partnerships between academic and student affairs, or student run, which already exist on select campuses (Balón & Shek, 2013; Liang et al., 2002). Key experiences included in these programs are: (a) exploration of different models of leadership; (b) explicit attention to racial and ethnic identity; (c) the teaching of Asian American history and culture; (d) discussions of racism and leadership for social justice; (e) learning about Asian American leaders; and (f) engagement with local Asian American communities (Balón & Shek, 2014; Liang et al., 2002). These partnerships could be beneficial in helping students to make an explicit connection between identity development and leadership development as well as assist them in better negotiating different campus contexts.

Working With a Diverse Asian American Population

Another implication for practice is the importance of understanding the diversity of the Asian American population and the avoidance of making assumptions about similarities between Asian ethnic groups. This study raises questions about the possible differences in LSE and identity development that have been hypothesized but rarely empirically tested. Thus, educators should be mindful of the ways in which Asian Americans are grouped together given potential differences in both leadership and

identity development for specific ethnic groups. It is also important for practitioners to know what ethnic groups make up the Asian American population on their campus, as it differs greatly by geographical location (CARE, 2011).

Given that most campuses outside of California and Hawaii do not disaggregate Asian American data, attending to the diversity within the Asian American student population is often difficult to operationalize in practice if it is not evident what the composition of the population actually is. Thus, practitioners and researchers alike should encourage their campuses and state higher education boards to move toward disaggregating data collection and reporting by Asian ethnic group as the state of California most recently did (CARE, 2013)

However, even with a lack of disaggregated data there are some best practices that educators can undertake to address this Asian American diversity. This is important not only for student affairs generalists but especially for multicultural affairs practitioners (whether in a cross-cultural or identity-based department) who are often assumed to be the experts on all things race-related. In particular, practitioners should be mindful to attend to both ethnic and racial identities for Asian American students given the nuanced differences found by ethnic group in this study on the influence of CRE variables.

The first step for educators is to be aware of the ethnic background of Asian Americans who are represented in campus programs and practices. Are East, South, and Southeast Asians all represented in your students, staff, and content of your programs? Does the ethnic composition of staff and student peer leaders reflect that of the Asian American student body? What activities and cultures are featured in Asian American

heritage week or month activities? When hosting speakers or highlighting examples of

Asian American leaders, what groups do they represent? Typically campuses equate

"Asian American" with East Asian groups such as Chinese, Japanese, and Korean, and

thus South and Southeast Asians may be overlooked in campus diversity efforts.

However, given the differential importance of the CRE variables to specific ethnic groups

in this study, as well as the literature showing different degrees of ethnic and racial

identification, attention should be paid to the unique cultures, experiences, and influences

for Asian American ethnic groups. For example, raising awareness of Asian American

historical struggles have often been used to promote ethnic/racial pride, demonstrate

resilience, or inspire leadership (Balón & Shek, 2013; Liang, Lee, & Ting, 2002). The

typical pan-Asian lens tends to focus on experiences like the Chinese railroad workers or

Japanese internment camps, but closer attention to ethnic diversity may instead include

(or in addition to) Filipino farm workers, Indian citizenship issues, or Vietnamese

refugees.

An opportunity to learn more about the differences between Asian American

ethnic groups and their leadership development is to work with identity-based

organizations, both pan-Asian and ethnic-specific, particularly given their role in the

development of ethnic and racial identity. These organizations can also provide feedback

to campus committees in terms of suggested speakers and presentation topics that may be

particularly interesting or relevant to their ethnic group, whether for Asian American

events specifically or leadership development experiences. Given the different paths of

influence found in this study from the CRE variables in particular, these organizations

may help to shed light on the identity development and leadership development processes of specific groups. Additionally, collaborations between Asian ethnic organizations may help to facilitate an understanding of both unique and shared experiences as Asian Americans across specific groups, which may contribute to the development of CRE as well. However, because of the lack of research literature to inform specific findings, there will not be detailed implications for all groups examined in this study.

Indian/Pakistani organizations have often tended to operate differently and separately from other Asian American campus organizations, though there is little research addressing influences on their leadership development (Gupta, 1998). Thus, opportunities should be provided which allow Indian/Pakistani students to learn more about their cultural heritage as well as share it with others. However, in addition to this focus on traditional cultural values and heritage, Navsaria (2008) suggested a bicultural approach to positive adjustment, as she found that both traditional Indian values as well as positive attitudes about the majority culture had positive influences on resilience. Thus, educators should encourage Indian American student organizations to partner with non-Indian organizations or campus-wide activities to develop a connection to the broader campus community to the degree that this augments the experiences of these students and avoids assimilative practices. Additionally, specific attention should be paid to racial discrimination that Indian/Pakistani students experience on campus, given evidence showing an post-9/11 increase and high levels of race-related stress (Iwamoto et al., 2013; Tummala-Narra et al., 2011).

For Filipino student organizations, it may be important to understand how social comparisons play into how they see themselves and their development of resilient coping skills given the strong influence of Public CRE. Dialogue around the similarities and differences between racial and ethnic identity may also help Filipino students to resolve some of the dissonance found in other studies between ethnic pride and racial consciousness (Nadal, 2004, 2011; Rodriguez, 2003; Wong, 2010), and perhaps address the negative influence of identity-based experiences found in this study. Given the marginalization that Filipinos often feel within a larger Asian American umbrella, collaborations with other Asian American ethnic organizations may help them to develop a stronger racial identity and sense of shared experiences, thus increasing both Private and Public CRE.

Conclusion and Significance

This study attempted to take the existing research on LSE development one step further by examining possible influences related to identification as Asian Americans, with focus primarily on the impact of psychological constructs. Results from this study are one of the first to empirically test this relationship in a quantitative design using data disaggregated by gender and also ethnic group.

Results indicated that Resilience was a key influence on LSE for Asian American students, more than any other variable tested in this model. Thus, resilient skills, behaviors, and outlooks are important to consider in developing leadership in addition to the tangible college experiences such as community service, mentoring, and sociocultural conversations found in previous research (Dugan & Komives, 2010; Dugan et al., 2008;

Kodama & Dugan, 2013). Additionally, the strong relationship of Resilience to LSE underscores the contributions of resilience to college outcomes other than academic achievement or persistence.

Another important contribution of this research is related to the uniqueness of the sample used for this study: a national, geographically diverse dataset of Asian American students from over 80 institutions surveyed on leadership and other college outcomes. Nationally, the majority of Asian American college students are in California, and much of the extant research on Asian Americans has been conducted with California-based samples. However, the dataset used for this study was not weighted to any particular region and thus contributed to painting a national picture of Asian Americans, which may be different than existing research using single-campus or regionally-based samples. Thus, this study's results may be more representative of the diverse population of Asian American students across the United States, not just ethnically but geographically as well. Additionally, the large sample size allowed for testing of the legitimacy of existing and popular scales for use with Asian Americans together and disaggregated by ethnic group, revealing more detailed findings and implications for future research.

Findings from this study add to the research showing the critical role of racial identity (as measured by CRE) on student outcomes such as leadership development. Perhaps more importantly, this influence was found for Asian Americans, a group for which scholars and practitioners often overlook the impact of race on college outcomes and are often portrayed as lacking in leadership development. Additionally, results from this study demonstrated that the impact of race may function differently for specific

Asian ethnic groups in their resilience and LSE development. The ethnic differences found in this study are a good reminder of the diversity of the Asian American population and the importance of understanding the unique cultural influences and college experiences of specific ethnic groups.

The influence of CRE variables found in this study support the conceptual framework of Kodama et al. (2002) highlighting the centrality of racial identity to student development, informed with an empirically tested structural model. Racial identity development for Asian Americans contributes to the development of resilience, which in turn will contribute to LSE, an important predictor of leadership development. Results from this study also add a nuanced layer to Bandura's (1997) suggestion of the importance of affective states in influencing self-efficacy, given the ways which racial identity can impact self-construals. The combination of these two frameworks was thus able to more fully capture the LSE development processes of Asian American students in this study, important for a population for which there is limited empirical research.

However, in addition to LSE found in this study, resilience has also shown to be an influence on other positive psychological outcomes as well (Brown, 2008; Clauss-Ehlers, 2004, 2008; Lee, 2005; Poon, 2013). This resilience may then be doubly important for Asian American students to develop, given that they not only have reported low levels of LSE, but also psychological well-being (Bowman, 2010; Cress & Ikeda, 2003; Park & Millora, 2010). Thus, the relationship between racial identity, resilience, and LSE is an integrated approach to leadership development for Asian Americans which

may not only best prepare them for leadership but also contribute to positive functioning

and more holistic student development throughout their college years.

APPENDIX A

VARIABLE CODING, MEANS, AND COMPOSITE SCALES FOR OVERALL

ASIAN AMERICAN SAMPLE

Coding, means, and standard deviations for all variables for overall sample

	M	SD	Coding
Identity-Based Experiences: Ethnic, Cultural, or Area Studies Major	.85	.81	
Identity Based student groups			1=yes; 2=no
Multi-Cultural Fraternities and Sororities			
Racial group membership of mentor			1=White; 2=Middle Eastern; 3=African American/Black; 4=Native American; 5=Asian American/Pacific Islander; 6=Latino/Hispanic; 7=Multiracial; 8=Unsure; 9-Race/ethnicity not indicated above
Collective racial esteem			
Private CRE	5.52	1.15	4-item composite measure;
Public CRE	5.20	1.04	1=strongly disagree; 2=disagree; 3=disagree
ID salience	4.51	1.37	somewhat; 4=neutral; 5=agree somewhat; 6=agree; 7=strongly agree
Non-Discriminatory Climate	3.66	.93	5-item composite measure; 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
Resiliency	3.81	.65	10-item composite measure: 1=not at all true; 2=rarely true; 3=sometimes true; 4=often true; 5=true nearly all the time
Outcome measure			
Leadership self-efficacy	2.96	.67	4-item composite measure; 1=not at all confident; 2=somewhat confident; 3=confident; 4=very confident

Reliabilities and factor loadings for composite measures for overall sample

	α	Factor Loading
Leadership self-efficacy	.87	
How confident are you that you can be successful at the following?		
Leading others		.81
Organize group tasks to accomplish goal		.89
Taking initiative to improve something		.80
Working with team on group project		.67
Private CRE	.88	
I'm glad to be a member of my racial group		.88
I feel good about the racial group I belong to		.90
Public CRE	.73	
My racial group is considered good by others		.80
In general, others respect my race		.72
Identity salience	.87	
The racial group I belong to is an important reflection of who I am		.89
Belonging to my racial group is an important part of my self image		.86
Resilience	.91	
I am able to adapt when changes occur		.70
I can deal with whatever comes my way		.77
I try to see the humorous side of things when I am faced with problems		.55
Having to cope with stress can make me stronger		.69
I tend to bounce back after illness, injury, or other hardships		.70
I believe I can achieve my goals, even if there are obstacles		.73
Under pressure, I stay focused and think clearly		.72
I am not easily discouraged by failure		.69
I think of myself as a strong person when dealing with life's challenges and difficulties		.78
I am able to handle unpleasant or painful feelings like sadness, fear, and anger		.71
Non-Discriminatory Campus Climate	.87	
I have observed discriminatory words, behaviors, or gestures directed at people like me		.74
I have encountered discrimination while attending this institution		.89
I feel there is a general atmosphere of prejudice among students		.76
Faculty have discriminated against people like me		.61
Staff members have discriminated against people like me		.62

APPENDIX B

VARIABLE CODING, MEANS, AND COMPOSITE SCALES BY GENDER

Coding, means, and standard deviations for all variables by gender

	Men		Women		Coding
	M	*SD*	*M*	*SD*	
Identity-Based experiences	.75	.80	.81	.79	Summed total of 4 items with 0=no; 1=yes for each item; range from 0-4
Non-Discriminatory Climate	3.61	.96	3.69	.91	5-item composite measure: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
Collective racial esteem					
Private CRE	5.50	1.22	5.63	1.15	2-item composite measure; 1=strongly
Public CRE	5.15	1.13	5.21	1.12	disagree; 2=disagree; 3=disagree
ID salience	4.82	1.55	5.08	.86	somewhat; 4=neutral; 5=agree somewhat; 6=agree; 7=strongly agree
Intermediate outcome					
Resilience	3.85	.67	3.78	.63	10-item composite measure: 1=not at all true; 2=rarely true; 3=sometimes true; 4=often true; 5=true nearly all the time
Outcome measure					
Leadership Self-Efficacy	2.98	.66	2.94	.67	4-item composite measure; 1=not at all confident; 2=somewhat confident; 3=confident; 4=very confident

Reliabilities and factor loadings for composite measures by gender

	Men		Women	
	Factor Loading	α	Factor Loading	α
Resilience		.91		.90
I am able to adapt when changes occur	.71		.69	
I can deal with whatever comes my way	.78		.76	
I try to see the humorous side of things when I am faced with problems	.58		.54	
Having to cope with stress can make me stronger	.71		.68	
I tend to bounce back after illness, injury, or other hardships	.73		.68	
I believe I can achieve my goals, even if there are obstacles.	.74		.72	
Under pressure, I stay focused and think clearly	.73		.70	
I am not easily discouraged by failure	.69		.68	
I think of myself as a strong person when dealing with life's challenges and difficulties	.79		.78	
I am able to handle unpleasant or painful feelings like sadness, fear, and anger	.69		.73	
Non-Discriminatory Climate		.87		.87
I have observed discriminatory words, behaviors, or gestures directed at people like me	.75		.73	
I have encountered discrimination while attending this institution	.89		.89	
I feel there is a general atmosphere of prejudice among students	.76		.76	
Faculty have discriminated against people like me	.60		.62	
Staff members have discriminated against people like me	.62		.62	
Private CRE		.89		.88
I'm glad to be a member of my racial group	.89		.88	
I feel good about the racial group I belong to	.91		.89	
Public CRE		.70		.75
My racial group is considered good by others	.77		.82	
In general, others respect my race	.69		.74	
Identity salience		.88		.86
The racial group I belong to is an important reflection of who I am	.91		.88	
Belonging to my racial group is an important part of my self image	.87		.86	
Leadership self-efficacy		.86		.87
How confident are you that you can be successful at the following?				
Leading others	.80		.83	
Organize group tasks to accomplish goal	.88		.89	
Taking initiative to improve something	.78		.82	
Working with team on group project	.69		.66	

APPENDIX C

VARIABLE CODING, MEANS, AND COMPOSITE SCALES BY ETHNIC

GROUP

Coding, means, and standard deviations for all variables by ethnic group

	Chinese		Indian/Pakistani		Korean		Filipino		Vietnamese		Coding
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	
Identity-Based experiences	.81	.81	.74	.76	.79	.80	.77	.80	.70	.75	Summed total of 4 items with 0=no; 1=yes for each item; range from 0-4
Non-Discriminatory Climate	3.66	.93	3.74	.94	3.46	.88	3.51	.95	3.76	.96	5-item composite measure: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
Collective racial esteem											
Private CRE	5.43	1.19	5.62	1.19	5.38	1.28	5.83	1.05	5.61	1.15	2-item composite measure; 1=strongly disagree; 2=disagree; 3=disagree somewhat; 4=neutral; 5=agree somewhat; 6=agree; 7=strongly agree
Public CRE	5.14	1.07	5.10	1.19	4.98	1.18	5.50	1.05	5.18	1.12	
ID salience	4.85	1.49	4.96	1.56	4.75	1.66	5.16	1.43	5.23	1.39	
Intermediate outcome											
Resilience	3.77	.65	3.89	.67	3.78	.66	3.92	.58	3.78	.65	10-item composite measure: 1=not at all true; 2=rarely true; 3=sometimes true; 4=often true; 5=true nearly all the time
Outcome measure											
Leadership Self-Efficacy	2.88	.63	3.12	.65	2.86	.75	3.08	.63	2.88	.68	4-item composite measure; 1=not at all confident; 2=somewhat confident; 3=confident; 4=very confident

Reliabilities and factor loadings for composite measures by ethnic group

	Chinese		Indian/Pakistani		Korean		Filipino		Vietnamese	
	Factor Loading	α	Factor Loading	α	Factor Loading	α	Factor Loading	α	Factor Loading	α
Resilience		.91		.91		.90		.88		.90
I am able to adapt when changes occur	.73		.73		.62		.64		.74	
I can deal with whatever comes my way	.78		.75		.78		.75		.82	
I try to see the humorous side of things when I am faced with problems	.62		.51		.54		.45		.49	
Having to cope with stress can make me stronger	.70		.69		.70		.69		.60	
I tend to bounce back after illness, injury, or other hardships	.70		.73		.72		.64		.70	
I believe I can achieve my goals, even if there are obstacles.	.70		.80		.69		.69		.74	
Under pressure, I stay focused and think clearly	.70		.73		.71		.63		.70	
I am not easily discouraged by failure	.73		.72		.69		.63		.70	
I think of myself as a strong person when dealing with life's challenges and difficulties	.79		.82		.77		.73		.80	
I am able to handle unpleasant or painful feelings like sadness, fear, and anger	.74		.76		.69		.61		.73	
Non-Discriminatory Climate		.87		.87		.83		.85		.89
I have observed discriminatory words, behaviors, or gestures directed at people like me	.73		.76		.76		.61		.79	
I have encountered discrimination while attending this institution	.88		.92		.89		.77		.94	
I feel there is a general atmosphere of prejudice among students	.78		.72		.67		.88		.80	
Faculty have discriminated against people like me	.63		.60		.48		.65		.65	
Staff members have discriminated against people like me	.63		.62		.55		.64		.63	
Private CRE		.88		.90		.90		.85		.85
I'm glad to be a member of my racial group	.88		.92		.87		.84		.84	
I feel good about the racial group I belong to	.90		.90		.94		.88		.88	
Public CRE		.71		.75		.75		.72		.78

My racial group is considered good by others	.86	.77	.75	.77	.82
In general, others respect my race	.64	.77	.79	.72	.78
Identity salience	.88	.88	.87	.84	.87
The racial group I belong to is an important reflection of who I am	.91	.86	.88	.95	.85
Belonging to my racial group is an important part of my self image	.86	.91	.88	.78	.91
Leadership efficacy*	.84	.87	.90	.85	.87
How confident are you that you can be successful at the following?					
Leading others	.79	.82	.84	.81	.80
Organize group tasks to accomplish goal	.87	.87	.90	.87	.90
Taking initiative to improve something	.76	.82	.85	.79	.79
Working with team on group project	.62	.67	.73	.63	.66

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VITA

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