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CHAPTER 5

WHO APPLIES FOR AND WHO IS SELECTED FOR WASHINGTON STATE ACHIEVERS SCHOLARSHIPS? A PRELIMINARY ASSESSMENT[1]

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An important debate in academic and public policy arenas has revolved around the relative importance of financial considerations, ability, and ambitions in shaping opportunities for higher education in the United States, especially among disadvantaged youth. On one side it is argued that no amount of money can make up for the social and intellectual deficits accrued in the formative years of childhood. On the other side, there is the belief that anyone can "make it" in American society if given the right opportunities.[2] Most youth, even those from poor families,

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[2] This a fundamental premise of sociology. Whatever deficits we accrue in our early formative years, they are no match for the lifelong socialization process.

will rise to the occasion and become highly motivated students if they think that going to college is a real possibility for them.

School reformers, along with many influential institutions and foundations, subscribe to the latter view. Students of low socioeconomic status, it is believed, are more constrained by lack of opportunity than by lack of ability. This belief has given life to innovative policy initiatives, including the Washington State Achievers (WSA) program. Among the goals of the WSA program is to increase college enrollment among students from disadvantaged backgrounds at low-income high schools in Washington State. The foundation's program of support includes a scholarship program, mentoring services, and, ultimately, major school reforms.

The primary objective of this analysis is to examine the processes involved with the first of these three interventions—application to and selection for a Washington State Achievers scholarship. Our analysis is based on a survey of all high school seniors in five Achievers High Schools in 2002 and 2003. In particular, we measure (1) the association between background characteristics and application for the WSA scholarship and (2) the impact of background characteristics on the likelihood of being awarded the WSA scholarship.

The Washington State Achievers Program

Sixteen high schools in Washington State with large low-income populations are participants in the Washington State Achievers program. The generous scholarships program studied here is an important aspect of the WSA program, which will also include a profound restructuring of the participating schools. Each of the schools with students receiving WSA scholarships will, in time, be systematically transformed from a large comprehensive format to a more personalized, small-school format—with a handful of small, semiautonomous schools sharing a single physical plant. The combination of the scholarships and the school redesign, it is hoped, will create school environments that better encourage and facilitate college preparation and encouragement for all students.

Because the redesign program has gone into effect only very recently, we are unable to assess its impact. However, the Washington State Achievers scholarships have been made available to students in the WSA schools, beginning in 2001. By chance, three of the selected WSA schools are part of an ongoing longitudinal study of high school seniors in several high schools in Washington State—the University of Washington Beyond High School (UWBHS) project. The fortuitous overlap between our survey and the Washington State Achievers initiative allows us to compare scholarship recipients and nonrecipients in the Achievers High Schools and also to compare WSA schools with traditional high schools. In this chapter, we combine surveys of high school seniors in 2002 and 2003 who were the second and third cohorts to graduate from high school under the WSA program. In the coming years, we will be able to track these students with follow-up surveys.

There are good reasons to think that the scholarships alone will make a significant difference in the lives of students who receive them. Previous research has demonstrated the significant positive effects of financial aid on college enrollment, particularly among minority students (Jackson, 1990; St. John & Noell, 1989). Capable students from low-income households often find themselves unable to afford college education. Most often the affordability of college is thought of in terms of the direct costs of the education—for tuition, books, and room and board—and indeed these costs are often prohibitive. Less obvious are the "opportunity costs" associated with college attendance—that is, wages forgone by remaining a student rather than working. Both the "direct" and the lost "opportunity" costs are likely to be major concerns of young people and their families as they make their very important decisions regarding whether and when to attend college (Manski & Wise, 1983; Perna, 2000).

The Washington State Achievers scholarships alleviate and in some cases totally eliminate the direct costs associated with college attendance. Successful applicants for the scholarships may receive up to $8,400 per year for four years of college leading to a bachelor's degree, and they are expected to work to defray any educational expenses in excess of this amount. The opportunity to work part time while holding a WSA scholarship means that

scholarship recipients may be able to contribute positively to the economics of their households while attending college, thus alleviating part of the opportunity costs of attending college. This may be a crucial factor in educational planning—particularly, among low-income students and families.

In seeking to reach students who may not have applied for college scholarships in the past, the Washington State Achievers program focuses on economic need and employs a broad definition of academic potential. The WSA scholarship program eligibility criteria are as follows:

- Candidates must attend and graduate from one of the 16 Achievers High Schools.
- Candidates must be actively working to prepare academically for college and must demonstrate academic potential through their commitment to classroom work and assignments.
- Candidates must plan to obtain a four-year college degree.
- Candidates must plan to attend an eligible public or independent Washington college or university for at least the first two years of college.
- Candidates must come from families who have and will continue to have an annual income that is in the lowest 35 percent of the State of Washington family incomes and have low or modest family assets.

Rather than simply choosing the best and the brightest students (based on GPA) from poor families around the state, this program focuses on selected low-income schools where it might be possible to create an institutional as well as an individual effect.[3] WSA scholarships are awarded to applicants on the basis

[3] This approach may be informed by the knowledge that the disadvantages of students from low-income backgrounds have as much to do with contextual effects as with direct effects. These students are disadvantaged not only because their parents have little in the way of financial resources but also because they are often surrounded by similarly challenged students, and this fact may further diminish their

of academic promise and noncognitive skills that are predictive of academic success among students from low-income families (see Arbona & Novy, 1990). By providing scholarships to relatively large numbers of students in the selected schools, the aim is to create among low-income students "a culture of college attendance" similar to that which is typical among middle- and upper-class families. Once the expectation of going to college is normative among *all* students in the high school regardless of family income, then students should increasingly see college attendance and completion as *realistic* goals and begin to exhibit behaviors in line with those goals. However, this may only happen if students in the participating schools are aware of the scholarships and believe they have a reasonable chance of getting one.

The Application and Selection Process for WSA Awards

As the title of this chapter suggests, this analysis seeks to answer the question: Who gets the Washington State Achievers awards? The process of selection has two stages. First, all eligible students are invited to apply in the fall of their junior year. In the five high schools in the University of Washington Beyond High School (UWBHS) senior surveys in 2002 and 2003, nearly a third (31%) of all seniors applied for Achievers scholarships. The application process reflects both eligibility to apply and motivation on the part of students (and/or their families) to attend college. Although we do not have direct measures of eligibility, we suspect that there are many more students in these five high schools who could have applied but did not.

The second stage is the selection process among those who apply. The selection process is conducted by the Washington Education Foundation (WEF), which has gone to great lengths to identify alternative ways to assess academic potential among disadvantaged students—beyond grades and test scores (see Arbona & Novy, 1990; Pfeifer & Sedlacek, 1974). The WEF conducts interviews with all applicants in addition to carefully

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educational aspirations and expectations (Alwin & Otto, 1977; Coleman, 1990; Roscigno, 1998).

reviewing school records, letters of recommendation, and evidence of student engagement. The awards are limited to 500 scholarships for all 16 Achievers High Schools in the state. In the five high schools in the UWBHS senior survey, nearly two-thirds (64%) of all applicants were awarded Achievers scholarships. This high rate of selection may be partly attributable to the fact that this study is based on the early years of the program. The selection rate was much higher for the 2002 cohort (83%) than for the 2003 cohort (54%). As the number of applicants increases in subsequent years, the process may become more competitive, leading to a lower rate of selection. This increased competition will, however, not decrease the number of WSA scholarship recipients, often more than 30, in each high school.

The result of these two processes—application and selection—determines the number and composition of students who receive Achievers scholarships. Whatever the composition, the fact that one in five seniors receives an Achievers scholarship may quite possibly transform the culture of these low-income high schools such that college attendance becomes a norm rather than an exception.

The UWBHS Senior Survey

Beginning in 2000, the UWBHS project conducted surveys of all seniors in the five comprehensive high schools in a metropolitan district in Washington State. Two additional public school districts comprised of two schools each were included in the 2003 survey—for a total of nine comprehensive public high schools. The year 2001 marked the inception of the Washington State Achievers Program in five of these schools. The current analysis is based on the 2002 and 2003 senior surveys administered in these five high schools. In 2002, this meant three schools in a single district, and, in 2003, it meant five schools in three districts.

All told, 1,674 seniors in these high schools completed the survey. Although our aim was to include the universe of all seniors, we estimate that 75 to 80 percent completed the survey. Refusals were very few; less than 2 percent of seniors (or their parents) declined to take the survey. The majority of students that

the survey missed simply were not in regular classrooms on the day of the senior survey and did not respond to four follow-up mailings to their homes. Many of the missed students were taking courses at local community colleges for part or all of the day, while others were in special education classes or had chronic attendance problems.

The UWBHS senior survey asked each senior if he or she had applied for a Washington State Achievers Scholarship and whether he or she had received one. We matched the survey data with WEF administrative records and found a high degree of validity of the survey measures. Of the survey respondents, 330 reported receiving a scholarship, and 326 of them had received one according to WEF records. The survey counted 534 students who applied for an Achievers scholarship, and 514 were confirmed in the WEF data. In all the subsequent analysis, we relied on the WEF-confirmed number of applicants and recipients.

Factors Influencing WSA Application and Selection

Tables 1a through 1e provide some preliminary answers to who applies for and who receives WSA awards, with a bivariate analysis of individual characteristics and the two outcome variables: application and selection. The relationships between receipt of the awards and various background characteristics[4] provide a sketch of these processes. In the final part of the chapter, we combine all of the background variables in a multivariate analysis to assess the relative importance of the various background characteristics. The analysis begins with simple comparisons to see how likely it is that members of different groups will receive the Washington State Achievers Awards. As was mentioned earlier, this means looking at probabilities of application and probabilities of receipt among those who apply.

The first row in Table 1a reveals that a fifth (20%) of all seniors in the five high schools studied here received a WSA

[4] In the social sciences we refer to such relationships as "bivariate" since we look at the relationship between one variable and another, ignoring other variables which may influence the relationship. In other words, we simply ask does *x* influence *y*?

scholarship. More than a quarter (31%) of all students applied, and nearly two-thirds of all applicants (64%) were awarded the scholarship. The single most important predictor of who receives a scholarship may be *application*, but there are many other factors that influence the probability of students' selection.

Ascribed Characteristics

Among the factors relevant in the application and selection of WSA awards are ascribed characteristics, which students themselves have no control over. *Gender* is one such factor that influences the probability of selection for WSA awards (Table 1a). Girls appear to have been more likely than boys to receive the awards (23% and 16%, respectively). This is partly explained by different rates of application between boys and girls. Nevertheless, girls were also more likely to be selected—better than two-thirds (68%) were granted awards while 57 percent of male applicants received a scholarship.

We might expect *race or ethnicity* to play an important role in selection for WSA scholarships as well. Statistics in the third column of Table 1a indicate that nearly half of the 59 Vietnamese seniors in the Achievers High Schools received awards. They were more than twice as likely as nearly all other groups to receive the awards. A quarter (or more) of African American and Cambodian students received the awards. These differences in the receipt of WSA scholarships are largely explained by differential rates of application across racial or ethnic categories. Overall, 31 percent of all students applied, but 73 percent of Vietnamese students did so. While they were more than twice as likely as other students to apply, however, this fact did not help them once they were in the applicant pool; 63 percent of Vietnamese applicants received the awards—a figure not significantly different from that for all students (64%). African American applicants seem to have fared best in the selection process, while Filipino and "other Asian" students were considerably less likely to be selected than students of all other groups. All of this said, it is important to point out that the racial and ethnic differentials in selection were very modest. Even among Filipinos and other Asians, who were least likely to get the scholarships, better than 4 of 10 were successful. What little role race and ethnicity did play in determining

scholarship receipt seems to reside primarily in application rates. Once students applied, race appears to have been immaterial.

Table 1a. Percentage of Students Who Applied For and Who Received Achiever Scholarships, by Gender, Race/Ethnicity, Immigrant Generation, and Home Language, in Three High Schools in the Pacific Northwest

	% of All Who Apply	x	% Recipients of Applicants	=	% Recipients of All Students	All Students	
						(N)	%
All Seniors	31		64		20	1674	100
Gender							
Males	28		57		16	770	47
Females	34		68		23	880	53
Race/Ethnicity							
Hispanic	26		64		17	202	12
African American	35		72		25	320	19
East Asian	35		62		22	133	8
Cambodian	51		57		29	69	4
Vietnamese	73		63		46	59	4
Filipino & other Asian	34		42		14	77	5
Am Indian & Pac Islander	28		60		17	90	5
White	24		63		15	724	43
Immigrant Generation							
First (foreign born)	41		54		22	322	19
Second	35		68		24	296	18
Third or higher	27		66		18	1056	63
Home Language							
English	27		69		19	1045	66
Another language	39		56		22	533	34

Data Source: UWBHS Senior Survey, 2002 & 2003

Nativity and home language are also relevant background factors that may influence scholarship receipt (Table 1a). On one

hand, foreign-born students who speak English as a second language might be marginal students in some schools—more isolated from teachers, counselors, and administrators and less familiar with the American educational system. Such students might be less likely to hear about and less encouraged to apply for the scholarship. On the other hand, first- and second-generation students may be highly motivated to "achieve the American dream" and, thus, more likely to seek out any and all opportunities for postsecondary education (Kao & Tienda, 1995; Portes & Rumbaut, 2001). Results presented here are more in accordance with the second hypothesis. Table 1a shows that foreign-born students (first-generation) and American-born students of foreign-born parents (second-generation) were more likely to receive the scholarships than American-born students of American-born parents (third-generation or higher). Further, students from non-English speaking homes were more likely to receive the awards than native English speakers, but these outcomes can largely be explained by the fact that first- and second-generation students (many of whom come from non-English speaking homes) were more often eligible and, thus, more likely to apply than other students. First-generation students and students from non-English speaking homes were, however, slightly less successful in being selected once they were in the applicant pool.

Socioeconomic Background

Because the Washington State Achievers program is specifically designed to ameliorate the effects of poverty and/or economic disadvantage on educational opportunities, we might guess that students from low socioeconomic status (SES) backgrounds are more likely to receive awards. Although we do not have direct measures of household or family income, *parental education* and *homeownership* provide good proxy measures for SES. Our results show that students with highly educated parents were less likely to receive the awards because they were less likely to apply, presumably because they were not eligible (Table 1b). For example, about a fifth of students whose fathers had a high school education or less were scholarship recipients, while only 12 percent of those with college-educated fathers were. Similarly, we found that students whose families owned their homes were less

likely to receive the awards than students from families who were (presumably) renting. Higher SES students were less likely to be granted awards because they were less likely to apply. This should come as no surprise, given the eligibility criteria outlined earlier.

Table 1b. Percentage of Students Who Applied For and Received Achiever Scholarships, by Socioeconomic Background and Family Structure, in Three High Schools in the Pacific Northwest

	% of All Who Apply	x	% Recipients of Applicants	=	% Recipients of All Students	All Students	
						(N)	%
All Seniors	31		64		20	1674	100
Father's Education							
No father figure	40		69		27	210	13
Less than 12th grade	36		57		21	263	16
HS graduate	30		66		20	413	25
Some college	30		64		20	506	30
College grad+	21		58		12	282	17
Mother's Education							
No mother figure	30		54		16	138	8
Less than 12th grade	35		61		21	318	19
HS graduate	30		66		20	437	26
Some college	32		62		20	524	31
College grad+	24		72		17	257	15
Homeownership							
Live in owner-occupied home	27		62		17	940	58
Live in rented home	36		66		24	613	38
Don't know	31		64		20	70	4
Family Structure							
Lives with both parents	28		56		15	861	54
Does not live with both parents	35		71		25	729	46

Data Source: UWBHS Senior Survey, 2002 & 2003

Family structure has historically been associated with SES. We considered its effects in terms of family "intactness," defining an intact family as one in which the student resides with two married parents. Previous studies have shown that children from single-parent families are less likely to receive higher education (Krein & Beller, 1988; McLanahan & Sandefur, 1994). The WSA award may provide partial compensation for this disadvantage, as students from single-parent families were more likely to apply for and receive scholarships (Table 1b). In short, the WSA awards—in principle and in practice—are for students from disadvantaged home environments.

Parents and Significant Others

It makes sense that what goes on in the home—irrespective of household structure—will have an impact on students' chances for success (Coleman, 1990; Lareau, 2000). With this in mind, we examined the effects of *parental support, supervision, and control* on the probabilities that students would apply for and receive a WSA award. Parental support is a scale measure meant to capture the quality of communication between students and their parents as well as the perception of parental support. Our measure of parental supervision is based on two items that ask students how familiar their parents are with their friends and their friends' parents. The parental control measure is based on the extent to which parents limit school-night activities and/or check to see that their children have completed their homework assignments each night. There are good reasons to believe that such parental influences would shape patterns of scholarship application and receipt, but we found only modest relationships between these factors and the probability of applying for and/or receiving a WSA scholarship (Table 1c). This is not to say that a student's home and community life do not make a difference.

Parents are not the only agents of socialization that matter. With this in mind, we included an *encouragement* index, which is the sum of all individuals in the student's life who believe that college is the most important thing for the student to do after he or she graduates from high school. Mother, father, other adults, siblings, friends, and favorite teacher were among the possible sources of encouragement that registered in the UWBHS survey.

Table 1c. Percentage of Students Who Applied For and Received Achiever Scholarships, by Parenting Style and Degree of Encouragement, in Three High Schools in the Pacific Northwest

	% of All Who Apply	x	% Recipients of Applicants	=	% Recipients of All Students	All Students	
						(N)	%
All Seniors	31		64		20	1674	100
Parental Influences:							
Communication & Support							
0 low	33		67		22	9	1
0.5	42		55		23	48	3
1	35		69		24	136	8
1.5	32		50		16	323	19
2	31		62		19	589	35
2.5	28		76		21	427	26
3 high	29		63		18	142	8
Supervision (Knows Friends)							
0 low	41		79		33	82	5
0.5	37		64		24	105	6
1	31		57		18	334	20
1.5	32		64		20	362	22
2	29		63		18	460	27
2.5	23		54		12	172	10
3 high	30		73		22	159	9
Control/Checking							
0 low	38		73		28	219	13
0.5	23		58		13	189	11
1	28		61		17	253	15
1.5	30		65		19	361	22
2	31		58		18	275	16
2.5	30		63		19	243	15
3 high	38		63		24	134	8
Encouragement Index							
0	12		33		4	123	7
1	14		25		4	84	5
2	19		35		7	90	5
3	23		54		12	123	7
4	28		59		17	224	13
5	34		71		24	381	23
6	39		68		26	649	39

Data Source: UWBHS Senior Survey, 2002 & 2003

The bottom panel of Table 1c demonstrates clearly that encouragement was positively related to students' chances of receiving a scholarship. Highly encouraged students were more likely to receive the award—mainly because they were more likely to apply than other students.

Student Behaviors

Thus far, we have considered only one behavioral factor—application; the rest have been factors that students themselves cannot control. *Grades,* on the other hand, are at least in part reflective of the decisions, efforts, and talents of the students themselves. They may be taken as measures of "academic potential," which is one of the eligibility criteria for the WSA program. Not surprisingly, students with better grades were more likely to apply and more likely to be granted the award (Table 1d). However, the most important finding is that *applying was the key* to getting the scholarship. Among those who did not apply, the chance of receiving a scholarship was zero. Among those with relatively poor grades (mostly Cs and lower) the chance of receiving a scholarship was 45 percent. Even among C students, nearly half of those who applied did receive a scholarship.

Patterns of attendance and preparedness did not have clear relationships with the measured outcomes. There were some incipient patterns, but none was consistent across the range of these variables. Due to low application rates, students who are often in trouble are less likely to receive the scholarship than others. However, "troublemakers" who do apply have a better than average chance of receiving it. It appears that the Achievers Scholarships provide a second chance for many students who have not had the best records for attendance, preparation in class, and completion of homework. The only clear behavioral influence on scholarship receipt is *contact with counselors.* Those students who frequented their counselor's office were more likely to have received the awards because they were more likely to have applied for and more likely to have received an award once in the applicant pool (Table 1d). Their success in the applicant pool may reflect their relatively close relationships with counselors who may have been more likely to write them strong letters of recommendation. Furthermore, the Washington State Achievers

Table 1d. Percentage of Students Who Applied For and Received Achiever Scholarships, by Behaviors, in Three High Schools in the Pacific Northwest

	% of All Who Apply	x	% Recipients of Applicants	=	% Recipients of All Students	All Students	
						(N)	%
All Seniors	31		64		20	1674	100
Self-Reported Grades							
Mostly As	37		80		30	306	19
Half As and half Bs	38		62		23	450	27
Mostly Bs	36		64		23	303	18
Half Bs and half Cs	19		54		10	392	24
Mostly Cs and lower	21		45		9	202	12
Student Behaviors:							
Truant/Tardy/Absent							
Never	31		69		21	52	3
1 or 2 times	31		62		19	404	24
3 to 6 times	29		65		19	775	46
7 to 9 times	32		61		19	339	20
10 or more times	38		64		24	104	6
Unprepared for Class							
Never	29		59		17	151	9
1 or 2 times	31		64		20	704	42
3 to 6 times	30		62		19	620	37
7 to 9 times	31		71		22	124	7
10 or more times	35		69		24	75	4
In Trouble/Punished							
Never	33		65		21	1193	71
1 or 2 times	27		59		16	413	25
3 times or more	19		69		13	68	4
Hours Spent on Homework/Week							
None	25		68		17	185	12
less than 1 hr	26		44		11	368	23
1 to 2 hrs	26		71		19	430	27
3 to 4 hrs	33		67		22	304	19
5 to 6 hrs	40		58		24	119	7
7 to 9 hrs	43		65		28	87	5
over 10 hrs	49		80		39	114	7
Contact with Counselor(s)							
Hardly ever	19		52		10	370	22
Sometimes	29		59		17	892	54
Frequently	45		74		33	395	24

Data Source: UWBHS Senior Survey, 2002 & 2003

program stays in close touch with high school counselors, reminding them of various programs and deadlines. This being true, it is not surprising that those students who have the most contact with counselors would have the highest rates of application. The most important behavior, then, in determining scholarship receipt may be application, and application, in turn, partly depends on contact with counselors.

Personality

Personality traits such as *self-esteem* and *self-efficacy*, often referred to in school achievement literature as "locus of control" or "internalized locus of control," might also have some bearing on the behaviors and outcomes of students. It is easy to imagine that students who think highly of themselves and their abilities to effect change in their own lives would be most likely to take action to improve their life chances (Coleman, 1990). Such action might include applying for scholarships like the Washington State Achievers award. Indeed, Table 1e suggests that this is at least partly true. While self-esteem did not seem to affect scholarship application or receipt, self-efficacy appears to have had strong effects on both processes. The relationship between self-efficacy and receipt of the scholarship was particularly striking. Forty-three percent (43%) of those low on this measure received the award while 74 percent of those high on this measure won the award. Perhaps students who have confidence in themselves and a strong internal sense of direction are seen as particularly able candidates by raters. They may also be better able to deal with adversity, leaders rather than followers, and popular among their peers.

Numerous studies have attempted to measure *popularity*, and most often they have relied on subjective measures (see Ainsworth-Darnall & Downey, 1998). The UWBHS senior survey included an objective measure of popularity and/or leadership by counting the number of times each student was nominated by another as one of his or her best friends. We might expect that students with high counts would be more successful than others. Table 1e hints that there may be some truth to this. Students with high counts (more nominations) on this measure seem to have had better chances of receiving the scholarships, both because they were more likely to apply and because they

Table 1e. Percentage of Students Who Applied For and Received Achiever Scholarships, by Self Image and Popularity

	% of All Who Apply	x	% Recipients of Applicants	=	% Recipients of All Students	All Students	
						(N)	%
All Seniors	31		64		20	1674	100
Self-Image/Popularity:							
Self Esteem							
low	34		59		20	202	12
medium	31		57		18	616	37
high	30		69		21	856	51
Self-Efficacy/Locus of Control							
low	29		43		13	229	14
medium	30		56		17	656	39
high	32		74		24	789	47
Popularity/Nominations as Friend							
0	26		56		14	497	30
1	29		63		18	448	27
2	33		63		21	324	19
3	31		67		21	224	13
4	37		76		28	103	6
5	57		79		45	42	3
6 or more	44		63		28	36	2

Data Source: UWBHS Senior Survey, 2002 & 2003

were more likely to be selected. This may reflect the importance placed on leadership ability and/or other intangible qualities by the Washington State Achievers program.

An overview of the bivariate statistics suggests that students' chances of receiving the WSA award have depended on a combination of individual and household characteristics including gender, race/ethnicity, parents' education, homeownership, family intactness, nativity, home language, encouragement, grades, contact with counselors, self-efficacy, and popularity. Some of these are important because they affect the probability of application, and others are important because they affect the probability of selection among those who apply. Some may not be

important in and of themselves, but only insofar as they influence or are influenced by some other covariate or unobserved factor. These possibilities are addressed in the following multivariate analysis.

A Multivariate Analysis of Factors Influencing WSA Application and Selection

Thus far, we have looked at scholarship receipt at the bivariate level. This type of analysis yields results that are interesting but that do not take into account the overlapping effects of the independent variables. To further our inquiry, we undertook a multivariate analysis which assessed whether each variable had a significant net influence on scholarship receipt, all else being equal. For example, if everyone were the same in all respects except gender, would gender make a difference? Logistic regression was employed since it is the most appropriate multivariate statistical technique for dichotomous outcome variables (Long, 1997) such as those examined here.

Table 2 provides results from the estimation of three regression equations. The first predicts the odds of applying for the scholarship among all students; the second, the odds of receiving the scholarship among students who applied; and the third, the overall odds of receiving the scholarship among all students. Numbers in each column represent the odds of scholarship application or receipt relative to those of the omitted category for each independent variable. Exp(B)s[5] less than 1 suggest that the odds of scholarship application or receipt diminish as values on the corresponding independent variable increase. Conversely, Exp(B)s greater than 1 suggest that the odds of scholarship application or receipt improve as values on the independent variable increase.[6] Statistical significance is indicated by asterisks located next to the numbers in each column.

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[5] Exponentiated beta coefficients from logistic regression.

[6] For dichotomous variables such as homeownership, where homeowners get a "1" and nonhomeowners get a "0," a coefficient greater than 1 reflects the benefit of being a homeowner. For a continuous variable such as parents' years of schooling a coefficient greater than 1 reflects the

Who Applies?

Looking first at column one in Table 2, we see that there are twelve factors which significantly influenced the odds of applying for the Washington State Achievers award—eight positively and four negatively, net of all relevant background variables. Vietnamese students were more likely to apply than other students, and this finding is not a function of any other measured covariate. Encouragement, as captured by the number of significant others (father, mother, favorite teacher, etc.) who think that college is the most important thing to do after high school, had a strong positive effect as well.[7] Along the same lines, hours spent on homework, contact with school counselors, and grades all had strong positive net effects. Popularity also had a significant positive effect on application rates. With 64 percent of applicants selected for a scholarship, the determinants of application are very consequential.

On the other hand, students living in households headed by married couples who were highly educated and supportive parents were significantly less likely to be in the applicant pool—probably because such families typically earn more income than allowable for children to qualify for the WSA scholarship. This is not surprising, given that the Gates Foundation has targeted for the scholarships students who would not likely attend college without external assistance. Less obvious, however, are the reasons that students with parents who know their friends and the parents of their friends (supervision) were underrepresented in the applicant pool, as we found. We might expect that such community cohesion or "social capital" (Coleman, 1990) would have

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average benefit respondents receive for every additional year of education their parents have attained.

[7] Other research using the UWBHS data has demonstrated that encouragement effects sometimes overwhelm the effects of race and ethnicity (Hirschman, Lee, & Emeka 2004). This does not happen in the case of Vietnamese students, who are significantly more likely to receive these scholarships because they are significantly more likely to apply. Why they are more likely to apply is a question that cannot be answered here.

Table 2. Logistic Regression Models of Application and Receipt of Achiever Scholarship Among Senior Students in Three High Schools in the Pacific Northwest

	Application Among All Students	**Sig.**	**Receipt Among Applicants**	**Sig.**	**Receipt Among All Students**	**Sig.**
Gender	Exp(B)		Exp(B)		Exp(B)	
Female	1.01		0.82		1.07	
Male	Omitted		Omitted		Omitted	
Race/Ethnicity						
Hispanic	0.98		1.14		1.10	
African American	1.47	*	1.68		1.65	*
East Asian	1.24		1.30		1.24	
Cambodian	1.99	*	1.52		2.07	
Vietnamese	6.01	***	1.92		4.27	***
Filipino/other Asian	1.36		0.41		0.73	
American Indian	1.21		1.09		1.26	
White	Omitted		Omitted		Omitted	
Family Structure						
Student lives with both parents	0.62	***	0.49	**	0.49	***
Not intact	Omitted		Omitted		Omitted	
Mother's Education	0.99		1.03		1.01	
Father's Education	0.94	*	0.93		0.92	**
Homeownership						
Own	0.83		1.03		0.81	
Rent	Omitted		Omitted		Omitted	
Nativity						
First generation	1.07		0.89		1.06	
Second generation	1.08		1.85		1.38	
Third generation or more	Omitted		Omitted		Omitted	
Home Language						
English	0.90		1.63		1.23	
Other language	Omitted		Omitted		Omitted	

Table 2. Logistic Regression Models of Application and Receipt of Achiever Scholarship Among Senior Students in Three High Schools in the Pacific Northwest (cont.)

	Application Among All Students	Sig.	Receipt Among Applicants	Sig.	Receipt Among All Students	Sig.
Parental Influences						
Support	0.69	**	1.05		0.74	
Supervision	0.82	*	0.75		0.75	**
Control/checking	1.07		0.85		0.96	
Encouragement	1.26	***	1.26	**	1.41	***
Student Behaviors						
Frequency of truancy/absence	1.03		1.00		1.01	
Frequency of unpreparedness	1.07	*	1.14	**	1.11	**
Frequency of trouble/punishment	0.89		1.09		0.90	
Hours spent on homework	1.09	***	1.07		1.08	**
Contact with counselor(s)	1.05	***	1.06	***	1.07	***
Self-reported grades	1.57	***	2.19	***	1.81	***
Self-Image/Popularity						
Self-esteem	1.11		0.72		0.95	
Self-efficacy/locus of control	0.91		3.47	***	1.66	*
Nominations as friend	1.09	*	1.08		1.12	*
McFadden's R Square	15.2%		20.4%		20.6%	
N=	1650		510		1650	
*p<.05 **p<.01 ***p<.001						
Data Source: UWBHS Senior Survey, 2002 & 2003						

increased the likelihood of application, but this expectation found no empirical support here.

Who Among the Applicants Receives the Awards?

As noted earlier, the relatively small size of the applicant pool limits our ability to answer the question of which applicants

receive the awards with great certainty. Moreover, the limitation of our analysis to the first two years of the program may obscure our view of patterns and relationships that may change as the program evolves.[8]

Column 2 of Table 2 provides Exp(B)s from a logistic regression equation predicting the odds of receiving the Washington State Achievers award among those who apply. Four of the factors that significantly influenced application also influenced selection. Among applicants, those with highly educated fathers and two married parents living in their homes were less likely to be selected. Such students may include borderline cases—in terms of the income requirement—who were ultimately declined because their family incomes were too high.

All other things being equal, applicants who had good grades, who did their homework, and who had more contact with counselors were more likely to have been selected to receive scholarships. These students may be thought of as "safer bets" than other applicants. Second-generation (American-born children of immigrant parents) students appear to have better odds of selection than others as well.

There are some anomalies in the results as well. Mother's educational attainment had a positive and significant impact on the odds of receiving the award, while father's educational attainment had a significant negative effect. The unexpected positive effect of mother's education may reflect the fact that we are dealing with mothers who are divorced, have never been married, or are married to men with low levels of education—any of which circumstances might lower the family income into the bottom third of Washington's family income distribution. Students from low-income families with relatively highly educated mothers may have been advantaged in the selection process due to patterns of language, speech, and comportment, which may be taken as signs

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[8] Several rather large coefficients are not statistically significant. The fact that particularly large or small odds ratios are not found to be statistically significant probably reflects that they are based on a small number of cases.

of "academic potential"[9] acquired through lifelong interactions with an educated mother. Such mothers might also be particularly involved in the education of their children (Lareau, 2000). It was also found, contrary to expectation, that self-esteem appears to have a negative effect on selection—another fact that eludes easy explanation.

Who Among All Students Receives the Awards?

The chance of getting a Washington State Achievers scholarship may be understood as a product of application rates among all students and selection rates among those who apply. Column 3 of Table 2 provides clues as to which students (among the total student body) were most likely to receive the awards. By looking at coefficients in all three columns we may determine what factors were important and why. For the sake of clarity these factors are classified on two dimensions: the valence of their influence and the vehicle of their influence. On the first dimension, some factors impacted the odds of scholarship receipt negatively and others positively. On the second dimension, some factors acted on scholarship receipt by way of their influence on application rates, others by way of their influence on selection once the student was in the applicant pool, and still others influenced both application and selection rates.

We begin with the factors negatively associated with scholarship receipt. The third column in Table 2 indicates that there were three factors which were negatively and statistically significant in shaping one's odds of scholarship receipt: residence with both parents, fathers' educational attainment, and parental supervision. Living with both parents reduced both the odds that one would apply for the WSA scholarship and the odds that one would receive the scholarship once in the applicant pool. The more educated one's father, the lower were one's chances for receiving a WSA scholarship, but there is no statistically convincing evidence that this was because such students were disfavored in the selection process. Rather, high educational

[9] Pierre Bourdieu (1974, 1973) referred to these patterns as "cultural capital."

attainments among fathers significantly reduced the chance that students would apply. Both of these findings make sense given that the aim of the WSA program is to offset the disadvantages faced by students from lower class families—many of which are headed by lesser educated single adults. More vexing is the finding that parental supervision was negatively related with application and, thus, receipt of the WSA award.

There are nine variables in the third column of Table 2 that were positively associated with scholarship receipt and were statistically significant. Of these, four influenced WSA scholarship receipt primarily by way of application rates. Race and/or ethnicity seemed to play a part. African American and Vietnamese students applied more and, thus, received the scholarships more often, though there is no statistically sound evidence that they were favored in the selection process. The same is true of students who did lots of homework and students who had lots of friends. The diligence associated with engagement in more than trivial amounts of homework, it makes sense, might also lead such students to apply for the scholarships in disproportionate numbers. Those with large friendship networks might be more likely to hear of the award and, therefore, more likely to apply than their less well-connected classmates. There is no obvious explanation as to why African American and Vietnamese students were more likely to apply, all else being equal.

Interestingly, there is only one factor—negative or positive—whose influence on WSA scholarship receipt was wholly a function of favor in the selection process, and that was self-efficacy, or locus of control. Students who scored high on this measure were no more likely to apply for the scholarship than other students but were significantly more likely to be granted the award once in the applicant pool. Perhaps this belief in the self and in the mastery of one's own fate is the prime "intangible" that impresses selection committee members and, maybe, foretells bright futures for those who possess it.

Encouragement from significant others, contact with counselors, and good grades were all positively associated with scholarship receipt. Highly encouraged students who frequented their counselor's office and earned high grades were more likely to apply and more likely to be selected than others for the WSA

award once in the applicant pool. Perhaps the most counterintuitive finding of this study is that students' unpreparedness (showing up to class without pen/pencil, books, paper, homework) was positively associated with both application and selection for the scholarships. In any case, this suggests as strongly as any other finding in this study that WSA scholarships are not being granted solely on the basis of conventional measures of academic success and/or potential. Rather, the program casts a much broader net and may effectively grant dozens of disadvantaged students a new lease on life.

Conclusions

This chapter began by framing the Washington State Achievers program in a larger debate over how we can best ameliorate the effects of poverty in our society. The Washington State Achievers program falls clearly on the side of those who argue that what the poor need most is *opportunity*—educational opportunity in particular. It is too early in the life of the program to ask whether the Washington State Achievers program will create a "culture of college attendance" in low-income schools. However, the program is moving forward quickly and the baseline objectives of the program are being met: (1) students who receive Achievers awards attend high schools with large numbers of low-income students; (2) students who apply are, themselves, from low socioeconomic status backgrounds; and (3) the majority (64%) of those who applied in 2002 and 2003 received the scholarships.

Among eligible students, those who are highly encouraged by parents and peers, who have frequent contact with school counselors, who get good grades, who are popular among their peers, and who have a heightened sense of self-efficacy are likely to be awarded the scholarships.[10] Some of these findings may

[10] However, it is important to note that these are not the only low-income students who win the awards. Receipt rates are high at all levels of encouragement, grades, popularity, etc. Thus, highly visible opportunities for college attendance are now widespread among low-income students in the Achievers schools. This fact may have a dramatic effect on the culture of these schools and their students.

seem unexceptional; we would expect students with good grades to get scholarships. However, other positive influences listed above may not be as obvious or intuitive. This is perhaps because a goal of the WSA program has been to identify students of great potential but whose promise may not be evident via conventional measures. Our measure of internalized locus of control (self-efficacy) captures students' tendency or ability to "take the bull by the horns"—to instigate change for the better in their own lives. Such ability may not always show up in GPAs or standardized test scores but may be no less predictive of success later in the lives of these or any group of students. The above findings hold up in our multivariate analysis and are the patterns of behavior consistent with the culture of college attendance that the Washington State Achievers program is trying to encourage.

Directions for future research in this area involve questions whose answers may be central to educational policy debates and to reform efforts in the future. As data on the recipients and nonrecipients stream in over the coming years, we will be able to see how successful the students are and, ultimately, how effective the Washington State Achievers program is. Data on these students may inform broader debates regarding the roles of financial constraints and financial aid in shaping patterns of college attendance, college completion, and life chances. The continued study of Achievers schools will provide us the opportunity to see the effects of scholarship programs and alumni successes on the culture of the schools and, in turn, the lives of future generations of students—for these schools may become places where students of all backgrounds not only *hope* to go to college but *expect* to and *believe* they can. For now, suffice it to say that the Washington State Achievers program is doing what it set out to do. It has made college attendance a real possibility for large numbers of low-income students, potentially altering the courses of their lives and their alma maters for the better.

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