DO ALL ASIAN AMERICANS FEEL ALIKE? EXPLORING ASIAN AMERICAN COLLEGE STUDENTS' SENSE OF BELONGING ON CAMPUSES

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A Dissertation

Submitted to the Graduate College of Bowling Green
State University in partial fulfillment of
the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2018

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ABSTRACT

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Sense of belonging on campus has been identified as one of the most important factors that affect college students' persistence, retention, and graduation. The purpose of this quantitative research was to explore the within-group heterogeneity of sense of belonging among Asian American undergraduate students on campus. Specifically, I explored how institutional context, campus involvement, and students' experiences with diversity and campus climate related to sense of belonging. I also examined if there were differences in sense of belonging across Asian American student ethnic groups and if there were differences in the variables that significantly related to each ethnic group's sense of belonging. The theoretical framework used to ground this study was Astin's (1993) "Input-Environment-Outcome" (I-E-O) college impact model. A critical quantitative paradigm was used. I analyzed data from the 2015 Multi-Institutional Study of Leadership (MSL) which included responses from 6,609 Asian American college students from over 90 higher education institutions.

This study found that sense of belonging among Asian American college students varied by ethnicity. Korean American students' sense of belonging was significantly lower than the overall sense of belonging level of All Asian Americans. Asian Indian students, on the other hand, reported a higher level of sense of belonging on campus, relative to the overall sense of belonging level in the sample. Factors significantly related to sense of belonging of students also varied by ethnicity. For example, number of types of academic-based experiences engaged was positively related to multi-racial Asian Americans' sense of belonging, but negatively related to that of Filipino American students.

Future research is needed to assess the impact of the quality of campus involvement on sense of belonging and to understand why same factors related to each ethnic groups' sense of belonging to various degrees. As campus educators, including faculty, staff, and other personnel, work to connect Asian American college students to the campus community, they also need to move away from a color-blind approach toward a culturally responsive approach that acknowledges and celebrates students' diversity in terms of race, ethnicity, and country of origin. The finding that factors related to sense of belonging varies by ethnicity indicates that a one-size-fits-all approach to improving their sense of belonging on campus is inadequate and inappropriate. Programs and resources should be tailored to the needs of different segments of the Asian American population.

I dedicate this dissertation to those who believed in me and supported me in this process.

ACKNOWLEDGMENTS

First, I would like to thank my phenomenal dissertation Co-Chairs Dr. Dafina-Lazarus (D-L) Stewart and Dr. Hyun Kyoung Ro. D-L, you have not only been a chair and advisor to me, but also a mentor and inspiration. You have a great mind and a great heart. Your passion for research, teaching, and social equity and justice inspire me every day. I can't begin to express my gratitude for your care, guidance, and support. Thank you for believing in me when I lack confidence in my study and research, for motivating me to keep forward when I need it, and for reminding me that I am better than who I think I am! Hyunny, my experience at BGSU would not have been the same without you! Your personal and professional achievement has inspired me to believe in myself that I can do better. I will always remember our conversation in Grounds for Thought, and I sincerely appreciate you taking the time and effort to guide me to a brighter future even after I finished the dissertation!!! To my other committee members Dr. Christina Lunceford and Dr. Steve Boone: I am very grateful for your valuable feedback and for encouraging me to think more deeply about my research and its implication for work!

To Dr. Manfred Te Grotenhuis in the Netherlands: Thank you for teaching me how to do weighted effect coding step by step in SPSS and for sharing your website and publications with me! I have learned so much from you! My dissertation would not be possible without you. I really did not expect you would go this far to help me who you have never met before and probably will not meet in the future. You are a great teacher and researcher, and I am honored to be one of your students.

To Dr. Vrooman: Thank you for having been lifting me up in the past four years! You are a great mentor and supervisor to me! You provided me with opportunities, time, resources, and guidance to help me grow personally and professionally. I am who I am today because of you. Your insights about different types of education, efforts to prepare equity-minded teacher

candidates, passion for promoting students' development have made me reflect more and dig deeper into my own thinking.

To the other incredible faculty I had to opportunity to learn from while at Bowling Green State University: Dr. Maureen Wilson, Dr. Ellen Broido, Dr. Kenneth Borland, Dr. Hyeyoung Bang, Dr. Patrick Pauken, Dr. Mike Coomes, and Dr. Rachel Vannatta Reinhart. I whole-heartedly believe your teachings and wisdom have not only made me a better researcher, but also have made me a better human being. A special thank-you to Dr. Maureen Wilson. From the deep of my heart, I appreciate every effort you have made to make my life, my study, and job search easier in this program.

To my supervisors at Institutional Planning, Assessment and Research (IPAR) at East Carolina University: Dr. Ying Zhou and Dr. Kristen Springer-Dreyfus. I am deeply inspired by both of your experiences when working full-time, being a mon, and finish your dissertation. Thank you for your guidance, care, and support on so many things so I can get to where I am right now! To my dear colleagues at IPAR, especially Susan Morrissey, Dr. Jeanette Morris, Kyle Chapman, and Dr. Margot Neverett: Thank you for making me feel loved in the IPAR family! Your care and support in work and sweet messages before dissertation defense warmed my heart!

To my cohort family, and the HIED and CSP cohorts I shared space with: it is an honor to have learned with and from each of you. Jackie, Kerry, and Krystal, thank you for the group study sessions, discussions, celebrations, Halloween activities, and the commitment to support and help each other in this program! I am grateful to be a part of this. To Sue Ann, Mark, Cari, Keenan, Liane, Dandan, Monda, Bre, Jessica, and many others, thank you very much for your company, help, and support in this journey! You will always be my favorite BG family.

To Multi-Institutional Study of Leadership (MSL) and Dr. John Dugan: Thank you for

collecting Asian American ethic-disaggregated data! I wish more national surveys and other data collection agencies can follow your practice. Dr. Dugan, thank you for sharing the most recent dataset with me even when this dataset is not available for researchers outside of MSL. Your believing in the significance of my research has kept me motivated during the dissertation process!

To Nico Pinchak: I am inspired by you on many things, such as your attitude toward life, decision-making process, passion for research, unique and insightful perspectives about education, culture, and society, genuine care for people from diverse background, and keen interest for teacher education preparation programs. I enjoyed our every conversation. I know we have talked about many times to work on a research project together and I hope we can make it happen soon.

To my friends in China and U.S.: I appreciate your love and support! You all have been very helpful in numerous ways in the past four years. This journey would not have been possible without your friendship.

To my relatives: I thank you for whatever you have done to help my parents while I am out of the country. I also appreciate every call, text, and visit you have made to my parents. Your support and love to my parents is truly important for me and has helped me through this process.

Finally, a special thank-you to my family. To my parents, Haiqing Li and Bolian Li: Thank you for your unconditional love and support of my education and for always encouraging me and pushing me to get a Ph.D. so I can live a life that my heart desires. To my incredible sister Yifei Li: You are THE MOST WONDERFUL sister in the world!!! You raise me up to more than I can be. I know I can always count on you, and I will do the same for you for the rest of my life. Of all the great qualities you have, I would like to let you know that your persistence

can take you to anywhere you want. To Dongting Pan, Zhancheng Pan, and George Li: Thank you for being my family. You all have made my life in this foreign country colorful, rich, and full of good memories. To Jingxiang Jiang, Ping Cai, and Chao Cai: I am grateful for your calls, texts, support, and love! And thank you for raising such a fantastic human, Hu Cai. He is such an amazing partner in life. Hu Cai, thank you for making my education on top of everything and loving me and supporting me any way you can! I also appreciate your continuous efforts in bettering yourself. I promise to make every effort to support you and build the life that we envision together. We can do it!!! And to my unborn baby, for being such a good little baby in my belly and making it possible for me to complete what I started. We can't wait to see you in March 2019!

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I. INTRODUCTION

In this chapter, I discuss the purpose and rationale for this study and why the examination of Asian American college students' sense of belonging on campus is important. The chapter begins with the background of the study and segues to the statement of the problem and purpose of the study. Finally, I discuss the significance of the study and define key terms.

Background of the Study

As the racial composition of the society becomes more diverse, it is estimated that by 2044, no single racial group will comprise more than 50 percent of the nation's total population in the United States. This projection is based on the Census Bureau 2014 results. According to the Census Bureau, the Two or More Races population is predicted to have the most dramatic gain over the next 46 years. For Asian Americans, the second projected fastest-growing group, will increase from 5.4 percent in 2014 to 9.3 percent of the population in 2060 (Colby & Ortman, 2015). On college campuses as well as in society overall, the number of Asian Americans is consistently on the rise. Therefore, it is necessary to pay more attention to this distinct racial group.

The term "model minority" is often associated with a stereotype that all Asian American students are monolithically hardworking, financially very well-off students with high academic achievement (Museus, 2009). Therefore, some educators "may operate on the premise that students in college have already 'made it' and do not need assistance" (Yeh, 2002, p. 61). However, researchers have found that this model minority myth is far from reality (Museus & Park, 2015). Many researchers have devoted valuable efforts to debunk the model minority myth since 1977 starting with Suzuki's *Education and the Socialization of Asian Americans: A Revisionist Analysis of the "Model Minority" Thesis* (as cited by Poon et al., 2016). This

stereotype brings a lot of pressure to other Asian Americans who do not fit this model, neglects the diversity within Asian American community (Kwon, Kwon, & Overton-Adkins, 2014), and masks the challenges that Asian American college students face (Museus & Park, 2015). According to Museus, Shiroma, and Dizon (2016), "these challenges include significant pressure from cultural conflict, unwelcoming racial climates, pressure to conform to racial stereotypes, experienced racial discrimination, and relatively high rates of mental health issues" (p. 486).

These challenges could impact individual student's sense of belonging on campus which Strayhorn (2012) found to be closely related to many important college outcomes. The term sense of belonging has been described as an essential need and motivation in psychology. In the educational setting, sense of belonging is referred to as "the extent to which students feel personally accepted, respected, included, and supported by" their peers, lecturers, and others within their educational organization" (Goodenow, 1993, p. 80). In educational research, researchers found that sense of belonging has a significant influence on students' academic achievement, retention, and persistence (Astin, 1984; Braxton, 2002; Braxton, Sullivan, & Johnson, 1997; Maramba & Museus, 2011, 2012). In the book *College Student's Sense of Belonging: A Key to Educational Success for All Students*, Terrell L. Strayhorn (2012) stated:

> A sense of belonging among students has real consequences on a variety of outcomes ranging from personal happiness and comfort to college completion and academic success. Moreover, sense of belonging is a key factor for students who have been historically underrepresented in higher education. (p. x)

Statement of Problem

Research that focuses on the Asian American college student population suggests that this population has lower levels of satisfaction with campus climate compared to their White

peers (Ancis, Sedlacek, & Mohr, 2000). They experience significant pressure to fit into the cultures of predominantly White institutions (Museus, 2013). Their pressure and struggle have been well documented in research papers and social media. For example, in Sumura's (2013) study, she collected photo journals from the participants in which they could illustrate how their physical appearance influenced their level of comfort and feelings of belonging in campus spaces. One of the participants submitted a photo which captured the moments when she sat across from her roommate who was thin and blond-haired. The participant said,

> What I shot was what I saw. This is what I see everyday when I'm out with her. I feel she fits in, but I can't. She's not thinking about race when she's on campus. I feel not American enough because my features are flat, I have olive skin and my hair is dark. Maybe it's just me being paranoid or thinking that everyone is noticing me. But I feel like I wouldn't feel this way for no reason. (Section "Example A: Being Watched")

This participant's struggle to fit in is not unique. Many Asian American college students shared similar feelings and experiences in the My Banana Story initiative. My Banana Story is an initiative created by Paradox, an Asian-American sociopolitical rights organization at the University of Illinois. This initiative was a platform where Asian American college students can share their experiences on campus and find strength through each other's stories. It aims to bring "awareness to Asian Americans who have felt alienated, bullied or suffered from social anxiety while assimilating to American culture and society" (Castillo, 2015, para. 3). Each story they shared on Facebook had a photo of the story author holding a banana to their head. Banana here represents something that is similar to Asian Americans' physical appearance which is yellow on the outside. According to Bing Wang, Paradox's director of

communications, holding a banana to their head symbolizes the idea of killing your own identity in order to conform; being white on the inside. One participant shared her experience:

> I was proud of being different. I was proud of the fact that I ate hotdogs for breakfast and packed rice for lunch. What I wasn't proud of was my accent. I don't know why, but I tried really hard to "normalize" it. Maybe it's because that was the only way I could think of for them to listen to me without immediately branding me as a foreigner...so I could make them understand that just because I have a Filipino lifestyle, that doesn't mean I'm a foreigner. (Castillo, 2015, para. 1)

Although many students shared their stories, Imee Ignacio, co-director of the Asian Pacific American Coalition, said there were also Asian American individuals who were not able to relate to those stories because they did not have these experiences (Castillo, 2015). This suggests that not all Asian American students feel the same on campus. Some can fit in and feel they belong to the campus community, while others struggle for different reasons.

Existing research clearly has indicated that sense of belonging is one of the most important factors that impact college students' success (e.g., Astin, 1993; Hurtado & Carter, 1997; Maramba & Museus, 2012). Some research findings indicate that Asian American students have a low sense of belonging on campus (Lim, 2005; Johnson et al., 2007; Maramba & Museus, 2011). Thus, it is essential for higher education institutions to understand which factors are related to Asian American undergraduate students' sense of belonging on campus.

Asian American college students do not experience college the same way, therefore more research should be conducted to understand their different college experiences (Museus & Parker, 2015; Samura, 2013). The fact that they have different experiences with fitting in on campus also indicates a need to examine the differences in sense of belonging among Asian

American ethnic groups and how various factors correlate with their sense of belonging. Yet, there is still scant literature on sense of belonging on campus among Asian American undergraduate students across ethnic groups (Lim, 2015). Thus, it is necessary to examine the within-group heterogeneity of sense of belonging among Asian American undergraduate students on campus.

Purpose of the Study

The purpose of this study was to explore the within-group heterogeneity of sense of belonging among Asian American undergraduate student subpopulations on campus using data from the 2015 Multi-Institutional Study of Leadership (MSL; MSL, 2015). Specifically, I examined if there were differences in students' sense of belonging across Asian American ethnic groups. Then, I identified factors that were significantly related to Asian American students' sense of belonging on campus. Finally, I identified important factors that were significantly related to each Asian American ethnic group and explored differences and similarities in the factors related to sense of belonging across and between these various ethnic groups.

Significance of the Study

The sense of belonging is an important outcome variable to explore as it has been identified as one of the most important factors that impact college students' persistence, retention, and graduation (e.g., Astin, 1993; Hurtado & Carter, 1997; Maramba & Museus, 2012). With this knowledge, it is essential to the success of this constituency to discover the factors that are related to this outcome. Given the paucity of research on many Asian American subgroups and the reality that Asian American ethnic groups encounter many barriers to fit in on the college campus, there is a pressing need to examine the factors that relate to their sense

of belonging. This study fills this gap in the literature. In addition, this study helps educators in higher education institutions develop a more holistic understanding of Asian American college students' college experience. Finally, my findings provide insights that help professionals to improve and develop programs and interventions that can positively influence Asian American college students' sense of belonging.

Definition of Key Terms

This section provides definitions of two key terms used in this study.

Asian American

In this study, Asian American is defined as "[a] person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent. This area includes, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam" (NCES, n.d., p. A-2). According to the U.S. Census, the estimated number for people who identified as Asian in 2015, either one race or in combination with one or more additional races, were 16.795 million (United States Census Bureau, 2015a). Within this group, big differences exist in population numbers. In the U.S., the Chinese (not including Taiwanese) population was the largest Asian group (4.76 million), followed by Asian Indians (3.98 million), Filipinos (3.898 million), Vietnamese (1.98 million), Koreans (1.822 million), Japanese (1.411 million), and Pakistani (0.518 million) (United States Census Bureau, 2015b).

In the 2015 MLS, there were 18 ethnic group options under the racial group of Asian American/Asian: Asian Indian, Bangladeshi, Bhutanese, Cambodian, Chinese, Filipino, Hmong, Indonesian, Japanese, Korean, Laotian, Malaysian, Nepalese, Pakistani, Sri Lankan, Thai, and Vietnamese, and other Asian. This study will include all these Asian ethnic groups in order to have a better understanding of this community. The primary reason is that each ethnic

group has its own history, culture, or religion. Because some ethnic groups in the 2015 MSL dataset had very small sample sizes, I grouped ethnic groups with the least representation in the sample as one group in the analysis. Analyses were conducted on 10 ethnic categories: Asian Indian, Chinese, Filipino, Japanese, Korean, Pakistani, Vietnamese, Multi-Racial Asian, Mono-Racial Multi-Ethnic Asian, and Other Asian.

Sense of Belonging

In this study, the term sense of belonging is defined as "the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment" (Goodenow, 1993, p. 80). Others could include peers, lecturers, and others within their educational organization.

CHAPTER II. LITERATURE REVIEW

This chapter provides an overview of the theoretical framework of the study and literature on Asian American college students, as well as a review of the literature on sense of belonging. First, I present a literature review on Asian American college students which provides a general description of the diversity within Asian American college student population in terms of college access and postsecondary degree attainment. Then, I focus on the sense of belonging as a theoretical construct and the relationship between sense of belonging and student success. Next, I summarize and review factors identified from previous research that are related to college students' sense of belonging on campus. Finally, I introduce Astin's (1993) Input-Environment-Outcome (I-E-O) college impact model as the theoretical framework for this study. Overall, the review of the literature illustrates that perceptions of sense of belonging is an important construct for Asian American students' success in college, yet there is a small body of literature available to support and further elaborate on the Asian American students' sense of belonging on campus.

Asian American Students' College Access and Postsecondary Degree Attainment

This section includes the literature related specifically to Asian American college students in the United States. In the first section, I compare the enrollment size, growth, and pattern of the Asian American college students with other racial groups and describe the diversity on higher education enrollment within this group. In the second section, I focus on describing the pattern of degree attainment of different racial groups and the disparities in degree attainment within Asian American college students. It should be noted that in some literature, Asian American students and Pacific Islander students are grouped together. In this case, I would include both groups when discussing data and findings from these literatures.

College Access

Although much effort has been made to level the uneven playing field in the United States, for many marginalized and vulnerable populations, access to higher education remains a significant challenge (CARE, 2011). African Americans, Hispanics, and American Indians or Native Americans are the most often mentioned three marginalized and vulnerable populations. Asian Americans, unfortunately mislabeled by the model minority myth, are often viewed as a very successful group and thus are neglected in policy consideration and research. In reality, some Asian American student populations are facing as many obstacles as Hispanic students, American Indians or Native Americans, and African American students.

Asian Americans and Pacific Islanders (AAPI) college students have been described as "growing at one of the fastest rates of any major racial population in American higher education" (CARE, 2011, p. 8). According to the National Center for Education Statistics (2013), both undergraduate and post-baccalaureate enrollment in the U.S. increased 24 percent between 2002 and 2012. Along with the overall rapid growth of college students, the percentage of AAPI college students also has been increasing, but AAPI college students' growth was actually lower than that of Hispanic and on par with Black college students. From 1976 to 2012, the percentage of AAPI college students only has been increased by four percent (from two percent to six percent), while Hispanic students grew by 11 percent (from four percent to 15 percent), and Black students increased by five percent (from 10 percent to 15 percent).

Although the increase in Asian American higher education participation is almost consistent with its population growth, this enrollment trend and growth was not the same for all ethnic groups within this population. Trends in educational attainment for many Asian American sub-groups are representative of this problem. According to Teranishi (2010), the percentages of

Southeast Asian Americans with a bachelor's degree or higher is disproportionately lower than the 25.9% national average. For instance, the percentage of Hmong Americans with a bachelor's degree or higher is 7.5%; Cambodian is 9.2%; Laotian is 7.7%; Vietnamese is 19.4%. In addition, according to a report from the National Commission on Asian American and Pacific Islander Research in Education (CARE; 2011), "51.1 percent of Vietnamese, 63.2 percent of Hmong, 65.5 percent of Laotian, and 65.8 percent of Cambodian adults (25 years or older) living in the U.S. have either not enrolled in or not completed their postsecondary education" (p. 8).

For many Asian American students, barriers to education even begin at an early age, creating a weak pipeline to higher education. Many AAPI subpopulations continues to have very low rates of attainment at the elementary and secondary level. For instance, less than 40% of Laotian, Cambodian, and Hmong adults do not even have a high school diploma or equivalent. In the Hmong community, nearly a third of the adults have less than a fourth-grade education (Teranishi, 2010). These data indicate that educational access is a critical issue for many AAPI sub-populations and not all AAPI sub-population fit the enrollment trend and growth pattern for the AAPI college-going population overall.

Regarding college choice, contrary to the model minority myth that Asian Americans are most likely to attend private four-year institutions, far more AAPI students attend public two-year and four-year colleges (CARE, 2010). In fact, among all types of higher education institutions, the largest percentage of AAPI college students are enrolled in the community college sector (47%). Compared to other AAPI ethnic groups, Southeast Asian Americans, such as Laotians, Cambodians, Hmong, and Vietnamese, are more likely to attend community colleges and are less likely to graduate with a degree (Teranishi, 2010). Considering the fact that

the majority of Asian American college students are attending two-year institutions, we should seriously question the stereotype of academic excellence among this student population.

Between public and private institutions, AAPI students are mostly enrolled at public institutions. They make up 7% and 6% of the student population respectively in 2013 in public four-year institutions and public two-year institutions (National Center for Education Statistics, 2014). According to Teranishi (2010), a majority of Asian Americans, including Chinese Americans (65.4%), Japanese Americans (74%), and Korean Americans (62%), are attending more low-selective institutions than highly selective ones.

Postsecondary Degree Attainment

As the enrollment kept increasing between 2002 and 2012, the total number of postsecondary degrees conferred increased at all degree levels for all students: certificates increased by 49 percent, associate's degrees by 59 percent, bachelor's degrees by 36 percent, master's degrees by 45 percent, and doctor's degrees by 44 percent. During this period, the number of postsecondary degrees conferred also increased for all racial/ethnic groups at each level. Asian Americans had higher rates of degree attainment than White students and American Indian/Alaska Native students at all four degree levels (associate's degree, bachelor's degree, graduate degree, and doctor's degree). However, the changes of degree attainment rates among Asian American students between 2002 and 2012 were significantly lower than those of Hispanic students and Black students at all four degree levels (NCES, 2016).

As a result of the degree attainment changes between 2002 and 2012, the share of degree attainment for each racial group at each level also changed (see Table 2 below). Although Asian Americans had slight increases in their share of degree attainment at the master's and doctoral degree levels, their share at the associate's level and bachelor's level remained the same (less

than 1% change; NCES, 2016). It is noticeable that the share of doctorate degrees earned by AAPI was 12%, which is significantly higher than its population proportion in the U.S. population (6%). AAPI students' shares of bachelor's degrees and other graduate degrees are also slightly greater than their population in proportion to the U.S. population. These numbers support the general conception of Asian Americans' model minority image: higher academic achievement at all levels of education.

Table 1

The Distribution and Percentage Change of Degrees Attained by Race between 2002-2012

Student Group	Associate's	Bachelor's	Graduate	Doctor's
White	62% (-9%)	69% (-7%)	69% (-8%)	72% (-4%)
Hispanic	16% (+5%)	11% (+4%)	8% (+2%)	7% (+2%)
Black	14% (+2%)	11% (+1%)	13% (+2%)	8% (+1%)
Asians/Pacific Islanders	5%	7 %	7% (+1%)	12% (+1%)
American Indian/Alaska Native	1%	1%	1%	1%

Note. The symbol "+" indicates increase in percentage; the symbol "-" indicates decrease in percentage. No "+" or "-" means the change in the percentage is less than 1%. The data comes from "The Condition of Education 2016," by National Center for Education Statistics, 2016.

However, extra caution should guide the interpretation of these numbers. As many studies have suggested, these percentages are not proportionally distributed across all Asian ethnic groups (Maramba, 2008a, 2008b; Museus, 2009; Museus & Maramba, 2010; Suzuki, 2002; Yeh, 2002; Um, 2000). For example, over 40% of Japanese-Americans and nearly 50% of Filipino-Americans have earned bachelor's degrees (NCES, 2015). In the most recent iCount report, the educational attainment for Asian American subgroups between 2008-2010 of a bachelor's degree or higher is Asian Indian at 71.1% attainment, followed by Chinese at 51.5%, and Filipino at 48.1% attainment. Much lower levels of educational attainment were seen with Laotians at 12.4% attainment, Cambodians at 14.1%, and Hmongs at 14.7% attainment (Teranishi, Lok, & Nguyen, 2013). Many studies on Cambodian-Americans discussed low

academic achievement (Kim, 2002; Rumbaut & Ima, 1988), high dropout rates, and delinquency (Chang & Le, 2005; Ima & Nidorf, 2000; Goldberg, 1999) within this group. These statistics are examples of the gaps and disproportionate educational access and attainment in higher education among Asian Americans. Thus, the model minority myth is just a myth.

Taking a closer look at the literature in higher education that suggests Asian Americans have higher academic achievement, the participants sampled are East Asian and South Asian Americans (Asher, 2008; Joshi, 2006; Lew, 2006a, 2006b). In reality, Asian American sub-groups can be clustered into two groups based on their educational attainment: high performers and low performers. Asian Indian, Chinese, Pakistani, and Korean are in the high-performance groups. The low-performance group includes Samoan, Tongan, Native Hawaiian, Guamanian, Hmong, Laotian, Cambodian groups, and others (CARE, 2011, p. 25, Figure 3).

Student success in higher education institutions are affected by a lot of factors (Astin, 1993). According to extensive literature, students are more likely to succeed in college if they feel that they belong at their institution (Astin, 1984; Hoffman, Richmond, Morrow, & Salomone, 2002; Hurtado & Carter, 1997; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Maramba & Museus, 2012; Museus & Quaye, 2009; Strayhorn, 2008b, 2012). In addition, much of the research shows that sense of belonging is a powerful predictor of retention and student success (Bowman, 2010; Braxton, Milem, & Sullivan, 2000; Hurtado & Carter, 2007; Johnson et al., 2007; Strayhorn, 2008a). In the next section, I focus on sense of belonging as a theoretical construct and how sense of belonging is being measured in literature.

Sense of Belonging

Sense of belonging in educational settings is "the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment"

(Goodenow, 1993, p. 80). Hurtado and Carter (1997) defined sense of belonging on campus as "the individual's view of whether he or she feels included in the college community" (p.327). Baumeister and Leary (1995) proposed that all humans have an innate need to belong to social groups and strive to form positive interpersonal relationships within them. Bollen and Hoyle (1990) also believed that a "sense of belonging is fundamental to a member's identification with a group and has numerous consequences for behavior" (p. 484). If students feel they belong and are part of their institutions, they are more likely to persist and graduate (Astin, 1984; Braxton, 2002; Braxton, Sullivan, & Johnson, 1997; Maramba & Museus, 2011, 2012; Museus & Maramba, 2011; Museus & Quaye, 2009; Tinto, 1987, 1993). Researchers have conducted many studies on college students' sense of belonging. In this section, I review different ways to study sense of belonging in the college context and summarize the current status of Asian American college students and sense of belonging studies.

Studying Sense of Belonging as a Construct in the College Context

In the literature, sense of belonging has been studied both quantitatively and qualitatively. In quantitative studies, most of the time, sense of belonging is measured through surveys. One of the most widely used way to measure sense of belonging was developed by Bollen and Hoyle (1990). They focused on the concept of perceived cohesion and defined it as "emcompass[ing] an individual's sense of belonging to a particular group and his or her feelings of morale associated with membership in the group" (p. 482). Bollen and Hoyle (1990) developed three items to measure sense of belonging: "I feel a sense of belonging to .... I feel that I am a member of the … community. I see myself as part of the … community" (p. 485). Responses were on a 0-10 Likert scale, with 0 indicating strongly disagree, 5 indicating neutral, and 10 indicating strongly agree (Bollen & Hoyle, 1990). This three-item scale of sense of belonging has been

tested on various populations (Hurtado& Carter, 1997). For example, Hurtado and Cater (1997) conducted a study on Hispanic students' sense of belonging which has been considered as "particularly useful for scholars who focus on historically marginalized populations, such as students of color" (Samura, 2016, p. 136). One of the data sources Hurtado and Carter used is the National Survey of Hispanic Students. This longitudinal survey used the three-item scale of sense of belong developed by Bollen and Hoyle.

Another widely cited study on sense of belonging used five different items to measure sense of belonging. The study was conducted by Johnson, Soldner, Leonard, Alvarez, Inkelas, Rowan-Kenyon, and Longerbeam (2007). These five items were: "I feel comfortable on campus," "I would choose the same college over again," "My college is supportive of me," "I feel that I am a member of the campus community," and "I feel a sense of belonging to the campus community" (p. 529). Participants were required to report their level of agreement with these items. These items were different from those developed by Bollen and Hoyle (1990) and used by Hurtado and Cater (1997). However, according to the Johnson et al. (2007), "[t]his measure of sense of belonging is consistent with the concepts of membership and belonging that were included in the works of Hurtado and Carter (1997) and Hurtado and Ponjuan (2005)" (p. 529).

The national Cooperative Institutional Research Program (CIRP) survey administered by the Higher Education Research Institute (HERI) at the University of California, Los Angeles, also uses very similar items to measure students' sense of belonging. For example, in the Senior Student Survey 2018 version, students were asked to indicate the level of agreement with the following statements: "I feel valued at this institution"; "I feel a sense of belonging to this campus"; and "I feel I am a member of this college" (HERI, 2018, p. 11).

Although quantitative ways of studying sense of belonging are useful, Michelle Samura (2016) pointed out one major limitation of quantitative studies of sense of belonging is that it can only capture participants' sense of belonging at one point in time; it fails to give attention to the dynamic nature of sense of belonging. Samura is not the first researcher to note this. Strayhorn (2012) emphasized the changing nature of individual's sense of belonging and the need to keep monitoring and maintaining one's feeling of belong. Hurtado (2012) in her foreword to Strayhorn's book also pointed out, "sense of belonging changes as conditions and contexts change and students develop perspective with maturity" (p. x).

Qualitative studies of sense of belonging allow researchers to capture the dynamic process of how students experience sense of belonging. Hom (2015) used an interpretative phenomenological approach to explore how Asian American female students experience the concept of sense of belonging in the context of students' involvement on campus. During each semi-structured interview, Hom (2015) asked participants a few structured questions and some follow-up questions. For example, "tell me about a time when you felt connected to Northeastern?", "How does your involvement affect your connection to Northeastern? (p. 114)."

Maramba and Museus (2011) studied Filipino American students' experiences with campus climate and sense of belonging using mixed methods. They used a survey to measure sense of belonging, and then conducted individual interviews to understand participants' sense of belonging on campus. There were three interview questions including, "What has been helpful in feeling a sense of belonging in college?" (p. 96). Samura (2013) also adopted a mixed method approach to study Asian American college students' sense of belonging. She surveyed students' sense of belonging as well. In the qualitative portion of the study, she used interviews and photo journals. According to Samura (2013), interviews and photo journals allowed her to "more

closely examine not just whether or not students feel they belong at a campus, but also when, where, and with whom they feel like they belong as well as possible reasons for their varying levels of belonging" (para. 8).

Samura (2016) further pointed out that previous quantitative and qualitative studies of sense of belonging often missed one important factor: the role of students themselves play in the process of belonging. In other words, "how students navigate, negotiate, contest, and understand their processes of belonging" (p. 137). Using a case study methodology, Samura (2016) examined ways in which Asian American college students made sense of and responded to their experiences of navigating through physical and social spaces on campus. The emphasis was on students' agency in the process. Semi-structured interviews and photo journals were used to collect qualitative data from participants. A review of the literature focusing on both quantitative and qualitative studies of sense of belonging suggest that both quantitative and qualitative studies are useful. Each method allows researchers to understand sense of belonging from different perspectives.

Sense of Belonging Studies and Asian American College Students

In the context of higher education, the importance of "belonging" for college students has been well documented, so have the factors that influence students' sense of belonging and the influence of sense of belonging on college outcomes such as student persistence and academic performance (Strayhorn, 2012). Despite the importance of understanding belonging of students of color, studies that examine how different student groups experience belonging remain limited (Kuh et al., 2006; Lee & Davis, 2000; Locks, Hurtado, Bowman, & Oseguera, 2008; Mendoza-Denton, Downey, Purdie, Davis, & Peitrzak, 2002; Strayhorn, 2012). When searching books on the subject of sense of belonging, I found only one book written by Strayhorn, published in 2012.

This book is significant and well-known for many reasons. One particular reason is that it addresses sense of belonging of different groups, including Latino students, gay students, first-year college students, students of color in STEM, Black male students, and graduate students. The findings in the book are very valuable to understand sense of belonging across different groups. However, Asian American students were not included in the book.

Only a few studies have examined Asian American students' sense of belonging (Hurtado & Carter, 1997; Hurtado, Carter, & Spuler, 1996; Lim, 2015; Maestas et al., 2007; Museus & Maramba, 2011; Samura, 2016; Strayhorn, 2008a, 2012). Among the few studies that researched Asian American college students' sense of belonging, only a handful studies focused on comparing the similarities and differences among Asian ethnic groups. This study is aiming to fill this gap and to provide empirically based recommendations for improving Asian American college students' sense of belonging on campus. In the next section, I review factors related to college students' sense of belonging on campus. Given the paucity of research focused on Asian American college students and their sense of belonging, important literature on sense of belonging and students of color in college are also included.

Factors Related to Sense of Belonging on Campus

This section summarizes factors identified in previous findings related to sense of belonging. The factors are organized according to the I-E-O model used in this study: student demographic characteristics, institutional context, and college experience. I separate college experience factors into two parts. The first part includes experience with diversity and campus climate factors, and the second part contains campus involvement factors. I separate them because experiences with diversity and especially campus climate are really students'

perceptions of the institution, and campus involvement factors are students' self-selected behaviors to some extent.

Student Demographic Characteristics

Research seems to agree that race/ethnicity is the most important background characteristic related to sense of belonging. Studies consistently show differences in perceptions of sense of belonging among students from different racial/ethnic backgrounds (Gilliard, 1996; Johnson et al., 2007; Mandell, Mulvey, & Bond, 1992; Nora & Cabrera, 1996). For example, Johnson et al. (2007) examined sense of belonging among first-year college students from different racial/ethnic groups. Five groups were included in the study: African American, Asian Pacific American, Hispanic/Latino, Multiracial/Multiethnic, and White/Caucasian. They found that for first-year students, African American, Asian/Pacific American, and Hispanic/Latino students perceive a weaker sense of belonging on their campuses than do White/Caucasian students (Johnson et al., 2007).

Gender also has been identified as influencing students' experiences on campus climate, but it is often ignored in research on climate and sense of belonging (Maramba, 2008; Museus & Maramba, 2011). In Johnson et al.'s (2007) study, gender was a control variable. Hierarchical multiple regression results indicated that gender was significantly related to sense of belonging for only Hispanic/Latino students, not the other groups including African American, Asian/Pacific American, Multiracial/Multiethnic, and White/Caucasian. In Museus and Maramba's (2011) study, gender was also a control variable, but they compared the mean and standard deviation of sense of belonging for Filipino American male and female students. Descriptive statistics indicated that women in the sample reported slightly lower levels of belonging on campus.

Museus and Maramba's (2011) study also looked at the mean differences across generational status. The mean and standard deviation statistics indicate that first-generation students reported the lowest sense of belonging to their campus cultures, and third-generation students reported the strongest sense of belonging. As there were only five students in the third-generation category, Museus and Maramba (2011) suggested that researchers interpret this difference with caution.

Regarding parents' level of education and sense of belonging, Lim (2015) found that Asian American college students' parent's education was not significantly related to sense of belonging for all Asian American college students in the sample and for the three subpopulations under study, including Chinese Americans, Filipino Americans, and Asian Indian Americans. In Johnson et al.'s (2007) study, father's education, mother's education, and family income together were used to create a variable called cumulative social economic status (SES). This variable was not significantly related to sense of belonging for any of the five racial/ethnic groups: African American, Asian Pacific American, Hispanic Latino, Multiracial/Multiethnic, and White/Caucasian.

Institutional Context

Between-college characteristics include attributes such as Carnegie classification (Research/Doctoral/Master' s/Baccalaureate/Associate's), selectivity, size, religious or secular, and control (public or private institution; Astin, 1993). It is important to examine the effect of between-college characteristics because they capture the unique impact the environment has on students' experiences. For example, students who attend private institutions or highly selective institutions do not share the same experiences.

Studies show that between-college characteristics, such as selectivity and Carnegie classification, usually have little impact on collegiate outcomes (Pascarella & Terenzini, 2005). In relation to sense of belonging, Hagerty et al. (1996) suggested that the community college environment could uniquely impact sense of belonging. Johnson et al.'s (2007) and Hurtado and Carter's (1997) studies examined some between-college characteristics. Their findings support other literature. They found that selectivity (represented by the average SAT score) had no significant effect on the students of color in the sample and Latino students respectively. However, Johnson et al. (2007) suggested that since a majority of the students in the sample were involved in living learning programs, the effects of institutional selectivity on sense of belonging may have been mediated by the unique Living Learning program environment. Lim (2015) found that institution control (private) was significantly related to Asian American college students' sense of belonging. Though most past studies have found no significant effect of between-college characteristics, I believe having access to a dataset with more between-college variables and a substantial sample population size warrants taking another look.

Experience with Diversity and Campus Climate

The perceived environment and how one feels about their community set the stage for all experiences and scenarios. Many studies indicate that perceptions of the campus racial climate have significant impact on students' sense of belonging (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; Hurtado & Carter, 1997; Hurtado & Ponjuan, 2005; Maramba & Museus, 2011; Museus, 2008). However, the extant literature highlights the fact that students of color including Asian Americans often experience an unwelcoming campus climate that negatively impacts their sense of belonging (Hurtado, 1992; Harper & Hurtado, 2007; Maramba & Museus, 2011, 2012; Museus & Maramba, 2010; Museus & Truong, 2009).

Research shows that Asian Americans had only slightly higher satisfaction levels with the campus racial climate than their Black counterparts (Museus, 2008). In a similar fashion to their counterparts at four-year universities, Asian American community college students also found difficulties in adjusting to the campus climate (Chang, 2005). They reported feeling strongly that "things are harder because of their race or ethnicity" (Chang, 2005, p. 789). Correspondingly, a national study of undergraduates showed that the Asian American population was more likely to be satisfied with a racially diverse environment when they attended an institution that was more diverse (Park, 2009). However, it is important to note one's perception of campus climate could be influenced by many things. It could be what the university provides the students. It could be what the students themselves bring to the university. When examining the relationship between campus climate and sense of belonging, the dialogue should be two-way rather than one-way.

Campus Involvement

This section summarizes campus involvement factors identified in previous findings related to sense of belonging. These factors include on-campus housing, employment, mentorship and faculty interactions, peer interactions and co-curricular involvement, and ethnic student organizations and ethnic group identification.

On-campus housing. A lack of consensus exists regarding on-campus housing's influence on sense of belonging. In Hurtado and Ponjuan (2005)'s study, Latino students who lived on campus had a greater sense of belonging than students who lived off campus. Johnson et al. (2007) found first-year students across all racial groups who reported the residence hall environment to be socially supportive and inclusive had greater sense of belonging. Further, Maestas et al.'s (2007) study on sense of belonging at a Hispanic serving institution found that a positive relationship existed between living in campus housing and sense of belonging and that

living in campus is a significant predictor of sense of belonging. Yet, Strayhorn's (2008) two studies of sense of belonging, one for Black men at predominantly White institutions (2008a) and another study of Latinos (2008b), did not find living on campus to be a significant predictor of sense of belonging in either case.

Employment. Astin's (1984) theory of student involvement claimed that holding a part-time job on campus actually facilitates retention and the reverse is true for employment held off-campus. Time spent on campus increases the likelihood of one's coming in contact with other students, professors, and college staff and relying on the college as a source of income, all increase a greater sense of attachment to the institution (Astin, 1984). Other research, however, shows considerable inconsistency and even contradiction in the empirical literature regarding employment on college experiences (Riggert, Boyle, Petrosko, Ash, & Rude-Parkins, 2006). Very few studies can be found that include on-campus employment as a potential predictor of sense of belonging. Strayhorn's (2008b) study of Latino students' sense of belonging showed having an on-campus job did not significantly predict one's sense of belonging. Lim's (2015) study of Asian American college students' sense of belonging found that working on campus was significantly related to lower sense of belonging.

Mentorship and faculty interactions. In the literature, mentorship and its relationship with sense of belonging in higher education research is a relatively unchartered territory. But it could be a possible predictor of sense of belonging. Campbell, Smith, Dugan, and Komives' (2012) found that mentorship can influence the leadership development of college students. Leadership development has been shown to be highly correlated with sense of belonging (Astin, 1993; Dugan & Komives, 2007; Kezar & Moriarty, 2000; Komives, Owen, Longerbeam, Mainella, & Osteen, 2005; Thompson, 2006). Thus, as a strong predictor of other variables

related to sense of belonging, it is important to begin incorporating mentorship into future studies of sense of belonging.

In general, interactions with faculty have been found to be significant predictors of sense of belonging among students of color (Hoffman et al., 2002; Hurtado & Carter, 1997). Hurtado and Carter (1997) found that the academic interactions beyond the classroom, such as peer tutoring and informal contact with faculty, were associated with a relatively higher sense of belonging for Latino students. Hoffman et al. (2002) found a positive correlation between supportive faculty interactions in both academic and social environments and students' sense of belonging. These findings were supported by later studies of diverse students including Native Americans, reinforcing that interaction with faculty and peer support contributed to a higher sense of belonging (Freeman, Anderman, & Jensen, 2007; Harrington & Hunt, 2010; Hausmann, Shofield, & Woods, 2007; Maestas et al., 2007; Oxendine, 2015; Strayhorn, 2008a). However, Johnson et al.'s (2007) study results suggested that among first-year college students, their interaction with faculty was not significantly related to sense of belonging for African American, Asian/Pacific American, Multiracial/Multiethnic, and White/Caucasian. Although it was significant for Hispanic/Latino students, the relationship was negative.

Peer interactions and co-curricular involvement. Astin's (1993) extensive research of involvement on campus illustrates a positive influence of peer and co-curricular involvement on student learning and development. This pattern suggests a high potential correlation between student involvement and sense of belonging. Later research studies support that sense of belonging is impacted by the unique influences of various types of peer interactions. For example, Velasquez (1999) found that Chicano students' sense of belonging was higher when

socializing with White students. Oxendine (2015) found that Native American students who reported high peer group interactions had higher level of sense of belonging.

Correspondingly, Huffman's (2001) findings that Native American students who were socially isolated on campus were discouraged and ultimately left college due to this isolation. Hurtado and Ponjuan (2005) found positive interactions with diverse peers contributed to sense of belonging among Latino students. Maestas et al. (2007) found that socializing with different racial/ethnic group members, engagement in academic support programs, and joining a sorority or fraternity were significant positive predictors of sense of belonging.

However, in Johnson et al.'s (2007) study, interaction with diverse peers was not significantly related to sense of belonging for any of the five racial/ethnic groups: African American, Asian/Pacific American, Hispanic Latino, Multiracial/Multiethnic, and White/Caucasian. Given these findings, interactions with peers and co-curricular involvement may increase the likelihood for enhancing sense of belonging (Demcho, 2011; Freeman, Anderman, & Jensen, 2007; Hausmann et al., 2007; Hurtado & Carter, 1997; Locks, Hurtado, Bowman, & Oseguera, 2008; Maestas et al., 2007; Strayhorn, 2008a).

Student organizations on campus. In Maramba and Museus's (2011) study, they found that when students experienced a lack of belonging on campus they would try to involve in student organizations on campus to improve their feelings of belonging. In addition, their qualitative analysis indicated that there were differences in how female and male students discussed their sense of belonging and student organization involvement. Female students often discussed their feelings before their involvement in student organizations and most of their feelings were negative. Examples of their descriptions of feelings included "did not belong here" and "always feel isolated" (p. 97). Male students, on the contrary, often talked about what

they had to do to improve sense of belonging on campus. For example, one male participant felt he did belong to the student organization and said that "I just need to find it" (p. 97).

Lim (2015) conducted a study to identify what collegiate experiences predicted sense of belonging for Asian American college students. After controlling for student demographic characteristics, being involved in a student organization in general was significantly and positively related to sense of belonging. In addition, involvement in sports/recreation type of student organizations and involvement in student governance/campus-wide programming type of student organizations were also significantly and positively related to sense of belonging. However, involvement in military type of student organizations was significantly and negatively related to sense of belonging.

Wong, Brownson, and Schwing (2011) did not study sense of belonging, but they pointed out a very important factor to consider when studying the relationship between sense of belonging and student organization involvement. They found that there was a positive correlation between involvement in a student organization and suicidal ideation. One interpretation they provided for this correlation was as students have more interaction with peers from different racial/ethnic backgrounds, their chances of experiencing racism and injustice also increased. Therefore, when studying the relationship between sense of belonging and student organization involvement and between peer interaction in different contexts and sense of belonging, the quality of their involvement in the student organization and the quality of peer interaction should be measured and included in the analysis.

Ethnic student organizations and ethnic group identification. Participating in ethnic student organizations and having a closer relationship to one's ethnic group is positively related to students' sense of belonging (Hurtado & Carter, 1997; Maestas et al., 2007; Maramba &

Museus, 2011, 2012; Museus, 2008; Museus & Maramba, 2011; Oxendine, 2015). Chhuon and Hudley (2008) stressed that the importance of a Cambodian club on Cambodian American students. Museus and Maramba's (2011) quantitative study of Filipino students found that students' connection to cultural heritage significantly but indirectly influenced their sense of belonging on campus. In Lee and Davis's (2000) study looking at sense of belonging using an overall sample of Asian American college students, Asian Americans students at a predominantly White university who have strong cultural orientation were more apt to find belongingness during college.

Delving further into the cultural factor, some researchers suggested that most often the culturally relevant organizations and support do not mitigate the pressure students of color felt to assimilate to the dominant campus culture; rather, the ethnic student organizations provide support to maintain students' cultural integrity, create a safe place on campus, help combat feelings of isolation, increase in self-efficacy, and provide academic support and social support (Hurtado & Carter, 1997; Museus, 2008). Samura (2016) found that when Asian American students experienced lower or decreased sense of belonging, their involvement in ethnic- or race-specific student organizations offered a means for individual students to reposition themselves to increase belonging on campus.

Theoretical Framework

The MSL was designed using an adapted version of Astin's (1993) "input-environment-outcome" (I-E-O) college impact model as its conceptual framework (Owen, 2012). This study used Astin's I-E-O model as theoretical framework, too. The I-E-O model is an effective tool for assessing and analyzing the effect of students' pre-college characteristics and college environments on students' academic and social development after taking students' pre-college

characteristics into consideration (Astin, 1993). It allows educators and researchers to gain insight into colleges' educational practices that contribute to college-related outcomes. In this study, independent variables were input variables and environment variables. The seven input variables described student characteristics. Environment variables included 18 variables, such as institutional size, mentoring experience, and perceptions of non-discriminatory climate. The dependent variable was students' sense of belonging which is the outcome in the I-E-O Model. The conceptual model for the study follows in Table 2 below. Further information on variables is in the section of Variables in Chapter Three.

Table 2

I-E-O Framework for Analysis of Asian American College Students' Sense of Belonging

Inputs	Environment	Outcome
Block 1	Block 3	Sense of
Ethnicity	Institutional Size	
Block 2	Institutional Control	Belonging
Age	Institution's Carnegie Classification	
Sexual Orientation	Institution's Selectivity Classification	
Religion	Institutional Affiliation	
Enrollment Status	Institutional Setting	
Citizenship and/or Generation Status	Block 4	
Parental Education	Social Cultural Conversations	
	Perceptions of Campus Climate (Indirect)	
	Perceptions of Campus Climate (Direct)	
	Block 5	
	Faculty and Student Affairs Staff Mentorship	
	Peer Mentorship	
	On-Campus Employment	
	On-Campus Housing	
	Number of Type of Academic-based Experience Engaged	
	Number of Type of Organization/Group Involved	
	Level of College Organization Involvement	
	Level of Off-Campus Organization Involvement	
	Level of Civic Engagement	
	Level of Racial/Ethnic Groups Involvement	

Summary

In summary, many Asian American students have a low sense of belonging on campus and a low sense of belonging has a negative impact on college outcomes. Astin's I-E-O model provides a useful framework for examining Asian American college students' sense of belonging on campus. Student demographic characteristics, institutional context, and college experiences all play an important role in students' sense of belonging. But it is unclear how these factors are related to sense of belonging of Asian American college students and their different ethnic group students. Research on Asian American college students and their sense of belonging remains scarce, so is research on Asian American ethnic groups and their sense of belonging.

CHAPTER III. METHODOLOGY

The purpose of this study is twofold. First, I explored how institutional context, campus involvement, and students' experiences with diversity and campus climate related to Asian American college students' sense of belonging. Second, I examined if there were differences in students' sense of belonging across Asian American student ethnic groups and if there were differences in the variables that significantly related to each ethnic group's sense of belonging on campus. My interest in the within-group heterogeneity among Asian American college students led me to use a critical quantitative paradigm to inform my study. I used the 2015 Multi-Institutional Study of Leadership (MSL) data which includes a large sample of Asian American college students. This chapter includes methodological framework, research questions, hypothesis, dataset description, variables and measures, data analysis, ethical considerations, and limitations.

Critical Quantitative Paradigm

A critical quantitative paradigm was used in this study. Drawing on the work of several prominent scholars, Frances K. Stage (2007) developed the critical quantitative paradigm. According to Stage (2007), critical quantitative research falls between critical and positivist approaches. For the research methods part (scope, findings, focus, data, and results), there is "little difference between the positivistic approach and the critical quantitative approach" (p. 9). Specifically, in both approaches, "the scope is broad rather than in-depth, the findings are generalizable using aggregated data, and the results are independent of context" (p. 9). The difference between critical and positivist approaches lies in the motivations for the research. The motivations for critical quantitative research are more closely similar to those for critical race research:

> The critical researcher calls into question models, assumptions, and measures traditionally made under the positivist perspective. By using techniques such as interviews and observations, traditional critical researchers demonstrate situations and populations for whom the assumptions and models are fallacious. The critical quantitative researcher also questions models and assumptions but uses analysis of sociological and economic processes to demonstrate that for particular population groups, some widely accepted models and assumptions are inaccurate. (Stage, 2007, pp. 9-10)

The outcomes of both critical quantitative and critical race approaches center upon equity. Therefore, "being a quantitative criticalist comes with the questions we ask, not with the methods we use to answer them" (Stage, 2007, p. 5).

In the higher education field, there are many critical quantitative researchers who confront social justice and raise equity concerns through examining differences caused by race or ethnicity, gender, and class. They "adapt[s] a proactive stance by consciously choosing questions that seek to challenge" (p. 8) and use quantitative methods to "identify social or institutional perpetuation of systematic inequities" (p. 10). Stage (2007) proposed two tasks for critical quantitative researchers:

- "Use data to represent educational processes and outcomes on a large scale to reveal inequities and to identify social or institutional perpetuation of systematic inequities in such processes and outcomes" (p. 10).
- "Question the models, measures, and analytic practices of quantitative research in order to offer competing models, measures, and analytic practices that better describe experiences of those who have not been adequately represented" (p. 10).

My motivation in this quantitative study was to reveal and identify social and institutional

perpetuation of systematic inequities in Asian American college student ethnic groups. This aligns well with the characteristics of the critical quantitative paradigm and the first task endorsed by Stage (2007).

In the U.S., "model minority" is often associated with a stereotype that all Asian American students are a monolithic group who are hardworking, financially very well-off students with high academic achievement. In addition, as many higher education institutions and national organizations often analyze and report Asian Americans in one group (e.g., "Harvard yield hits 82 percent," 2013; the College Board, 2013), the impressive high academic achievement of those put into the Asian American category further reinforce the "model minority" stereotype. Due to this stereotype and common data analysis and reporting practice, "there is this assumption that [Asian American college students] are well-adjusted [and] they are fine" (Cana, 2015, para. 15). However, Asian American college students in general have a lower sense of belonging on campus compared to those who are not Asian American (e.g., Samura, 2013). The model minority stereotype and the data analysis and reporting practices that present a monolithic Asian American population neglect the diversity within Asian American community (Kwon, Kwon, & Overton-Adkins, 2014).

There are critical differences among Asian American college students. For example, some ethnic groups such as Asian Indian and Filipino Americans have relatively high levels of English proficiency than other groups such as Vietnamese and Chinese Americans who speak English as a second language (Ramakrishnan & Wong, 2018). This indicates that some Asian American ethnic groups need language help to succeed in college and some do not. The neglect of within-group diversity is detrimental to some Asian American students because their needs have been systematically neglected at the institutional level.

The analytical approach I used in this study also aligns well with the characteristics of the critical quantitative paradigm. I seek to question a commonly used dummy code scheme by using an effect coding method when examining the differences in students' sense of belonging level across Asian American ethnic groups. With a dummy code scheme, the estimates represent deviations from a pre-determined reference category. The reference category can be determined by research questions or randomly. Typically, when examining race, if not determined by the research questions, researchers select White as the reference group. Mayhew and Simonoff (2015) argued that this essentializes the White students' experience, making them the norm against the experiences of others. Effect coding, however, provides a way to avoid selecting a reference group. With effect coding, the estimates represent deviations from the sample mean. We can avoid "consistently essentializ[ing] the voices of any group of students as the bench mark for understanding racial differences" (Mayhew & Simonoff, 2015, p. 174). In this study, when comparing differences in students' sense of belonging level across Asian American ethnic groups, no group was randomly selected because there is no theory to guide which group should be the reference group. Thus, it is not appropriate to position any group's sense of belonging level as the norm over other groups. Therefore, I chose the effect coding method based on the critical quantitative paradigm (Mayhew & Simonoff, 2015) rather than the dummy coding method as the best choice for this study.

Research Questions

Based on the critical quantitative paradigm, the following three research questions about Asian American college students' sense of belonging guided this study:

Question 1: After controlling for student characteristics, does students' sense of belonging vary across Asian American student ethnic groups (Asian Indian, Chinese, Filipino,

Japanese, Korean, Pakistani, Vietnamese, Multi-Racial Asian, Mono-Racial Multi-Ethnic Asian, and Other Asian)?

Question 2: After controlling for student characteristics, how do institutional context, campus involvement, and students' experiences with diversity and campus climate relate to Asian American college students' sense of belonging?

Question 3: After controlling for student characteristics, how do institutional context, campus involvement, and students' experiences with diversity and campus climate differentially relate to students' sense of belonging by Asian American students' ethnicity (Asian Indian, Chinese, Filipino, Korean, Vietnamese, Multi-Racial Asian, Mono-Racial Multi-Ethnic Asian, and Other Asian)?

Hypotheses

I examined the three null hypotheses in this study:

$H1_0$: After controlling for student characteristics, students' sense of belonging does not vary across Asian American student ethnic groups (Asian Indian, Chinese, Filipino, Japanese, Korean, Pakistani, Vietnamese, Multi-Racial Asian, Mono-Racial Multi-Ethnic Asian, and Other Asian).

$H2_0$: After controlling for student characteristics, institutional context, campus involvement, and students' experiences with diversity and campus climate do not relate to Asian American college students' sense of belonging.

$H3_0$: After controlling for student characteristics, institutional context, campus involvement, and students' experiences with diversity and campus climate do not relate to Asian American college students' sense of belonging by Asian American students' ethnicity

differentially (Asian Indian, Chinese, Filipino, Korean, Vietnamese, Multi-Racial Asian, Mono-Racial Multi-Ethnic Asian, and Other Asian).

Dataset

I analyzed secondary data gleaned from the 2015 Multi-Institutional Study of Leadership (MSL) dataset. "The MSL is an international research program focused on understanding the influences of higher education on college student leadership capacity and other leadership-related outcomes" (MSL, 2015, "Home"). It was designed to measure the degree of achievement across a wide-array of educational and leadership-related outcomes, and sense of belonging on campus is one of those outcomes (MSL, 2015). The MSL dataset was well-suited to answer my research questions for several reasons. First, the data included 6,609 Asian American college students. Second, the data had 18 Asian American ethnic group classifications for respondents: Asian Indian, Bangladeshi, Bhutanese, Cambodian, Chinese, Filipino, Hmong, Indonesian, Japanese, Korean, Laotian, Malaysian, Nepalese, Pakistani, Sri Lankan, Thai, and Vietnamese, and other Asian. Third, the data had a wide range of individual student variables and institutional variables.

Data Collection

The MSL was administered online by the Survey Sciences Group, LLC, an independent research organization specializing in multi-campus studies. They collected data every three years, such as 2009, 2012, 2015, and 2018 (Dugan, 2015). The data used in this study were collected in 2015 over four months, from January through the end of April 2015. Over 90 institutions participated in the 2015 data collection. Each participating institution could choose a three-week window to conduct the survey based on their academic calendar. The standard requirement for sampling in each participating institution was that each institution would draw a

random sample of 4,000 undergraduate students (both full and part-time) from their total population. For institutions with fewer than 4,000 students, MSL would survey all undergraduate students enrolled in that institution (MSL, 2015). The 2015 MSL survey instrument is available in Appendix A.

Students in the sample were invited to participate through e-mails. The e-mail included information regarding the purpose of the study, issues of confidentiality, informed consent, and the survey link. Students might receive up to four total emails. Students could choose not to participate in the survey. They could even request to be removed from the dataset through replying to any MSL emails (MSL, 2015). To increase the response rate and completion rate, MSL provided a number of monetary prizes raffled at the national level. In addition, each institution could come up with their own incentives to stimulate survey response from students including the number, type, and value of the prizes. MSL administration were responsible for the random drawing in each institution (MSL, 2015).

Sample

The 2015 MSL dataset includes the following institutional demographic information: size (of undergraduate population), control (public or private), institution's Carnegie classification, institution's selectivity classification (from Barron's), institutional religious affiliation (religious or secular), and setting of institution (location of the institution). Descriptive statistics of the institutional sample are in Chapter Four, Table 8.

The sample comprises all students in the 2015 MSL original dataset who self-identified as Asian American either singly or in combination with any of the other racial groups, such as White/Caucasian, Middle Eastern/Northern African, African American/Black, Native Hawaiian/Pacific Islander, and Latino/Hispanic. International Asian students are not included in

the sample. In total, there were 6,609 Asian American students from over 90 institutions in the sample. Among that, 1,743 students identified their racial/ethnic membership as Multi-Racial. This group has the largest number, followed by Asian Chinese group that has 1,245 participants. Table 3 exhibits the total number of participants in each Asian American ethnic group in the 2015 MSL dataset. More demographic descriptive statistics on the sample are provided in Chapter Four, as well as in Appendices C, D, and E.

Table 3

Number of Participants in Each Asian American Subpopulation (N = 6609)

Subpopulation	Number of Participants
Asian Indian	751
Chinese	1245
Filipino	521
Japanese	155
Korean	642
Pakistani	164
Vietnamese	468
Multi-Racial	1743
Mono-Racial Multi-Ethnic	433
Other Asians	487
Total	6609

Variables

I used Astin's (1993) widely accepted I-E-O college impact model as the overarching conceptual framework for this study as it allowed me to explore how students' sense of belonging was related to students' characteristics upon entering college and within-college or between-college factors. Using the I-E-O framework, I put the variables in this study in three groups: input variables, environment variables, and the outcome variable. Input variables and environment variables are independent variables. The outcome variable is the dependent variable. Input variables will include student characteristics and pre-college characteristics. Environment variables will include 18 variables. The outcome variable is students' sense of belonging. All the variables were selected based on literature and the availability of survey items.

Independent Variables

For this study, the independent variables include both input variables and environment variables. Below, I enumerate both sets of variables and how they were operationalized within the MSL.

Input variables. The input variables are student characteristics and family background. These variables are control variables. Based on the literature, student characteristics variables such as age, gender, and parental educational background are correlated with students' sense of belonging, but the findings are inconsistent (Hagerty, Williams, Coyne, & Early, 1996; Johnson et al., 2007; Museus & Maramba, 2010). Controlling these variables in the analysis will rule out the possibility that findings are driven by these student characteristics rather than the focused variables.

Ethnicity. Ethnicity was a categorical variable. It had 10 categories including Asian Indian American, Chinese American, Filipino American, Japanese American, Korean American, Pakistani American, Vietnamese American, Other Asian American, Multi-Racial Asian American, and Mono-Racial Multi-Ethnic Asian American.

Age. Age was a categorical variable. Participants under 24 were in the group of traditionally aged, and participants aged 24 or older were in the non-traditionally aged group.

Sexual orientation. Sexual orientation was a nominal variable. In the regression model for the whole sample, it had five levels including heterosexual, bisexual, gay/lesbian, queer, and questioning. In the regression models for each subpopulation, due to fewer number of respondents in some subpopulations, this variable only had two levels: heterosexual and LGBQ (lesbian/gay, bisexual, queer, and questioning).

Enrollment status. Enrollment status was a dichotomous variable: full-time or less than full-time.

Religion. Religion was a nominal variable with three groups: Christian, Non-Christian, and Not Affiliated.

Citizenship and/or generation status. Citizenship and/or generation status is a nominal variable consisting of five levels: your grandparents, parents, and you were born in the U.S., both of your parents and you were born in the U.S., you were born in the U.S., but at least one of your parents was not, you are a foreign born, naturalized citizen, and you are a foreign born, resident alien/permanent resident. In the 2015 MSL survey, there was one more category for this variable: international students. International students are citizens and permanent residents of another country (not U.S.) who explicitly came to the U.S. for education. As this study focused on Asian American students, international students were not included.

Parental education. Parental education was a nominal variable consisting of eight levels: less than high school diploma or less than a GED, high school diploma or a GED, some college, Associates degree, Bachelor's degree, Master's degree, Doctorate or professional degree (ex. JD, MD, PhD), and don't know.

Environment variables. The environment variables included 16 variables. Six of them were institutional context variables. Nine of them were campus involvement variables. The remaining three variables are about students' experiences with diversity and campus climate. Institutional context such as selectivity and size have been found to be related to student outcomes (Kamens, 1971; Kim, Rhoades & Woodward, 2003), thereby potentially associated with students' sense of belonging. Some studies I cited in the literature review also suggested that the level of students' engagement with faculty, staff, and peers, campus organizations, academic activities, and civic-related matters and their perceived campus climate were correlated with sense of belonging. Thus, all the following variables were included in the study.

Institutional size. Institutional size was a nominal variable with four levels: enrollment of 1,000 - 4,999, enrollment of 5,000 – 9,999, enrollment of 10,000 to 19,999, and enrollment of 20,000 and above.

Institutional control. Institutional control was a nominal variable with two levels: public institution and private institution.

Institution's Carnegie classification (from IPEDS). Institution's Carnegie classification was a nominal variable with five levels: baccalaureate, masters, doctoral/research, research (high research activity) and research (very high research activity).

Institution's selectivity classification (from Barron's). Institution's selectivity classification was a nominal variable with six levels: unclassified, less competitive, competitive, very competitive, highly competitive, and most competitive.

Institutional religious affiliation. Institutional affiliation was categorized as religious or secular.

Setting of institution (from IPEDS). The setting of institution was decided by the geographic location of the institution and was categorized as city, suburb, or town.

Mentorship. In 2015 MSL, a mentor was defined as a person who intentionally assisted students' growth or connected them to opportunities for career or personal development since they started at the current college/university. In this study, mentorship was operationalized as the frequency of mentor assistance in students' growth or development at the current college/university. The types of mentors included faculty/instructor and academic or student affairs professional staff. The frequency was measured with a 4-point scale: 0 = never, 1 = once, 2 = sometimes, and 3 = often. The measurement scale was ordinal, but they were treated as continuous in this study. There are usually two ways to treat ordinal variables in statistical analysis: as discrete or continuous. Treating ordinal variables as continuous allows researchers to estimate the linear component of the relationship. I would like to examine the linear component associated with any ordinal variables used in this study. The subscale of mentorship was calculated as the mean of the respective items.

On-campus employment. On-campus employment was a binary variable with the options yes and no.

On-campus housing. On-campus housing was also a binary variable with the options yes and no.

Number of type of academic-based experiences engaged. The number of the type of academic-based experiences with which students engaged was a continuous variable. There were seven types of academic-based experiences including study abroad; practicum, internship, field experience, co-op experience, or clinical experience; learning community, or other formal program where groups of students took two or more classes together; living-learning program; research with a faculty member outside of class; first-year or freshman seminar course; and culminating senior experience. Therefore, the range for this variable was 0-7.

Number of type of organizations/groups involved. The number of organizations or groups with which a student was involved was a continuous variable. There were 21 types of organizations/groups including academic, departmental, professional; arts, theater, music; campus-wide programming; identity-based; international interest; honor societies; media; military; new student transitions; resident assistants; peer helper; advocacy; political; religious; service; multi-cultural fraternities and sororities; social fraternities or sororities; sports-intercollegiate or varsity; sports-club; sports-intramural; recreational; social/special interest; and student governance. Therefore, the range for this variable was 0-21.

Level of college organization involvement. This variable was operationalized as the frequency of involvement in college organizations. College organizations include all the organization types described in the variable Number of Organizations/Groups Involved. There were five response options for this item: never, once, sometimes, many times, and much of the time. The measurement scale was ordinal, but they were treated as continuous in this study.

Level of off-campus organization involvement. This variable was operationalized as the frequency of involvement in off-campus community or work-based organizations unaffiliated with the campus, such as Parent Teacher Association, church group, and union. There were five

response options for this item: never, once, sometimes, many times, and much of the time. The measurement scale was ordinal, but they were treated as continuous in this study.

Level of civic engagement. The level of civic engagement was operationalized as the frequency of engagement students were involved in the following activities: performed community service, worked with others to make the campus or community a better place, and worked with others to address social inequality. For each item, participants responded using a 4-point scale (0 = Never, 1 = Once, 2 = Sometimes, and 3 = Often). The measurement scale for each statement was ordinal, but they were treated as continuous in this study. The subscale of Level of Community and Civic Engagement were calculated as the mean of the respective items.

Level of racial/ethnic group involvement. The level of racial/ethnic group involvement was operationalized as the frequency of engagement students had in racial/ethnic groups on campus during college, for example, a Korean Student Association. There were four response options: Never, Sometimes, Often, and Very Often. The measurement scale for each statement was ordinal, but they were treated as continuous in this study.

Social cultural conversations. Social cultural conversations was a continuous variable. It was measured using six statements that applied a 4-point scale (0 = Never, 1 = Once, 2 = Sometimes, and 3 = Often). The six statements were talked about different lifestyles/customs; held discussions with students whose personal values were very different from your own; discussed major social issues such as peace, human rights, and justice; held discussions with students whose religious beliefs were very different from your own; discuss your views about multiculturalism and diversity; and held discussions with students whose political opinions were very different from your own. The subscale of social cultural conversations was calculated as the mean of the respective items.

Perceptions of campus climate (indirect). Students' perceptions of campus climate (Indirect) was measured using three statements that applied a 5-point Likert scale ranging from 1 being Strongly Disagree to 5 being Strongly Agree. Reverse coding was used. Thus, in the data analysis stage, 1 indicated strongly agree and 5 indicated strongly disagree. The three statements were1) I have encountered discrimination while attending this institution; 2) I feel there is a general atmosphere of prejudice among students; and, 3) I would describe the environment on campus as negative/ hostile. The measurement scale for each statement was ordinal, but they were treated as continuous in this study. The subscale of Perceptions of Campus Climate (Indirect) were calculated as the mean of the respective items.

Perceptions of campus climate (direct). Students' perceptions of campus climate (Direct) was measured using three statements that applied a 5-point Likert scale ranging from 1 being Strongly Disagree to 5 being Strongly Agree. Reverse coding was used. Thus, in the data analysis stage, 1 indicated strongly agree and 5 indicated strongly disagree. The three statements were 1) faculty have discriminated against people like me; 2) staff members have discriminated against people like me; and, 3) students have discriminated against people like me. The measurement scale for each statement was ordinal, but they were treated as continuous in this study. The subscale of Perceptions of Campus Climate (Direct) were calculated as the mean of the respective items.

Dependent Variable

Sense of belonging is the outcome of this study. Students' sense of belonging was measured using three statements: 1) I feel valued as a person at this school; 2) I feel accepted as a part of the campus community; and, 3) I feel I belong on this campus. For each item, participants responded using a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 =

Neutral, 4 = Agree, and 5 = Strongly Agree). The measurement scale for each statement was ordinal, but they were treated as continuous in this study. The subscale of sense of belonging was calculated as the mean of these three items by the MSL research group. Validity and reliability evaluation results of this measurement are provided in the next section.

Validity and Reliability Tests

There were six constructs in this study including mentorship, level of civic engagement, social cultural conversations, perceptions of campus climate (indirect), perceptions of campus climate (direct), and sense of belonging. Prior to running the analysis, confirmatory factor analysis (CFA) were used to test whether the items in the six scales do in fact reveal the construct structure. Then, Cronbach's alpha was calculated to estimate the internal consistency of each scale. According to Serbetar and Sedlar (2016), "Coefficient alpha, usually known as Cronbach alpha, on account of Cronbach's seminal article in 1951, is probably the most widely used reliability coefficient" (p. 190).

Before answering the research questions, two statistical analyses were conducted to validate the six constructs used in this study: mentorship, level of civic engagement, social cultural conversations, perceptions of campus climate (indirect), perceptions of campus climate (direct), and sense of belonging. The first two scales were compiled based on literature and available survey items, and the last four scales are developed by the MSL research group. I conducted CFA to confirm the construct's structural validity and unidimensionality. The second one is Cronbach's Alpha that was used to assess the internal reliability of each construct. I performed CFA with AMOS 24. I did Cronbach's Alpha with SPSS Statistics 24.

Construct validity is achieved if the fitness indexes of the construct meet the required acceptance level. CFA produces a dozen different fit statistics indicate how fit the items are in

measuring their respective latent constructs. There are three model fit categories (absolute fit, incremental fit, and parsimonious fit; Awang, 2015). Based on literature, Awang summarized the Fitness Indexes, their respective category, and the level of acceptance (see Table 4). Varying opinions exist regarding which statistics should be reported, for example, Holmes-Smith (2006) recommends reporting at least one from each category. However, Awang warned that the Chi-square test (Chisq) is very sensitive to sample size. Many other researchers also claimed that the Chisq is no longer a reliable reference for acceptance or rejection because of its high sensitivity to sample size (Schlermelleh-Engel, Moosbrugger, & Muller, 2003; Vandenberg, 2006). As this study has a very large sample size, Chisq statistics will not be used. Instead, I used the following four model fit indices: goodness-of-fit index (GFI), comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA).

Table 4

Model Fit Indexes, Their Level of Acceptance, and Supporting Literature

Category	Index Name	Level of Acceptance	Supporting Literature
Absolute fit	Discrepancy Chi Square (Chi-Square)	P-value > 0.05	Wheaton et al. (1977)
	Root Mean Square of Error Approximation (RMSEA)	RMSEA < 0.08	Browne and Cudeck (1993)
	Goodness of Fit Index (GFI)	GFI > 0.90	Joreskog and Sorbom (1984)
Incremental fit	Adjusted Goodness of Fit (AGFI)	AGFI > 0.90	Tanaka and Huba (1985)
	Comparative Fit Index (CFI)	CFI > 0.90	Bentler (1990)
	Tucker-Lewis Index (TLI)	TLI > 0.90	Bentler and Bonett (1980)
	Normed Fit Index (NFI)	NFI > 0.90	Bollen (1989b)
Parsimonious fit	Chi Square/Degrees of Freedom	Chi-Square/ df < 3.0	Marsh and Hocevar (1985)

Note. Adapted from Awang, Z. (2015.) SEM made simple: A gentle approach to learning structural equation modeling (p. 57). Malaysia, Selangor: MPWS Rich.

Table 5 is a summary of the four fitness indexes values produced by CFA. Based on level of acceptance in Table 5, as GFI, CFI, and TLI all exceed 0.9, and RESEA is less than 0.08, I consider the six constructs demonstrate good fit to the data.

Table 5

Summary for Fitness Indexes

Name of Index	Index Value	Comments
Goodness-of-fit index (GFI)	0.920	The required level is achieved.
comparative fit index (CFI)	0.919	The required level is achieved.
Tucker-Lewis Index (TLI)	0.901	The required level is achieved.
Root mean square error of approximation (RMSEA)	0.072	The required level is achieved.

To achieve unidimensionality, all items in a construct should have acceptable factor loadings. Any items with a factor loading lower than the suggested threshold should be excluded. The factor loading for every item in a newly developed construct should be 0.5 or higher (Awang, 2015). For an established construct, the factor loading for every item should larger than 0.6. Thus, in this study, the items in the first construct, Level of Civic Engagement, should have a factor loading larger than 0.5, and the items in the last four constructs (Social Cultural Conversations, Perceptions of Campus Climate (Indirect), Perceptions of Campus Climate (Direct), and Sense of Belonging) should have a factor loading exceed 0.6.

To achieve internal consistency for a construct, Nunnaly (1978) suggested that the Cronbach's Alpha of a construct should be .70 or higher. Usually the value of Cronbach's Alpha

is ranged from 0 to 1. The higher the value, the more reliable the generated construct is. "A low value of alpha could be due to a low number of questions, poor inter-relatedness between items or heterogeneous constructs" (Tavakol & Dennick, 2011, p. 53). However, Cronbach alpha values are closely related to the number of items in the scale. It can be very small when the number of items in the scale is fewer than 10. Starkweather (2012) pointed out that some researchers including Cronbach had acknowledged this limitation and recommended more appropriate statistics to estimate reliability. In a widely cited article, Briggs and Cheek (1986) recommended to use the mean inter-item correlation for the items. For unidimensional scale, the optimal inter-item correlation values range from 0.2 to 0.4 (Briggs & Cheek, 1986). In this study, as the first construct only has two items, I expected its Cronbach's Alpha would be quite low, so its inter-item correlation value was calculated in SPSS.

Table 6 shows the factor loading for every item in the five constructs and their Cronbach's Alpha value. Based on the table below, the factor loading for all items but one exceeds 0.6. Item ENV5A in the construct of Level of Civic Engagement has a factor loading of 0.55. As this is a newly developed construct, 0.55 is acceptable, according to Awang (2015). For all six constructs, the value of Cronbach Alpha is higher than 0.70. The construct of Mentorship has a value of 0.612, which is expected because it only has two items. The inter-item correlation for the two items is 0.441, which meets the requirement level suggested by Briggs and Cheek (1986). Therefore, all six constructs have achieved unidimensionality and good internal consistency.

Table 6

Factor Loading and Cronbach's Alpha for All Constructs

Construct	Item	Factor Loading	Cronbach's Alpha
Mentorship	ENV8B1	0.71	0.612
	ENV8B2	0.62	
Level of Civic Engagement	ENV5A	0.55	0.729
	ENV5G	0.82	
	ENV5G	0.71	
Social Cultural Conversations	ENV9A	0.73	0.899
	ENV9B	0.78	
	ENV9C	0.81	
	ENV9D	0.77	
	ENV9E	0.82	
	ENV9F	0.73	
Perception of Campus Climate	ENV11B1	0.71	0.781
(Indirect)	ENV11B2	0.74	
	ENV11B3	0.76	
Perception of Campus Climate	ENV11C1	0.92	0.871
(Direct)	ENV11C2	0.94	
	ENV11C3	0.69	
Sense of Belonging	ENV11A1	0.78	0.854
	ENV11A2	0.85	
	ENV11A3	0.81	

Data Coding

I used two data coding schemes in this study: weighted effect coding and dummy coding. I used weighted effect coding for ethnic groups and other categorical variables when addressing research question one and two. Effect coding is a preferred analytic technique in critical quantitative research "as a small step toward addressing issues of equity" (Mayhew & Simonoff, 2015, p. 171). To answer the third research question, I ran a separate regression for each ethnic group. Thus, coding for the ethnicity variable was not required. For the other categorical variables, I used dummy coding.

To include categorical variables in a regression model, data coding was a necessary part to create so-called "dummy variables." The most common data coding scheme is dummy coding. With a dummy code scheme, variables are assigned values only to distinguish between categories. Take for instance ethnicity with categories "Asian Indian", "Chinese", and "Korean." For variable "Asian Indian," you can assign 1 if the participant is an Asian Indian and assign 0 if not. Dummy coding also involves a selection of a comparison group (frequently arbitrary). In this case, you can select any two categories to create two dummy variables and the left category will be the reference group. In the regression equation, the constant is equal to the mean of the reference group. The coefficients represent deviations from the mean of the pre-determined reference category.

Effect coding, however, provides a way to avoid selecting a reference group (Mayhew & Simonoff, 2015). Effect coding allows researchers to test the means of each category against one unweighted overall sample mean (i.e., the mean of the means of all categories). For example, if we have two groups of students, transfer and non-transfer students. The mean test score of transfer students is 60, and for non-transfer students is 80. The unweighted overall sample mean

would be 70. In the regression equation, the constant is equal to the unweighted sample mean. The coefficient of each variable is equal to the difference between the mean of each group and the unweighted sample mean.

When the numbers of students in each group are unequal, for example, if the number of transfer students is 100 and for non-transfer students is 300, the weighted sample mean (75) is the overall mean of all 140 students, not the simple average of the two group means (i.e., unweighted sample mean, 70). In the regression equation, the constant is equal to the weighted sample mean. The coefficient of each variable is equal to the difference between the mean of each group and the weighted sample mean.

With equal group sizes, weighted and unweighted sample means are the same, so effect coding is a good choice. Grotenhuis et al. (2017) further noted that "this [balanced data] is not a necessary condition for the sample data; it suffices to assume a population with such a balanced design" (p. 175). However, when the numbers of individuals in each category in the population are not the same, and this is also reflected in the sample, if a researcher wants to take into account of the unequal sizes per category, weighted effect coding is less appropriate (Grotenhuis, et al., 2017). In this study, as the numbers of individuals in each Asian ethnic group are not equal, I chose to do a weighted effect coding.

In the following paragraphs, I use the ethnicity variable example mentioned in the dummy coding case as an example to explain the weighted effect coding process in SPSS syntax. In this example, there are three ethnicity categories: "Asian Indian," "Chinese," and "Korean." There are 100 Asian Indians, 70 Chinese, and 50 Koreans. To do a weighted effect coding, you only have to create two effect coded dummy variables when there are three categories. But to get the parameters for all three categories, you have to follow two processes. In the first process,

you can create two effect coded dummy variables: Asian Indian and Chinese. Korean will be the omitted group. Including these two variables in the regression analysis can estimate the parameter for the Asian Indian and Chinese. In the second process, another two effect-coded dummy variables can be created: Chinese and Korean. Asian Indian will be the omitted group. With these codings, you can estimate the parameters for the Chinese and Korean categories. In this way, you can get parameters for all three categories: "Asian Indian," "Chinese," and "Korean."

In the first process, code dummy variable "Asian Indian" with code 1 for participants in the Asian Indian category and code 0 for participants in the Chinese category. The code or weight for participants in the omitted category Korean equals to -100/50, i.e., – (number of participants in Asian Indian group/number of participants in the Korean group). For dummy variable "Chinese", the codings are: 1 for Chinese, 0 for Asian Indian, and -70/50 for Korean, i.e., – (number of participants in Chinese group/number of participants in the Korean group).

In the second process, code dummy variable "Chinese" with code 1 for participants in the Chinese category and code 0 for participants in the Korean category. The code or weight for participants in the omitted category Asian Indian equals to -70/100, i.e., – (number of participants in Chinese/number of participants in the Asian Indian group). For dummy variable "Korean", the codings are as follows: 1 for Korean, 0 for Chinese, and -50/100 for Asian Indian, i.e., – (number of participants in Korean group/number of participants in the Asian Indian group).

Data Analysis

I conducted secondary data analysis to answer my research questions. I used SPSS Statistics 24 to check model assumptions and multicollinearity to maintain appropriate model

inference (Reinhart, 2015). Given that each item had less than 1% missing data in the MLS survey, I did not check the pattern of missing data. Descriptive statistics display the distribution percentages breakdown of the dependent variable (sense of belonging) and other related variables. A five-stage hierarchical multiple regression was conducted with sense of belonging as the dependent variable to answer research questions one and two. I grouped the input and environmental variables accordingly. Hierarchical multiple regression allows the researcher to determine the order of entry of the variables based on researchers' substantive knowledge of the issue under study or theoretical reasons instead of relying on a statistical consideration (Mertler & Reinhart, 2013).

In this analysis, the ethnicity variable was entered into the model first, followed by other input variables like age, sexual orientation, parents' background, and religious preference in one block. In this way, I could make sure I had taken their influences on the dependent variable (any variability that they may have with the dependent variable) into account. The third block had six institutional context variables: Institutions' size, control, Carnegie Classification, selectivity classification, affiliation, and setting. After that, I put the three student experiences with diversity and campus climate variables (social cultural conversations, indirect perceptions of campus climate, and direct perceptions of campus climate) into the model. Finally, ten campus involvement variables (instructor/student affairs staff mentorship, peer mentorship, on-campus employment, on-campus housing, number of type of academic-based experiences engaged, number of type of organization/group involved, level of college organization/group involvement, level of off-campus organization involvement, level of civic engagement, and level of racial/ethnic group involvement) were entered as the fifth block. Experiences with diversity and campus variables were separated from campus involvement variables because involvement

variables, for example civic engagement, were students' self-select behaviors to some extent, but experiences with diversity and especially campus climate are really students' perceptions of the institution that are in response to conditions in those spaces.

For the first research question, I used the second model. Research suggested that student characteristics such as gender and family background were related to their sense of belonging (e.g., Johnson et al., 2007; Museus & Maramba, 2011). In this dataset, within each ethnic group, the distributions of age, sexual orientation, and enrollment status were very similar to those of the entire sample. However, religious preferences, citizenship/generation status, parental education, and parental income tended to vary by the students' ethnicity. Therefore, ethnic differences in sense of belonging could be easily swayed by what are actually differences in parental education or religious preferences. In the second model, I could control for all input variables and be more confident about any differences in sense of belong found across ethnic groups. When comparing model 1 and model 2, I could also see the differences across ethnic groups with and without controlling input variables. For research question two, all five models developed using blocked hierarchical multiple regression were used.

For research question three, I built a blocked hierarchical multiple regression model for each of the following Asian American subgroups: Asian Indian, Chinese, Filipino, Korean, Vietnamese, Multi-Racial Asian, Mono-Racial Multi-Ethnic Asian, and Other Asian. After that, a comparison of significant predictors was done to examine differences in predictors across and between subpopulations.

Ethical Considerations

For every research study, it is necessary to consider ethics when designing the study (Creswell, 2013). I have received permission from BGSU's Office of Research Compliance. As

noted in my Human Subjects Review application, this study involved minimal risk. The dataset I received from MSL did not include any identifiable information. I have and will continue to follow MSL and local IRB protocols (e.g., storage of data, access to data, destroy data upon project completion).

Limitations

There are a few limitations associated with the current study. First, the data used in this study were collected for a purpose different from the research questions for this study. Thus, the variables used in this study were constricted only to what was available within the dataset. For example, I was interested in exploring the correlation between Asian American college students' sense of belong and the percentage of Asian American college students in each institution, however, the MSL data did not have unique institutional identification numbers, so I could not examine institutional characteristics. Due to data limitations, I also could not explore the relationship between the quality of students' campus involvement and their sense of belonging. This relationship could be very important as Astin (1984) suggested that students' developmental gain was directly proportional to the extent to which they were involved on campus in both aspects of quality and quantity.

The second limitation of the study is related to the fact that the MSL study is cross-sectional data. It is carried out over a short period (three weeks in one institution). Therefore, it can only provide a "snapshot" of the outcome and the characteristics associated with it, at a specific point in time, rather than longitudinal design. The study may provide differing results if another time-frame had been chosen as human being's sense of belonging is dynamic. Strayhorn (2012) also noted the changing nature of students' sense of belonging. Thus, future studies are needed to further verify and validate findings. "[R]esearch that approaches belonging as a

process in which students are actively and continuously engaged is needed" (Samura, 2016, p. 137).

Another limitation related to cross-sectional data is that when interpreting the data results, it is important to note that the relationship between students' perceptions of campus climate and sense of belonging is not causal, but rather correlational. A correlational relationship means a better perceived campus climate is correlated with higher level of sense of belonging, but it does not mean better perceived campus climate leads to or causes higher level of sense of belonging. A causal relationship can only be established in a controlled study with pre and post measures.

The fourth limitation is that two ethnic groups, Japanese American students and Pakistani American students, were excluded in research question three. I chose not to include these two ethnic groups for two reasons. First, their sample sizes were too small. There were only 155 Japanese American college students and 164 Pakistani American college students in the sample. Given the desired probability level (0.05), the number of predictors in the model (n=55), the anticipated effect size (medium), and the desired statistical power level (greater or equal to 0.80), the minimal required sample size is 203 for regression (Soper, 2018). Too small a sample may reduce the internal and external validity of a study (Faber & Fonseca, 2014). Second, the characteristics of the students in these two ethnic groups differed significantly from students in the Other Asian American group such as Bangladeshi Americans, Bhutanese Americans, and Cambodian Americans. This would limit the generalization of results from research question three to Japanese and Pakistani American college students on campus.

The fifth limitation of this study comes from a restriction of the research design. I assumed that sense of belonging was the outcome variable that was dependent on students'

campus involvement and between-college characteristics as many researchers did, such as Lim (2015), Hurtado and Carter (1997), Wood and Harris (2015), and Maramba and Museus (2012). It is possible that sense of belonging is the moderating variable that is influencing how students determine how involved they want to be on campus and what kinds of experiences they seek to have. In other words, it might be worth exploring how students' sense of belonging affects their choices regarding which academic and co-curricular activities to engage and to what extent. Future research using a qualitative research design could look into the nuanced interaction between students' sense of belonging and their involvement on campus.

CHAPTER IV. RESULTS

I report the findings of this study in this chapter. First, I report descriptive analysis of the variables being studied. Then, I present the results of the analyses for each of the three research questions. Prior to running the statistical analysis, appropriate steps were taken to check for model assumptions of multicollinearity, normality, linearity, and homoscedasticity to maintain appropriate model inference (Mertler & Reinhart, 2013). Measures were taken to ensure that multicollinearity was not present among the variables. Collinearity statistics showed that the two categories of gender (male and female) had a variance inflation factor (VIF) of 63, thus, those were excluded from the analysis. Then, all variables had a VIF in the 1.038 – 3.760 range much lower than Pallant's (2007) maximum acceptable limit of 10. I used the histogram of residuals to check if the assumptions of the regression model were met. The residual histogram shows a fairly normal distribution of the residuals, so the normality of residual assumption is satisfied. A scatter plot of the residuals against the predicted values show that the linearity and homoscedasticity assumption were also met.

Descriptive Analysis

In this study, there were 6,609 Asian American students in the sample. All 6,609 Asian American students were included in the analysis for research questions one and two. The eight ethnic groups in research question three include 751 Asian Indian Americans (11.3%), 1,245 Chinese Americans (18.8%), 521 Filipino Americans (7.9%), 642 Korean Americans (9.7%), 468 Vietnamese Americans (7.1%), 1,743 Multi-Racial Asian Americans (26.4%), 433 Mono-Racial Multi-Ethnic Asian Americans (6.6%), and 487 Other Asians (7.4%). Other Asians included all the other Asian ethnicities that were not listed above, such as Laotian, Malaysian, Nepalese, Bangladeshi, and Bhutanese. Japanese Americans and Pakistani Americans are not

included in the analysis for research question three because their numbers are too low to build a regression model, but too high to be grouped in the group Other Asians as it will distort the findings for this group.

Table 7 provides the frequencies for all the demographic data for the entire Asian American student sample (I also offer the same information by ethnic groups in Appendix B). Participants for this study were predominately aged under 24 (91.3%), identified as heterosexual (91.4%), and were full-time (96.4%) students. About two-thirds of the participants were religious-affiliated. Among those who were religiously affiliated, about 67% were Christian. About 15% of students and their parents were born in the U.S. Close to 60% were born in the U.S. and at least one parent was not born in the U.S. Moreover, over one-third of the participants' parents only had an associate degree or below, and other one-third had a master's, doctorate, or professional degree. Finally, 20% of students' parental income was less than $40,000, but nearly 15% earned between $100,000 – $149,999, and 15% earned $150,000 and over.

Table 7

Demographic Data of the Sample

Variables	N Percentage	
Age		
Under 24	6034	91.3%
24 and above	574	8.7%
Sexual Orientation		
Heterosexual	6043	91.4%
LBGQ	560	8.5%
Enrollment Status		
Full Time	6373	96.4%
Part Time	236	3.6%
Religion		
Christian	2781	42.1%
Non-Christian	1389	21.0%
Unaffiliated	2419	36.6%
Citizenship/Generation		
Your grandparents, parents, and you were U.S.-born	483	7.3%
Both parents AND you were born in the U.S.	507	7.7%
U.S.-Born, but at least one of the parents was not	3842	58.1%
Foreign born, naturalized citizen	1269	19.2%
Foreign born, resident alien/ permanent resident	508	7.7%
Parental Education		
Less than high school diploma or a GED	361	5.5%
High school diploma or a GED	829	12.5%
Some college	714	10.8%
Associates degree	342	5.2%
Bachelor’s degree	1787	27.0%
Master’s degree	1393	21.1%
Doctorate or professional degree	1022	15.5%
Don’t know	146	2.2%

Within each ethnic group, the distributions of age, sexual orientation, and enrollment status were very similar to those of the entire sample. However, religious preferences, citizenship/generation status, parental education, and parental income tended to vary by the students' ethnicity. With regard to religious preference, almost two-thirds of the Chinese Americans were not affiliated with any religious groups, followed by Multi-Racial Asian Americans (38.9%) and Mono-Racial Multi-Ethnic Asian Americans (37.4%). For Asian Indian Americans, 78% indicated that their religious preference is a Christian religion, but 65% of the entire Asian Indian Americans sample were affiliated with non-Christian religions. Almost half of the participants in the Other Asian Americans group were also affiliated with non-Christian religions. As to citizenship/generation status, the majority of Multi-Racial Asian Americans (92.7%) and Mono-Racial Multi-Ethnic Asian Americans (85.2%) were U.S. born with at least one of the parents was not or both participants and their parents were U.S. born. Korean Americans had the highest percentage of participants who were foreign born, resident alien or permanent residents (17.1%), followed by Other Asians Americans (13.6%). Regarding parental education, four subpopulations, Vietnamese Americans, Chinese Americans, Other Asians Americans, and Multi-Racial Americans, had a higher percentage of parental education being Associate degree and below, compared to the sample average that was 34%. Almost 70% of Vietnamese American students' parents only had an associate degree and below. On the other hand, in terms of master's degree and above, Vietnamese American students' parents had the lowest percentage (10.7%), and Asian Indian Americans had the highest percentage (51%), followed by Chinese Americans (40.5%) and Multi-Racial Asian Americans (40.3%).

Turning to the institutional context, as shown in Table 8, more than two-thirds of the respondents chose a secular institution over a religious institution. About 51% of the students

attended public institutions. Close to 77% of the respondents were enrolled in an institution located in a city. Pertaining to institutional size, 35.6% of the respondents were from large institutions with an enrollment of 20,000 and above, followed by 17% enrolled in institutions with 10,000 to 19,999 enrollments. In terms of institution selectivity, only 6% attended unclassified or less competitive institutions, 18% attended competitive institutions, and 76% attended institutions classified as very competitive, highly competitive, or most competitive. With regard to Carnegie classification, about 40% enrolled in master's level institutions, and 33% were in research (very high research activity) institutions.

In each subpopulation, there were more students in secular institutions than those in religious institutions, similar to the entire Asian Americans sample. The percentage of students in secular institutions for each ethnic group varies ranging from 57% (Filipino Americans) to 79% (Other Asian Americans), though. The distribution of institutional setting was also similar to that of the entire sample, with more participants attending institutions located in a city. The distribution of institutional control, however, was not the same across subpopulations. For Asian Indian Americans, Filipino Americans, Korean Americans, Multi-Racial, and Mono-Racial Multi-Ethnic Americans, there were slightly more respondents attending private institutions. For the other three subpopulations, Chinese Americans, Vietnamese Americans, and Other Asians, there were more respondents attending public institutions. The percentages in Vietnamese Americans group and Other Asians group were 62.6% and 63% respectively.

Table 8

Frequency and Percentage of Institutional Context Variables

Variables	N	%
Institutional Size (Enrollment)		
1,000 - 4,999	843	12.8%
5,000 – 9,999	1642	24.8%
10,000 to 19,999	1769	26.8%
20,000 and above	2355	35.6%
Institutional Control		
Public	3391	51.3%
Private	3218	48.7%
Institution's Carnegie Classification		
Baccalaureate	499	7.6%
Masters	2656	40.2%
Doctoral/Research	243	3.7%
Research (High Research Activity)	1057	16.0%
Research (Very High Research Activity)	2154	32.6%
Institution's Selectivity		
Unclassified	191	2.9%
Less Competitive	213	3.2%
Competitive	1206	18.2%
Very Competitive	2148	32.5%
Highly Competitive	1491	22.6%
Most Competitive	1360	20.6%
Institutional Affiliation		
Religious	2177	32.9%
Secular	4432	67.1%
Institution Setting		
City	5053	76.5%
Suburb	1254	19.0%
Town	302	4.6%

In terms of institutional selectivity, 41% of the Other Asians group was from institutions classified as unclassified, less competitive, or competitive institutions. Vietnamese Americans had the second highest percentage (37.4%) of students enrolled in unclassified, less competitive, or competitive institutions and the second lowest percentage of students enrolled in most competitive institutions (11%). Filipino Americans had the third highest percentage (36.5%) of students enrolled in unclassified, less competitive, or competitive institutions and the lowest percentage of students enrolled in most competitive institutions (6.5%).

Pertaining to an institution's Carnegie classification, over half of Filipino Americans, Vietnamese Americans, and Mono-Racial Multi-Ethnic Asian Americans attended master's institutions (51.2%, 50.4%, and 52.7% respectively). On the contrary, 48% of the Korean Americans and 42% of the Asian Indian Americans attended research (very high research activity) institutions (Appendix C). Table 9 presents the descriptive statistics for the entire sample of on-campus employment, living status, campus involvement, experiences with diversity and campus climate variables used in this study. The same information by subpopulations are available in Appendix D.

Table 9

Descriptive Statistics of Campus Involvement Variables and Experiences with Diversity and Campus Climate Variables

Variables	*N*	*%*
On-campus Employment		
Yes	2003	30.3%
No	4606	69.7%
Living Status		
Off-campus with partner, spouse, and/ or children	303	4.6%
Off-campus with parent/guardian or other relative	1288	19.5%
Other off-campus home, apartment, or room	1642	24.8%
College/university residence hall	2834	42.9%
Other on-campus student housing	404	6.1%
Fraternity or sorority house	63	1.0%
Other	58	0.9%
	Mean	*SD*
Instructor& Student Affairs Staff Mentorship	1.26	.983
Peer Mentorship	1.58	1.236
N of Academic-based Experiences Engaged	1.82	1.429
N of Organization/Group Involved	3.44	3.066
Level of College Organization Involvement	2.19	1.386
Level of Off-campus Org. Involvement	.94	1.329
Level of Civic Engagement	1.21	.836
Level of Racial/Ethnic Groups Involvement	.45	.909
Social Cultural Conversations	1.63	.774
Perceptions of Campus Climate (Indirect)	3.46	.947
Perceptions of Campus Climate (Direct)	3.93	.993
Sense of Belonging	3.58	.811

Sense of Belonging for Asian American College Student Ethnic Groups (Research Question One)

A five-stage hierarchical multiple regression was conducted to answer the first and the second research question. Five models were developed, and the second model was used to answer the first research question. Participants' ethnicity was entered as the first model. Other demographics were entered at the second model. The second model allowed me to examine whether there was a difference in students' sense of belonging across ten Asian American student ethnic groups (Chinese, Indian, Pakistani, Japanese, Korean, Filipino, Vietnamese, Other Asian, Multi-Racial, and Mono-Racial Multi-Ethnic) after controlling for students' demographic information. The model shows a significant relationship between race/ethnicity and students' sense of belonging score; $R^2 = 0.035$, $R^2_{adj} = 0.031$, F (25, 6473) = 5.974, $p < 0.01$. The race/ethnicity variable coefficients are presented in Table 10.

As indicated in Chapter Three, I used weighted effect-coded race/ethnicity variables in the regression analysis. The reference group was an average of all students in the sample, not any randomly chosen group. In other words, the comparison was between the particular subpopulation and an average of all students in the sample.

The results indicate that compared to the average students in the sample irrespective of race/ethnicity, Korean American college students on average reported feeling less belonging on campus (0.142 unit lower on the 0 to 4 sense of belonging scale). Asian Indian American college students, on the other hand, reported a .071-point increase in their reported feelings of belonging on campus on the sense of belonging scale, relative to how the average student in the sample.

Table 10

Regression Coefficients from the Second Model Using Weighted Effect Coding

Variable	*B*	SE_B	β	*t*	*p*
Asian Indian	.071	.031	.049	2.268	*
Chinese	-.010	.022	-.009	-.433	
Filipino	.049	.036	.022	1.364	
Japanese	.000	.065	.000	-.002	
Korean	-.142	.032	-.074	-4.502	***
Pakistani	.007	.066	.002	.109	
Vietnamese	-.016	.037	-.006	-.415	
Other Asians	.054	.037	.023	1.472	
Multi-Racial	.020	.019	.023	1.038	
Mono-Racial Multi-Ethnic	-.070	.038	-.028	-1.864	
Intercept	3.584	.010		36.128	***

Notes. * $p < .05$. *** $p < .001$.

Regression Models for Sense of Belonging for All Asian American College Students (Research Question Two)

The second research question aimed to explore how institutional context, campus involvement, and students' experiences with diversity and campus climate related to Asian American college students' sense of belonging after controlling for student characteristics. The fifth regression model developed when answering the first research question was used to answer this question.

Model Summary

A five-stage hierarchical multiple regression was conducted with sense of belonging as the dependent variable. Participants' ethnicity was entered as the first model. Other demographics were entered at the second model. Institutional context variables were entered at the third model, followed by students' experience with diversity and campus climate variables at the fourth model. Campus variables were entered into the final model. Overall, the entire model significantly accounted for 19.9 % of the variance in all Asian students' perceptions of sense of belonging, $R^2 = .210$, $R^2_{adj} = .202$, $F\ (59, 6439) = 28.926$, $p < .001$. R^2 is the amount of variance in the dependent variable (sense of belonging) that can be explained by the independent variables. In this study, adjusted R^2 is included as it takes into account the large number of predictors and sample size. This indicates that 21% of the variance in sense of belonging can be explained by the model.

Table 11 provides a summary of the regression model findings, and Table 12 provides both unstandardized and standardized regression coefficients for variables predicting sense of belonging in each model. Unstandardized beta (B) represents the increased or decreased value in students' sense of belonging for every unit increase in that continuous variable. For categorical

variable, B represents the increased or decreased value in students' sense of belonging when students in one group, compared to the reference group. Standardized beta (β), on the other hand, describes the strength and direction of a relationship between an independent variable and students' sense of belonging. The value of β ranges from 0 to1 or 0 to -1. A negative value indicates a negative relationship, and a positive value represents a positive relationship. The closer the value is to 1 or -1, the stronger the relationship. The value β can be used to compare the variables to see which has a strongest relationship with the dependent variable.

The first model of the regression analysis included students' ethnicity and explained an initial 0.7% of the variance in scores on sense of belonging for all Asian American college students ($F_{chg} = 4.855$, $p < .001$). In the second model, adding demographics (such as gender and parents' education achievement) contributed an additional 2.8% of the variance in scores on sense of belonging ($F_{chg} = 11.862$, $p < .001$). Adding institutional context variables to the third regression model explained an additional 0.8% of the variation in sense of belonging and this change in R^2_{adj} was also significant ($F_{chg} = 3.347$, $p < .001$). Experiences with diversity and campus climate variables were entered into the fourth model accounting for 8.2% variance ($F_{chg} = 200.908$, $p < .001$). Finally, the addition of students' campus involvement variables to the regression model explained an additional 8.5% of the variation in Sense of Belonging ($F_{chg} = 47.659$, $p < .001$).

Table 11

Model Summary for All Asian American Students' Sense of Belonging

Blocks	R	R^2	R^2_{adj}	F_{chg}	ΔR^2	p	df_1	df_2
1: Ethnicity	.082	.007	.005	4.855	.007	***	9	6489
2: Other Demographics	.187	.035	.031	11.862	.028	***	16	6473
3: Institutional Context	.207	.043	.037	3.347	.008	***	16	6457
4: Experiences	.353	.125	.119	200.908	.082	***	3	6454
5: Campus Involvement	.458	.210	.202	47.659	.085	***	15	6439

Notes. *** $p < .001$.

Factors Related to Sense of Belonging

Table 12 presents the regression coefficients for all variables in the five models. Unstandardized beta coefficients in the final model indicated that when holding all other variables constant, public institution was positively and significantly related to sense of belonging ($B = .039$, $\beta = .050$, $p = .023$). To put it another way, Asian American college students who enrolled in public institution reported .039 higher in sense of belonging on campus, compared to an overall level.

There were also three institutional context variables that were negatively related to Asian American college students' sense of belonging. These variables included institution with an enrollment size of 5,000 – 9,999 ($B = -.060$, $\beta = -.064$, $p = .008$), private institution ($B = -.041$, $\beta = -.050$, $p = .023$), and institution's selectivity level being competitive ($B = -.056$, $\beta = -.079$, $p = .016$). Alternatively speaking, compared to an overall level, Asian American college students in institutions with an enrollment size of 5,000 – 9,999, private institutions, or competitive

institutions reported .060, .041, and .056 lower respectively on level of sense of belonging on campus.

When the remaining independent variables were held at the same value or are fixed, all three experiences with diversity and campus climate variables were significantly and positively related to sense of belonging. These variables included living in social cultural conversations (B = .101, β = .096, p < .001), perceptions of campus climate (indirect) (B = .094, β = .110, p < .001), and perceptions of campus climate (direct) (B = .123, β = .150, p < .001). Alternatively stated, while holding other predictors in the model constant, the mean score of sense of belonging increased .101, .094, and .097 given every one-unit increase in social cultural conversations, perceptions of campus climate (indirect), and perceptions of campus climate (direct) correspondingly.

Six campus variables were positively and significantly correlated with sense of belonging when the remaining independent variables were held constant. These variables included living in college or university residence hall (B = .053, β = .138, p < .001), instructor and student affairs staff mentorship (B = .094, β = .114, p < .001), peer mentorship (B = .038, β = .058, p < .001), number of types of organization and group involved (B = .010, β = .036, p = .013), level of college organization involvement (B = .087, β = .148, p < .001), and level of civic engagement (B = .118, β = .122, p < .001). To explain more clearly, compared to an overall level, students who lived in college or university residence hall reported .053 points higher on sense of belonging. In addition, while holding other predictors in the model constant, the mean score of sense of belonging increased .094, .038, .036, .087, and .118 given every one-unit increase in instructor and student affairs staff mentorship, peer mentorship, number of types of organization

and group involved, level of college organization involvement, and level of civic engagement correspondingly.

Finally, three campus involvement variables were negatively and significantly related to sense of belonging when the remaining independent variables were held constant. These variables included living off-campus with parent or guardian or other relative, living other off-campus home, apartment, or room, and level of racial or ethnic group involvement. Explaining more clearly, compared to an overall level, students who lived off-campus but not with partner, spouse, and/ or children reported .076 and .033 lower on sense of belonging. Additionally, while holding other predictors in the model constant, the mean score of sense of belonging decreased .028 given every one-unit increase in level of racial or ethnic group involvement.

Standardized beta coefficients of all the significant variables discussed above suggested that perceptions of campus climate (direct) had the strongest correlation with sense of belonging, followed by level of college organization involvement and living in college or university residence hall.

Table 12

*Hierarchical Multiple Regression Coefficients for Variables Predicting Sense of Belonging (*N = *6,499)*

Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.
Ethnicity															
Asian Indian	.089	.061	**	.071	.049	*	.063	.044	*	.023	.016		.006	.004	
Chinese	-.054	-.047	**	-.010	-.009		-.016	-.014		.028	.025		.025	.022	
Filipino	.082	.037	*	.049	.022		.072	.032	*	.049	.022		.031	.014	
Japanese	.029	.006		.000	.000		-.012	-.002		.021	.004		.020	.004	
Korean	-.104	-.055	**	-.142	-.074	***	-.159	-.083	***	-.120	-.063	***	-.086	-.045	**
Pakistani	.029	.006		.007	.002		-.002	.000		-.046	-.010		-.019	-.004	
Vietnamese	-.069	-.029		-.016	-.006		-.006	-.003		.016	.007		.000	.000	
Other Asians	.029	.012		.054	.023		.072	.031		.093	.040	**	.081	.035	*
Multi-Racial	.040	.047	*	.020	.023		.020	.023		-.018	-.021		-.009	-.011	
Mono-Racial Multi-Ethnic	-.086	-.034	*	-.070	-.028		-.065	-.026		-.042	-.016		-.046	-.018	
Age															
Under 24				.007	.028	*	.004	.015		.002	.010		-.004	-.016	
24 and above				-.075	-.028	*	-.041	-.015		-.026	-.010		.043	.016	
Sexual Orientation															
Heterosexual				.014	.055	***	.014	.056	***	.013	.053	***	.013	.053	***
LGBQ				-.146	-.055	***	-.149	-.056	***	-.141	-.053	***	-.141	-.053	***
Enrollment Status															
Full Time				.006	.040	**	.005	.033	*	.004	.024		.003	.021	
Part Time				-.169	-.040	**	-.139	-.033	*	-.100	-.024		-.087	-.021	

Table 12 (continued).

Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.
Religion															
Christian				.085	.100	***	.084	.098	***	.089	.105	***	.063	.074	***
Non-Christian				.020	.014		.026	.018		.015	.010		.018	.013	
Unaffiliated				-.109	-.112	***	-.111	-.114	***	-.111	-.113	***	-.083	-.085	***
Citizenship/Generation															
Your grandparents, parents, and you were U.S.-born				.095	.044	*	.094	.044	*	.096	.045	**	.096	.044	**
Both parents AND you were born in the U.S.				.055	.027		.053	.026		.031	.015		.019	.009	
U.S.-Born, but at least one of the parents was not				-.045	-.127	***	-.047	-.133	***	-.045	-.126	***	-.041	-.116	***
Foreign born, naturalized citizen				.049	.051	*	.052	.054	*	.042	.043	*	.037	.038	
Foreign born, resident alien/ permanent resident				.074	.036	*	.084	.041	*	.112	.055	**	.108	.053	**
Parental Education															
Less than high school diploma or a GED				-.132	-.071	**	-.118	-.063	**	-.082	-.044	*	-.070	-.037	
High school diploma or a GED				-.022	-.017		-.007	-.005		.026	.020		.043	.034	
Some college				-.020	-.014		-.001	-.001		.001	.001		.026	.018	
Associates degree				-.103	-.041	*	-.089	-.035	*	-.098	-.038	*	-.086	-.034	*
Bachelor’s degree				-.009	-.015		-.010	-.016		-.015	-.023		-.012	-.018	
Master’s degree				.064	.081	**	.054	.067	**	.036	.045		.020	.025	
Doctorate or professional degree				.067	.064	**	.044	.042		.031	.029		-.003	-.003	
Don’t know				-.181	-.039	**	-.156	-.034	*	-.099	-.021		-.028	-.006	

Table 12 (continued).

Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.
Institutional Size															
1,000 - 4,999							.055	.028		.045	.023		.004	.002	
5,000 – 9,999							.003	.004		-.005	-.005		-.060	-.064	**
10,000 to 19,999							.009	.011		.000	.000		.007	.008	
20,000 and above							-.029	-.042		-.013	-.018		.035	.051	
Institutional Control															
Public							.023	.029		.018	.023		.039	.050	*
Private							-.024	-.029		-.019	-.023		-.041	-.050	*
Institution's Carnegie Classification															
Baccalaureate							-.031	-.012		-.024	-.009		.008	.003	
Masters							.063	.018		.051	.015		.048	.014	
Doctoral/Research							-.005	-.010		-.005	-.009		.026	.051	
Research (High Research Activity)							-.027	-.023		-.029	-.026		-.018	-.016	
Research (Very High Research Activity)							.020	.032		.020	.032		-.030	-.049	
Institution's Selectivity															
Unclassified							-.099	-.022		-.069	-.015		.097	.021	
Less Competitive							-.026	-.008		-.002	-.001		.026	.008	
Competitive							-.102	-.143	***	-.090	-.125	***	-.056	-.079	*
Very Competitive							.009	.021		.011	.026		.016	.040	
Highly Competitive							.023	.039		.018	.031		-.001	-.001	
Most Competitive							.070	.109	*	.053	.083		.007	.011	

Table 12 (continued).

Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.
Institutional Affiliation															
Religious							.056	.049	*	.040	.035		.043	.037	
Secular							-.028	-.049	*	-.020	-.035		-.021	-.037	
Institution Setting															
City							-.009	-.041		-.009	-.041		-.005	-.022	
Suburb							.037	.022		.030	.018		.020	.012	
Town							.000	.000		.028	.008		-.005	-.001	
Social Cultural Conversations										.227	.217	***	.101	.096	***
Perceptions of Campus Climate (Indirect)										.078	.091	***	.094	.110	***
Perceptions of Campus Climate (Direct)										.120	.146	***	.123	.150	***
Living Status															
Off-campus with partner, spouse, and/ or children													.009	.006	
Off-campus with parent/guardian or other relative													-.076	-.095	***
Other off-campus home, apartment, or room													-.033	-.051	*
College/university residence hall													.053	.138	***
Other on-campus student housing													-.009	-.004	
Fraternity or sorority house													.142	.019	
Other													-.104	-.013	

Table 12 (continued).

Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.	B	β	Sig.
On-campus Employment															
Yes													.007	.006	
No													-.003	-.006	
Instructor& Student Affairs Staff Mentorship													.094	.114	***
Peer Mentorship													.038	.058	***
# of Academic-based Experiences Engaged													.001	.001	
# of Organization/Group Involved													.010	.036	*
Level of College Organization Involvement													.087	.148	***
Level of Off-campus Org. Involvement													-.005	-.009	
Level of Civic Engagement													.118	.122	***
Level of Racial/Ethnic Groups Involvement													-.028	-.032	*
Constant	3.584		***	3.584		***	3.584		***	2.470		***	2.080		***

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

Regression Models by Ethnic Groups (Research Question Three)

Asian American subpopulations do have complex and diversified college experience. Different institutional contexts, campus involvement type and level, and experiences with diversity and campus climate might relate differently to each ethnic group's sense of belonging. As was done with the overall regression model, hierarchical regression with enter method was used to explore how institutional context, campus involvement, and students' experiences with diversity and campus climate differently related to students' sense of belonging across and between Asian American student subpopulations (Asian Indian, Chinese Americans, Korean Americans, Filipino Americans, Vietnamese Americans, Multi-Racial Asian Americans, Mono-Racial Multi-Ethnic Asian Americans, and Other Asian Americans), after controlling for student characteristics. In the following sections, I discuss the regression models for each ethnic group, followed by a summary of the similarities or differences across ethnic groups in terms of how institutional context, campus involvement, and students' experiences with diversity and campus climate differentially relate to students' sense of belonging.

Asian Indian Students

Regression results indicated that the overall model significantly predicted sense of belonging for Asian Indian students, $R^2 = .173$, $R^2_{adj} = .130$, $F\ (36, 688) = 4.010$, $p < .001$. This model accounted for 17.3% of the variance in Asian Indian college students' sense of belonging. Table 13 is a summary of the regression model. The first block of regression model included students' demographics and explained an initial 3.2% of the variance ($F_{chg} = 2.653$, $p = .005$). Next, institutional context variables contributed an additional 1.6% to the variation in sense of belonging scores ($F_{chg} = .959$, $p = .028$). After that, experience with diversity and campus climate variables accounted for 6.3% variance ($F_{chg} = 16.569$, $p < .001$). Lastly, the final block,

campus involvement variables, added 6.2% to the overall variance explained by the model (F_{chg} = 4.328, $p < .001$).

Table 13

*Model Summary for Sense of Belonging (Asian Indian Students) (*N=*725)*

Blocks	R	R^2	R^2_{adj}	F_{chg}	ΔR^2	p	df_1	df_2
1: Demographics	.180	.032	.020	2.653	.032	**	9	715
2: Institutional Context	.219	.048	.019	.959	.016	*	12	703
3: Experiences	.333	.111	.081	16.569	.063	***	3	700
4: Campus Involvement	.416	.173	.130	4.328	.062	***	12	688

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

Table 14 displays all of the predictors in the final regression model for all Asian Indian American students. Unstandardized beta coefficients in the final model indicated that no institutional context variables significantly related to sense of belonging. In addition, when the remaining independent variables were held at the same value or are fixed, two experiences with diversity and campus climate variables were significantly correlated with sense of belonging. These variables included social cultural conversations (B = .097, β = .044, p = .027) and perceptions of campus climate (direct) (B = .138, β = .041, p = .001). This means while holding other predictors in the model constant, the mean score of sense of belonging increased .097 and .138 given every one-unit increase in social cultural conversations and perceptions of campus climate (direct) respectively.

Table 14

Regression Coefficients in the Final Model (Asian Indian Students)

Variables	*B*	SE *B*	*β*	*t*	*p*
Age (Ref: 24 and above) – Under 24	.093	.156	.023	.595	
Sexual Orientation (Ref: Heterosexual - LBGQ	-.030	.120	-.009	-.254	
Enrollment Status (Ref: Part Time) - Full Time	.099	.221	.017	.449	
Religion (Ref: Christian)					
Non-Christian	.138	.091	.081	1.515	
Unaffiliated	-.062	.108	-.031	-.578	
Citizenship/Generation (Ref: Foreign born, resident alien/ permanent resident)					
U.S.-born	-.198	.116	-.114	-1.709	
Foreign born with citizenship	-.065	.124	-.034	-.521	
Parental Education (Ref: below Bachelor's degree or don't know)					
Bachelor's degree	.008	.085	.005	.099	
Above Bachelor's degree	.007	.078	.004	.083	
Institutional Size (Ref: 1,000 - 4,999)					
5,000 – 9,999	.081	.160	.040	.503	
10,000 to 19,999	.199	.183	.119	1.092	
20,000 and above	.152	.216	.091	.703	
Institutional Control (Ref: Private) - Public	.002	.107	.001	.017	
Institution's Carnegie Classification (Ref: Baccalaureate)					
Masters	.015	.159	.008	.094	
Doctoral/Research & Research (High Research Activity)	-.073	.185	-.041	-.395	
Research (Very High Research Activity)	.007	.215	.004	.033	
Institution's Selectivity (Ref: Unclassified & Less Competitive & Competitive)					
Very Competitive	-.011	.102	-.007	-.111	
Highly Competitive	-.121	.110	-.063	-1.097	
Most Competitive	-.135	.133	-.075	-1.014	
Institutional Affiliation (Ref: Secular) - Religious	.024	.100	.014	.234	
Institution Setting (Ref: City) – Suburb & Town	.120	.083	.061	1.458	
Social Cultural Conversations	.097	.044	.090	2.214	*
Perceptions of Campus Climate (Indirect)	.033	.042	.039	.780	
Perceptions of Campus Climate (Direct)	.138	.041	.166	3.364	**
On-campus Employment (Ref: No) - Yes	.052	.070	.028	.742	
Living Status (Ref: Off-campus with family)					
Other off-campus home, apartment, or room	.136	.100	.070	1.361	
College/university residence hall	.203	.087	.125	2.318	*
Other on-campus housing	.171	.119	.062	1.433	
Instructor& Student Affairs Staff Mentorship	.136	.034	.163	4.014	***
Peer Mentorship	.018	.027	.027	.665	
N of Academic-based Experiences Engaged	.022	.023	.041	.956	
N of Organization/Group Involved	-.006	.011	-.023	-.492	
Level of College Organization Involvement	.048	.028	.079	1.689	
Level of Off-campus Org. Involvement	-.028	.024	-.048	-1.187	
Level of Civic Engagement	.097	.045	.103	2.143	*
Level of Racial/Ethnic Groups Involvement	-.033	.032	-.043	-1.046	
Constant	2.038	.324		6.283	***

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

Three campus variables were significantly correlated with sense of belonging when the remaining independent variables were held constant. These variables included living in college or university residence hall (B = .203, β = .087, p = .021), instructor and student affairs staff mentorship (B = .136, β = .034, p < .001), and level of civic engagement (B = .097, β = .045, p = .032). Alternatively stated, while holding other predictors in the model constant, the mean score of sense of belonging increased .136 and .097 given every one-unit increase in instructor and student affairs staff mentorship and level of civic engagement correspondingly. In addition, on average, Asian Indian college students who lived in college/university residence hall reported 0.2 points higher in their perception of sense of belonging compared to those who lived off-campus with family. Standardized beta coefficients of the five significant variables discussed above suggested that living in college or university residence hall had the strongest correlation with sense of belonging.

Chinese American Students

Regression results indicated that the overall model significantly predicted sense of belonging for Chinese American students, R^2 = .231, R^2_{adj}= .207, F (36, 1147) = 9.584, p <.001. This model accounted for 23.1% of variance in Chinese American college students' sense of belonging. A summary of the regression model is presented in Table 15. The first block of regression model included students' demographics and explained an initial 4.1% of the variance (F_{chg} = 5.565, p < .001). Next, institutional context variables contributed an additional 1.3% to the variation in sense of belonging scores (F_{chg} = 1.348, p < .001). After that, experience with diversity and campus climate variables accounted for 7.5% variance (F_{chg} = 33.380, p < .001). Lastly, the final block, campus involvement variables, added 10.2% to the overall variance explained by the model (F_{chg} = 12.673, p < .001).

Table 15

*Model Summary for Sense of Belonging (Chinese American Students) (*N=*1184)*

Blocks	R	R^2	R^2_{adj}	F_{chg}	ΔR^2	p	df_1	df_2
1: Demographics	.202	.041	.034	5.565	.041	***	9	1174
2: Institutional Context	.233	.054	.037	1.348	.013	***	12	1162
3: Experiences	.360	.129	.111	33.380	.075	***	3	1159
4: Campus Involvement	.481	.231	.207	12.673	.102	***	12	1147

Notes. *** $p < .001$.

Table 16 presents all of the predictors in the final regression model for all Chinese American students. Unstandardized beta coefficients in the final model indicated that no institutional context variables significantly correlated to sense of belonging. In addition, when the remaining independent variables were held at the same value or are fixed, all three experiences with diversity and campus climate variables were significantly correlated with sense of belonging. These variables included social cultural conversations ($B = .075$, $\beta = .031$, $p = .015$), perceptions of campus climate (indirect) ($B = .107$, $\beta = .032$, $p = .001$), and perceptions of campus climate (direct) ($B = .105$, $\beta = .029$, $p < .001$). Explaining more clearly, while holding other predictors in the model constant, the mean score of sense of belonging increased .075, .107, and .105 given every one-unit increase in social cultural conversations, perceptions of campus climate (indirect), and perceptions of campus climate (direct) respectively.

Table 16

Regression Coefficients for Final Model (Chinese American Students)

Variables	*B*	SE *B*	*β*	*t*	*p*
Age (Ref: 24 and above) – Under 24	-.009	.090	-.003	-.094	
Sexual Orientation (Ref: Heterosexual - LBGQ	-.195	.075	-.070	-2.612	**
Enrollment Status (Ref: Part Time) - Full Time	.332	.120	.076	2.763	**
Religion (Ref: Christian)					
Non-Christian	-.041	.082	-.015	-.498	
Unaffiliated	-.132	.049	-.082	-2.677	**
Citizenship/Generation (Ref: Foreign born, resident alien/ permanent resident)					
U.S.-born	-.240	.069	-.152	-3.463	**
Foreign born with citizenship	-.143	.076	-.084	-1.894	
Parental Education (Ref: below Bachelor's degree or don't know)					
Bachelor's degree	-.012	.060	-.006	-.210	
Above Bachelor's degree	-.025	.049	-.016	-.517	
Institutional Size (Ref: 1,000 - 4,999)					
5,000 – 9,999	-.130	.093	-.070	-1.398	
10,000 to 19,999	-.045	.102	-.027	-.439	
20,000 and above	.067	.125	.042	.539	
Institutional Control (Ref: Private) - Public	.133	.073	.086	1.833	
Institution's Carnegie Classification (Ref: Baccalaureate)					
Masters	-.082	.106	-.051	-.776	
Doctoral/Research & Research (High Research Activity)	-.001	.122	-.001	-.008	
Research (Very High Research Activity)	-.154	.136	-.097	-1.127	
Institution's Selectivity (Ref: Unclassified & Less Competitive & Competitive)					
Very Competitive	.084	.072	.046	1.159	
Highly Competitive	.090	.073	.051	1.231	
Most Competitive	.116	.094	.069	1.236	
Institutional Affiliation (Ref: Secular) - Religious	.059	.067	.034	.883	
Institution Setting (Ref: City) – Suburb & Town	-.035	.055	-.020	-.639	
Social Cultural Conversations	.075	.031	.071	2.429	*
Perceptions of Campus Climate (Indirect)	.107	.032	.123	3.353	**
Perceptions of Campus Climate (Direct)	.105	.029	.131	3.592	***
On-campus Employment (Ref: No) - Yes	-.061	.046	-.036	-1.321	
Living Status (Ref: Off-campus with family)					
Other off-campus home, apartment, or room	-.032	.070	-.017	-.454	
College/university residence hall	.151	.068	.097	2.216	*
Other on-campus housing	.130	.098	.042	1.321	
Instructor& Student Affairs Staff Mentorship	.064	.024	.080	2.630	**
Peer Mentorship	.033	.019	.053	1.778	
N of Academic-based Experiences Engaged	-.008	.016	-.015	-.515	
N of Organization/Group Involved	.011	.008	.043	1.323	
Level of College Organization Involvement	.101	.020	.178	5.134	***
Level of Off-campus Org. Involvement	-.007	.019	-.010	-.350	
Level of Civic Engagement	.170	.033	.175	5.207	***
Level of Racial/Ethnic Groups Involvement	-.075	.026	-.080	-2.820	**
Constant	2.001	.200		9.994	***

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

Finally, five campus variables were significantly correlated with sense of belonging when the remaining independent variables were held constant. These variables included living in college or university residence hall (B = .151, β = .068, p = .027), instructor and student affairs staff mentorship (B = .064, β = .024, p = .009), level of college organization involvement (B = .101, β = .020, p < .001), level of civic engagement (B = .170, β = .033, p < .001), and level of racial and ethnic group involvement (B = -.075, β = .026, p = .005). Alternatively stated, while holding other predictors in the model constant, the mean score of sense of belonging increased .064, .101, and .170 given every one-unit increase in instructor and student affairs staff mentorship, level of college organization involvement, and level of civic engagement correspondingly. Additionally, compared to those who lived off-campus with family, Chinese American college students who lived in college or university residence hall reported 0.151 points higher in their level of sense of belonging on average. Furthermore, the variable level of racial/ethnic group involvement was negatively correlated with sense of belonging on campus. When holding other predictors in the model constant, the mean score of sense of belonging decreased .075 with every one-unit increase in level of racial and ethnic group involvement. Standardized beta coefficients of the eight significant variables discussed above suggested that living in college or university residence hall had the strongest correlation with sense of belonging.

Filipino American Students

Regression results indicated that the overall model significantly predicted sense of belonging for Filipino American students, R^2 = .283, R^2_{adj} = .227, F (36, 465) = 5.090, p <.001. This model accounted for 22.7% of variance in sense of belonging. A summary of the regression model is presented in Table 17. The first block of regression model included students'

demographics and explained an initial 5.3% of the variance (F_{chg} = 3.074, p = .001). Next, institutional context variables contributed an additional 3.1% to the variation in sense of belonging scores (F_{chg} = 1.339, p = .003). After that, experience with diversity and campus climate variables accounted for 11.6% variance (F_{chg} = 23.166, p < .001). Lastly, the final block, campus involvement variables, added 8.2% to the overall variance explained by the model (F_{chg} = 4.444, p < .001).

Table 17

*Model Summary for Sense of Belonging (Filipino American Students) (*N=*502)*

Blocks	R	R^2	R^2_{adj}	F_{chg}	ΔR^2	p	df_1	df_2
1: Demographics	.231	.053	.036	3.074	.053	**	9	492
2: Institutional Context	.290	.084	.044	1.339	.031	**	12	480
3: Experiences	.448	.200	.160	23.166	.116	***	3	477
4: Campus Involvement	.532	.283	.227	4.444	.082	***	12	465

Notes. ** p < .01. *** p < .001.

Table 18 shows all of the predictors in the final regression model for all Filipino American students. Unstandardized beta coefficients in the final model indicated that no institutional context variables significantly related to sense of belonging. In addition, when the remaining independent variables were held at the same value or are fixed, two experiences with diversity and campus climate variables were significantly correlated with sense of belonging. These variables included social cultural conversations (B = .198, β = .053, p < .001) and perceptions of campus climate (direct) (B = .212, β = .050, p < .001). Explaining more clearly, while holding other predictors in the model constant, the mean score of sense of belonging

increased .198 and .212 given every one-unit increase in social cultural conversations and perceptions of campus climate (direct) respectively.

When the remaining independent variables were held at the same value or are fixed, another three campus variables were significantly and positively correlated with sense of belonging. These variables included instructor and student affairs staff mentorship (B = .083, β = .041, p = .044), number of type of academic-based experiences engaged (B = -.066, β = .030, p = .027), and level of civic engagement (B = .162, β = .058, p = .006). This means while holding other predictors in the model constant, the mean score of sense of belonging increased .083, and .162 given every one-unit increase in instructor and student affairs staff mentorship and level of civic engagement correspondingly. However, the mean score of sense of belonging decreased .066 with every one-unit increase in the number of types of academic-based experiences engaged. Standardized beta coefficients of the five significant variables discussed above suggested that level of civic engagement had the strongest correlation with sense of belonging.

Table 18

Regression Coefficients for Final Model (Filipino American Students)

Variables	*B*	SE *B*	*β*	*t*	*p*
Age (Ref: 24 and above) – Under 24	-.347	.138	-.115	-2.511	*
Sexual Orientation (Ref: Heterosexual - LBGQ	.065	.119	.023	.552	
Enrollment Status (Ref: Part Time) - Full Time	.387	.180	.094	2.149	*
Religion (Ref: Christian)					
Non-Christian	-.604	.458	-.054	-1.318	
Unaffiliated	-.283	.102	-.117	-2.788	**
Citizenship/Generation (Ref: Foreign born, resident alien/ permanent resident)					
U.S.-born	-.065	.131	-.034	-.495	
Foreign born with citizenship	-.175	.146	-.084	-1.201	
Parental Education (Ref: below Bachelor's degree or don't know)					
Bachelor's degree	-.010	.087	-.006	-.116	
Above Bachelor's degree	.051	.109	.024	.466	
Institutional Size (Ref: 1,000 - 4,999)					
5,000 – 9,999	-.062	.124	-.032	-.500	
10,000 to 19,999	-.176	.167	-.080	-1.056	
20,000 and above	-.007	.182	-.004	-.037	
Institutional Control (Ref: Private) - Public	.094	.182	.054	.513	
Institution's Carnegie Classification (Ref: Baccalaureate)					
Masters	.214	.154	.124	1.387	
Doctoral/Research & Research (High Research Activity)	.325	.194	.164	1.675	
Research (Very High Research Activity)	.257	.220	.108	1.168	
Institution's Selectivity (Ref: Unclassified & Less Competitive & Competitive)					
Very Competitive	-.069	.108	-.039	-.643	
Highly Competitive	-.040	.132	-.017	-.307	
Most Competitive	.218	.220	.063	.991	
Institutional Affiliation (Ref: Secular) - Religious	.163	.160	.093	1.017	
Institution Setting (Ref: City) – Suburb & Town	.193	.111	.079	1.738	
Social Cultural Conversations	.198	.053	.174	3.721	***
Perceptions of Campus Climate (Indirect)	-.009	.052	-.010	-.172	
Perceptions of Campus Climate (Direct)	.212	.050	.252	4.240	***
On-campus Employment (Ref: No) - Yes	.163	.084	.087	1.940	
Living Status (Ref: Off-campus with family)					
Other off-campus home, apartment, or room	.140	.104	.066	1.337	
College/university residence hall	.126	.095	.071	1.325	
Other on-campus housing	.038	.160	.011	.235	
Instructor& Student Affairs Staff Mentorship	.083	.041	.097	2.024	*
Peer Mentorship	.031	.034	.043	.931	
N of Academic-based Experiences Engaged	-.066	.030	-.103	-2.225	*
N of Organization/Group Involved	.004	.016	.012	.238	
Level of College Organization Involvement	.044	.035	.071	1.232	
Level of Off-campus Org. Involvement	.041	.028	.063	1.438	
Level of Civic Engagement	.162	.058	.158	2.771	**
Level of Racial/Ethnic Groups Involvement	.008	.039	.010	.212	
Constant	1.743	.325		5.364	***

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

Korean American Students

Regression results indicated that the overall model significantly predicted sense of belonging for Korean American students, $R^2 = .235$, $R^2_{adj} = .188$, $F(36, 581) = 4.959$, $p < .001$. This model accounted for 23.5% of variance in sense of belonging. A summary of the regression model is presented in Table 19. The first block of regression model included students' demographics and explained an initial 3% of the variance ($F_{chg} = 2.079$, $p = .029$). Next, institutional context contributed an additional .7% to the variation in sense of belonging scores ($F_{chg} = .383$, $p = .344$). After that, experience with diversity and campus climate variables accounted for 9.2% variance ($F_{chg} = 20.815$, $p < .001$). Lastly, the final block, campus involvement variables, added 10.6% to the overall variance explained by the model ($F_{chg} = 6.712$, $p < .001$).

Table 19

*Model Summary for Sense of Belonging (Korean American Students) (*N*=618)*

Blocks	R	R^2	R^2_{adj}	F_{chg}	ΔR^2	p	df_1	df_2
1: Demographics	.173	.030	.015	2.079	.030	*	9	608
2: Institutional Context	.193	.037	.003	.383	.007		12	596
3: Experiences	.359	.129	.094	20.815	.092	***	3	593
4: Campus Involvement	.485	.235	.188	6.712	.106	***	12	581

Notes. * $p < .05$. *** $p < .001$.

Table 20 exhibits all of the predictors in the final regression model for all Korean American students. Unstandardized beta coefficients in the final model indicated that no institutional context variables significantly correlated to sense of belonging. In addition, when

the remaining independent variables were held at the same value or are fixed, all three experiences with diversity and campus climate variables were significantly correlated with sense of belonging. These variables included social cultural conversations ($B = .103$, $\beta = .046$, $p = .024$), perceptions of campus climate (indirect) ($B = .149$, $\beta = .047$, $p = .002$), and perceptions of campus climate (direct) ($B = .089$, $\beta = .043$, $p = .038$). Explaining more clearly, while holding other predictors in the model constant, the mean score of sense of belonging increased .103, .149, and .089 given every one-unit increase in social cultural conversations, perceptions of campus climate (indirect), and perceptions of campus climate (direct) respectively.

When the remaining independent variables were held at the same value or are fixed, another three campus variables were significantly and positively correlated with sense of belonging. These variables included peer mentorship ($B = .085$, $\beta = .028$, $p = .002$), level of college organization involvement ($B = .117$, $\beta = .030$, $p < .001$), and level of civic engagement ($B = .166$, $\beta = .047$, $p < .001$). This means while holding other predictors in the model constant, the mean score of sense of belonging increased .085, .117, and .166 given every one-unit increase in peer mentorship, level of college organization involvement, and level of civic engagement correspondingly. Standardized beta coefficients of the six significant variables discussed above suggested that two variables, perceptions of campus climate (indirect) and level of civic engagement, had the strongest correlation with sense of belonging.

Table 20

Regression Coefficients for Final Model (Korean American Students)

Variables	*B*	SE *B*	*β*	*t*	*p*
Age (Ref: 24 and above) – Under 24	-.138	.120	-.048	-1.149	
Sexual Orientation (Ref: Heterosexual - LBGQ	-.429	.120	-.135	-3.565	***
Enrollment Status (Ref: Part Time) - Full Time	.066	.149	.017	.445	
Religion (Ref: Christian)					
Non-Christian	-.091	.173	-.020	-.525	
Unaffiliated	-.050	.071	-.028	-.699	
Citizenship/Generation (Ref: Foreign born, resident alien/ permanent resident)					
U.S.-born	-.080	.082	-.049	-.980	
Foreign born with citizenship	8.963E-5	.094	.000	.001	
Parental Education (Ref: below Bachelor's degree or don't know)					
Bachelor's degree	-.035	.078	-.020	-.452	
Above Bachelor's degree	-.011	.075	-.007	-.152	
Institutional Size (Ref: 1,000 - 4,999)					
5,000 – 9,999	.061	.151	.032	.401	
10,000 to 19,999	.071	.162	.039	.436	
20,000 and above	.104	.177	.063	.588	
Institutional Control (Ref: Private) - Public	.072	.107	.044	.671	
Institution's Carnegie Classification (Ref: Baccalaureate)					
Masters	-.019	.167	-.011	-.116	
Doctoral/Research & Research (High Research Activity)	-.053	.188	-.025	-.282	
Research (Very High Research Activity)	-.021	.202	-.013	-.104	
Institution's Selectivity (Ref: Unclassified & Less Competitive & Competitive)					
Very Competitive	-.110	.108	-.059	-1.017	
Highly Competitive	.004	.116	.002	.031	
Most Competitive	-.035	.146	-.021	-.241	
Institutional Affiliation (Ref: Secular) - Religious	.112	.100	.063	1.119	
Institution Setting (Ref: City) – Suburb & Town	-.136	.080	-.075	-1.691	
Social Cultural Conversations	.103	.046	.097	2.259	*
Perceptions of Campus Climate (Indirect)	.149	.047	.163	3.150	**
Perceptions of Campus Climate (Direct)	.089	.043	.108	2.081	*
On-campus Employment (Ref: No) - Yes	.001	.069	.000	.011	
Living Status (Ref: Off-campus with family)					
Other off-campus home, apartment, or room	.041	.107	.022	.389	
College/university residence hall	.151	.101	.093	1.492	
Other on-campus housing	.111	.134	.041	.825	
Instructor& Student Affairs Staff Mentorship	.021	.036	.025	.578	
Peer Mentorship	.085	.028	.127	3.045	**
N of Academic-based Experiences Engaged	.041	.026	.069	1.580	
N of Organization/Group Involved	-.013	.012	-.052	-1.129	
Level of College Organization Involvement	.117	.030	.191	3.923	***
Level of Off-campus Org. Involvement	.020	.023	.036	.864	
Level of Civic Engagement	.166	.047	.170	3.519	***
Level of Racial/Ethnic Groups Involvement	-.026	.037	-.029	-.696	
Constant	1.883	.273		6.908	***

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

Vietnamese American Students

Regression results indicated that the overall model significantly predicted sense of belonging for Vietnamese American students, $R^2 = .175$, $R^2_{adj} = .102$, $F\ (36, 405) = 2.386$, $p < .001$. This model accounted for 17.5% of variance in sense of belonging. A summary of the regression model is presented in Table 21. The first block of regression model included students' demographics and explained an initial 1.3% of the variance ($F_{chg} = .630$, $p = .772$). Next, institutional context contributed an additional 2.2% to the variation in sense of belonging scores ($F_{chg} = .780$, $p = .022$). After that, experience with diversity and campus climate variables accounted for 4.2% variance ($F_{chg} = 6.314$, $p = .084$). Lastly, the final block, campus involvement variables, added 9.9% to the overall variance explained by the model ($F_{chg} = 4.032$, $p < .001$).

Table 22 presents all of the predictors in the final regression model for all Vietnamese American students. Unstandardized beta coefficients in the final model indicated that no institutional context variables significantly correlated to sense of belonging. In addition, when the remaining independent variables were held at the same value or are fixed, the variable perceptions of campus climate (direct) was significantly correlated with sense of belonging ($B = .124$, $\beta = .052$, $p = .018$). This means while holding other predictors in the model constant, the mean score of sense of belonging increased .124 given every one-unit increase in perceptions of campus climate (direct).

Table 21

*Model Summary for Sense of Belonging (Vietnamese American Students) (*N*=442)*

Blocks	R	R^2	R^2_{adj}	F_{chg}	ΔR^2	p	df_1	df_2
1: Demographics	.114	.013	-.008	.630	.013		9	432
2: Institutional Context	.186	.034	-.014	.780	.022		12	420
3: Experiences	.276	.076	.023	6.314	.042		3	417
4: Campus Involvement	.418	.175	.102	4.032	.099	***	12	405

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

When the remaining independent variables were held constant, three campus involvement variables were significantly correlated with sense of belonging. These variables included living in other off-campus home, apartment, or room (B = -.273, β = .107, p = .011), instructor and student affairs staff mentorship (B = .137, β = .043, p = .002), and level of college organization involvement (B = .092, β = .037, p = .014). In other words, the variable living in other off-campus home, apartment, or room was negatively related to Vietnamese American college students' sense of belonging on campus, compared to living off-campus with family. When holding all other variables constant, Vietnamese American college students who lived in other off-campus home, apartment, or room without family reported .273 points lower on sense of belonging than those who lived in lived off-campus with family. Additionally, while holding other predictors in the model constant, the mean score of sense of belonging increased .137 and .092 points given every one-unit increase in instructor and student affairs staff mentorship and level of college organization involvement respectively. Standardized beta coefficients of the four significant variables discussed above suggested that living in other off-campus home, apartment, or room without family had the strongest correlation with sense of belonging.

Table 22

Regression Coefficients for Final Model (Vietnamese American Students)

Variables	*B*	SE *B*	*β*	*t*	*p*
Age (Ref: 24 and above) – Under 24	-.027	.119	-.012	-.229	
Sexual Orientation (Ref: Heterosexual - LBGQ	.024	.139	.009	.174	
Enrollment Status (Ref: Part Time) - Full Time	-.028	.166	-.008	-.168	
Religion (Ref: Christian)					
Non-Christian	.007	.095	.004	.069	
Unaffiliated	-.096	.090	-.057	-1.062	
Citizenship/Generation (Ref: Foreign born, resident alien/ permanent resident)					
U.S.-born	-.234	.169	-.138	-1.385	
Foreign born with citizenship	-.179	.175	-.100	-1.024	
Parental Education (Ref: below Bachelor's degree or don't know)					
Bachelor's degree	.099	.100	.049	.990	
Above Bachelor's degree	-.001	.120	.000	-.008	
Institutional Size (Ref: 1,000 - 4,999)					
5,000 – 9,999	-.195	.140	-.100	-1.394	
10,000 to 19,999	-.079	.171	-.041	-.462	
20,000 and above	-.232	.193	-.151	-1.206	
Institutional Control (Ref: Private) - Public	.164	.170	.103	.963	
Institution's Carnegie Classification (Ref: Baccalaureate)					
Masters	-.119	.196	-.077	-.605	
Doctoral/Research & Research (High Research Activity)	.020	.222	.010	.091	
Research (Very High Research Activity)	.094	.218	.056	.433	
Institution's Selectivity (Ref: Unclassified & Less Competitive & Competitive)					
Very Competitive	.044	.108	.026	.404	
Highly Competitive	-.079	.125	-.042	-.631	
Most Competitive	-.060	.177	-.025	-.339	
Institutional Affiliation (Ref: Secular) - Religious	.072	.151	.042	.478	
Institution Setting (Ref: City) – Suburb & Town	-.038	.111	-.019	-.341	
Social Cultural Conversations	.048	.055	.048	.881	
Perceptions of Campus Climate (Indirect)	.007	.054	.009	.134	
Perceptions of Campus Climate (Direct)	.124	.052	.167	2.382	*
On-campus Employment (Ref: No) - Yes	.078	.091	.045	.859	
Living Status (Ref: Off-campus with family)					
Other off-campus home, apartment, or room	-.273	.107	-.149	-2.553	*
College/university residence hall	-.048	.103	-.028	-.463	
Other on-campus housing	-.092	.149	-.032	-.619	
Instructor& Student Affairs Staff Mentorship	.137	.043	.175	3.185	**
Peer Mentorship	.015	.033	.024	.445	
N of Academic-based Experiences Engaged	.011	.029	.020	.385	
N of Organization/Group Involved	.023	.017	.082	1.347	
Level of College Organization Involvement	.092	.037	.163	2.465	*
Level of Off-campus Org. Involvement	.041	.032	.069	1.283	
Level of Civic Engagement	-.031	.060	-.035	-.524	
Level of Racial/Ethnic Groups Involvement	-.008	.044	-.010	-.185	
Constant	2.892	.357		8.105	***

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

Multi-Racial Asian American Students

Regression results indicated that the overall model significantly predicted sense of belonging for Multi-Racial Asian American students, $R^2 = .241$, $R^2_{adj} = .224$, F (36, 1673) = 14.727, $p < .001$. This model accounted for 24.1% of variance in Sense of Belonging. A summary of the regression model is presented in Table 23.

Table 23

*Model Summary for Sense of Belonging (Multi-Racial Asian American Students) (*N*=1710)*

Blocks	R	R^2	R^2_{adj}	F_{chg}	ΔR^2	p	df_1	df_2
1: Demographics	.209	.044	.039	8.660	.044	***	9	1700
2: Institutional Context	.250	.063	.051	2.822	.019	***	12	1688
3: Experiences	.389	.151	.139	58.585	.089	***	3	1685
4: Campus Involvement	.491	.241	.224	16.426	.089	***	12	1673

Notes. *** $p < .001$.

The first block of regression model included students' demographics and explained an initial 4.4% of the variance ($F_{chg} = 8.660$, $p < .001$). Next, institutional context variables contributed an additional 1.9% to the variation in sense of belonging scores ($F_{chg} = 2.822$, $p < .001$). After that, experience with diversity and campus climate variables accounted for 8.9% variance ($F_{chg} = 58.585$, $p < .001$). Lastly, the final block, campus involvement variables, also added 8.9% to the overall variance explained by the model ($F_{chg} = 16.426$, $p < .001$).

Table 24 presents all of the predictors in the final regression model for all Multi-Racial Asian American students. Unstandardized beta coefficients in the final model indicated that after controlling for student characteristics, when the remaining independent variables were held at the same value or are fixed, the reported sense of belonging level from students whose institution's

selectivity being highly competitive was 0.156 points significantly higher than those enrolled in institution with selectivity being unclassified or less competitive or competitive.

In addition, when the remaining independent variables were held at the same value or are fixed, two experiences with diversity and campus climate variables were significantly correlated with sense of belonging. These two variables included social cultural conversations ($B = .101$, $\beta = .025$, $p < .001$) and perceptions of campus climate (indirect) ($B = .195$, $\beta = .027$, $p < .001$). Explaining more clearly, while holding other predictors in the model constant, the mean score of sense of belonging increased .101 and .195 given every one-unit increase in social cultural conversations and perceptions of campus climate (indirect) respectively.

Finally, five campus variables were significantly correlated with sense of belonging when the remaining independent variables were held constant. These variables included living in college or university residence hall ($B = .173$, $\beta = .058$, $p = .003$), instructor and student affairs staff mentorship ($B = .096$, $\beta = .020$, $p < .001$), peer mentorship ($B = .033$, $\beta = .015$, $p = .031$), number of organization or group involved ($B = .016$, $\beta = .008$, $p = .049$), level of college organization involvement ($B = .082$, $\beta = .016$, $p < .001$), and level of civic engagement ($B = .120$, $\beta = .029$, $p < .001$). Alternatively stated, while holding other predictors in the model constant, the mean score of sense of belonging increased .096, .033, .016, .082, and .120 given every one-unit increase in instructor and student affairs staff mentorship, peer mentorship, number of organization or group involved, level of college organization involvement, and level of civic engagement correspondingly. Additionally, compared to those who lived off-campus with family, Multi-Racial Asian American students who lived in college/university residence hall reported .173 points higher on sense of belonging on average. Standardized beta coefficients of the nine significant variables discussed above suggested that two variables, institution's

selectivity being highly competitive and living in college or university residence hall had the strongest correlation with sense of belonging.

Table 24

Regression Coefficients for Final Model (Multi-Racial Asian American Students)

Variables	*B*	SE *B*	*β*	*t*	*p*
Age (Ref: 24 and above) – Under 24	-.075	.068	-.026	-1.098	
Sexual Orientation (Ref: Heterosexual - LBGQ	-.238	.056	-.094	-4.226	***
Enrollment Status (Ref: Part Time) - Full Time	-.001	.107	.000	-.008	
Religion (Ref: Christian)					
Non-Christian	-.137	.069	-.045	-1.998	*
Unaffiliated	-.160	.039	-.097	-4.135	***
Citizenship/Generation (Ref: Foreign born, resident alien/ permanent resident)					
U.S.-born	-.246	.177	-.079	-1.389	
Foreign born with citizenship	-.333	.188	-.099	-1.769	
Parental Education (Ref: below Bachelor's degree or don't know)					
Bachelor's degree	.006	.046	.004	.137	
Above Bachelor's degree	.051	.045	.031	1.130	
Institutional Size (Ref: 1,000 - 4,999)					
5,000 – 9,999	-.002	.062	-.001	-.029	
10,000 to 19,999	.010	.072	.005	.132	
20,000 and above	.067	.093	.038	.722	
Institutional Control (Ref: Private) - Public	.073	.067	.045	1.080	
Institution's Carnegie Classification (Ref: Baccalaureate)					
Masters	-.009	.076	-.005	-.117	
Doctoral/Research & Research (High Research Activity)	-.097	.091	-.046	-1.064	
Research (Very High Research Activity)	-.079	.100	-.044	-.797	
Institution's Selectivity (Ref: Unclassified & Less Competitive & Competitive)					
Very Competitive	.108	.053	.065	2.044	*
Highly Competitive	.156	.058	.081	2.710	**
Most Competitive	.132	.079	.060	1.686	
Institutional Affiliation (Ref: Secular) - Religious	.066	.063	.040	1.056	
Institution Setting (Ref: City) – Suburb & Town	.049	.045	.027	1.083	
Social Cultural Conversations	.101	.025	.097	4.004	***
Perceptions of Campus Climate (Indirect)	.195	.027	.227	7.331	***
Perceptions of Campus Climate (Direct)	.049	.026	.059	1.926	
On-campus Employment (Ref: No) - Yes	-.008	.040	-.005	-.198	
Living Status (Ref: Off-campus with family)					
Other off-campus home, apartment, or room	.109	.058	.062	1.891	
College/university residence hall	.173	.058	.106	2.998	**
Other on-campus housing	.071	.081	.024	.882	
Instructor& Student Affairs Staff Mentorship	.096	.020	.117	4.722	***
Peer Mentorship	.033	.015	.052	2.161	*
N of Academic-based Experiences Engaged	.000	.014	-.001	-.034	
N of Organization/Group Involved	.016	.008	.058	1.968	*
Level of College Organization Involvement	.082	.016	.142	5.130	***
Level of Off-campus Org. Involvement	-.028	.014	-.047	-1.947	
Level of Civic Engagement	.120	.029	.125	4.176	***
Level of Racial/Ethnic Groups Involvement	-.014	.025	-.013	-.539	
Constant	2.162	.240		9.024	***

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

Mono-Racial Multi-Ethnic Asian American Students

Regression results indicated that the overall model significantly predicted sense of belonging for Mono-Racial Multi-Ethnic Asian American Students, $R^2 = .353$, $R^2_{adj} = .291$, $F(36, 371) = 5.632$, $p < .001$. This model accounted for 35.3% of variance in Mono-Racial Multi-Ethnic Asian American students' sense of belonging. A summary of the regression model is presented in Table 25. The first block of regression model included students' demographics and explained an initial 3.2% of the variance ($F_{chg} = 1.448$, $p = .166$). Next, institutional context contributed an additional .9% to the variation in sense of belonging scores ($F_{chg} = .295$, $p = .75$). After that, experience with diversity and campus climate variables accounted for 16.4% variance ($F_{chg} = 26.254$, $p < .001$). Lastly, the final block, campus involvement variables, added 14.9% to the overall variance explained by the model ($F_{chg} = 7.134$, $p < .001$).

Table 25

Model Summary for Sense of Belonging (Mono-Racial Multi-Ethnic Asian American Students) (N=408)

Blocks	R	R^2	R^2_{adj}	F_{chg}	ΔR^2	p	df_1	df_2
1: Demographics	.178	.032	.010	1.448	.032		9	398
2: Institutional Context	.201	.041	-.012	.295	.009		12	386
3: Experiences	.452	.204	.154	26.254	.164	***	3	383
4: Campus Involvement	.594	.353	.291	7.134	.149	***	12	371

Notes. *** $p < .001$.

Table 26 exhibits all of the predictors in the final regression model for all Mono-Racial Multi-Ethnic Asian American students. Unstandardized beta coefficients in the final model indicated that no institutional context variables significantly correlated to sense of belonging.

When the remaining independent variables were held at the same value or are fixed, all three experiences with diversity and campus climate variables were significantly correlated with sense of belonging. These variables included social cultural conversations ($B = .119$, $\beta = .055$, $p = .031$), perceptions of campus climate (indirect) ($B = .112$, $\beta = .052$, $p = .032$), and perceptions of campus climate (direct) ($B = .248$, $\beta = .051$, $p < .001$). Explaining more clearly, while holding other predictors in the model constant, the mean score of sense of belonging increased .119, .112, and .248 given every one-unit increase in social cultural conversations, perceptions of campus climate (indirect), and perceptions of campus climate (direct) respectively.

When the remaining independent variables were held at the same value or are fixed, two campus variables were significantly and positively correlated with sense of belonging. These two variables included instructor and student affairs staff mentorship ($B = .143$, $\beta = .042$, $p = .001$) and level of college organization involvement ($B = .151$, $\beta = .034$, $p < .001$). This means while holding other predictors in the model constant, the mean score of sense of belonging increased .143 and .151 given every one-unit increase in instructor and student affairs staff mentorship and level of college organization involvement correspondingly. Standardized beta coefficients of the five significant variables discussed above suggested that the variable social cultural conversations had the strongest correlation with sense of belonging.

Table 26

Regression Coefficients for Final Model (Mono-Racial Multi-Ethnic Asian American Students)

Variables	*B*	SE *B*	*β*	*t*	*p*
Age (Ref: 24 and above) – Under 24	-.068	.162	-.020	-.421	
Sexual Orientation (Ref: Heterosexual - LBGQ	-.093	.158	-.027	-.591	
Enrollment Status (Ref: Part Time) - Full Time	-.498	.238	-.092	-2.095	*
Religion (Ref: Christian)					
Non-Christian	-.094	.103	-.046	-.911	
Unaffiliated	-.118	.084	-.069	-1.407	
Citizenship/Generation (Ref: Foreign born, resident alien/ permanent resident)					
U.S.-born	.138	.185	.058	.748	
Foreign born with citizenship	.377	.208	.138	1.808	
Parental Education (Ref: below Bachelor's degree or don't know)					
Bachelor's degree	-.034	.095	-.018	-.356	
Above Bachelor's degree	.023	.094	.013	.242	
Institutional Size (Ref: 1,000 - 4,999)					
5,000 – 9,999	-.064	.127	-.035	-.507	
10,000 to 19,999	-.018	.165	-.009	-.109	
20,000 and above	-.110	.190	-.061	-.576	
Institutional Control (Ref: Private) - Public	-.122	.166	-.073	-.736	
Institution's Carnegie Classification (Ref: Baccalaureate)					
Masters	-.043	.188	-.026	-.232	
Doctoral/Research & Research (High Research Activity)	-.033	.218	-.015	-.149	
Research (Very High Research Activity)	-.023	.233	-.012	-.098	
Institution's Selectivity (Ref: Unclassified & Less Competitive & Competitive)					
Very Competitive	.136	.122	.080	1.114	
Highly Competitive	.016	.131	.007	.119	
Most Competitive	-.136	.194	-.055	-.704	
Institutional Affiliation (Ref: Secular) - Religious	-.157	.144	-.092	-1.090	
Institution Setting (Ref: City) – Suburb & Town	.101	.115	.045	.882	
Social Cultural Conversations	.119	.055	.107	2.164	*
Perceptions of Campus Climate (Indirect)	.112	.052	.121	2.154	*
Perceptions of Campus Climate (Direct)	.248	.051	.277	4.910	***
On-campus Employment (Ref: No) - Yes	.088	.085	.048	1.042	
Living Status (Ref: Off-campus with family)					
Other off-campus home, apartment, or room	-.116	.111	-.061	-1.046	
College/university residence hall	-.117	.113	-.068	-1.035	
Other on-campus housing	.001	.154	.000	.007	
Instructor& Student Affairs Staff Mentorship	.143	.042	.170	3.412	**
Peer Mentorship	.050	.034	.073	1.485	
N of Academic-based Experiences Engaged	-.039	.028	-.067	-1.379	
N of Organization/Group Involved	.023	.016	.079	1.394	
Level of College Organization Involvement	.151	.034	.252	4.386	***
Level of Off-campus Org. Involvement	-.038	.032	-.057	-1.158	
Level of Civic Engagement	.091	.059	.093	1.554	
Level of Racial/Ethnic Groups Involvement	-.023	.040	-.029	-.573	
Constant	1.976	.420		4.707	***

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

Other Asian American Students

Regression results indicated that the overall model significantly predicted sense of belonging for Multi-Racial Asian American Students, $R^2 = .264$, $R^2_{adj} = .200$, $F\ (36, 418) = 4.156$, $p < .001$. This model accounted for 26.4% of variance in sense of belonging. A summary of the regression model is presented in Table 27.

Table 27

*Model Summary for Sense of Belonging (Other Asian American Students) (*N*=455)*

Blocks	R	R^2	R^2_{adj}	F_{chg}	ΔR^2	p	df_1	df_2
1: Demographics	.202	.041	.021	2.093	.041	*	9	445
2: Institutional Context	.268	.072	.027	1.207	.031	*	12	433
3: Experiences	.403	.163	.116	15.568	.091	***	3	430
4: Campus Involvement	.513	.264	.200	4.775	.101	***	12	418

Notes. * $p < .05$. *** $p < .001$.

The first block of regression model included students' demographics and explained an initial 4.1% of the variance ($F_{chg} = 2.093$, $p = .029$). Next, institutional context contributed an additional 3.1% to the variation in sense of belonging scores ($F_{chg} = 1.207$, $p = .047$). After that, experience with diversity and campus climate variables accounted for 9.1% variance ($F_{chg} = 15.568$, $p < .001$). Lastly, the final block, campus involvement variables, explained the greatest amount of variance which is 10.1% ($F_{chg} = 4.775$, $p < .001$).

Table 28 exhibits all of the predictors in the final regression model for all students in the Other Asian group. Unstandardized beta coefficients in the final model indicated that after controlling for student characteristics, when the remaining independent variables were held at the same value or are fixed, the reported sense of belonging level from students whose institution's

Carnegie classification being doctoral or research and research (high research activity) was 0.327 points significantly lower than those enrolled in institution with Carnegie classification being Baccalaureate.

One experience variable and three engagement variables significantly and positively correlated with sense of belonging scores. These variables include: perceptions of campus climate (direct) (B = .198, β = .048, p < .001), instructor and student affairs staff mentorship (B =.129, β = .040, p = .001), level of college organization involvement (B = .078, β = .034, p = 0.021), and level of civic engagement (B = .124, β = .060, p = .040). Specifically, while holding other predictors in the model constant, the mean score of sense of belonging increased .198, .129, .078, and .124 given every one-unit increase in perceptions of campus climate (direct), instructor& student affairs staff mentorship, level of college organization involvement, and level of civic engagement respectively. Standardized beta coefficients of the five significant variables discussed above suggested that the variable Carnegie classification being doctoral or research and research (high research activity) had the strongest correlation with sense of belonging.

Table 28

Regression Coefficients for Final Model (Other Asian American Students) (N= 487)

Variables	*B*	SE *B*	*β*	*t*	*p*
Age (Ref: 24 and above) – Under 24	-.088	.114	-.041	-.773	
Sexual Orientation (Ref: Heterosexual - LBGQ	-.006	.140	-.002	-.046	
Enrollment Status (Ref: Part Time) - Full Time	.184	.171	.051	1.078	
Religion (Ref: Christian)					
Non-Christian	-.060	.094	-.038	-.634	
Unaffiliated	-.129	.102	-.073	-1.263	
Citizenship/Generation (Ref: Foreign born, resident alien/ permanent resident)					
U.S.-born	-.236	.116	-.144	-2.028	*
Foreign born with citizenship	-.178	.122	-.098	-1.461	
Parental Education (Ref: below Bachelor's degree or don't know)					
Bachelor's degree	-.141	.097	-.068	-1.453	
Above Bachelor's degree	.046	.086	.028	.541	
Institutional Size (Ref: 1,000 - 4,999)					
5,000 – 9,999	-.022	.152	-.013	-.148	
10,000 to 19,999	.094	.181	.053	.519	
20,000 and above	-.007	.219	-.004	-.031	
Institutional Control (Ref: Private) - Public	.084	.137	.051	.609	
Institution's Carnegie Classification (Ref: Baccalaureate)					
Masters	-.179	.131	-.107	-1.369	
Doctoral/Research & Research (High Research Activity)	-.327	.165	-.166	-1.976	*
Research (Very High Research Activity)	-.128	.198	-.074	-.647	
Institution's Selectivity (Ref: Unclassified & Less Competitive & Competitive)					
Very Competitive	.024	.106	.012	.223	
Highly Competitive	-.144	.116	-.071	-1.235	
Most Competitive	-.201	.158	-.097	-1.277	
Institutional Affiliation (Ref: Secular) - Religious	.031	.137	.016	.223	
Institution Setting (Ref: City) – Suburb & Town	.067	.104	.034	.643	
Social Cultural Conversations	.089	.046	.090	1.925	
Perceptions of Campus Climate (Indirect)	.012	.054	.015	.232	
Perceptions of Campus Climate (Direct)	.198	.048	.263	4.081	***
On-campus Employment (Ref: No) - Yes	-.010	.079	-.006	-.125	
Living Status (Ref: Off-campus with family)					
Other off-campus home, apartment, or room	-.027	.109	-.014	-.248	
College/university residence hall	.030	.102	.018	.295	
Other on-campus housing	-.072	.166	-.021	-.433	
Instructor& Student Affairs Staff Mentorship	.129	.040	.164	3.214	**
Peer Mentorship	.035	.031	.053	1.116	
N of Academic-based Experiences Engaged	-.040	.029	-.070	-1.393	
N of Organization/Group Involved	.022	.013	.091	1.692	
Level of College Organization Involvement	.078	.034	.141	2.312	*
Level of Off-campus Org. Involvement	.013	.030	.021	.431	
Level of Civic Engagement	.124	.060	.130	2.063	*
Level of Racial/Ethnic Groups Involvement	-.027	.040	-.034	-.668	
Constant	2.462	.310		7.950	***

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

Summary Findings for Research Questions One and Two

Hierarchical multiple regression analysis results indicated that after controlling for student characteristics, compared to the average students in the sample irrespective of race/ethnicity, Korean American college students on average reported feeling less belonging on campus. Asian Indian American college students, on the other hand, reported higher level of sense of belonging on campus. The other ethnic groups' reported senses of belonging were not statistically different from the average level of the sample.

The results also suggested that after controlling for student characteristics, all institutional context variables, experiences with diversity and campus climate variables, and campus involvement variables significantly explained variance in sense of belonging to various degree. Compared to institutional context variables, campus involvement variables and experiences with diversity and campus climate variables had almost same higher predictive power for students' sense of belonging on campus. Campus involvement variables were slightly higher.

Regarding institutional context variables, for all Asian American students in the sample, only one variable, public institution, was positively and significantly related to sense of belonging. Three institutional context variables were negatively related to Asian American college students' sense of belonging. These three variables were institution with an enrollment size of 5,000 – 9,999, private institution, and institution's selectivity level being competitive.

All three experiences with diversity and campus climate variables were significantly related to sense of belonging. These variables included social cultural conversations, perceptions of campus climate (indirect), and perceptions of campus climate (direct). The relationship between sense of belonging and each of the three variables were positive.

Six campus variables were positively and significantly correlated with sense of belonging when the remaining independent variables were held constant. These variables included living in college or university residence hall, instructor and student affairs staff mentorship, peer mentorship, number of types of organization and group involved, level of college organization involvement, and level of civic engagement. On the other hand, three campus variables were negatively and significantly correlated with sense of belonging when the remaining independent variables were held constant. These variables included living off-campus with parent or guardian or other relative, living other off-campus home, apartment, or room, and level of racial or ethnic group involvement.

Standardized beta coefficients of the five significant variables discussed above suggested that perceptions of campus climate (direct) had the strongest correlation with sense of belonging. Level of college organization involvement had the second strongest relationship. The third were living in college or university residence hall.

Summary Findings for Research Question Three

The findings from the eight hierarchical regression models (each ethnic group had one model) indicated that compared to institutional context variables, campus involvement variables and experiences with diversity and campus climate variables had stronger predictive power for students' sense of belonging on campus. For Multi-Racial Asian American college students, campus involvement variables and experiences with diversity and campus climate variables had the same predictive power. Of the other seven groups, campus climate variables had the strongest predictive power in four groups. This pattern is similar to that of the entire Asian American college students in the sample.

The most significant experience variable across Asian subpopulations was students' direct perceptions of campus climate. This variable was returned as a statistically significant predictor in seven regression models, except for the model of Multi-Racial Asian American students. The relationships between direct perceptions of campus climate and sense of belonging were positive in the seven models. Of the seven models, this predictor was the most statistically significant predictor ($p < .001$) in four of them including models of Chinese, Filipinos, Mono-Racial Multi-Ethnic, and Other Asian American students.

The variable instructor and student affairs staff mentorship was also returned in seven regression models, except for the model of Korean American students. The relationships between instructor and student affairs staff mentorship and sense of belonging were positive in these seven models. It was statistically significant at the $p < .001$ level in two models (Asian Indians and Multi-Racial Asian Americans) and statistically significant at the $p < .01$ level in four models (Chinese, Vietnamese, Mono-Racial Multi-Ethnic, and Other Asian American students).

Three variables were returned in six regression models. The first one was the level of college organization involvement. It had a positive and significant relationship with sense of belonging for the following six ethnic groups: Chinese, Koreans, Vietnamese, Multi-Racial, Mono-Racial Multi-Ethnic, and Other Asian American students. It was statistically significant at the $p < .001$ level in four of the six models (Chinese, Koreans, Multi-Racial, and Mono-Racial Multi-Ethnic Asian American students). The second variable was participation level of civic engagement. It had a positive and significant relationship with sense of belonging for the following six ethnic groups: Asian Indians, Chinese, Filipinos, Koreans, Multi-Racial, and Other Asian American students. It was statistically significant at the $p < .001$ level in three of the six

models (Chinese, Koreans, and Multi-Racial Asian American students). The third variable was social cultural conversations. It had a positive and significant relationship with sense of belonging for the following six ethnic groups: Asian Indians, Chinese, Filipinos, Koreans, Multi-Racial, and Mono-Racial Multi-Ethnic Asian American students. It was statistically significant at the $p < .001$ level in two of the six models including models for Filipinos and Multi-Racial Asian American students.

The following variables were returned in at least two or more of the eight regression models: peer mentorship, living in college/university residence hall, number of types of academic-based experiences engaged, as well as indirect perceptions of campus climate. However, these variables differently related to students' self-reported sense of belonging.

Institutional context variables were returned in only two regression models: regression models for Multi-Racial Asian Americans and Other Asian Americans. For Multi-Racial Asian American college students, institution's selectivity being very competitive or highly competitive was positively and significantly related to sense of belonging. For Other Asian Americans, institution's Carnegie classification being doctoral/Research or research (high research activity) significantly but negatively related to sense of belonging compared to baccalaureate. In other words, for Other Asian American students, if they were in an institution with Carnegie classification being doctoral/Research or research (high research activity), their reported levels of sense of belonging were lower than those who were in an institution with Carnegie classification being Baccalaureate.

Regression models shows that when holding all other variables constant, the variable number of types of academic-based experiences engaged had positive relationship with sense of belonging for Multi-Racial Asian American college students, but negative relationship with

sense of belonging for Filipino American college students. In addition, for Vietnamese American students, the variable living in other off-campus home, apartment, or room negatively related to their sense of belonging on campus compared to living off-campus with family. Finally, for Chinese American students, as the level of racial/ethnic group involvement increased, the reported level of sense of belonging decreased.

CHAPTER V. DISCUSSION

The purpose of this quantitative study was to better understand the within-group heterogeneity among Asian American college students' sense of belonging on campus. More specifically, I examined how institutional context, campus involvement, and students' experiences with diversity and campus climate related to Asian American college students' sense of belonging after controlling for student characteristics. I also explored if there were differences in students' sense of belonging across Asian American student ethnic groups and if there were differences in the variables that significantly related to each ethnic group's sense of belonging on campus. Astin's (1993) widely accepted I-E-O college impact model served as the overarching conceptual framework for this study. My interest in the within-group heterogeneity among Asian American college students led me to use a critical quantitative paradigm to inform my study.

I used the 2015 Multi-Institutional Study of Leadership (MSL) data which included a large sample of Asian American college students. The literature review established that Asian American college students in general are less satisfied with their college experiences compared to their college counterparts, and there are many differences among ethnic groups within Asian Americans in terms of higher education access, postsecondary degree attainment, and college experience. Hierarchical multiple regression was conducted to examine if there is any difference in students' sense of belongs across Asian American student subpopulations and to understand how institutional context, campus involvement, and students' experiences with diversity and campus climate related to sense of belonging for Asian American college students in general and for each ethnic group.

In this chapter, I discuss if students' sense of belonging varied across Asian American student ethnic groups (Asian Indian, Chinese, Filipino, Japanese, Korean, Pakistani, Vietnamese,

Multi-Racial Asian, Mono-Racial Multi-Ethnic Asian, and Other Asian) after controlling for student characteristics. Then I discuss how institutional context, campus involvement, and students' experiences with diversity and campus climate were positively or negatively related to sense of belonging for Asian American college students in general. Differences in the variables that were significantly related to each ethnic group's sense of belonging on campus will be included in the discussion, too. I discuss the main findings alongside the previous literature. This study offers a number of implications for future research, policy, and practice.

Differences in Sense of Belonging across Asian American Ethnic Groups

This study found that Asian American college students' perception of sense of belonging varied across ethnicity. Among the ten ethnic groups (Chinese, Indian, Pakistani, Japanese, Korean, Filipino, Vietnamese, Other Asian, Multi-Racial, and Mono-Racial Multi-Ethnic), compared to the overall sense of belonging level in the sample irrespective of race/ethnicity, Korean American college students on average reported feeling less sense of belonging on campus. Asian Indian American college students, on the other hand, reported higher level of sense of belonging on campus on average, relative to the overall sense of belonging in the sample. In literature, students' sense of belonging is closely related to academic achievement in college. Both Asian Indian and Korean American students are in the high-performance group (CARE, 2011). However, Korean American students' sense of belonging was significantly lower than other ethnic groups in this study. I pose one possible explanation for this finding. Samura (2016) found that "when [Asian American college] students experienced a lower or decreased sense of belonging, they often engaged in one of three processes: remake themselves, reposition themselves, or remake space" academically and/or socially on campus (p. 140). These

processes "were attempts to achieve a better fit" (p. 148). It is possible that Korean students tend to choose to remake themselves, reposition themselves, or remake space academically.

The variables significantly related to each ethnic group's sense of belonging also varied. For example, of the eight ethnic groups analyzed (Asian Indian, Chinese, Filipino, Korean, Vietnamese, Multi-Racial Asian, Mono-Racial Multi-Ethnic Asian, and Other Asian), direct perceptions of campus climate significantly and positively related to sense of belonging for seven of them. The only exception was Multi-Racial Asian American students. In other words, Multi-Racial Asian American students' sense of belonging was not significantly related to their direct perceptions of campus climate. In the other seven groups, the variable, direct perceptions of campus climate, was the most statistically significant variable ($p < .001$) in four of them (Other Asian Americans, Mono-Racial Multi-Ethnic Asian Americans, Filipino Americans, and Chinese Americans). Another example is the variable, number of types of academic-based experiences engaged. While number of types of academic-based experiences engaged had a positive relationship with Multi-Racial Asian American college students' sense of belonging, it was negatively related to Filipino students' sense of belong, after controlling for other model variables.

It is not surprising to find that there were variations across ethnicity in terms of level of sense of belonging and variables significantly related to sense of belonging. Lim's (2015) study results suggested that sense of belonging was significantly different among Asian Indian, Chinese American, and Filipino American college students. Among these three groups, Asian Indian students had the highest sense of belonging and the differences compared to the other two groups were statically significant. Lim (2015) also found that the same factors did not relate to sense of belonging on the same level on one Asian American subpopulation as it did on another

Asian American group. For example, college organization involvement was statistically related to Chinese American, and Filipino American college students' sense of belonging, but the same variable was not significantly related to Asian Indian students' sense of belonging. Findings from this study and Lim's (2015) confirmed that Asian American college student population is not a homogenous group. When addressing issues related to this population's sense of belonging, understanding and responding to their respective needs is important.

Institutional Context

Institutional context in this study refers to what Astin (1993) called between-college characteristics. Some researchers have examined whether students' sense of belonging varied by institutional context (e.g., Johnson et al., 2007), but they only focused on very few institutional context variables. For example, Hurtado and Carter' (1997) study on Latino students only examined the relationship between institutional selectivity and sense of belonging, and they did not find a significant relationship. Johnson et al. (2007) also only explored the relationship between institutional selectivity and sense of belonging for first-year undergraduates from different racial/ethnic groups. They did not find a significant relationship between institutional selectivity and sense of belonging for all racial/ethnic groups. Samura (2013) examined if there was a difference in sense of belonging between West University and other Coastal University System campuses. She found that even though the Asian American student population in West University was one of the smallest among the Coastal University System campuses, Asian American students in West University reported a slightly higher sense of belonging than Asian American students at other Coastal University System campuses. The current study expanded on previous work and explored the relationship between sense of belonging and six institutional context factors including enrollment size, control (public or private), Carnegie classifications,

selectivity (from Barron's), affiliation (religious or secular), and setting (location of the institution).

In this study, affiliation and setting were not significantly correlated with sense of belonging on the overall level and on the individual ethnic group level. For the entire Asian American college student sample, compared to the overall level of sense of belonging, attending a public institution was positively and significantly related to sense of belonging, while attending a private institution was negatively and significantly related to sense of belonging. In addition, attending an institution with an enrollment size of 5,000 – 9,999 and the institution's selectivity level being competitive were also negatively and significantly related to sense of belonging.

On the individual ethnic group level, two ethnic groups' sense of belonging were related to institutional context variables. The first group was Multi-Racial Asian American college students. Regression analysis results indicated that an institution's selectivity being very competitive or highly competitive was positively and significantly related to Multi-Racial Asian American college students' sense of belonging. The findings on selectivity and sense of belonging is an important contribution to the literature on Asian American students and on minority students as well. The findings were based on a narrower focus on Asian American ethnic groups, which suggests that the findings from previous studies which treated Asian American students as one group, for example, Johnson et al.'s (2007) study, should be treated with caution. Future research is necessary to validate the relationship between selectivity and sense of belonging for Asian American college students.

The second group is "Other" Asian American college students. For Other Asian American students, if they were in an institution with Carnegie classification being doctoral/research or research (high research activity), their reported levels of sense of belonging

were lower than those who were in an institution with Carnegie classification being Baccalaureate. This could be the interaction result of student population characteristics and the general purpose of the institution. For students in the Other group, such as Bangladeshi, Bhutanese, Cambodian, Laotian, Nepalese, and Sri Lankan, their psychological and academic needs might be very different from those of other Asian Americans. The difference is caused by not only their disadvantaged socioeconomic and educational backgrounds, but also their immigration histories which begin with war. To accommodate their psychological and academic needs, in general, it is believed that positive interaction with faculty and student affairs staff can be helpful. According to the Yuhas and BrckaLorenz's (2017) analysis with the 2013- 2015 Faculty Survey of Student Engagement (FSSE) data, student-faculty interaction levels were the highest in Baccalaureate colleges (Arts & Sciences Focus) and Baccalaureate Colleges (Diverse Fields), compared to institutions in all other Carnegie Basic Classifications. Therefore, this finding is not surprising. Future qualitative studies that look at how Asian American college students experience sense of belonging differently in institutions with different Carnegie classifications can validate this result.

Experiences with Diversity and Campus Climate

Interacting with diverse others including peers, faculty, and staff on campus has been found to positively relate to sense of belonging in literature (e.g., Hurtado & Ponjuan, 2005; Maestas et al., 2007). For example, Hurtado and Ponjuan's (2005) study on Latino students found that Latino students who had positive interactions with diverse peers tended to report higher level of sense of belonging. Maestas et al.'s (2007) study on students' sense of belonging at a Hispanic-serving institution found that socializing with different racial/ethnic group members was a significant positive predictor on sense of belonging. Consistent with previous

literature, involvement in social and cultural conversations was significantly and positively related to sense of belonging for the entire Asian American student sample. This variable was also significantly and positively related to sense of belonging for six ethnic groups except for Other Asian Americans and Vietnamese Americans.

Experiences with campus climate in this study were operationalized as students' perceptions of the campus climate. General observed attitudes toward students from other racial/ethnic backgrounds than one's own could negatively affect perception of campus climate (Hurtado, Milem, Clayton-Pedersen, & Allen, 1998). That is to say, students' perceptions of campus climate might be affected by many things including situations that happened to them (i.e., perceptions from direct experiences) and things that happened to other people who they share certain identities such as minoritized racial/ethnic groups, economic status, language proficiency, and disability status, etc. (i.e., perceptions from indirect experiences). For example, Asian American students' perception of campus climate could be affected by how they were treated on campus. Furthermore, their perceptions of campus climate could also be affected by their observations of how other minoritized people on campus have been treated (i.e., perceptions from indirect experiences). Many studies indicate that both perceptions have a significant impact on students' sense of belonging (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; Hurtado & Carter, 1997; Hurtado & Ponjuan, 2005; Maramba & Museus, 2011; Museus, 2008). However, no studies were found to consider the difference between these two types of perceptions (perceptions from direct experiences and indirect experiences) and how they might relate to sense of belonging differently.

Using the MSL dataset, I was able to explore the relationship between sense of belonging and both direct perception and indirect perception of campus climate separately. Consistent with

previous literature, both direct perception and indirect perception of campus climate were significantly related to sense of belonging on the overall level. Interestingly, on the individual ethnic group level among Asian American students, direct perception of campus climate was significantly related to sense of belonging for all groups but one, Multi-Racial Asian American students. In addition, indirect perception of campus climate was significantly related to sense of belonging for four ethnic groups: Mono-Racial Multi-Ethnic Asian Americans, Multi-Racial Asian Americans, Korean Americans, and Chinese Americans. Taken alone, there is little indication as to why this may be the case. There was no pattern among these four groups in the descriptive statistics output and regression output, too. These findings suggest the need for future research to explore why direct perception and indirect perception of campus climate were related to sense of belonging in different ways.

Campus Involvement

Consistent with the results of Hoffman et al.'s (2002) study and Hurtado and Carter's (1997) study, instructor and student affairs staff mentorship was significantly and positively related to sense of belonging for all Asian American college students in the sample. On the individual ethnic group level, instructor and student affairs staff mentorship was significantly and positively related to sense of belonging for all eight groups but one, Korean American students. Although the reported mean frequency of instructor and student affairs staff mentorship for Korean American students was the second lowest among the eight groups, this does not necessarily mean instructor and student affairs staff mentorship was not significantly related to Korean American students' sense of belonging beyond the sample. In addition, as Korean American college students on average reported feeling less belonging on campus compared to the average students in the sample irrespective of race/ethnicity, it is possible that

their lower sense of belonging might have negatively impacted their choices of interacting with instructor and student affairs staff.

Another element of the campus involvement experience that is consistently related to sense of belonging for students of color is peer mentorship. Hurtado and Carter's study (1997) suggested that there was a positive and strong relationship between frequency of discussions of course content with peers outside class and sense of belonging. They also found that Latino students who reported tutoring other students reported a relatively high sense of belonging compared with those who did not engage in these activities very frequently. Oxendine (2015) found that Native American students who reported high peer group interactions have high level of sense of belonging. In this study, although the scope of peer mentorship is smaller than peer interaction, higher frequency of peer mentorship also indicates higher interaction with peers. The data in this study indicated that peer mentorship was significantly and positively related to sense of belonging on the overall level. However, of the eight ethnic groups, peer mentorship was significantly related to sense of belonging in two groups: Multi-Racial Asian American college students and Korean American college students.

As indicated in Guiffrida (2003), ethnic student organizations seem to affect students of the same race differently. Specifically, Guiffrida found that on one hand, African American student organizations were critical for African American students from predominantly Black high schools. On the other hand, for African American students who came from predominantly White high schools, these African American student organizations actually created challenges as they were forced to function in predominantly African American institutional subcultures for the first time. Among students of color, Asian Pacific American students are the most likely to involve in ethnic or cross-cultural organizations (Johnson et al., 2007). In this study, level of

racial or ethnic group involvement was negatively and significantly correlated with sense of belonging for all Asian American college students. On the individual ethnic group level, this variable was significant and negative for only Chinese American students. It is also important to note that the relationship between level of racial or ethnic group involvement and sense of belonging was negative (not statistically significant) for six groups: Asian Indians, Koreans, Vietnamese, Multi-Racial, Mono-Racial Multi-Ethnic, and Other Asian Americans.

Although this study does not address why this is the case, I pose one possible explanation for this finding. Previous studies did note that most often the culturally relevant organizations and support do not mitigate the pressure students of color felt to assimilate to the dominant campus culture; rather, the ethnic student organizations provide support to maintain students' cultural integrity, create a safe place on campus, help combat feelings of isolation, increase in self-efficacy, and provide academic support and social support (Hurtado & Carter, 1997; Museus, 2008). Therefore, if students do not feel a sense of belonging on campus, and it is natural for them to seek support from people of the same race/ethnicity, ethnic student organizations would be the good choice for them to find people of the same race/ethnicity. It is possible that their level of involvement in those ethnic student organizations would increase as they feel supported by people from that ethnic student organizations. As this type of involvement does not necessarily mitigate the pressure students of color felt to assimilate to the dominant campus culture, their sense of belonging on campus may not increase. It is also important to note that although many culturally related student organizations exist on campuses, they have not been given appropriate attention and support by the institution (Park, 2008). With enough resources such as time, money, personnel, and space, ethnic student organizations could be a great place to help students get the support they need and develop a sense of belonging on

campus. This finding also suggests that sense of belonging might be a moderating variable that is influencing how students determine how involved they want to be on campus and what kinds of experiences they seek to have, not an outcome variable.

Finally, in terms of on-campus housing, the body of literature on sense of belonging and on-campus housing for students of color showed mixed results. Maestas et al.'s (2007) study on sense of belonging at a Hispanic serving institution found that a positive relationship existed between living in campus housing and a student's sense of belonging. However, Strayhorn's studies of sense of belonging, one for Black men at predominantly White institutions (2008a) and another for Latinos (2008b), did not find living on campus to be a significant predictor of sense of belonging in either case. Hurtado and Ponjuan's (2005) study suggested that Latino students who lived on campus had a greater sense of belonging than students who lived off campus.

In this study, for all Asian American college students, after controlling for student characteristics, living in college or university residence hall was positively and significantly correlated with sense of belonging. In addition, living off-campus with parent or guardian or other relative or living other off-campus home, apartment, or room was negatively and significantly correlated with sense of belonging. Compared to living in other off-campus home, apartment, or room, the correlation between living off-campus with parent or guardian or other relative and sense of belonging was stronger. On the individual ethnic group level, for Chinese, Asian Indian, and Multi-Racial Asian American college students, living in college or university residence hall was positively and significantly correlated with sense of belonging. For Vietnamese American students, living in other off-campus home, apartment, or room negatively related to their sense of belonging on campus compared to living off-campus with family.

The mixed results of living in residence hall and sense of belonging in literature and in this study are not surprising because these studies, including mine, did not measure the perceived environment in residence halls. The environment could be supportive and inclusive or hostile to students of color. Johnson et al. (2007) did find that for first-year students across all racial groups reported the residence hall environment to be socially supportive and inclusive had greater sense of belonging. Future studies are needed to explore the within-race differences in relationship between perceived residence hall environment and sense of belonging for Asian American college students.

In addition, there are at least two possible interpretations for the result that living off-campus with parent or guardian or other relative or living other off-campus home, apartment, or room was negatively and significantly correlated with sense of belonging. First, regardless of race and ethnicity, students living off-campus face more challenges which inhibit their ability to engage on campus (Alfano & Eduljee, 2013). Campus engagement has been shown to be related to sense of belonging. Second, in many institutions, only first-year students are required to live on campus. If students do not feel a sense of belonging on campus in their first-year, they might choose to live off-campus with their family or friends or alone. In this scenario, their reported sense of belonging may be relatively lower.

Implications for Future Research

The results of the analysis in this study provide useful information for future research. First of all, informed by many researchers (e.g., Maestas, Vaquera, & Zehr, 2007), this study explored the linear relationship between sense of belonging and students' involvement on campus, experiences with diversity and campus climate, and institutional contexts. In many other studies (e.g., Maramba & Museus, 2013), sense of belonging was the outcome variable

dependent on students' involvement, campus climate, and institutional contexts. However, the results of this study and previous literature indicate that it is possible that students' sense of belonging influences the desire of students to get involved on campus and what kind of experience they seek to have. Future research using qualitative research designs could be conducted to look into the nuanced interaction between students' sense of belonging and their involvement on campus. It might help professionals and practitioners to intervene or design projects to promote students' learning and development in college.

Second, although this study had many campus involvement variables such as civic engagement level and number of types of on-campus organization/groups with which students were involved, none of those variables measured the quality of students' involvement. Astin's (1984) involvement theory suggested that students' developmental gain from campus involvement is directly proportional to the level of their involvement and the quality of the involvement. In this study, I found that some inconsistent results, such as the relationship between living in residence hall and sense of belonging, could be explained if it was known how students experience the residence hall environment. Therefore, it is important to include variables measuring involvement quality when exploring the relationship between sense of belonging and campus involvement.

Third, this study revealed within-race differences in students' sense of belonging. It also discussed how institutional context, campus involvement, and students' experiences with diversity and campus climate differentially relate to students' sense of belonging by Asian American students' ethnicity (Asian Indian, Chinese, Filipino, Korean, Vietnamese, Multi-Racial Asian, Mono-Racial Multi-Ethnic Asian, and Other Asian) after controlling for student characteristics. However, it could not explore why the differences were caused. For example,

findings suggest that instructor and student affairs staff mentorship was significantly and positively related to sense of belonging for all eight groups but one, Korean American students. As Korean American college students on average reported feeling less belonging on campus compared to the average students in the sample irrespective of race/ethnicity, I assume that their lower sense of belonging might have negatively impacted their choices of interacting with instructors and student affairs staff. However, it is also possible that as the percentages of Korean American students enrolled in the most competitive institutions and institutions with a very high research activity Carnegie classification were the highest among the eight groups, they had less opportunity to receive mentorship. More research is needed to understand the reasons behind these differences and to help student affairs administrators to better understand how to serve this diversified group of students.

Fourth, I used only the 2015 MSL data in this study. The MSL data collection occur every three years starting from 2006. Future research could use a different year's MSL data or multiple years' data to see if there are different or similar patterns. Researchers could also use the 2018 MSL data to explore how changes in the social environment, such as presidential elections, immigrant policies, and climate against Muslim students, affect Asian American students' sense of belonging.

Finally, future research could focus on the following two groups' sense of belonging: Multi-Racial and Other Asians. In this study, I grouped all students who identified as an Asian American and any of the other racial groups, such as White/Caucasian, Middle Eastern/Northern African, African American/Black, Native Hawaiian/Pacific Islander, and Latino/Hispanic into one group named Multi-Racial Asian Americans. I also put Bangladeshi, Bhutanese, Cambodian, Hmong, Indonesian, Laotian, Malaysian, Nepalese, Sri Lankan, Thai, and other

Asian into one group called Other Asian Americans. Students in these two groups were diversified, too. For example, the experience of a student identified as Asian and Black is highly likely different from that of a student identified as Asian and White. To study these students' sense of belonging, researchers should further disaggregate the data instead of putting all Multi-Racial students in one group and students with small sample sizes in one group.

Implications for Policy and Practice

The results of the analysis in this study also provide useful information for policy and practice. I would like to focus on five specific areas for policy and practice that will help enhance and develop Asian American students' sense of belonging on campus. These five areas are: (a) disaggregated data of Asian American subpopulations on both national and institutional levels; (b) a culturally responsive approach that acknowledges and celebrates students' diversity in terms of race, ethnicity, and even country of origin; (c) campus climate; (d) faculty and student affairs staff mentorship; and (e) college organization/group involvement.

Disaggregated Data of Asian American Subpopulations

Asian Americans are a small part of the U.S. college student population, about 7% of the Fall 2015 enrollment (NCES, 2018). However, they are composed of more than 20 different ethnic groups, each with unique histories, languages, and cultures. In this study, I took a closer look at Asian American college students' sense of belonging on campus through ethnic categories. The study results confirmed that Asian American college students' sense of belonging varied across their ethnicities. Although disaggregating the data by ethnicity cuts an already small minority group into even smaller fractions, any significant findings would simultaneously indicate the importance and necessity of data disaggregation for this population.

National and institutional policies affect students significantly in every aspect, such as education access, educational resources, educational outcomes, and even social mobility. One of the most recently debated national policies involving Asian American college students is affirmative action. In the Harvard lawsuit case, one of the popular arguments put forward was that since affirmative action in college admissions is a "penalty" for Asian Americans, especially at elite universities like Harvard, universities should not adopt affirmative action policy for enrollment at all (Chang, 2018). Advocates of this argument include not only White advocates, but also a group of Asian Americans. This is not the first time that Asian Americans engaged in and are being used in the affirmative action debate. In many significant law cases related to affirmative action, such as *Grutter v. Bollinger* (2003), *Fisher v. University of Texas* (2013), and *Fisher v. University of Texas* (2016), White anti-affirmative action petitioners claimed that both Whites and Asian Americans were harmed by affirmative action policies. However, in the *Fisher v. University of Texas* cases, "briefs submitted by AAPI affirmative action supporters argued that AAPIs benefited both directly and indirectly from affirmative action" (Poon & Segoshi, 2018, p. 259), especially Southeast Asian Americans and Pacific Islanders. Therefore, policymakers should take a closer look at the evidence provided by both sides of the arguments, the conclusion they draw from the evidence, and especially who those advocates are. Can these advocates represent all Asian Americans' opinions? If they belong to a very homogenous group, then policymakers should find out what other Asian Americans think about affirmation action. After all, racial labels alone can be very misleading. This applies to the evidence as well. Instead of looking at the total number of Asian Americans admitted and enrolled, disaggregated data will help policymakers to better understand the impact of affirmative action on the higher education opportunity for Asian American subgroups.

Institutional level policymakers should also be very mindful of the diversity within Asian American students when developing policies. Many times, I have heard colleagues from different institutions say that Asian American students are not considered as disadvantaged as underrepresented minorities in their institutions. This means when designing interventions or allocating resources to help disadvantaged students, Asian American students are not in the target population at all. It is quite possible that some Asian American students do not need extra support or resources to succeed in college. However, most of them do need extra support and resources, just as much as other disadvantaged students do. To identify specific needs for these students and target resources where it can be most effective, disaggregating the data would be the first step. Institutions need to develop policies to require units on campus to evaluate Asian American students based on disaggregated data. Otherwise, because of the lack of understanding and awareness of the diversity within this group, very few units would change their way of evaluating and treating Asian American students.

In many institutions, the number of Asian American students is very small, let alone the numbers of students in Asian American sub-ethnic groups. Analysis based on small numbers usually raises reliability concerns. To study this group, one possible way is to collect multiple years' data. Pulling multiple year's data could generate a larger sample size and get more reliable results.

Culturally Responsive Approach

The results of the analysis in this study also provide useful information for current higher education practitioners to consider as they work to connect Asian American college students to the campus community. As more and more researchers found within-race differences for students of color (e.g., Museus & Truong, 2009), it became evident Asian American college

students are not a homogeneous group but a rather diversified group. Recognizing and valuing the differences among Asian American college students would be a very important first step. To recognize and value these differences means practitioners need to stop implementing color-blind approaches that reflect the assumption that success is not determined by race or ethnicity. When educators claim they are color-blind, or they do not see race, they are denying students' experiences associated with their race or ethnicity and ignoring how those experiences influence higher education outcomes. Gallagher (2003) also noted that a color-blind approach tends to benefit the racial majority due to the racial hierarchy that is already in place. Therefore, college and university administrators, faculty, and staff need to move away from a color-blind approach toward a culturally responsive approach that acknowledges and celebrates students' diversity in terms of race, ethnicity, and even country of origin. This could help them better understand and leverage students' backgrounds as assets for development and develop strategies tailored to their needs to improve their sense of belonging on campus.

I will use civic engagement as an example to explain how to apply a culturally responsive approach. I chose the level of civic engagement because it was significantly related to sense of belonging for Asian American students overall and six ethnic groups in this study. Civic engagement can cover a wide range of activities which aim to address community needs and improve the life quality for individuals and groups within the community. When I did my internship in a UK university, I learned about one of their best civic engagement activities developed for students: a student mentor program. This student mentor program was designed to help new incoming students transition into their first year, especially at the beginning of the semester. All mentors were student volunteers. For each incoming new student, program coordinators would provide at least two student mentors for them to choose. Based on mentor

availability, one of the two mentors would match some characteristics of the new student. For example, for international students, one mentor would be a local student, and the other one would be an international student or even an international student from the same country. For race/ethnicity minority students, one of the two mentors would be a student with the same race/ethnicity. This program was very successful; most student mentors chose to volunteer because they wanted to give other students the same help they received. I, later on, also heard students talk about how this program, especially the options of different mentors, had made them feel welcomed and connected to the campus when I was conducting other research. This type of culturally responsive civic engagement activity can help both the mentors and mentees cultivate a greater sense of belonging on campus. A one-size-fits-all approach is not adequate.

Campus Climate

The most significant college experience variable positively associated with a sense of belonging across Asian subpopulations was students' direct perceptions of campus climate. This finding is not surprising. When students encounter discrimination on campus, they will feel rejected and perceive the environment as negative or hostile which results in low sense of belonging. There are various ways to cultivate a welcoming and favorable environment. The key point is that this should be the responsibility of all individuals and units on campus, not just a group of people or one office.

Many campuses across the country have conducted campus climate studies. It is vital to encourage more students to participate in the study and make sure the results are representative for all student subpopulations on campus. Interventions and programs to improve campus climate should be designed based on reliable and representative data. One study is not enough, especially for student subpopulations with small sizes. Longitudinal data can generate more data

and provide a more comprehensive picture. It is also essential to involve students in coming up with solutions.

In addition to programs and interventions specifically designed to improve campus climate, there are many other campus programs that educators can use to foster a favorable campus climate. For instance, college orientation programs and first-year experience programs. In these types of programs, students usually have multiple opportunities to interact with each other. As they are in the early stage of college, many of them lack experiences with people from a different background. Guiding them to appropriately interact with diverse others and have in-depth conversations on social and cultural topics can reduce misunderstanding and create a safer space and positive climate for all students. As this study identified, the frequency of social cultural conversations significantly and positively related to students' sense of belonging. Campus educators should integrate this practice in programs like college orientation programs and first-year experience programs.

Faculty and Student Affairs Staff Mentorship

One significant campus involvement factor related to a greater sense of belonging for Asian Americans overall was faculty and student affairs staff mentorship. The higher frequency of positive mentorship concerning assisting students' growth or development, the greater sense of belonging was reported. Mentors can connect students to campus resources, provide growth opportunities, give feedback and suggestions, and provide emotional support when needed. Faculty and student affairs staff can mentor students through joining in a mentorship program, guiding a research project, supervising a student organization, or even working one-on-one with students in their classes. Therefore, colleges and universities need to encourage more faculty and student affair staff to provide mentorship that will help students build a sense of belonging

campus. As mentoring students requires faculty and staff to commit an appropriate amount of time with each mentee, colleges and universities need to develop policies to ensure the sustainability of faculty and staff mentoring. For instance, faculty and staff who provide mentoring should receive appropriate relief from other service obligations. Recognition and compensation at the unit level and/or institution level are also necessary.

To help students connect to the campus, providing a positive mentorship experience is also essential. Becoming an effective mentor is not easy. In addition to time commitment, faculty and staff also need to be culturally responsive and competent. This does not necessarily mean faculty and staff need to know their mentee's cultural background very well. They have to recognize that students from different cultural backgrounds are different in a variety of ways and to be conscious of those differences while interacting with them. They also should have the ability to relate respectfully with students from various cultural backgrounds. As I interviewed students about their experiences with campus support in one UK university, I learned that not all of them were able to build a good relationship with mentors and benefited from the mentorship. Some students felt that the interactions with mentors (such as emails and office visits) were less genuine or more "scripted." It is not tailored to who they are and thus less encouraging for students to keep building the relationship with their mentors. Faculty and staff are experts in their fields, but this does not necessarily mean they know how to effectively connect to students with different cultural and social backgrounds and tailor assistance to each student's unique needs. Therefore, institutions should provide sufficient training and resources for faculty and staff mentors to help them develop skills and knowledge that may contribute to effective mentoring relationship.

College Organization/Group Involvement

Another significant campus involvement factor that positively related to sense of belonging for all Asian American college students was level of college organization/group involvement. Higher education practitioners should consider how to encourage Asian American college students to participate in college organizations and groups and how to help college organizations and groups attract and retain Asian American college students. These two approaches are equally important. Also, practitioners should note that level of college organization/group involvement was statistically significant in six of the eight ethnic groups in this study. This suggests that perhaps not all Asian American college students are significantly benefiting from their engagement in college organizations and groups. Efforts from student affairs practitioners are needed to make sure they have positive engagement experiences.

For any university or college to actively work to help Asian American students build sense of belonging through ethnic student organizations, there must be a great investment of resources including mentors, finances, space, and policy support. Hurtado and Carter (1997) found that ethnic student organization involvement can increase sense of belonging for students of color. Samura's (2016) qualitative study on Asian American college students' process of sense of belonging showed that when Asian American students experienced lower or decreased sense of belonging, their involvement in ethnic- or race-specific student organizations offered a means for individual students to reposition themselves to increase belonging. Samura (2016) did not explain how participants in her study re-positioned themselves to increase belonging through involvement in ethnic- or race-specific student organizations, but her study does provide evidence that it is possible for students to improve their sense of belonging through ethnic- or race-specific student organization engagement. Since support for ethnic- or race-specific student

organization varies from institution to institution, it is possible that the ethnic- or race-specific student organizations mentioned in Samura's (2016) study received enough support and guidance. Regardless, the negative statistical significance of level of racial or ethnic group involvement should get higher education policymakers and practitioners' serious attention to their support of ethnic student organizations' development. As it is natural for students to seek support from people of the same race/ethnicity, the more involved they are in ethnic- or race-specific student organizations, the easier and more appropriate way to reach out to them and help them develop sense of belonging is through these organization. Financial and space support are important. However, personnel support, especially mentors, is more important to help students build their cultural identity, combat feelings of isolation, increase in self-efficacy, and develop sense of belonging.

Conclusion

Sense of belonging on campus has been identified as one of the most important factors that affect college students' persistence, retention, and graduation (e.g., Astin, 1993; Hurtado & Carter, 1997; Maramba & Museus, 2012). The purpose of this quantitative study was to explore the within-group heterogeneity of sense of belonging among Asian American undergraduate student subpopulations on campus. Using data from the 2015 Multi-Institutional Study of Leadership (MSL), I aimed to understand how institutional context, campus involvement, and students' experiences with diversity and campus climate relate to Asian American college students' sense of belonging. I also sought to learn if there were differences in students' sense of belonging across Asian American student ethnic groups and if there were differences in the variables that significantly related to each ethnic group's sense of belonging on campus.

Hierarchical multiple regression analysis results indicated that after controlling for student characteristics, there were significant differences in students' sense of belonging across Asian American student ethnic groups. Specifically, compared to the average students in the sample irrespective of race/ethnicity, Korean American college students on average reported feeling less belonging on campus. Asian Indian American college students, on the other hand, reported higher level of sense of belonging on campus. The other eight ethnic groups' reported senses of belonging were not statistically different from the average level of the sample.

The study also suggested that for Asian American college students, after controlling for student characteristics, institutional context variables, experiences with diversity and campus climate variables, and campus involvement variables significantly explained variance in sense of belonging to various degrees. Compared to institutional context variables, campus involvement variables and experiences with diversity and campus climate variables had almost the same higher predictive power for students' sense of belonging on campus. Campus involvement variables were slightly higher.

Of all variables, 10 of them were positively and significantly related to sense of belonging. These variables were attending a public institution, social cultural conversations, perceptions of campus climate (indirect), perceptions of campus climate (direct), living in college or university residence hall, instructor and student affairs staff mentorship, peer mentorship, number of types of organization and group involved, level of college organization involvement, and level of civic engagement. Six variables were negatively related to sense of belonging. These variables included attending an institution with an enrollment size of 5,000 – 9,999, attending a private institution, and attending an institution whose selectivity is competitive, living off-campus with a parent, guardian, or other relative, living in other off-

campus residences (e.g., home, apartment, or room), and level of racial or ethnic groups involvement.

The findings from the eight hierarchical regression models (each ethnic group had one model) indicated that there were differences in the variables that significantly related to each ethnic group's sense of belonging on campus. For Multi-Racial Asian American college students, campus involvement variables and experiences with diversity and campus climate variables had the same predictive power. Of the other seven groups, campus climate variables had the strongest predictive power in four groups. This pattern is similar to that of the entire Asian American college students in the sample.

The variables significantly related to each ethnic group's sense of belonging varied. Of the top four variables returned in the eight hierarchical regression models, the most significant of the experiences variables across Asian subpopulations were students' direct perceptions of campus climate, followed by the level of instructor and student affairs staff mentorship, the level of college organization involvement, and social cultural conversations. The relationship between these variables and sense of belonging not only varied in terms of degree across different ethnic subgroups, but also could be different in terms of direction. For example, when holding all other variables constant, the variable number of types of academic-based experiences engaged had a positive relationship with sense of belonging for Multi-Racial Asian American college students, but negative relationship with sense of belong for Filipino American college students.

The findings of this study have implications for future research, policy, and practice. First, the findings suggest that future research is needed to investigate the nuanced interaction between students' sense of belonging and their involvement on campus and to assess the impact of the quality of campus involvement on sense of belonging. This study also suggests the need

to understand the reasons behind the differences found this study to help student affairs administrators to understand better how to serve this diversified group of students.

Second, the findings of this study emphasize the importance of disaggregating the data to help higher education policymakers develop more equitable policies. On the other hand, national policymakers should consider the diversity within Asian American college students and carefully evaluate evidence and arguments related to this group and policy changes, making sure all perspectives and facts are fairly represented and discussed. To help higher education policymakers develop more equitable policies, institutions and researchers have an important responsibility to disaggregate the data and presenting a more comprehensive picture of Asian Americans college students at both the national level and institutional level. This could also help eradicate those negative perceptions and stereotypes about Asian American students.

Third, as identified in the study, a favorable campus climate, faculty and student affairs staff mentorship, and college organization involvement were positively associated with a greater sense of belonging. Campuses should have programs and interventions specifically designed to improve campus climate. Campus educators can also utilize other programs, such as college orientation programs and first-year experience programs, to guide students to interact with diverse others appropriately. This could help create a safer space and positive climate for all students. In addition, colleges and universities need to encourage more faculty and student affair staff to provide supportive mentorship and to develop policies to ensure the sustainability of such mentorship. Campus educators also need to promote Asian American college students to participate in college organizations and groups and provide sufficient mentorship and other support to ethnic- or race-specific student organizations.

Finally, the findings that Asian American students' sense of belonging vary by ethnicity and that factors related to sense of belonging also vary by ethnicity suggest that a one-size-fits-all approach to improving their sense of belonging on campus is inadequate and inappropriate. Racial labels alone can be very misleading. A monolithic view of Asian Americans obscures differential backgrounds and is detrimental to some Asian American students because their needs have been systematically neglected. These findings argue for institutional policymakers fully considering the heterogeneity exists within this group when developing policies and practices, such as mentorship programs and pre-college interventions on sense of belonging, to improve students' sense of belonging on campus. As campus educators, including faculty, staff, and other personnel, work to connect Asian American college students to the campus community, they must continue to reflect on our assumptions of Asian American students. They also need to move away from a color-blind approach toward a culturally responsive approach that acknowledges and celebrates students' diversity in terms of race, ethnicity, and country of origin. Programs and resources should be tailored to the needs of different segments of the Asian American population.

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APPENDIX A. MULTI-INSTITUTIONAL STUDY OF LEADERSHIP MSL 2015

CODEBOOK

QUESTION	VARIABLE NAME	VARIABLE LABEL	RESPONSE CODING
1	DEM1	Did you begin college at your current institution or elsewhere? (Choose One)	1= Started here 2=Started elsewhere
2	DEM2	How would you characterize your enrollment status? (Choose One)	1=Full-time 2=Less than full-time
3	DEM3	What is your current class level? (Choose One)	1=Freshman/ First-year 2=Sophomore 3=Junior 4=Senior (4^{th} year and beyond) 5=Graduate Student 6= Unclassified
4	DEM4	Which of the following best describes your primary major? (Select the category that best represents your field of study)	1=Agriculture/ Natural Resources 2= Architecture/ Urban Planning 3=Biological/ Life Sciences (ex. biology, biochemistry, botany, zoology) 4=Business (ex. accounting, marketing, management, entrepreneurship, finance, human resources, hospitality) 5=Communication (speech, journalism, television/radio) 6=Computer and Information Sciences 7= Criminal Justice 8= Ecology 9=Education 10=Engineering (ex. chemical, aerospace, civil, industrial, mechanical, biomedical) 11= Environmental Science 12=Ethnic & Cultural Studies 13=Foreign Languages and Literature (ex. French, Spanish)

			14=Health-Related Professions (ex. nursing, physical therapy, health technology, pharmacy, kinesiology, health care administration) 15=Humanities (ex. english, literature, philosophy, religion, history) 16=Liberal/ General Studies 17 = Library Science 18=Mathematics/ Statistics 19 = Military Science/ Technology/ Operations 20=Multi/ Interdisciplinary Studies 21=Parks, Recreation, Leisure Studies, Sports Management 22=Physical Sciences (ex. physics, chemistry, astronomy, earth science) 23=Pre-Professional (ex. pre-dental, pre-medical, pre-veterinary) 24=Public Administration (ex. city management, law enforcement) 25=Social Sciences (ex. anthropology, economics, political science, psychology, sociology, social work) 26=Visual and Performing Arts (ex. art, music, theater) 27= Women/ Gender Studies 28=Undecided
5	ENV1	Are you currently working OFF CAMPUS in a job unaffiliated with your school?	1 = Yes 2 = No
	ENV1a	Approximately how many hours do you work off campus in a typical 7-day week?	Open response
6	ENV2	Are you currently working ON CAMPUS?	1=Yes 2=No
	ENV2a	Approximately how many hours do you work on campus in a typical 7-day week?	Open response

7	ENV3	In an average month, do you engage in any 1=Yes If NO, skip to question #8 community service?	1=Yes 2=No
In an average month, approximately how many hours do you engage in community service? (choose one for each category).			
	ENV3a	As part of a class	0=None 1=1-5 2=6-10 3=11-15 4=16-20 5=21-25 6=26-30 7=31 or more
	ENV3b	As part of a work study experience	
	ENV3c	With a campus student organization	
	ENV3d	As part of a community organization unaffiliated with your school	
	ENV3e	On your own	
8. Which of the following have you engaged in during your college experience:			
	ENV4a	Study abroad	0=No 1=Yes
	ENV4b	Practicum, internship, field experience, co-op experience, or clinical experience	
	ENV4c	Learning community or other formal program where groups of students take two or more classes together	
	ENV4d	Living-learning program (ex. language house, leadership floors, ecology halls)	
	ENV4e	Research with a faculty member outside of class	
	ENV4f	First-year or freshman seminar course	
	ENV4g	Culminating senior experience (ex. capstone course, thesis)	
8a. To what degree have you been involved in the following on-campus recreational facilities, programs, and/or services?			
	REC1	Instructor-led group fitness or exercise classes (ex. yoga, zumba)	0=Never 1=Once 2=Sometimes 3=Many Times 4=Much of the Time
	REC2	Intramural sports (ex. intramural flag football, Ultimate Frisbee)	
	REC3	Open recreation (ex. pick-up basketball, weight lifting, treadmill)	
	REC4	Outdoor adventure activities and/or trips	

	REC5	Sport clubs (ex. club volleyball, club hockey)	
YOUR PERCEPTIONS BEFORE ENROLLING IN COLLEGE			
9. Looking back to before you started college, how confident were you that you would be successful in college at the following: (Select one response for each)			
	PRE1a	Handling the challenge of college-level work	1=Not at all confident 2=Somewhat confident 3=Confident 4=Very Confident
	PRE1b	Analyzing new ideas and concepts	
	PRE1c	Applying something learned in class to the "real world"	
	PRE1d	Enjoying the challenge of learning new material	
	PRE1e	Appreciating new and different ideas or beliefs	
	PRE2a	Leading others	
	PRE2b	Organizing a group's tasks to accomplish a goal	
	PRE2c	Taking initiative to improve something	
	PRE2d	Working with a team on a group project	
10. Looking back to when you were in high school, how often did you engage in the following activities: (Select one response for each)			
	PRE3a	Student clubs and organizations (e.g., student government, band, debate club)	0=Never 1=Sometimes 2=Often 3=Very Often
	PRE3b	Organized sports (ex. Varsity, club sports)	
	PRE3c	Leadership positions in student clubs, groups, or sports (ex. officer in a club or organization, captain of athletic team, first chair in musical group, section editor of newspaper)	
11. Looking back to before you started college, how often did you engage in the following activities: (Select one response for each)			
	PRE4a	Performed community service	0=Never 1=Sometimes 2=Often 3=Very Often
	PRE4b	Reflected on the meaning of life	
	PRE4c	Participated in community or work-related organizations (ex. church group, scouts, professional associations)	
	PRE4d	Took leadership positions in community organizations or work-related groups (ex. union leader, PTA president)	

	PRE4e	Considered my evolving sense of purpose in life	
	PRE4f	Worked with others for change to address societal problems (ex. rally, protest, community organizing)	
	PRE4g	Participated in training or education that developed your leadership skills	
	PRE4h	Found meaning in times of hardship	
12. Looking back to before you started college, please indicate your level of agreement with the following items:			
	PRE5a	Hearing differences in opinions enriched my thinking	1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree
	PRE5b	I knew myself pretty well	
	PREHOP1	I knew I could find ways to solve complex problems even when others gave up	
	PRERES1	I thought of myself as a strong person	
	PRE5d	I enjoyed working with others toward common goals	
	PREHOP2	I generally met the goals I set	
	PRE5e	I held myself accountable for responsibilities I agreed to	
	PRERES2	I was not easily discouraged when I experienced failure	
	PRE5f	I worked well when I knew the collective values of a group	
	PRE5g	My behaviors reflected my beliefs	
	PRERES3	I was able to effectively manage negative emotions like sadness, fear, or anger	
	PRE5h	I valued the opportunities that allowed me to contribute to my community	
	PREHOP3	I pursued my goals with great energy	
13. Please indicate how well the following statements describe how you were prior to college.			
	PRE6a	I attempted to carefully consider the perspectives of those with whom I disagreed.	1=Does Not Describe Me Well 2 3 4 5=Describes Me Very Well
	PRE6b	I regularly thought about how different people might view situations differently.	
	PRE6c	Before criticizing someone, I tried to imagine what it would be like to be	

		in their position.	
14. We would like you to consider your BROAD racial group membership (ex. White, Middle Eastern, Native American, African American/ Black, Asian American/ Pacific Islander, Latino/ Hispanic, Multiracial) in responding to the following statements. Please indicate what your perceptions were prior to college.			
	PRE7a	My racial group membership was important to my sense of identity.	1=Strongly Disagree 2=Disagree 3=Disagree Somewhat 4=Neutral 5=Agree Somewhat 6=Agree 7=Strongly Agree
	PRE7b	I was generally happy to be a member of my racial group.	
	PRE7c	I felt a strong affiliation to my racial group.	
YOUR EXPERIENCES IN COLLEGE			
15. How often have you engaged in the following activities during your college experience:			
	ENV5a	Performed community service	0=Never 1=Once 2=Sometimes 3=Often
	ENV5b	Acted to benefit the common good or protect the environment	
	ENV5c	Been actively involved with an organization that addresses a social or environmental problem	
	ENV5d	Been actively involved with an organization that addresses the concerns of a specific community (ex. academic council, neighborhood association)	
	ENV5e	Communicated with campus or community leaders about a pressing concern	
	ENV5f	Took action in the community to try to address a social or environmental problem	
	ENV5g	Worked with others to make the campus or community a better place	
	ENV5h	Acted to raise awareness about a campus, community, or global problem	
	ENV5i	Took part in a protest, rally, march, or demonstration	
	ENV5j	Worked with others to address social inequality	
16. Since starting college, how often have you:			
	ENV6a	Been an involved member in college organizations?	0=Never 1=Once
	ENV6b	Held a leadership position in a	

		college organization(s)? (ex. officer in a club or organization, captain of athletic team, first chair in musical group, section editor of newspaper, chairperson of committee)?	2=Sometimes 3=Many Times 4=Much of the Time
	ENV6c	Been an involved member in an off-campus community or work-based organization(s) (ex. Parent-Teacher Association, church group, union)?	
	ENV6d	Held a leadership position in an off-campus community or work-based organization(s)? (ex. officer in a club or organization, officer in a professional association, chairperson of committee)?	
17. Have you been involved in the following kinds of student groups during college? (Respond to each item)			
	ENV7a	Academic/Departmental/Professional (ex. Pre- 1=Yes Law Society, an academic fraternity, Engineering 2=No Club)	1=Yes 2=No OR 0=Never 1=Sometimes 2=Often 3=Very Often
	ENV7b	Arts/Theater/Music (ex. Theater group, Marching Band, Photography Club)	
	ENV7c	Campus-Wide Programming (ex. program board, film series board, multicultural programming committee)	
	ENV7d	Identity-Based (ex. Black Student Union, Korean Student Association)	
	ENV7d1	To what extent have you been actively involved in *racial/ ethnic groups* (ex. Black Student Union, Korean Student Association) *on campus* during college?	
	ENV7d2	To what extent have you been actively involved in *LGBTQ groups* (ex. Pride Alliance, Queer Student Union) *on campus* during college?	
	ENV7d3	To what extent have you been actively involved in *women's groups* (ex. Woman's Circle, National Organization for Women) *on campus* during college?	
	ENV7e	International Interest (ex. German Club, Foreign Language Club)	
	ENV7f	Honor Societies (ex. Omicron Delta	

		Kappa [ODK], Mortar Board, Phi Beta Kappa)	
	ENV7g	Media (ex. Campus Radio, Student Newspaper) Military (ex. ROTC, cadet corps)	
	ENV7h	Military (ex. ROTC, cadet corps)	
	ENV7i	New Student Transitions (ex. admissions ambassador, orientation advisor)	
	ENV7j	Resident Assistants	
	ENV7k	Peer Helper (ex. academic tutors, peer health educators)	
	ENV7l	Advocacy (ex. Students Against Sweatshops, Amnesty International)	
	ENV7m	Political (ex. College Democrats, College Republicans, Libertarians)	
	ENV7n	Religious (ex. Fellowship of Christian Athletes, Hillel)	
	ENV7o	Service (ex. Circle K, Habitat for Humanity)	
	ENV7p	Multi-Cultural Fraternities and Sororities (ex. National Pan-Hellenic Council [NPHC] groups such as Alpha Phi Alpha Fraternity Inc., or Latino Greek Council groups such as Lambda Theta Alpha)	
	ENV7q	Social Fraternities or Sororities (ex. Panhellenic or Interfraternity Council groups such as Sigma Phi Epsilon or Kappa Kappa Gamma)	
	ENV7r	Sports-Intercollegiate or Varsity (ex. NCAA Hockey, Varsity Soccer)	
	ENV7u	Recreational (ex. Climbing Club, Hiking Group)	
	ENV7v	Social/ Special Interest (ex. Gardening Club, Sign Language Club, Chess Club)	
	ENV7w	Student Governance (ex. Student Government Association, Residence Hall Association, Interfraternity Council)	
18. A mentor is defined as a person who intentionally assists your growth or connects you to opportunities for career or personal development. Since you started at your current college/university, have you been mentored by the following types of people:			

	ENV8a1	Faculty/Instructor	0=No 1=Yes
	ENV8a2	Academic or Student Affairs Professional Staff (ex. student organization advisor, career counselor, Dean of Students, academic advisor, residence hall coordinator)	
	ENV8a3	Employer	
	ENV8a4	Community member (not your employer)	
	ENV8a5	Parent/Guardian	
	ENV8a6	Other Student	
18b. A mentor is defined as a person who intentionally assists your growth or connects you to opportunities for career or personal development. Since you started at your current college/university, how often have the following types of mentors assisted you in your growth or development?			
	ENV8b1	Faculty/Instructor	0=Never 1=Once 2=Sometimes 3=Often
	ENV8b2	Academic or Student Affairs Professional Staff (ex. student organization advisor, career counselor, Dean of Students, academic advisor, residence hall coordinator)	
	ENV8b3	Employer	
	ENV8b4	Community member (not your employer)	
	ENV8b5	Parent/Guardian	
	ENV8b6	Other Student	
18c. When thinking of your most significant mentor at this college/university, what was this person's role?			
	ENV8c1	Faculty/Instructor	Select one response from the list of participant provided options, but do not include options not listed to the left.
	ENV8c2	Academic or Student Affairs Professional Staff (ex. student organization advisor, career counselor, Dean of Students, academic advisor, residence hall coordinator)	
	ENV8c3	Employer	
	ENV8c6	Other Student	
18d	ENV8c_2	When thinking of your most	1=Female

		significant mentor at this college/university, what was this person's gender?	2=Male 3=Transgender
18e	ENV8d	When thinking of your most significant mentor at this college/university, what was this person's broad racial group membership?	1=White/ Caucasian 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
19. During interactions with other students outside of class, how often have you done each of the following in an average school year? (Select one for each)			
	ENV9a	Talked about different lifestyles/ customs	0=Never 1=Sometimes 2=Often 3=Very Often
	ENV9b	Held discussions with students whose personal values were very different from your own	
	ENV9c	Discussed major social issues such as peace, human rights, and justice	
	ENV9d	Held discussions with students whose religious beliefs were very different from your own	
	ENV9e	Discussed your views about multiculturalism and diversity	
	ENV9f	Held discussions with students whose political opinions were very different from your own	
20	ENV10	Since starting college, have you ever participated in a leadership training or leadership education experience of any kind (ex: leadership conference, alternative spring break, leadership course, club president's retreat)?	0=No 1=Yes
20a. Since starting college, to what degree have you been involved in the following types of leadership training or education?			
	ENV10a	Leadership Conference	0=Never 1=Once 2=Sometimes
	ENV10b	Leadership Retreat	
	ENV10c	Leadership Lecture/Workshop Series	

	ENV10d	Positional Leader Training (ex. Treasurer's training, Resident Assistant training, Student Government training)	3=Often
	ENV10e	Leadership Course	
	ENV10f	Short-Term Service Immersion (ex. alternative spring break, January term service project)	
	ENV10g	Emerging or New Leaders Program	
	ENV10h	Living-Learning Leadership Program	
	ENV10i	Peer Leadership Educator Team	
	ENV10j	Outdoor Leadership Program	
	ENV10k	Women's Leadership Program	
	ENV10l	Multicultural Leadership Program	
20b. Since starting college, have you been involved in the following types of leadership training or education?			
	ENV10m	Leadership Certificate Program	0=No 1=Yes
	ENV10n	Leadership Capstone Experience	
	ENV10o	Leadership Minor	
	ENV10p	Leadership Major	
ASSESSING YOUR GROWTH			
21. Please indicate your level of agreement with the following items: For the statements that refer to a group, think of the most effective, functional group of which you have recently been a part. This might be a formal organization or an informal study group. For consistency, use the same group in all your responses.			
	SRLS1	I am open to others' ideas	1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree
	SRLS3	I value differences in others	
	SRLS4	I am able to articulate my priorities	
	SRLS5	Hearing differences in opinions enriches my thinking	
	SRLS9	I am usually self confident	
	SRLS10	I am seen as someone who works well with others	
	SRLS13	My behaviors are congruent with my beliefs	
	SRLS16	I respect opinions other than my own	
	SRLS22	I know myself pretty well	
	SRLS23	I am willing to devote the time and energy to things that are important to me	

	SRLS24	I stick with others through difficult times	
	SRLS27	It is important to me to act on my beliefs	
	SRLS28	I am focused on my responsibilities	
	SRLS29	I can make a difference when I work with others on a task	
	SRLS30	I actively listen to what others have to say	
	SRLS32	My actions are consistent with my values	
	SRLS33	I believe I have responsibilities to my community	
	SRLS34	I could describe my personality	
	SRLS40	I work with others to make my communities better places	
	SRLS41	I can describe how I am similar to other people	
	SRLS42	I enjoy working with others toward common goals	
	SRLS47	I participate in activities that contribute to the common good	
	SRLS48	Others would describe me as a cooperative group member	
	SRLS51	I can be counted on to do my part	
	SRLS52	Being seen as a person of integrity is important to me	
	SRLS53	I follow through on my promises	
	SRLS54	I hold myself accountable for responsibilities I agree to	
	SRLS59	I am comfortable expressing myself	
	SRLS60	My contributions are recognized by others in the groups I belong to	
	SRLS62	I share my ideas with others	
	SRLS63	My behaviors reflect my beliefs	
	SRLS66	I value opportunities that allow me to contribute to my community	
	SRLS69	It is important to me that I play an active role in my communities	
	SRLS71	I believe my work has a greater purpose for the larger community	
THINKING MORE ABOUT YOURSELF			
22	DEM5	How would you characterize your	1=Very liberal

		political views? (Choose One)	2=Liberal 3=Moderate 4=Conservative 5=Very conservative
23. Read each item carefully and select the response option that best reflects you.			
	HOP1	I can think of many ways to get out of a jam	1=Definitely False 2=Mostly False 3=Somewhat False 4=Slightly False 5=Slightly True 6=Somewhat True 7=Mostly True 8=Definitely True
	HOP2	I energetically pursue my goals	
	HOP3	There are lots of ways around any problem	
	HOP4	I can think of many ways to get the things in life that are important to me	
	HOP5	Even when others get discouraged, I know I can find a way to solve a problem	
	HOP6	My past experiences have prepared me well for my future	
	HOP7	I've been pretty successful in life	
	HOP8	I meet the goals that I set for myself	
24. In thinking about how you have changed during college, to what extent do you feel you have grown in the following areas? (Select one response for each)			
	OUT1a	Ability to put ideas together and to see 1=Not Grown At All relationships between ideas	1=Not Grown At All 2=Grown Somewhat 3=Grown 4=Grown Very Much
	OUT1b	Ability to learn on your own, pursue ideas, and find 3=Grown information you need	
	OUT1c	Ability to critically analyze ideas and information	
	OUT1d	Learning more about things that are new to you	
25. How confident are you that you can be successful at the following? (Select one response for each)			
	OUT2a	Leading others	1=Not at All Confident 2=Somewhat Confident 3=Confident 4=Very Confident
	OUT2b	Organizing a group's tasks to accomplish a goal	
	OUT2c	Taking initiative to improve something	
	OUT2d	Working with a team on a group project	
26. How often do you...			
	SUB2a	Search for meaning/purpose in your life	0=Never 1=Sometimes 2=Often
	SUB2b	Have discussions about the meaning of life with your friends	

	SUB2c	Surround yourself with friends who are searching for meaning/purpose in life	3=Very Often
	SUB2d	Reflect on finding answers to the mysteries of life	
	SUB2e	Think about developing a meaningful philosophy of life	
27. The following statements inquire about your thoughts and feelings in a variety of situations. For each item, be as honest as possible in indicating how well it describes you.			
	SPT1	I try to look at everybody's side of a disagreement before I make a decision.	1=Does Not Describe Me Well 2 3 4 5=Describes Me Very Well
	SPT2	I sometimes try to understand my friends better by imagining how things look from their perspective.	
	SPT3	I believe that there are two sides to every question and try to look at them both.	
	SPT4	When I'm upset at someone, I usually try to "put myself in their shoes" for a while.	
	SPT5	Before criticizing somebody, I try to imagine how I would feel if I were in their place.	
28. Please indicate your level of agreement with the following items. For the statements that refer to a group, think of the most effective, functional group of which you have recently been a part. This might be a formal organization or an informal study group. For consistency, use the same group in all your responses.			
	MOT1	I only join groups with good reputations	1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree
	MOT2	I need to be part of a group that reflects my values	
	MOT3	I am willing to persist in the face of adversity to meet my group's goals	
	MOT4	Others recognize me as a good person because of my contributions to the group	
	MOT5	Providing quality leadership, whether recognized or not, is important to me	
	MOT6	When I agree with my group's goals, I work harder to make a difference	
	MOT7	It is important that others think I do high quality work	
	MOT8	I need to see that my actions make a	

		difference in the group	
	MOT9	I put my group's progress toward a goal above my own success	
29. Indicate how much you agree with the following statements as they apply to you over the last month. If a particular situation has not occurrence recently, answer according to how you think you would have felt.			
	RES1	I am able to adapt when changes occur	1=Not at All True 2=Rarely True 3=Sometimes True 4=Often True 5=True Nearly All the Time
	RES2	I can deal with whatever comes my way	
	RES3	I try to see the humorous side of things when I am faced with problems	
	RES4	Having to cope with stress can make me stronger	
	RES5	I tend to bounce back after illness, injury, or other hardships	
	RES6	I believe I can achieve my goals, even if there are obstacles.	
	RES7	Under pressure, I stay focused and think clearly	
	RES8	I am not easily discouraged by failure	
	RES9	I think of myself as a strong person when dealing with life's challenges and difficulties	
	RES10	I am able to handle unpleasant or painful feelings like sadness, fear, and anger	
YOUR COLLEGE CLIMATE			
30. Indicate your level of agreement with the following statements about your experience on your current campus			
	ENV11a1	I feel valued as a person at this school	1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree
	ENV11a2	I feel accepted as a part of the campus community	
	ENV11b1	I have encountered discriminatory while attending this institution	
	ENV11a3	I feel I belong on this campus	
	ENV11b3	I would describe the environment on campus as negative/hostile	
	ENV11b2	I feel there is a general atmosphere of prejudice among students	
	ENV11c1	Faculty have discriminated against people like me	

	ENV11c2	Staff members have discriminated against people like me	
	ENV11c3	Other students have discriminated against people like me	
BACKGROUND INFORMATION			
31	DEM6	What is your age?	Open Response
32	DEM16	Have you ever been a member of the U.S. military?	1=Yes 0=No 0=No military service experience 1=ROTC, cadet, or midshipman at a service academy 2=In Active Duty, Reserves, or National Guard 3=Discharged Veteran NO LONGER serving in active duty, reserves, or national guard
33	DEM7	What is your gender?	1=Female 2=Male 3=Transgender /Gender Non-conforming
	DEM7B	Please indicate which of the following best describe you?	1=Female to male 2=Male to female 3=Intersexed 4=Gender non-conforming 5=Genderqueer 6=Two-spirit 7=Third gender 8=Preferred Response Not Listed (SPECIFY):
34	DEM8	What is your sexual orientation?	1=Heterosexual 2=Bisexual 3=Gay/Lesbian 4=Queer 5=Questioning 6=Rather not say
35	DEM9	Indicate your citizenship and/ or generation status: (Choose One)	1=Your grandparents, parents, and you were born in the U.S. 2=Both of your parents AND you were born in the U.S. 3=You were born in the

			U.S., but at least one of your parents was not 4=You are a foreign born, naturalized citizen 5=You are a foreign born, resident alien/ permanent resident 6=International student
36a	DEM10a	Please indicate your broad racial group membership: (Mark all that apply)	1=White/ Caucasian 2=Middle Eastern 3=African American/ Black 4=American Indian/ Alaska Native 5=Asian American/ Asian 6=Latino/ Hispanic 7=Multiracial 8=Race not included above
36b	DEM10b	Please indicate your ethnic group memberships (Mark all that apply).	African American/ Black 1=Black American 2=African 3=West Indian 4=Brazilian 5=Haitian 6=Jamaican 7= Not Listed SPECIFY American Indian/ Alaska Native 1=Tribal Affiliation(s) SPECIFY Asian American 1=Asian Indian 2=Bangladeshi 3=Bhutanese 4=Cambodian 5= Chinese 6=Filipino 7=Hmong 8=Indonesian 9=Japanese 10=Korean 11=Laotian 12=Malaysian 13=Nepalese

			14=Pakistani 15=Sri Lankan 16=Thai 17=Vietnamese 18= Not Listed SPECIFY Native Hawaiian/ Pacific Islander 1=Native Hawaiian 2=Samoan 3=Tongan 4=Guamanian or Chamorro 5=Marshallese 6=Fijian 7= Not Listed SPECIFY Latino/ Hispanic 1=Mexican/ Chicano 2=Puerto Rican 3=Cuban 4=Dominican 5=South American 6=Central American 7=Spanish (European) 7= Not Listed SPECIFY
37. We are all members of different social groups or social categories. We would like you to consider your BROAD racial group membership (ex. White, Middle Eastern, American Indian, African American/ Black, Asian American/ Pacific Islander, Latino/ Hispanic, Multiracial) in responding to the following statements. There are no right or wrong answers to any of the statements; we are interested in your honest reactions and opinions.			
	SUB4b	I often regret that I belong to my racial group	1=Strongly Disagree 2=Disagree 3=Disagree Somewhat 4=Neutral 5=Agree Somewhat 6=Agree 7=Strongly Agree
	SUB4c	Overall, my racial group is considered good by others	
	SUB4d	Overall, my race has very little to do with how I feel about myself	
	SUB4f	In general, I'm glad to be a member of my racial group	
	SUB4g	Most people consider my racial group, on the average, to be more ineffective than other groups	
	SUB4h	The racial group I belong to is an important reflection of who I am	
	SUB4j	Overall, I often feel that my racial group is not worthwhile	

	SUB4k	In general, others respect my race	
	SUB4l	My race is unimportant to my sense of what kind of a person I am	
	SUB4n	I feel good about the racial group I belong to	
	SUB4o	In general, others think that my racial group is unworthy	
	SUB4p	In general, belonging to my racial group is an important part of my self image	
38	DEM11a	Do you have a long-lasting condition (physical, visual, auditory, mental, emotional, or other) that substantially limits one or more of your major life activities (your ability to see, hear, or speak; to learn, remember, or concentrate)?	0=No 1=Yes
	DEM11b	Please indicate the conditions you have:	1=Deaf/Hard of Hearing 2=Blind/Visual Impairment 3=Speech/Language Condition 4=Learning Disability 5=Physical or Musculoskeletal (ex. multiple sclerosis) 6=Attention Deficit Disorder/ Attention Deficit Hyperactivity Disorder 7=Psychiatric/Psychological Condition (ex. anxiety disorder, major depression) 8=Neurological Condition (ex. brain injury, stroke) 9=Medical (ex. diabetes, severe asthma) 10=Not Listed
39	DEM12	What is your current religious preference? (Please Select One)	1=Agnostic 2=Atheist 3=Bahá'í 4=Baptist 5=Buddhist 6=Catholic 7=Church of Christ 8=Confucianism 9=Eastern Orthodox 10=Episcopalian

			11=Hindu 12=Muslim 13=Jehovah's Witness 14=Jewish 15=LDS (Mormon) 16=Lutheran 17=Methodist 18=Pentecostal 19=Presbyterian 20=Quaker 21=Seventh Day Adventist 22=Taoist 23=Unitarian/Universalist 24=UCC/Congregational 25=Protestant: Non-Denominational 26= Christian: Not Listed 27= Religion Not Listed 28=None
40	DEM13	What is your best estimate of your grades so far in college? [Assume 4.00 = A] (Choose One)	1=3.50 – 4.00 2=3.00 – 3.49 3=2.50 – 2.99 4=2.00 – 2.49 5=1.99 or less 6=No college GPA
41	DEM14	What is the HIGHEST level of formal education obtained by any of your parent(s) or guardian(s)? (Choose one)	1=Less than high school diploma or less than a GED 2=High school diploma or a GED 3=Some college 4=Associates degree 5=Bachelors degree 6=Masters degree 7=Doctorate or professional degree (ex. JD, MD, PhD) 8=Don't know
42	DEM15	What is your best estimate of your parent(s) or guardian(s) combined total income from last year? If you are independent from your parent(s) or guardian(s), indicate your income. (Choose one)	1=Less than $12,500 2=$12,500 - $24,999 3=$25,000 – $39,999 4=$40,000 – $54,999 5=$55,000 - $74,999 6=$75,000 - $99,999 7=$100,000 - $149,999

			8=$150,000 - $199,999 9=$200,000 and over 10=Don't know 11=Rather not say
43	ENV12	Which of the following best describes where you are currently living while attending college? (Choose one)	1= Off-campus with partner, spouse, and/ or children 2= Off-campus with parent/guardian or other relative 3=Other off-campus home, apartment, or room 4=College/university residence hall 5= Other on-campus student housing 6= Fraternity or sorority house 7=Other
44	DEF	Please provide a brief definition of what the term leadership means to you.	Open response

APPENDIX B. DEMOGRAPHIC DATA BY ASIAN AMERICAN SUBPOPULATIONS

Variables	Asian Indian N (%)	Chinese N (%)	Filipino N (%)	Korean N (%)	Vietnamese N (%)	Other Asians N (%)	Multi-Racial N (%)	Mono-Racial Multi Ethnic N (%)
Age								
Under 24	720(95.9)	1164(93.5)	474(91.0)	586(91.3)	405(86.5)	402(82.5)	1589(91.2)	406(93.8)
24 and above	30(4.0)	81(6.5)	47(90.)	56(8.7)	63(13.5)	85(17.5)	154(8.8)	27(6.2)
Sexual Orientation								
Heterosexual	702(93.5)	1141(91.6)	467(89.6)	598(93.1)	430(91.9)	456(93.6)	1535(88.1)	406(93.8)
LBGQ	48(6.4)	102(8.2)	54(10.4)	44(6.9)	38(8.1)	31(6.4)	206(11.8)	27(6.2)
Enrollment Status								
Full Time	736(98.0)	1205(96.8)	497(95.4)	613(95.5)	441(94.2)	461(94.7)	1690(97.0)	423(97.7)
Part Time	15(2.0)	40(3.2)	24(4.6)	29(4.5)	27(5.8)	26(5.3)	53(3.0)	10(2.3)
Religion								
Christian	103(13.7)	339(27.2)	435(83.5)	445(69.3)	199(42.5)	104(21.4)	928(53.2)	175(40.4)
Non-Christian	488(65.0)	108(8.7)	3(0.6)	20(3.1)	128(27.4)	239(49.1)	134(7.7)	94(21.7)
Unaffiliated	157(20.9)	793(63.7)	81(15.5)	177(27.6)	138(29.5)	142(29.2)	678(38.9)	162(37.4)
Citizenship/ Generation								
U.S.-Born, but at least one of the parents was not	518(69.0)	748(60.1)	367(70.4)	375(58.4)	329(70.3)	293(60.2)	1615(92.7)	369(85.2)
Foreign born, naturalized citizen	180(24.0)	363(29.2)	112(21.5)	157(24.5)	113(24.1)	128(26.3)	109(6.3)	46(10.6)
Foreign born, resident alien/ permanent resident	53(7.1)	134(10.8)	42(8.1)	110(17.1)	26(5.6)	66(13.6)	19(1.1)	18(4.2)
Parental Education								
Associates degree and below	165(22.0)	493(39.6)	132(25.3)	188(29.3)	324(69.2)	214(43.9)	470(27.0)	161(37.2)
Bachelor's degree	189(25.2)	204(16.4)	264(50.7)	191(29.8)	78(16.7)	84(17.2)	557(32.0)	121(27.9)
Master's degree and above	383(51.0)	504(40.5)	108(20.7)	249(38.8)	50(10.7)	166(34.1)	702(40.3)	135(31.2)
Parental Income								
Less than $40,000	91(12.1)	307(24.7)	60(11.5)	165(25.7)	181(38.7)	156(32.0)	237(13.6)	82(18.9)
$40,000 - $74,999	108(14.4)	164(13.2)	111(21.3)	144(22.4)	92(19.7)	100(20.5)	275(15.8)	70(16.2)
$75,000 – $99,999	75(10.0)	119(9.6)	77(14.8)	76(11.8)	37(7.9)	37(7.6)	210(12.0)	38(8.8)
$100,000 – $149,999	136(18.1)	162(13.0)	95(18.2)	63(9.8)	40(8.5)	49(10.1)	291(16.7)	64(14.8)
$150,000 and over	185(24.6)	168(13.5)	52(10.0)	66(10.3)	24(5.1)	30(6.2)	343(19.7)	61(14.1)
Don't know	156(20.8)	325(26.1)	126(24.2)	128(19.9)	94(20.1)	115(23.6)	387(22.2)	118(27.3)

APPENDIX C. FREQUENCY AND PERCENTAGE OF INSTITUTIONAL CONTEXT VARIABLES

Variables	Asian Indian N (%)	Chinese N (%)	Filipino N (%)	Korean N (%)	Vietnamese N (%)	Other Asians N (%)	Multi-Racial N (%)	Mono-Racial Multi Ethnic N (%)
Institutional Size (Enrollment)								
1,000 - 4,999	41(5.5)	122(9.8)	77(14.8)	54(8.4)	60(12.8)	42(8.6)	342(19.6)	58(13.4)
5,000 – 9,999	149(19.8)	287(23.1)	152(29.2)	153(23.8)	88(18.8)	140(28.7)	461(26.4)	131(30.3)
10,000 to 19,999	277(36.9)	377(30.3)	101(19.4)	185(28.8)	94(20.1)	130(26.7)	400(22.9)	104(24.0)
20,000 and above	284(37.8)	459(36.9)	191(36.7)	250(38.9)	226(48.3)	175(35.9)	540(31.0)	140(32.3)
Institutional Control								
Public	375(49.9)	650(52.2)	254(48.8)	319(49.7)	293(62.6)	307(63.0)	855(49.1)	205(47.3)
Private	376(50.1)	595(47.8)	267(51.2)	323(50.3)	175(37.4)	180(37.0)	888(50.9)	228(52.7)
Institution's Carnegie Classification								
Baccalaureate	39(5.2)	75(6.0)	42(8.1)	37(5.8)	21(4.5)	71(14.6)	163(9.4)	25(5.8)
Masters	181(24.1)	460(36.9)	267(51.2)	186(29.0)	236(50.4)	170(34.9)	790(45.3)	228(52.7)
Doctoral/Research & Research (High Research Activity)	212(28.2)	221(17.8)	132(25.3)	111(17.3)	74(15.8)	148(30.4)	481(27.6)	74(17.1)
Research (Very High Research Activity)	319(42.5)	489(39.3)	80(15.4)	308(48.0)	137(29.3)	98(20.1)	309(17.7)	106(24.5)
Institution's Selectivity								
Unclassified & Less Competitive & Competitive	123(16.4)	240(19.3)	190(36.5)	86(13.4)	175(37.4)	199(40.9)	410(23.5)	117(27.0)
Very Competitive	255(34.0)	300(24.1)	209(40.1)	167(26.0)	143(30.6)	113(23.2)	653(37.5)	174(40.2)
Highly Competitive	171(22.8)	339(27.2)	88(16.9)	165(25.7)	98(20.9)	91(18.7)	403(23.1)	86(19.9)
Most Competitive	202(26.9)	366(29.4)	34(6.5)	224(34.9)	52(11.1)	84(17.2)	277(15.9)	56(12.9)
Institutional Affiliation								
Religious	239(31.8)	338(27.1)	223(42.8)	188(29.3)	122(26.1)	102(20.9)	649(37.2)	178(41.1)
Secular	512(68.2)	907(72.9)	298(57.2)	454(70.7)	346(73.9)	385(79.1)	1094(62.8)	255(58.9)
Institution Setting								
City	592(78.8)	905(72.7)	445(85.4)	466(72.6)	384(82.0)	382(78.4)	1266(72.6)	355(82.0)
Suburb & Town	159(21.2)	340(27.3)	76(14.6)	176(27.4)	84(18.0)	105(21.6)	477(27.4)	78(18.0)

APPENDIX D. DESCRIPTIVE STATISTICS OF CAMPUS INVOLVEMENT VARIABLES AND EXPERIENCES WITH DIVERSITY AND CAMPUS CLIMATE VARIABLES

Variables	Asian Indian N (%)	Chinese N (%)	Filipino N (%)	Korean N (%)	Vietnamese N (%)	Other Asians N (%)	Multi-Racial N (%)	Mono-Racial Multi Ethnic N (%)
On-campus Employment								
Yes	191(25.4)	391(31.4)	156(29.9)	211(32.9)	129(27.6)	143(29.4)	556(31.9)	128(29.6)
No	560(74.6)	854(68.6)	365(70.1)	431(67.1)	339(72.4)	344(70.6)	1187(68.1)	305(70.4)
Living Status								
Off-campus with family or other relative	175(23.3)	245(19.7)	167(32.1)	113(17.6)	184(39.3)	184(37.8)	301(17.3)	111(25.6)
Other off-campus home, apartment, or room	165(22.0)	277(22.2)	108(20.7)	155(24.1)	105(22.4)	103(21.1)	541(31.0)	112(25.9)
College/university residence hall	336(44.7)	628(50.4)	207(39.7)	311(48.4)	140(29.9)	170(34.9)	762(43.7)	168(38.8)
Other on-campus housing	72(9.6)	91(7.3)	37(7.1)	63(9.8)	37(7.9)	28(5.7)	136(7.8)	41(9.5)
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Instructor& Student Affairs Staff Mentorship	1.31(1.0)	1.16(1.0)	1.35(1.0)	1.18(1.0)	1.31(1.0)	1.34(1.0)	1.25(1.0)	1.26(1.0)
Peer Mentorship	1.7(1.2)	1.47(1.2)	1.7(1.2)	1.57(1.2)	1.60(1.2)	1.55(1.2)	1.55(1.3)	1.58(1.2)
N of Academic-based Experiences Engaged	2.14(1.5)	1.81(1.4)	1.61(1.4)	1.78(1.4)	1.66(1.4)	1.77(1.4)	1.82(1.4)	1.80(1.4)
N of Organization/Group Involved	4.11(3.3)	3.26(3.0)	3.25(2.9)	3.67(3.1)	3.03(0.9)	3.31(3.3)	3.39(3.0)	3.40(2.9)
Level of College Organization Involvement	2.49(1.3)	2.19(1.4)	2.24(1.4)	2.19(1.3)	1.97(1.4)	1.98(1.5)	2.22(1.4)	2.18(1.4)
Level of Off-campus Org. Involvement	1.11(1.4)	0.77(1.2)	0.94(1.3)	1.19(1.5)	0.97(1.3)	0.96(1.3)	0.93(1.3)	0.82(1.3)
Level of Civic Engagement	1.39(0.9)	1.13(0.80	1.19(0.8)	1.20(0.8)	1.24(0.9)	1.19(0.8)	1.23(0.8)	1.17(0.9)
Level of Racial/Ethnic Groups Involvement	0.61(1.0)	0.37(0.8)	0.61(1.1)	0.45(0.9)	0.42(0.9)	0.52(1.0)	0.34(0.8)	0.58(1.0)
Social Cultural Conversations	1.86(0.8)	1.47(0.7)	1.59(0.8)	1.60(0.8)	1.51(0.8)	1.57(0.8)	1.72(0.8)	1.56(0.8)
Perceptions of Campus Climate (Indirect)	3.47(1.0)	3.38(0.9)	3.61(1.0)	3.24(0.9)	3.34(1.0)	3.35(1.0)	3.60(0.9)	3.40(0.9)
Perceptions of Campus Climate (Direct)	3.93(1.0)	3.88(1.0)	4.07(1.0)	3.77(1.0)	3.85(1.0)	3.83(1.1)	4.03(1.0)	3.90(0.9)
Sense of Belonging	3.68(0.8)	3.53(0.8)	3.67(0.9)	3.48(0.8)	3.52(0.8)	3.62(0.8)	3.62(0.8)	3.50(0.8)