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and Pacific Islander Research in Education

The Impact of Scholarships for Asian American and Pacific Islander Community College Students: Findings from an Experimental Design Study



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CONNECTING RESEARCH TO PRACTICE AND POLICY

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EXECUTIVE SUMMARY

Extant research on scholarship programs provides foundational knowledge on student enrollment patterns, different types of programs and their students, and outcomes for scholarship recipients in different sectors of higher education. Despite this growing body of research, however, looming questions remain about the measurable impact of scholarship funding. In this study, we use an experimental research design^a to estimate the impact of a race-conscious scholarship program for Asian American and Pacific Islander (AAPI) students attending three Asian American and Native American Pacific Islander-Serving Institution (AANAPISI) community colleges: City College of San Francisco, De Anza College, and South Seattle College. Our primary goal was to understand the lived experiences of AAPI students attending community college and the relative impact of the funding on their educational experiences and academic achievement.

^a We employed a randomized controlled trial to compare scholarship recipients and non-recipients in order to isolate the impact of the scholarship on students' educational experiences.

KEY FINDINGS

Results reveal a high level of financial vulnerability among AAPI community college students. With a median household income of \$20,238, students struggled financially to manage educational expenses and other financial responsibilities.

AAPI community college students are more likely to work and work longer hours. 64.3% of the respondents worked, which was higher than the national average of 45.2% for all community college students, and of the students in this study who were employed, 43.4% worked 40 hours or more per week, which is higher than the national average of 32.4% for all community college students.

Work interfered with students' academic engagement. 41.7% of the respondents indicated that work interfered with their studies every week. Students reported forgoing studying (60.7%), being late to class (24.9%), missing class (16.6%), and dropping a class because of work (7.1%).

AAPI community college students have a wide range of family responsibilities. 78.7% of the respondents reported family responsibilities interfering with their academics, 53.7% stated that it was important that the school they attended was near their parents' home, and 17.2% reported family responsibilities almost every day.

AAPI community college students have a high rate of immigrant-origin backgrounds. 83.4% of the participants were immigrants or children of immigrants, which is more than three times the proportional representation than can be found among community college students generally (24.0%).

A high proportion of AAPI community college students are first-generation college students. 82.6% of the sample had parents who never attended college, which is much higher than the national average for all community college students (36.0%). 17.4% of students reported having at least one parent who earned a college degree, but 70.7% of those students reported their parents earned their college degree outside of the U.S.

Receiving a scholarship was associated with improvements in educational expectations. From the baseline to follow-up survey, there were increases in the proportion of scholarship recipients who aspired to earn a bachelor's degree (93.1% vs. 83.7% non-recipients), and who reported confidence in their ability to reach their educational goals (96.6% vs. 87.0% non-recipients).

Scholarship recipients decreased the number of hours they worked. Among recipients who worked, there was a decrease in the hours they worked from an average of 22.1 to 18.1 hours per week. Non-recipients reported a greater likelihood that work interfered with studying, being late to class, missing class, and dropping a class.

Scholarship recipients were more likely to utilize campus resources. Recipients reported a higher rate of utilizing the financial aid office (56.8%) compared to non-recipients (44.3%), and were more comfortable doing so (74.8%). Recipients were also more confident in their ability to reach out for support with financial problems rather than dropping out of college (74.8%), compared to non-recipients (59.3%).

Scholarships were associated with improvements in academic success. Recipients increased the number of credits they attempted from 12.7 to 13.2. Students who received the scholarship also passed their courses at a higher rate than non-recipients.

PREFACE

This report is the third in a series of reports that share results from the Partnership for Equity in Education through Research (PEER), a collaborative effort between the National Commission on Asian American and Pacific Islander Research on Education (CARE), the Asian & Pacific Islander American Scholarship Fund (APIASF), and three inaugural Asian American and Native American Pacific Islander-Serving Institution (AANAPISI) campus partners: City College of San Francisco, De Anza College, and South Seattle College. The PEER project was generously supported by the Kresge Foundation, Lumina Foundation, USA Funds, and Walmart Foundation.

With a goal of supporting AANAPISIs to realize the degree-earning potential of Asian American and Pacific Islander (AAPI) students, PEER engaged in co-investigative action research with campus teams to identify promising practices, implemented targeted interventions, and mobilized key stakeholders to support greater institutional effectiveness. PEER also worked with campus partners to support AANAPISIs in the

policy arena by increasing the program's visibility and its impact on the educational mobility of low-income AAPI students. Collectively, the goal of these strands of work was to leverage research to inform practice and policy relevant to low-income AAPI college students and the institutions that serve them.

In the current report, we provide results from the study of scholarship funding provided to AAPI students attending PEER community college campus partners. While APIASF distributed scholarships, CARE conducted the external evaluation to measure the impact of the funding on intermediate and long-term academic outcomes. As the first study to examine AAPI scholarship recipients at community colleges, we focus this report on describing the cohort of applicants for the scholarship program and provide some early findings from the first year of the longitudinal analysis of recipients and non-recipients. This research provides baseline findings upon which future studies can track the long-term impact of scholarship funding for AAPI students attending community colleges.

Advance Institutional Effectiveness (Institution-Level)	<ul style="list-style-type: none">• Conduct Co-Investigative Research• Jointly Develop and Deploy Intervention Plan
Advocate for Increased Support (Policy-Level)	<ul style="list-style-type: none">• Implement Cross-Campus Collaborative• Promote Increased Investment in AANAPISIs
Promote AAPI Student Access and Success (Student-Level)	<ul style="list-style-type: none">• Provide Scholarship Support• Study Scholarship Recipients

INTRODUCTION

Scholarships, grants, and other forms of financial support for students attending college play an integral and complementary role in the system of American higher education. Scholarship programs, for instance, can be traced back to the earliest era of American higher education,¹ with programs created to support women and American Indians in the late nineteenth century.² Since then, scholarship programs have become more robust and far reaching with their support. A previous report estimated that approximately \$3 billion in private scholarships are distributed annually.³ Simply put, access to higher education for many students — and the system of American higher education generally — would be adversely impacted without such programs.

Despite the importance of these programs, there is a need for more empirical research that provides greater insight into the role and function of scholarships. While studies have found that scholarships have an impact on college access and choice, questions remain about the extent to which they are associated with long-term educational outcomes (e.g., academic achievement, persistence, and degree attainment rates) and intermediate outcomes such as self-concept, self-efficacy, and academic and social engagement.⁴ Moreover, and perhaps more importantly, there is a dearth of knowledge about how scholarships impact the educational outcomes of particularly vulnerable student populations.

In this study, we used an experimental research design to estimate the impact of a race-conscious scholarship program for Asian American and Pacific Islander (AAPI) students attending three AANAPISI community colleges: City College of San Francisco, De Anza College, and South Seattle College. We also relied on qualitative data to contribute empirical evidence about how and why scholarships influence these students' outcomes. The line of inquiry pursued in this study is a critical step toward a deeper understanding of the lived experiences of AAPI students attending community colleges, how they utilize funding from a scholarship program, and the relative impact of the funding on their academic achievement.

CONTEXT FOR THE STUDY

This report complements a growing body of research on race-conscious scholarship programs and other efforts to identify and understand policy strategies that promote greater access and success for students of color in higher education. This research also comes at a time when there is a growing movement toward building a culture of evidence to inform the work of practitioners, policymakers, and institutional leaders as they make decisions about resource allocation and best practices. Recent research on the impact of scholarships is of particular interest because of its focus on addressing the lack of knowledge about the impact of scholarship support that targets students of color, especially those who attend community colleges.

The following themes can be located in prior studies of scholarships:

- **Scholarships have primarily been examined in the context of college access and persistence.** Studies have found that financial barriers are among the most significant factors that impact persistence and degree attainment, especially for low-income and first-generation college students.⁵
- **Research has produced mixed results regarding the relationship between scholarships and long-term educational outcomes.** Some studies have found that scholarships raise the probability of year-to-year persistence, transfer, and baccalaureate completion for community college students.⁶ Others have found that scholarships have no relationship with persistence and associate degree attainment for this population.⁷
- **Few studies have focused on the impact of scholarships for particularly vulnerable student populations.** There is a need for research on the impact of scholarships for low-income students of color, students attending community colleges, and students attending minority-serving institutions. These students tend to be more price-sensitive and debt-averse,⁸ so we would expect scholarship support to be more meaningful to them and to exert a greater influence on their educational outcomes.



The extant research on scholarship programs provides foundational knowledge on student enrollment patterns, different types of programs and their students, and outcomes for recipients in different sectors of higher education. Despite this emerging body of research, looming questions remain about the measurable impact of scholarship funding. The growing emphasis on accountability and evaluation of program effectiveness within higher education makes research on the impact of scholarship funding all the more urgent.

PURPOSE OF THE REPORT

Prior research published by PEER includes co-investigative research with our campus partners — City College of San Francisco, De Anza College, and South Seattle College — examining the role and function of the federal AANAPISI program. The purpose of this report is to focus on the profile of AAPI community college students attending these institutions, and to provide preliminary findings on the role and function of a race-conscious scholarship program. The long-term goal for this project is to analyze longitudinal data comparing

scholarship recipients and non-recipients, in order to track the extent to which scholarship funding has a measurable impact on student success.

Three primary research questions drive this report:

1. What is the profile of AAPI community college students who applied for the race-conscious scholarship?
2. What impact does the scholarship have on their educational expectations, time spent on their education, and use of institutional resources?
3. In what ways, if at all, does funding from the scholarship program impact academic outcomes, including academic performance, persistence, and credit accumulation?

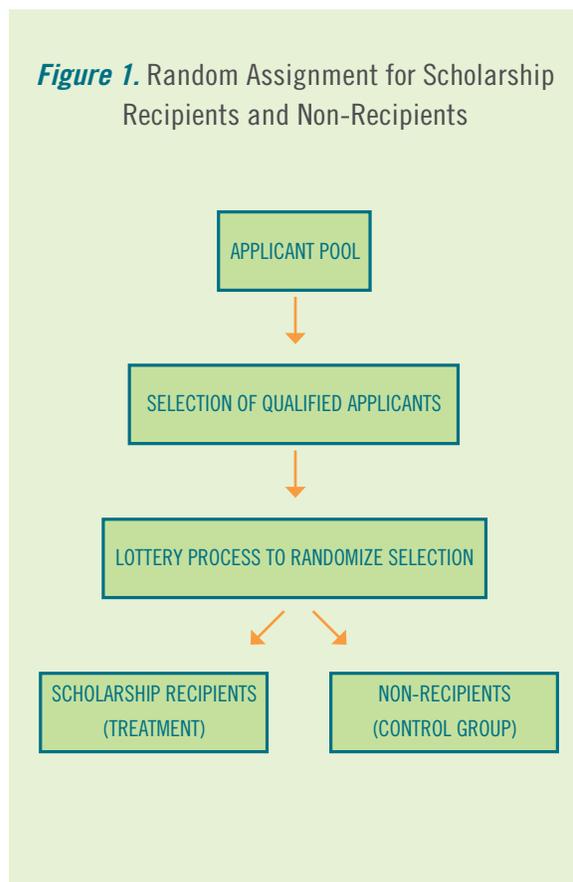
The report begins with a brief discussion of **the analytic approach** to the study, providing a description of the data sources, methodologies, and how we define and measure student success. We discuss our research approach in the context of prior studies of scholarship programs and their impact on student outcomes. The next section reports on **the profile of AAPI community college students**, which is based on data from the participants in this study. Our goal for this section is to offer a deeper understanding of the lives, challenges, and educational circumstances of AAPI community college students in order to better understand the impact of the scholarship program within the context of the day-to-day lives of these students.

The subsequent section builds on this student profile to provide perspectives on **how scholarship recipients utilize their scholarship funding** and the impact it has on their educational expectations (i.e., plans to transfer and reach educational goals), time spent on their education and their use of institutional resources. We also discuss preliminary findings on **educational performance and outcomes** for scholarship recipients and non-recipients. We conclude with recommendations for practitioners and policymakers in regard to scholarship funding for low-income students of color.

MEASURING THE IMPACT OF A NEED-BASED SCHOLARSHIP PROGRAM

The limited research and mixed results of studies on scholarships call for an experimental study of the impact of grant aid disbursed to community college students, as this kind of research design is viewed as meeting a methodological “gold standard.”⁹ This study uses a research design that remedies the self-selection bias common in studies of financial aid (see Technical Appendix).¹⁰ Specifically, we employed a **randomized controlled trial** to compare scholarship recipients and non-recipients in order to isolate the impact of the scholarship on students’ educational experiences.¹¹ After all qualified applicants from the scholarship applicant pool were identified, a lottery process randomly selected and awarded scholarships to a subgroup of these students; this enabled us to create comparable samples for the treatment and control groups (Figure 1).

Figure 1. Random Assignment for Scholarship Recipients and Non-Recipients



PARTICIPANT SAMPLE

The sample consisted of 366 AAPI community college students who were finalists in the APIASF scholarship competition. These students were selected based on a scoring rubric that considered students’ financial responsibilities and hardship, resiliency, leadership, engagement with their communities, and sense of civic responsibility. Among the pool of finalists, 135 (36.9%) were randomly assigned as scholarship recipients, with the remainder of the finalists (non-recipients) making up the comparison group ($n = 231$). Thus, the recipient and non-recipient groups are similar along a range of demographic indicators reported at the time of application. For example, the three largest ethnic subgroups (Vietnamese, Chinese and Filipino) all comprise very similar proportions of the treatment and controls groups. (See the Technical Appendix for a full description of the sampling procedure).

BASELINE AND FOLLOW-UP SURVEYS

As part of their application for the scholarship, applicants completed a survey consisting of questions on academic engagement, use of time, and employment behaviors, among other topics. Information from the applications and data from the surveys were merged with term-by-term academic data provided by the each institutional partner, which included information on grade point average, credit accumulation, persistence, transfer, and degree attainment. These data points served as the baseline data for our study.

Two-thirds of the sample participated in a follow-up survey administered one academic term after the scholarship disbursement. The survey was administered as a paper survey to recipients and as an identical online survey for non-recipients. The follow-up survey asked similar questions to the baseline survey.

We also conducted semi-structured focus group interviews with a subset of student recipients (10% of recipients, or about 40 students) about the process of applying for the scholarship, the perceived impact of the scholarship on their work and academic behavior, and

their engagement on campus. Each focus group interview was transcribed verbatim and coded for themes. Our goal was to evaluate: 1) the impact of scholarships on AAPI student persistence, course-taking behavior, grade point average, and academic and social engagement; and 2) the specific features of the scholarships that contributed to enhanced educational outcomes. (For more detailed information on the methods, see Technical Appendix).

MEASURES OF STUDENT SUCCESS

In this study, we focused on both intermediate and long-term outcomes related to students' educational expectations, experiences, and outcomes:

- **Intermediate Outcomes:** changes in educational expectations; use of time and funding; awareness about and use of academic resources.
- **Long-Term Outcomes:** impact on credits attempted and accumulated; academic performance.

We acknowledge that these measures should not be considered exhaustive definitions of student success.¹² However, these conventional measures of institutional performance are a primary concern of policymakers relative to national higher education policy priorities.¹³ Additionally, a focus on these measures aligns our work with existing studies on the impact of scholarships and grant programs. Our analysis in this report was also limited to one term following the intervention. Future research may track the academic progress of these students to measure their transfer and associate degree attainment outcomes.

The APIASF Asian American and Native American Pacific Islander-Serving Institution (AANAPISI) Scholarship Program is a collaboration between APIASF, AANAPISI institutions, and the communities they serve to provide scholarships, expand institutional capacity and mobilize local resources to help foster economic development. To be eligible for the scholarship, students had to be enrolled in an accredited degree-seeking program at one of the partner AANAPISIs, self-identify as AAPI, be a national, legal permanent resident of the United States, a citizen of the Republic of the Marshall Islands, Federated States of Micronesia or the Republic of Palau; and complete the Free Application for Federal Student Aid (FAFSA). There were no grade point average or educational level requirements (e.g., year of enrollment, enrollment in college level coursework). However, students needed to indicate their intent to enroll full-time upon receiving the scholarship the term following their application. (For more information, visit <http://apiasf.org/aanapisischolarship.html>).

A PROFILE OF AAPI COMMUNITY COLLEGE STUDENTS

AAPI college students are commonly perceived as having high academic achievement, coming from middle and upper class backgrounds, and attending highly selective four-year colleges. Despite these common misconceptions, 47.3 percent of AAPI college students are enrolled in community colleges.¹⁴ AAPI community college students often face barriers to achieving transfer and degree attainment, similar to other underrepresented minority groups.¹⁵

In order to better support this large segment of the AAPI college student population, researchers, policymakers, practitioners, and community-based organizations must first understand the nuanced experiences and challenges these students face, which may influence their educational experiences and outcomes. In this section, we discuss the profile of the applicants for this scholarship program to gain a deeper understanding of the lives, challenges, and educational circumstances of AAPI students in community colleges. This enables us to better understand the impact of the scholarship program within the context of the day-to-day lives of these particular students.

THE FINANCIAL VULNERABILITY OF THE STUDENTS

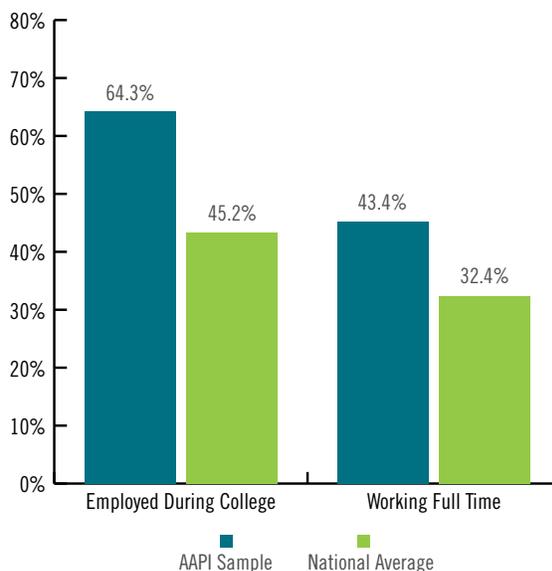
Perhaps the most important theme that characterizes the lives of the AAPI students in this study was the extent to which they face financial vulnerability. The students, for example, had a median household income of \$20,238, which is below the U.S. Census-defined federal poverty level of \$23,283.^b Having limited financial resources poses a number of challenges for students in their daily lives. In our sample, students indicated a number of adjustments they made to subsist financially, including changes to grocery shopping or eating habits (53.5%), postponing medical or dental care (27.2%), and putting off paying bills (12.9%). More specific to their education, they also indicated forgoing the purchase of textbooks (39.7%) or a computer/laptop (32.9%), both of which are essential for the success of students.

For community college students, there is a high preva-

^bThis is the U.S. Census defined level of poverty for a family of four. This household size is the common figure used in measures of median household income.

lence of working while attending college, compared to their counterparts attending four-year institutions. According to data from the Bureau of Labor Statistics (2014), 45.2 percent of community college students work while enrolled in college, compared to 27.8 percent of students attending four-year colleges.¹⁶ In our sample of AAPI community college students, just under two-thirds (64.3%) worked while attending college, almost 20 percent above the national average of community college students (Figure 2). Similarly, the AAPI students in our sample reported higher rates of full-time work (40 or more hours per week), compared to the national average (43.4% and 32.4%, respectively).¹⁷

Figure 2. Percent of Community College Students Employed During College and Employed Full-Time During College, AAPI Sample and National Average



Working long hours has many implications for students' educational progress. Research on national samples of community college students indicates that working more than 20 hours a week is a risk factor for not completing college.¹⁸ Students in our sample reported a number of ways work interfered with their academics. Over half indicated forgoing studying (60.7%) and nearly a quarter indicated being late to class (24.9%). Some respondents also reported missing class (16.6%) or dropping a class (7.1%) because of

work. Students who were employed full-time indicated that it limited their ability to study for their classes; more than one third of these respondents (41.7%) reported that work interfered with their studies every week.

AAPI community college students not only have a greater likelihood of working and working longer hours, they are also at a greater risk of not succeeding in college because of a high rate of enrolling as part-time students and delaying matriculation by two years or more, much higher than is the case for AAPI students at four-year colleges.¹⁹ Thus, working while attending college can be confounded with other risk factors that can adversely impact students' academic progress and outcomes.²⁰

41.7% of the survey respondents



reported that work interfered with their studies every week

While work was a necessity for many students, it is important to understand their financial vulnerability within the context of other responsibilities. In addition to supporting themselves financially, many of the student respondents reported responsibilities related to their families. This finding was similar to other studies that have found that low-income AAPI students are obligated or feel a sense of responsibility to support their parents, younger siblings, and extended family.²¹ In our sample, over half (53.7%) of the students stated that it was important that the school was near their parents' home and 17.2 percent reported having family responsibilities almost every day.

For example, a student in the focus group discussed challenges he faced with his family related to housing:

We quickly found ourselves being passed around from relative to relative, while trying to maintain a place to live and find any type of employment that would help satisfy our rent and household expenses, as well as our relative obligations. I found myself holding down three jobs at the same time — as a retail sales associate, a gas-attendant cashier, and a janitorial engineer. (De Anza College student)

Students also discussed additional responsibilities as cultural brokers and interpreters between their immigrant parents or grandparents and English-speaking institutions and society, which is a finding consistent with other research.²² One student shared, “It is important to my parents that I can communicate well in English, because they can rely on me since they cannot speak well in English” (CCSF student).

In general, community college students are twice as likely as their public 4-year counterparts to have dependents (31.8% vs. 15.2%, respectively) and they are almost two-and-a-half times more likely to be single parents (17.5% vs. 7.2%, respectively).²³ In our study, 9.6 percent of the applicants had at least one dependent, which was lower than the national average. Nonetheless, students in our focus groups with dependents discussed some of the challenges associated with responsibilities to their families, and the added pressure that exists for single parents. For example, one student reported:

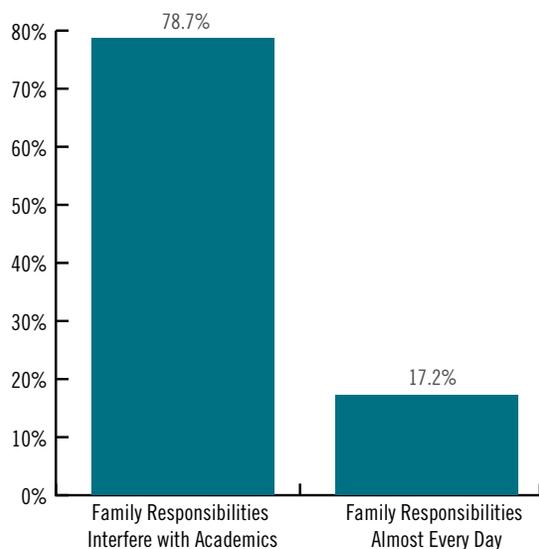
I am a single parent [and] providing emotional and physical support for my sons has always been my priority. I struggle financially because I live away from my parents and my sons both have chronic illnesses; I need medical coverage and time to care for them. I am finally seizing the opportunity to resume my education and rejoined the workforce in 2010. (CCSF student)

Managing responsibilities at home while attending college had implications for the educational experiences of the students in our study; almost four in five students in the sample (78.7%) reported family responsibilities interfering with their academics (Figure 3). As a result, students are often placed in a predicament where they have to choose between continuing their education and helping to take care of their families.²⁴ In some cases, the cost of college (e.g., tuition and fees, books, school supplies, transportation to and from campus, lost wages for reducing hours at work) needed to be weighed against other financial responsibilities. For example, consider that 34.5 percent of students indicated having difficulty with paying bills.

78.7% of the students reported family responsibilities interfering with their academics



Figure 3. Percentage of Sample Reporting Family Responsibilities



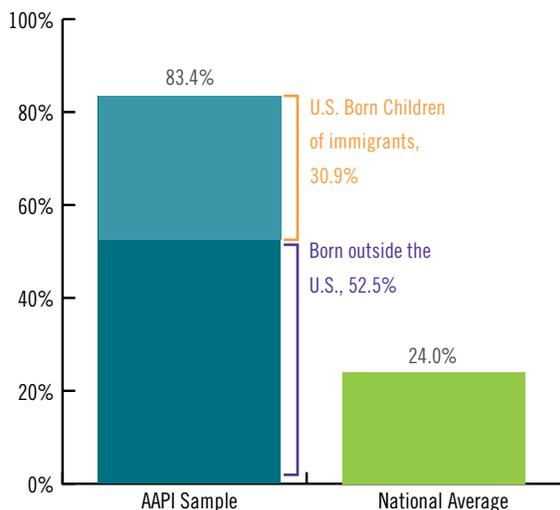
THE IMMIGRANT-ORIGIN BACKGROUND OF STUDENTS

Another important theme related to the demography of AAPI college students is the extent to which they come from immigrant-origin backgrounds, which is defined as being foreign-born or having at least one foreign-born parent. Of the students in this study, more than half (52.5%) were born outside the U.S. and another 30.9 percent had at least one foreign-born parent. Thus, 83.4 percent of the participants in this study fall under the definition of coming from an immigrant-origin background (Figure 4).²⁵ This is more than three times the proportional representation that can be found among community college students generally (24.0%).²⁶

83.4% of the survey respondents fall under the definition of immigrant-origin students



Figure 4. Percent of Community College Students with Immigrant-Origin Backgrounds, AAPI Sample and National Average



The high proportion of immigrant-origin students in this study is consistent with other research that found immigrants were more likely to be enrolled in community colleges or vocational programs than their native-born counterparts.²⁷ In a study of California, for example, 70 percent of immigrant undergraduates enrolled in community colleges.²⁸

Immigrant college students present an interesting paradox with regard to academic achievement and educational success. While immigrant college students often have higher aspirations and better academic performance,²⁹ they also spend more time than their native-born peers on family responsibilities, and are more likely to be older and work while attending college.³⁰ These findings suggest immigrant college students face significant demands from work and family that can make it more difficult for them to fully achieve their educational aspirations. In other words, while immigrants have higher academic performance (e.g., GPA or course completion), they also have lower levels of total educational attainment, falling short of their high educational aspirations. Research has also found that immigrant students are more likely than their native-born peers to be unfamiliar with the skills required to succeed in the American educational setting and are less likely to seek help from counselors or academic advisors.³¹

There are additional challenges for immigrant college students who are more recent arrivals to the U.S., a population that has been found to be more prevalent

among AAPI community college students compared to other students in the two-year sector. Research has found AAPI community college students are more likely to have a history of foreign schooling compared to other racial groups.³² In a study of AAPI students in a community college in Southern California, 66 percent reported attending high school outside the U.S. and 72 percent stated they had lived in the U.S. for less than five years. Another survey of students at community colleges in Los Angeles found that 60 percent of AAPI students had attended elementary school outside the U.S. and 45 percent attended high school outside the U.S.³³

Spending a limited time enrolled in U.S. K-12 schools poses a challenge when it comes to English proficiency and navigating the educational system. These recent immigrant-origin students are more likely to be placed in English as a Second Language (ESL) or developmental courses in college, which prolongs their time to transfer and earn a degree. Research has found that AAPI community college students are more likely than all other racial groups to speak another language, besides English, at home.³⁴ One student in our study discussed challenges she faced due to her language background:

When I came to United States, I did not understand much of what the teachers and classmates were saying to me, and I was not able to respond to them fluently. It also took me twice as long as my classmates to read and comprehend literature and textbooks. (CCSF student)

Students who speak English as a second language have been found to be less likely to have the reading and writing skills that are sufficient to be placed in college-level coursework. Additionally, research has found a greater proportion of AAPI community college students with a history of English Language Learner (ELL) and basic skills coursework during high school than their peers,³⁵ resulting in a greater likelihood of enrolling in basic skills courses in college.³⁶ This was a similar theme experienced by more recent immigrant students in our study, which was accompanied by a high rate of enrollment in bilingual education and other forms of ELL coursework.

Furthermore, research suggests that students who have difficulty speaking English are less likely to request sup-

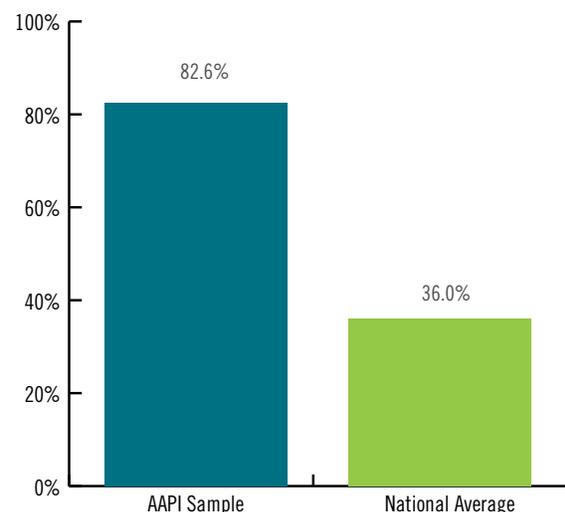
port services, speak with professors, and socialize with classmates.³⁷ This also relates to recent immigrant and immigrant-origin students having limited knowledge about how to navigate the U.S. higher education system and the expectations they must meet in order to succeed in the American postsecondary environment. One student discussed the challenges associated with being a new immigrant trying to navigate the American system of higher education:

After immigrating to America, at almost eighteen years of age, I had low self-confidence in speaking and writing English. I found myself lost and isolated. I did not have much knowledge about the higher education system in America and my goals seemed out of my reach. (De Anza College student)

BEING A FIRST-GENERATION COLLEGE STUDENT

A large segment of AAPI community college students are first-generation college students,³⁸ which was also reflected in the study. These students, many of whom are Southeast Asian or Pacific Islander, are often more financially vulnerable, more at risk of attrition, and more likely to have lower degree attainment rates. In our sample, 82.6 percent of the students had parents who had never attended college (Figure 5), which is much greater than the national average for community college students (36.0%).³⁹

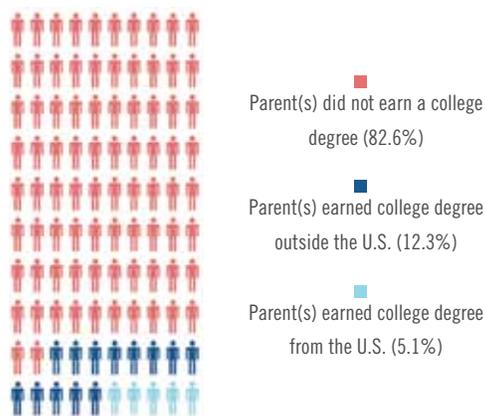
Figure 5. First-Generation College Students in Community Colleges, AAPI Sample and National Average



Moreover, our analysis revealed important distinctions about being the first in their families to attend college, which require careful attention. For example, while a common practice in higher education is to define first-generation college students as those whose parents have not received a bachelor's degree, this definition is problematic for AAPI students with parents who earned bachelor's degrees outside the U.S. In our study, 17.4 percent of students reported having at least one parent who earned a college degree. However, when we examine these numbers more closely, 70.7 percent of those students reported their parents earned their college degree outside of the U.S. (dark blue figures in Figure 6). This is not surprising, considering research has found that just over half of all immigrants (52.0%) receive their college education in their country of origin.⁴⁰

lower levels of preparation for college-level coursework and a higher likelihood of taking developmental courses during college.⁴¹ This factor alone can be an important barrier to success during college and should be considered within the context of first-generation college attendance among AAPI students. This has been established in earlier research detailing that first-generation AAPI college students are three times more likely to have considered leaving college for non-academic reasons than AAPI students with parents who had attended college (33.8% vs. 11.5%).⁴² Thus, a definition of first-generation college student that does not account for students whose parents attended college outside the U.S. can be problematic for AAPI students, especially if it impedes access to outreach programs that provide the support and services for first-generation college students.

Figure 6. Educational Attainment Patterns among Parents of AAPI Sample



82.6% of the participants had parents who never attended college



Overwhelmingly, participants in our survey reported their parents had high expectations for their academic success. However, because many of the students were first-generation college students, parents did not have the knowledge to help their students navigate the U.S. higher education system. Less than a quarter of the students in this study received guidance from their parents about college, especially with regard to financial aid. When asked who assisted them with their FAFSA, only 21.5 percent of students reported receiving guidance from their parents.

Research has found additional challenges associated with being a first-generation college student, including

STUDENT PERCEPTIONS, BEHAVIOR, AND ACADEMIC OUTCOMES

Among our sample, four in five students (81.1%) indicated that the financial aid they received directly impacts their ability to succeed in college. While previous studies have found scholarships have an impact on college access and choice, this study was interested in the extent to which scholarships are associated with intermediate outcomes (e.g., awareness about and use of academic resources, changes in educational expectations, academic and social engagement) and long-term educational outcomes (e.g., academic achievement, persistence, and degree attainment rates).⁴³ Thus, there is a need to understand how students utilize funding from the scholarship, and more generally, how receiving scholarships has an impact on students' attitudes, perceptions of opportunity, and behavior. In this section, we report on how the scholarship is associated with recipients' expectations, the impact of the scholarship on recipients' use of time during college, and the extent to which scholarships are associated with improvements in academic outcomes.

81.1% of students indicated that the financial aid they receive directly impacts their ability to succeed in college

EDUCATIONAL EXPECTATIONS

While scholarships have been found to play an important role in offsetting costs of attending college and fulfilling other unmet financial needs, little is known about their impact on students' educational expectations. Students' educational aspirations and expectations are important factors influencing student initiative, engagement, and involvement.⁴⁴ Therefore, aspirations and expectations need to be understood within the context of real and perceived obstacles students face during college, and the ability for the scholarship to alleviate these stressors.⁴⁵ An interview with a community college counselor provided insight into this point:

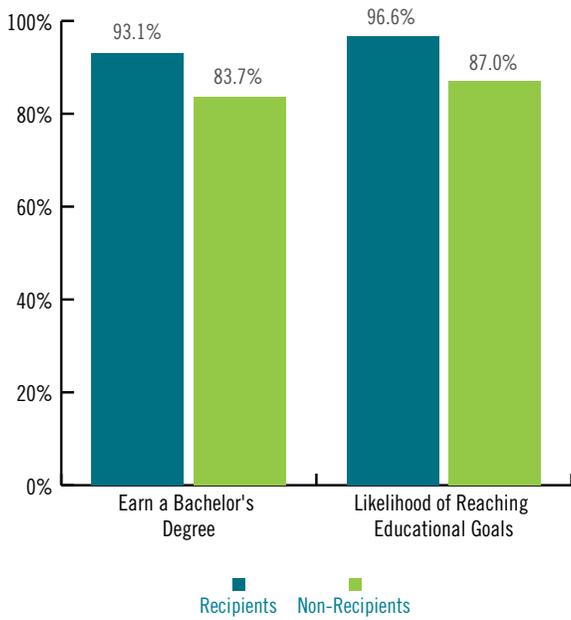
With community college students, self-efficacy or lack thereof is always an issue. For instance, many of the students had never applied for a scholarship in high school or college. Even with students that have high GPAs, they are constantly wrestling with anxiety and self-doubt. The fear of rejection is reason enough to never apply for an award, and in some cases, to stop short of completing the application. (De Anza College counselor)

In the study, a very high proportion of all scholarship applicants had very high expectations to transfer to a four-year college. However, a higher proportion of scholarship recipients believed they would earn a bachelor's degree (93.1%), compared to non-recipients (83.7%) (Figure 7). That said, when asked the extent to which they believed they would reach their educational goals, regardless what those goals were, recipients were significantly more likely to believe they would achieve their goals, compared to non-recipients (96.6% vs. 87.0%, respectively). Given the importance of goal setting in academic outcomes, this foreshadows the importance of scholarships in influencing students' expectations to earn a college degree.

RELATIONSHIP TO STUDENT BEHAVIOR

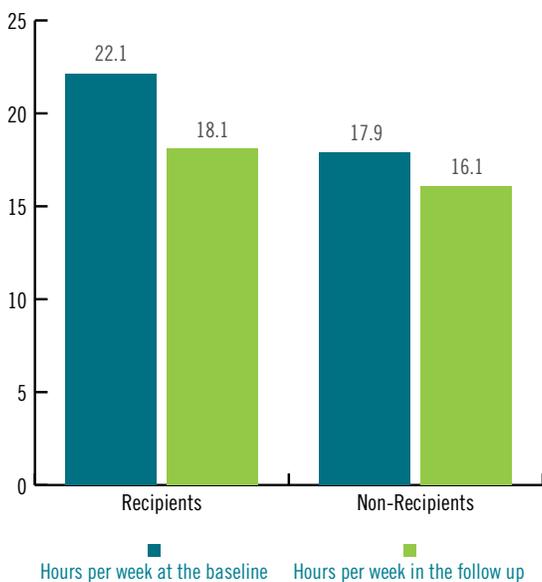
Scholarships have been linked to positive changes in student behavior, but results have not been consistent across studies.⁴⁶ In this study, we were interested in the extent to which scholarships had an impact on work behavior among recipients. At the time they applied for the scholarship, these students reported a high rate of working while attending college, with a high proportion of students working full-time. Among those who worked, they decreased the number of hours worked from an average of 22.1 to 18.1 hours per week (Figure 8). The results were not statistically significant for non-recipients.

Figure 7. Expectations among Recipients and Non-Recipients



Note: $p < .05$.

Figure 8. Change in Number of Hours Worked Among Recipients and Non-Recipients



Note: Recipients, $p < .05$; Non-recipients, *NS*.

“Receiving the APIASF scholarship makes me feel more confident about myself, more optimistic about my educational goals and believe in my ability to reach those goals.” —CCSF student

While the relationship between the scholarship and work behavior was important, we were also interested in how students reported the impact of work on their academic engagement. We found that non-recipients reported a higher degree of being adversely affected by work than was the case for recipients. Non-recipients were more likely to report that work interfered with studying and led them to drop a class (Figure 9). These findings are similar to results from other scholarship studies that have found that scholarship recipients report a greater amount of time devoted to studying than non-recipients.⁴⁷

Given the importance of financial aid, we asked students the extent to which they utilized financial aid resources. Scholarship recipients reported a higher rate of utilizing the financial aid office (56.8%) and being more comfortable doing so (74.8%) than non-recipients. Recipients were also more confident in their ability to reach out for support with financial problems rather than dropping out of college (74.8%), compared to non-recipients (59.3%). These findings are consistent with other research that has found that creating conditions in which students feel engaged is critical and contributes positively to student outcomes.⁴⁸

“The AANAPISI Office and TRIO introduced me to all the different resources available on campus — the writing center, how to use the library properly, and things like that. So by researching the scholarship, I was able to find a lot of other resources.” —De Anza College student

RELATIONSHIP TO ACADEMIC OUTCOMES

Ultimately, scholarships should impact student’s academic outcomes, including the rate of credit accumulation to make a steady progress toward earning a degree and/or transfer. Time has been found to adversely impact student progress with an exponential decrease in completion the longer a student remains enrolled in college.⁴⁹ Overall, recipients were more likely to increase the credits they attempted and earned compared to non-recipients (Table 1).

At one partner AANAPISI campus, for example, recipients increased the number of credits they attempted from 12.7 to 13.2, a statistically significant increase (Figure 10). The difference for non-recipients was not statistically significant.

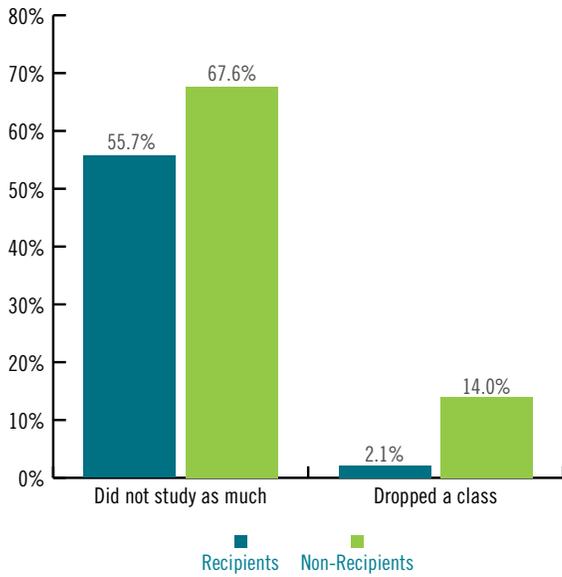
As such, the data that is available at this early stage already indicates that relative to a comparable sample of non-recipients, scholarship recipients had higher educational expectations and more confidence that they would achieve their goals, had decreased their hours of work and were less likely to report adverse effects of working on time spent studying and course completion, were more likely to have used the financial aid office, felt more comfortable doing so and were more confident reaching out for support with financial problems, and were more likely to have increased the number of courses attempted and the number of credits earned relative to credits attempted.

These results are preliminary, but illuminating. Additional analyses on academic performance, term-to-term persistence, degree attainment, and transfer rates will be reported in a later study. That said, these findings are an indication of the type of research needed to better understand the role and function of scholarships for low-income AAPI students attending community colleges.

Table 1.
Change in Credits Attempted and Credits Earned Relative to Credits Attempted among Recipients and Non-Recipients

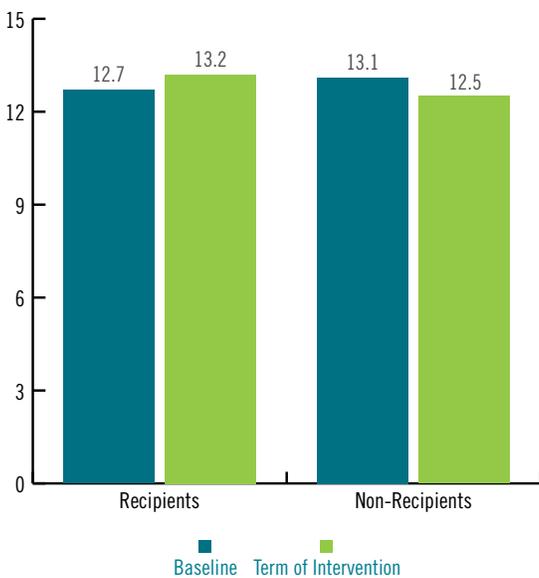
	Recipients	Non-Recipients
Percentage of students with an increase in credits attempted	43.1	39.2
Percentage of students with an increase in credits earned relative to credits attempted	32.2	27.7

Figure 9. Impact of Work on Academics among Recipients and Non-Recipients



Note: “Did not study as much” $p < .01$; “Dropped a class” $p < .05$.

Figure 10. Change in the Mean Number of Credits Attempted among Recipients and Non-Recipients at One Campus



Note: Recipients, $p < .05$; Non-recipients, *NS*.

“I felt like a big weight was lifted off my shoulders. The scholarship helped me a lot because I didn’t need to work full-time this quarter and it helped me balance [my time]. Right now I’m working to get my college degree and it kept me going to school.”
—SSC student

LESSONS LEARNED AND LOOKING AHEAD

Through a longitudinal analysis of race-conscious scholarship funding provided to students at three AANAPISI community colleges, this report provides higher education policymakers, practitioners, and researchers with a deeper understanding of the role and function of scholarships relative to the educational outcomes for AAPI community college students. Below is a set of recommendations based on the findings:

- More scholarship programs should target students in community colleges. Scholarships matter as a financial resource, but can also be a catalyst for the development of confidence and a positive influence on educational expectations for degree-seeking community college students. Community college students also had less experience utilizing resources on campus that can connect them with scholarship funding.
- Scholarship programs for community college students should be designed with the unique challenges faced by this student population in mind. Findings reveal a profile of students who are particularly vulnerable due to a number of risk factors.
- Race-conscious scholarships can play a unique role for first-generation college-going students of color. Students in this study improved their sense of belonging and engagement as college students.
- Scholarships for underrepresented students, such as racial or ethnic minorities, should be inclusive of low-income AAPI students. These students, especially in community college settings, face a number of challenges, which are often overlooked or misunderstood.
- Campuses should leverage scholarships as opportunities to improve financial literacy, help students balance school and work, and increase students' use of financial aid and other resources on campus. Assisting students with their access to and utilization of campus services is critical for improving the ability of community college students to navigate their educational experiences.
- Opportunities to build stronger partnerships between race-conscious scholarship programs and minority-serving institutions should be pursued. These partnerships can support the unique needs of the students attending these institutions and target specific, desired outcomes.
- There is a need for more research on scholarships, especially related to the study of vulnerable populations and community college students. This research will reveal more insight for how scholarship programs can directly support the success of their award recipients, and indirectly benefit students through a stronger relationship with institutions.

TECHNICAL APPENDIX

This study utilized a mixed-methods and experimental research design. In order to isolate the impact of the scholarship, the study was designed as a randomized control trial to compare scholarship recipients and comparable non-recipients. All applications were stripped of student names and other identifiers, and then reviewed and scored by campus-based review committees and APIASF staff. A pool of 366 applications were selected to be semi-finalists of the scholarship and entered into a school-level lottery. The semi-finalists were randomized and controlled for gender, ethnicity, full-time status, and self-reported GPA. The final sample consisted of 135 (36.9%) scholarship recipients (45 per campus) and 231 (63.1%) non-recipi-

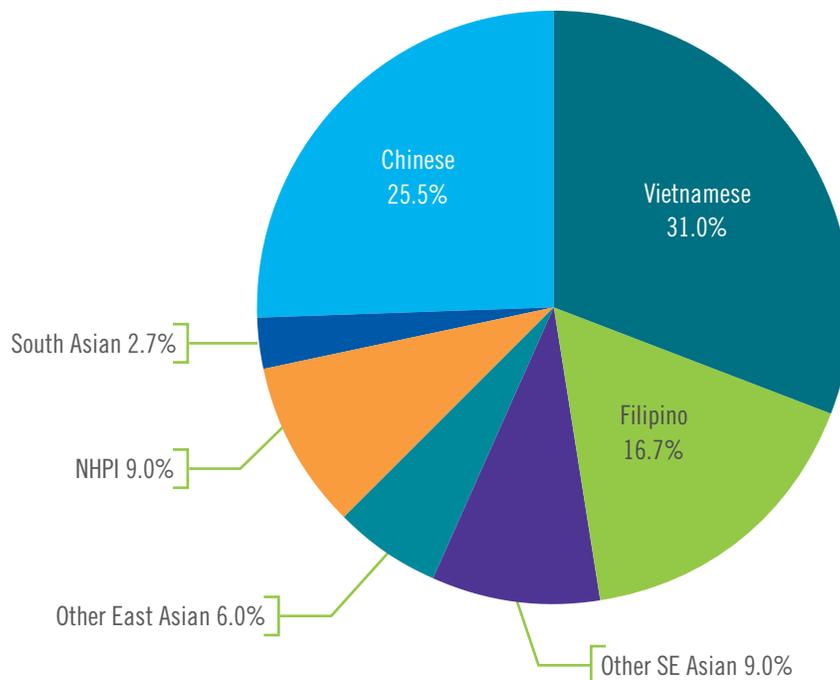
ents (see Table A1). We oversampled non-recipients to account for attrition.

Together, the recipients and non-recipients made up an array of ethnic groups representation, as demonstrated by Figure A1. In total, 27 ethnic subgroups were represented. However, due to sample size, the groups have been aggregated into larger regional categories, except for the three largest ethnic groups represented (i.e., Chinese, Filipino and Vietnamese). Across all three institutions, the ethnic breakdown of applicants reached near parity with the ethnic makeup of the campuses, in that the three largest AAPI groups were also the three largest groups represented in the applicant pool. The only divergence from this was South Seattle College,

Table A1. Distribution of Scholarship Recipients and Non-Recipients by Campus

	City College of San Francisco	De Anza College	South Seattle College
Recipients	45	45	45
Non-Recipients	80	76	75
Total Qualified Applicant Pool	125	121	120

Figure A1. Ethnic Representation of Applicants



where Chinese student applicants did not reach parity and Samoan and Cambodian applicants made up a larger proportion of their general representation on campus.

Comparatively, the recipients and non-recipients have virtually identical profiles, as demonstrated by Table A2 below. The recipient and non-recipient groups are similar along a range of demographic indicators reported at the time of application, as tabulated below.

Table A2.
Selected Demographic Characteristics,
Recipients and Non-Recipients

Demographic characteristics	Recipient	Non-Recipient
Female	51.1%	51.5%
Vietnamese	30.9%	29.5%
Chinese	25.4%	26.7%
Filipino	16.7%	16.6%
Pacific Islander	10.4%	8.2%
Full-time status*	98.5%	97.4%

*At time of application

RECRUITMENT STRATEGIES AND SELECTION BIAS

In this section, we describe the recruitment and outreach strategies administered at each campus, and the extent to which these strategies may have influenced the scholarship applicant pool and the students' experiences at the term of scholarship disbursement. At each campus, one college counselor or advisor took the lead and was the liaison between their students, APIASF and CARE. These individuals worked closely with their AANAPISI programs and services and had rapport with many of their AAPI students on campus. Each of the campus scholarship leads took the initiative to develop and execute an outreach and recruitment plan that would work for their campus and student population in order to reach the targeted application goal. Strategies included sending mass emails to students, faculty, and counselors; posting flyers across the campus and on social media; delivering recruitment

presentations in classrooms; and, making phone calls to students who started but had not yet finished the application. Additionally, each of the campus leads made themselves available to help students apply for the scholarship, whether it was help in the writing process or retrieving their student aid reports.

These recruitment and outreach initiatives led by the AANAPISI counselors and advisors allowed students to connect with these individuals and other programs and services on campus. This could have potentially positively affected student engagement with the campus after applying for the scholarship, which is ultimately a benefit for students and staff, but may have affected the research findings. However, by utilizing a randomized control trial design, we minimized the chances of selection bias from occurring⁵⁰ given that the treatment (scholarship recipients) and control group (non-recipients) were randomly selected from a pool of qualified applicants and matched on identified characteristics (i.e., ethnicity).

SCHOLARSHIP AMOUNT AND DISBURSEMENT

Each scholarship recipient was awarded \$2,500 in the term following the application cycle, which took place in the fall of 2012. Students at City College of San Francisco received their scholarship in the spring 2013 semester, and students at De Anza College and South Seattle College received their scholarship in the winter 2013 quarter. The scholarship was applied and disbursed according to the cost of attendance and financial aid disbursement regulations set forth by each campus; therefore, students could apply the scholarship to cover tuition and fees, room and board, course books and supplies, transportation or other expenses associated with college.

SURVEY ADMINISTRATION

Surveys were administered at two time periods. The first survey was part of the online scholarship application, which students completed in the fall of 2012. Students responded to questions about their work hours, school and career goals, campus and community involvement, family's educational background, and household income. Additionally, students submitted a copy of their student aid report (SAR) and a letter of recommendation.

After scholarship applicants were selected for the treatment (recipients) and control groups (non-recipients), each group was invited to participate in a second survey in the term the scholarship was distributed (i.e., spring 2013 semester for CCSF and winter 2013 quarter for De Anza College and South Seattle College). Scholarship recipients completed a paper survey administered in-person at their respective campuses. Non-recipients were invited to complete an identical survey online. This second survey included questions about their college enrollment (e.g., part-time vs. full-time, credits completed), decisions to attend their institution, educational expectations, use of time, social and academic engagement, financial aid literacy, scholarship use, work commitments, and high school work and school experiences. Several questions aligned with the first survey, which allowed for a pre- and post-survey analysis.

In general, the survey questions were structured as statements with which students indicated their level of agreement using a 5-point Likert scale (e.g., 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, and 5=strongly agree). The development of the survey instruments was informed by the Wisconsin Scholars Longitudinal Study (WSLS) directed by Dr. Sara Goldrick-Rab. (More information on the study can be found at <http://www.finaidstudy.org/study.html>).

Two-thirds of the sample participated in the second survey. The participation rate among recipients and non-recipients was 88.2 percent and 55.4 percent, respectively. The response rate by campus was 70.4 percent at CCSF, 70.3 percent at De Anza College, and 61.7 percent at South Seattle College. The survey respondents reflected the overall sample of study participants.

FOCUS GROUP INTERVIEWS

Approximately 12-15 scholarship recipients from each of the three PEER partner community colleges (CCSF, $n = 14$; De Anza College, $n = 12$; South Seattle College, $n = 13$) participated in a 90-minute audio-recorded semi-structured focus group interview held at their respective campuses. Each focus group was asked to share their process of applying for the scholarship, their use of scholarship funding, and the perceived impact of their scholarship on their use of time, work and academic behaviors, and engagement with their campus.

Our goal was to evaluate: 1) the perceived impact of scholarships on AAPI student persistence, course-taking behavior, academic performance, academic and social engagement, and their self-concept and self-efficacy; and 2) the specific features of the scholarships that contribute to the observed impacts. Focus group interviews at De Anza College and South Seattle College were conducted at the end of the winter 2013 term. For CCSF, the interviews were conducted in the middle of the spring 2013 term, as they operate on a semester system.

INSTITUTIONAL DATA

Longitudinal student-level data on scholarship recipients and non-recipients were obtained from partner institutions for the two terms prior to the intervention, the term of intervention and the term post-intervention. Data included demographic data, financial data, and enrollment, credit and course-level data to assess student academic performance for the 2012-13 academic year.

DATA ANALYSIS

Descriptive analyses were employed to assess differences between the recipients and non-recipients. To assess the use of scholarship funding, we analyzed variables such as educational goals, including transferring to a four-year institution and earning a bachelor's degree. To assess work habits, we analyzed variables including hours worked per week, hours worked in high school, full-time work, and students' perceived impact of work on academics. Statistical significance was determined for each variable and noted in the report. Pre-post t-tests were employed to assess within-group changes in academic indicators before and during the intervention terms.

The focus group interviews were transcribed verbatim, hand coded, and analyzed for emerging themes in an iterative process. The themes, which included civic engagement, academic engagement, aspirations, and expectations, were aligned with quantitative data to shed light on the daily lived experiences of scholarship recipients.

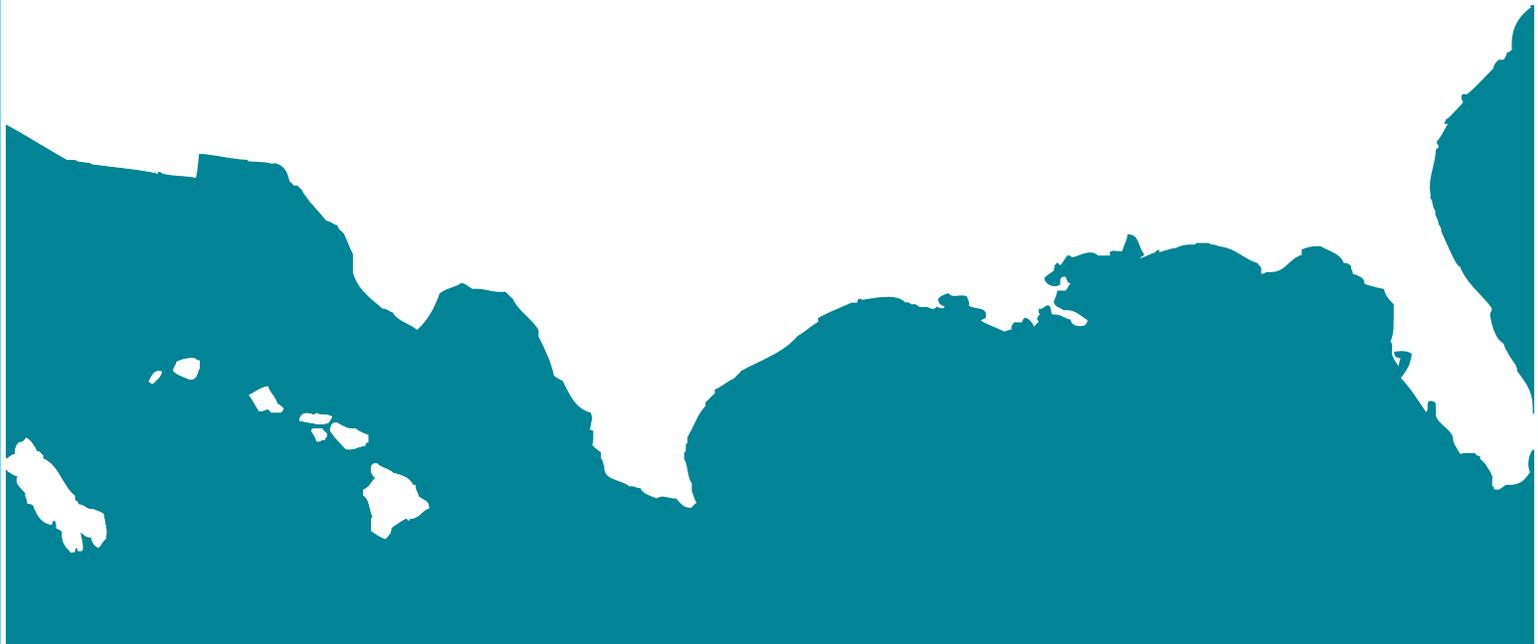
ENDNOTES

- 1 J. Thelin, "Higher Education and the Public Trough" in *Public Funding of Higher Education: Changing Contexts and New Rationales* (Baltimore: John Hopkins University Press, 2004).
- 2 A. Cohen & C. Kisker, *The Shaping of American Higher Education: Emergence and Growth of the Contemporary System* (San Francisco: Jossey-Bass, 2010); B. Solomon, *In the Company of Educated Women: A History of Women and Higher Education in America* (New Haven: Yale University Press, 1985).
- 3 M. Kantrowitz, M. *Student Aid Policy Analysis: The Distribution of Grants and Scholarships by Race*. (Online Publication: FinAid, 2011).
- 4 A. Cabrera, A. Nora & M. Castaneda, "The Role of Finances in the Persistence Process: A Structural Model," *Research in Higher Education*, 33, no 5 (1992): 571-593; B. Castleman, & B. Long, *Looking Beyond Enrollment: The Causal Effect of Need-Based Grants on College Access, Persistence, and Graduation* (Cambridge: The National Bureau of Economic Research, 2013); D. Deming & S. Dynarski, *Into College, Out of Poverty? Policies to Increase the Postsecondary Attainment of the Poor* (Cambridge: National Bureau of Economic Research, 2009); S. Goldrick-Rab, D. Harris, R. Kelchen & J. Benson, *Need-Based Financial Aid and College Persistence: Experimental Evidence from Wisconsin* (Washington, DC: Institute for Education Sciences, 2012); A. Nora, L. Barlow & G. Crisp, "Examining the Tangible and Psychosocial Benefits of Financial Aid with Student Access, Engagement, and Degree Attainment," *American Behavioral Scientist*, 49 (2006):1636-1651.
- 5 S. DesJardins, B. McCall, M. Ott & J. Kim, "A Quasi-Experimental Investigation of How the Gates Millennium Scholars Program is Related to College Students' Time Use and Activities," *Educational Evaluation and Policy Analysis*, 32, no 4 (2010): 456-475.
- 6 C. Arbona & A. Nora, "The Influence of Academic and Environmental Factors on Hispanic College Degree Attainment," *The Review of Higher Education*, 30, no 3 (2007): 247-269; G. Crisp & A. Nora, "Hispanic Student Success: Factors Influencing the Persistence and Transfer Decisions of Latino Community College Students Enrolled in Developmental Education," *Research in Higher Education*, 51, no 2 (2010): 175-194.
- 7 K. Crockett, M. Heffron, & M. Schneider, *Can Financial Aid Improve Student Success at Louisiana's Community Colleges? A Study of the Potential Impact of Redistributing State Gift Aid on the Success of Pell Grant Recipients*, (Washington, DC: American Institutes for Research, 2012); A. Dowd & T. Coury, "The Effect of Loans on the Persistence and Attainment of Community College Students," *Research in Higher Education*, 47, no 1 (2006): 33-62.
- 8 A. Cunningham & D. Santiago, *Student Aversion to Borrowing: Who Borrows and Who Doesn't* (Washington, DC: Institute for Higher Education Policy, 2008); D. Heller, "The Effects of Tuition and State Financial Aid on Public College Enrollment," *The Review of Higher Education*, 23, no 1 (1999): 65-89.
- 9 National Center for Education Evaluation, *Identifying and Implementing Educational Practices Supported by Rigorous Evidence: A User Friendly Guide* (Washington, DC: Institute of Education Services, 2003).
- 10 S. Cellini, "Smoothing the Transition to College? The Effect of Tech-Prep Programs on Educational Attainment," *Economics of Education Review*, 25, no 4 (2010): 394-411.
- 11 S. Goldrick-Rab, D. Harris, R. Kelchen & J. Benson, *Need-Based Financial Aid and College Persistence: Experimental Evidence from Wisconsin*.
- 12 M. Gasman & C. Conrad, *Minority Serving Institutions: Educating All Students* (Philadelphia: Center for MSIs, 2013); N. Harmon, *The Role of Minority Serving Institutions in National College Completion Goals* (Washington, DC: Institute for Higher Education Policy, 2012).
- 13 A. Carnevale, N. Smith & J. Strohl, *Help Wanted: Projections of Jobs and Education Requirements through 2018* (Washington, DC: Center on Education and the Workforce, 2010).
- 14 National Commission on Asian American and Pacific Islander Research in Education (CARE), *The Relevance of Asian Americans and Pacific Islanders in the College Completion Agenda* (New York: CARE, 2011).

- 15 *Ibid.*
- 16 Bureau of Labor Statistics (BLS), *College Enrollments and Work Activity of 2013 High School Graduates* (Washington, DC: BLS, 2014).
- 17 J. Juskiewicz, *Community College Students and Federal Student Financial Aid: A Primer* (Washington, DC: American Association of Community Colleges, 2014): p. 3.
- 18 B. Cook & J. King, *Status Report on the Pell Grant Program* (Washington, DC: American Council on Education, Center for Policy Analysis, 2007); C. Mullin, *Why Access Matters: The Community College Student Body* (Washington, DC: American Association of Community Colleges, 2012): p. 7; V. Orozco & N. Cauthen, *Work Less, Study More, and Succeed: How Financial Supports Can Improve Postsecondary Success* (New York: Demos, 2009).
- 19 National Commission on Asian American and Pacific Islander Research in Education (CARE), *Federal Higher Education Policy Priorities and the Asian American and Pacific Islander Community* (New York: CARE, 2010): p. 16.
- 20 T. Stinebrickner & R. Stinebrickner, "Time-Use and College Outcomes," *Journal of Econometrics*, 121 no 1-2 (2004): 243-269.
- 21 J. Lew, J. Chang & W. Wang, "UCLA Community College Review: The Overlooked Minority: Asian Pacific American Students at Community Colleges," *Community College Review*, 33, no 2 (2005): 64-84.
- 22 *Ibid.*
- 23 J. Juskiewicz, *Community College Students and Federal Student Financial Aid: A Primer* (Washington, DC: American Association of Community Colleges, 2014): p. 3.
- 24 T. Yeh, "Issues of College Persistence between Asian and Asian Pacific American Students," *Journal of College Student Retention: Research, Theory and Practice*, 6 no 1 (2004): 81-96.
- 25 K. Kawashima-Ginsberg & E. Kirby, *Volunteering Among Youth of Immigrant Origin* (Medford: The Center for Information & Research on Civic Learning & Engagement, 2009).
- 26 N. Horn & J. Griffith, *Profile of Undergraduates in U.S. Postsecondary Education Institutions, 2003-2004, with Special Analysis of Community College Students* (Washington, DC: NCES Institute of Education Sciences, 2006).
- 27 R. Teranishi, C. Suarez-Orozco & M. Suarez-Orozco, "Immigrants in Community Colleges," *The Future of Children*, 21 no 1 (2011): 153-169.
- 28 W. Erisman & S. Looney, *Opening the Door to the American Dream: Increasing Higher Education Access and Success for Immigrants* (Washington, DC: Institute for Higher Education Policy, 2007): p. 32.
- 29 K. Conway, "Educational Aspirations in an Urban Community College: Differences Between Immigrant and Native Student Groups," *Community College Review*, 37 no 3 (2010): 209-242.
- 30 W. Erisman & S. Looney, *Opening the Door to the American Dream: Increasing Higher Education Access and Success for Immigrants*: p. 6.
- 31 J. Lew, J. Chang & W. Wang, "UCLA Community College Review: The Overlooked Minority: Asian Pacific American Students at Community Colleges": p. 71.
- 32 National Commission on Asian American and Pacific Islander Research in Education (CARE), *Federal Higher Education Policy Priorities and the Asian American and Pacific Islander Community* (New York: CARE, 2010): p. 19.
- 33 J. Lew, J. Chang & W. Wang, "UCLA Community College Review: The Overlooked Minority: Asian Pacific American Students at Community Colleges."
- 34 National Commission on Asian American and Pacific Islander Research in Education (CARE), *Asian Americans and Pacific Islanders Facts Not Fiction: Setting the Record Straight* (New York: CARE, 2008).
- 35 National Commission on Asian American and Pacific Islander Research in Education (CARE), *Federal Higher Education Policy Priorities and the Asian American and Pacific Islander Community*: p. 19.
- 36 *Ibid.*
- 37 T. Yeh, "Issues of College Persistence between Asian and Asian Pacific American Students," *Journal of College Student Retention: Research, Theory and Practice*, 6 no 1 (2004): p. 63.

- 38 J. Lew, J. Chang & W. Wang, "UCLA Community College Review: The Overlooked Minority: Asian Pacific American Students at Community Colleges."
- 39 American Association of Community Colleges (AACC), *2014 Fact Sheet* (Washington, DC: AACC, 2014).
- 40 J. Batalova, M. McHugh, & M. Morawski, *Brain Waste in the U.S. Workforce: Select U.S. and State Characteristics of College-Educated Native-Born and Immigrant Adults* (Washington, DC: Migration Policy Institute, 2014).
- 41 X. Chen & C. Carroll, "First-Generation Students in Postsecondary Education: A Look at Their College Transcripts" (Washington, DC: NCES, 2005); S. Choy, "Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence, and Attainment. Findings from the Condition of Education" (Washington, DC: NCES, 2001); T. Ishitani, "Studying Attrition and Degree Completion Behavior among First-Generation College Students in the United States," *Journal of Higher Education* (2006) 861-885; E. Warburton, R. Burgian & A. Nunez, "Bridging the Gap: Academic Preparation and Postsecondary Success of First-Generation Students," (Washington, DC: NCES, 2001).
- 42 National Commission on Asian American and Pacific Islander Research in Education (CARE), *Federal Higher Education Policy Priorities and the Asian American and Pacific Islander Community*: p. 20.
- 43 A. Cabrera, A. Nora & M. Castaneda, "The Role of Finances in the Persistence Process: A Structural Model.;" B. Castleman, & B. Long, *Looking Beyond Enrollment: The Causal Effect of Need-Based Grants on College Access, Persistence, and Graduation* (Cambridge: The National Bureau of Economic Research, 2013); D. Deming & S. Dynarski, *Into College, Out of Poverty? Policies to Increase the Postsecondary Attainment of the Poor* (Cambridge: National Bureau of Economic Research, 2009); S. Goldrick-Rab, D. Harris, R. Kelchen & J. Benson, *Need-Based Financial Aid and College Persistence: Experimental Evidence from Wisconsin*.; A. Nora, L. Barlow & G. Crisp, "Examining the Tangible and Psychosocial Benefits of Financial Aid with Student Access, Engagement, and Degree Attainment."
- 44 M. Lawson & H. Lawson, "New Conceptual Frameworks for Student Engagement Research, Policy, and Practice," *Review of Educational Research* (2013).
- 45 L. Hagedorn & B. Maxwell, *Research on Urban Community College Transfer and Retention: The Los Angeles TRUCCS Project* (Los Angeles: University of Southern California, 2002).
- 46 D. Duffourc, "State-Funded College Scholarships: General Definitions and Characteristics," *Review of Policy Research*, 23, no 1 (2006): 235-248; S. Hune & G. Gomez, "Examining the College Opportunities and Experiences of Talented, Low-income Asian American and Pacific Islander Gates Millennium Scholars and Non-Recipients: A Complex Picture of Diversity," *Readings on Equal Education*, 23 (2008); R. Patel & L. Richburg-Hayes, "Performance-Based Scholarships: Emerging Findings from a National Demonstration," (New York City: MDRC, 2012).
- 47 S. DesJardins, B. McCall, M. Ott & J. Kim, "A Quasi-Experimental Investigation of How the Gates Millennium Scholars Program is Related to College Students' Time Use and Activities."
- 48 G. Kuh, J. Kinzie, J. Schuh, & E. Whitt, *Student Success in College: Creating Conditions that Matter* (San Francisco: John Wiley & Sons, 2010).
- 49 Complete College America, *Time is the Enemy* (Washington, DC: Complete College America, 2011).
- 50 C. J. Pannucci & E. G. Wilkins, "Identifying and Avoiding Bias in Research," *Plastic and Reconstructive Surgery*, 126, no 2 (2010): 619-625.





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