

REPORT

Correlates of Persistence for Oakland Promise Supported Scholars 2016-2019

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Purpose

In this report, NORC presents initial findings from the analysis of Oakland Promise (OP) program data that sought to reveal associations with Oakland Promise's College Scholarship and Completion activities and persistence to students' second year of post-secondary education. The primary data for this report come from enrollment measures for OP Scholars derived from National Student Clearinghouse (NSC) data. Here, persistence is defined as scholars returning to college for a second year. The analyses presented in this report include OP Scholars who started college between 2016-17 and 2018-19 (n=889).

Key Findings

- Two thirds of OP Scholars are enrolled in a 4-year college at some point in their first year of college, and about one quarter of OP Scholars enroll in two or more colleges by their second year
- About 88% of OP Scholars persist from year 1 to year 2 of college
 - Students attending a 4-year college in their first year are more likely to persist (91%) than students that start out in a 2-year college (84%)
 - Rates of students who return for a sophomore year, or persist, did not appear meaningfully different across OP Advisors which implies that most OP Advisors are equally effective
 - Persistence rates are generally consistent across college start year, with a slight decrease in persistence in the most recent cohort of OP Scholars with data (2018-19)
- Black students persist at lower rates than their peers
- Students with more interactions in the Scholar Docs file are more likely to persist than their peers
- While 14.6% of OP Scholars were not captured in the National Student Clearinghouse (NSC) data pull, it is unclear whether these students attended colleges that do not report to NSC, declined to share their information with NSC, or did not attend college at all.

Data Sources and Analytic Sample

This analysis combines two data sources about OP program participants: program data that records interactions with OP staff on a variety of topics (e.g., advising) and NSC records which detail the matches of OP program participants with enrollment records in post-secondary institutions for each academic term.

We combine these data to find associations between OP program activities and persistence of Scholars into a second year of college. Using persistence as our key outcome precludes this analysis excludes the most recent scholars who started in 2019-2020, as we do not yet have data to examine whether they persist into the future.

While Oakland Promise attempted to retrieve information on 1,392 OP Scholars from 2016-2020, the NSC was unable to find matches for 203 (14.6%) students. Based on OP tracking data, at least 80% of the 203 missing students are currently active in the program and should show up in a college. It is possible that these 203 students attended colleges that do not report to NSC, some may have declined to share their information with NSC, or some students may never have been enrolled in a college. No significant differences in background characteristics were found between students who were or were not captured by the NSC data pull.

Exhibit 1 below presents the distribution of students analyzed in this report by background characteristics. OP Scholars are primarily female, minority, and first generation college goers. Overall, the table shows that approximately 7% more students who enrolled in a 4-year college persist to their second year than students who enrolled in a 2-year college.

Exhibit 1. Descriptive Statistics for All OP Scholars and by Sample Type

	All OP Scholars 2016-2020 (N=1,392)	NSC Sample (n=1,189*)	Sample w/ NSC data prior to 2019 (n=889)	Of the 889 students w/ NSC data prior to 2019	
				Sample enrolled in 2-yr college (n=298)	Sample enrolled in 4-yr college (n=583)
Male	43.9%	43.1%	43.0%	43.1%	43.1%
African-American	27.9%	28.5%	28.8%	31.1%	27.3%
Hispanic	41.8%	40.7%	41.1%	35.5%	43.6%
Asian/White/Other+	30.3%	28.5%	30.1%	33.4%	28.6%
First generation	77.1%	76.5%	72.5%	65.1%	76.5%
Year 1 persistence rate	-	-	87.9%	83.6%	91.3%
Total scholarship amount	\$7,321	\$7,598	\$7,802	\$3,483	\$10,073
Amount of scholarship distributed	\$3,638	\$3,884	\$4,613	\$2,108	\$5,957
Avg. number of total interactions w/ OP program staff	-	-	4.4	4.2	4.5
Avg. number of interactions about class schedule	-	-	2.2	2.1	2.2
Avg. number of interactions about financial aid/donor letter	-	-	0.4	0.7	0.3
Avg. number of interactions about grades	-	-	1.7	1.4	1.8

	All OP Scholars 2016-2020 (N=1,392)	NSC Sample (n=1,189*)	Sample w/ NSC data prior to 2019 (n=889)	Of the 889 students w/ NSC data prior to 2019	
				Sample enrolled in 2-yr college (n=298)	Sample enrolled in 4-yr college (n=583)
Avg. # of F grades	-	-	.45	.46	.45
Probation rate	-	-	18%	7%	23%

* While 1,189 OP scholars have NSC data, only 889 students started college before the 2019-20 school year and have the requisite data to measure persistence.

† The Asian/White/Other racial group is 92% Asian/Pacific Islander, 3% White (non-Black, non-Hispanic), and 5% other racially identifying students. These groups were combined and used as the reference group for analyses because there were too few White/Other racially identifying students to use as a reference group in models separate from Asian/Pacific Islander.

Descriptive Analyses

The following descriptive tables present information on all OP Scholars with NSC data (N=1,189). When looking at college persistence this number is reduced to the students who start college before the 2019-20 school year (n=889). Definitions for variables used throughout this report can be found in the Appendix.

As shown in Exhibit 2, about two thirds of OP Scholars are enrolled in a 4-year college at some point during their first year of college, with some variation based on college start year.

Exhibit 2. Percent of Students Enrolled in a 2-year or, at some point, a 4-year College During their First Year of College

NSC Start Year	2-year	4 -year
2016-17 (N=250)	34%	66%
2017-18 (N=337)	37%	63%
2018-19 (N=302)	30%	70%
Total	34%	66%

When looking at the cohorts of OP Scholars with at least two years of college enrollment data, about 12% of students do not return to college for their second year. Exhibit 3 presents college persistence rates for students by college start year, broken down by the level of college students attended in their first year. Students that only attended a 2-year college in their first year persisted at an approximately 7% lower rate than students who attended a 4-year college during their first year of enrollment. From the below table, we can see a slight decrease in persistence rates for both 2-year and 4-year college students that matriculated in the 2018-19 school year.

Exhibit 3. College Persistence from Year 1 to Year 2 for All Students, by College Start Year

NSC Start Year	Students attending only 2-year schools in their first year	Students attending a 4-year school in their first year
2016-17 (N=250)	85.7%	92.7%
2017-18 (N=337)	83.1%	93.8%
2018-19 (N=302)	82.2%	87.5%
Total (N=889)	83.6%	91.3%

Additionally, there is not much evidence of mobility from 2-year to 4-year programs after the first year of college enrollment. After their first year of college, a larger percent of students move from a 4-year college to a 2-year college than from a 2-year college to a 4-year college. Initial evidence indicates that 4-year to 2-year and 2-year to 4-year transfers even out after the second year of college, but there is not much data for students through their third year of college yet.

Exhibit 4. College Persistence from Year 1 to Year 2 for All Students, by College Start Year

	Year 2		
	2-Year College	4-Year College	No NSC college
Year 1 2-Year College	82.6%	1.3%	16.1%
Year 1 4-Year College	8.1%	84.2%	7.7%

We examined persistence outcomes by OP advisor and found a slight variation in first-year persistence rates by OP advisor. This variation may be associated with the different factors that are used to assign advisors to students.

In the next section, we present a few different models that examine various OP program predictors. We first ran Hierarchical Linear Models (HLM) that nested students within their OP advisor and compared results with models which ignored this nesting. However, Likelihood Ratio Tests examining models with and without OP advisor effects indicate that there was not a statistically significant amount of variation due to advisors to require such a statistical model ($p=.151$).

Correlates of College Persistence

Results in this section examine whether the variables listed in Exhibit 1 are predictors of college persistence from year 1 to year 2. Note that the outcome in these analyses is three levels: did not persist in

a college their second year, attended a 2-year college in their second year, or attended a 4-year in their second year. We used multinomial probit regression to examine this probability of persistence with coefficients reported as the slopes in probit units. For general interpretation, a coefficient of 1 indicates an increase of one standard unit for the probability of persistence for the outcome compared to not persisting, due to a 1 unit change in the predictor.¹ A bolded coefficient indicates statistical significance, and the reference group for the 2-year and 4-year outcomes is did not persist.

Persistence appears to be decreasing over cohorts, defined by their starting year. This change is slight for students who started college in 2018-19. Students that start in a 4-year college are much more likely than other students to end up in a 4-year college their second year. There is also evidence that black students have a significantly lower probability of persistence to both 2 and 4-year colleges than Asian/White/Other students, and there is some evidence that this is also the case for Hispanic students.

Table 1 shows the results of models focusing on OP scholarship funding. Due to the highly correlated nature of total scholarship amount, and the level of college students start in, we do not see much evidence for a larger initial scholarships leading to a higher probability of persistence, above and beyond the type of college students start in. Black and Hispanic students in models 2 and 3 reflect a lower probability of persisting compared to their Asian/White/Other peers. One limitation to this data is that we do not have a record of the amount of scholarship money distributed in just the first year of college, so we expected to see students with more money distributed having higher probabilities of college persistence in Model 3.

Table 1. Year 1 to Year 2 College Persistence and Scholarship Amounts

<i>Predictors</i>	Model 1		Model 2		Model 3	
	<i>Slope</i>	<i>p</i>	<i>Slope</i>	<i>p</i>	<i>Slope</i>	<i>p</i>
Did Not Persist	Base level					
2-year College in Second Year						
Constant	1.452	0.000	1.857	0.000	0.943	0.010
NSC Start Year [2017]	-0.002	0.993	-0.024	0.917	0.033	0.898
NSC Start Year [2018]	-0.234	0.304	-0.284	0.229	-0.068	0.795
School Level Y1 [4]	-1.331	0.000	-1.406	0.000	-1.954	0.000
Male			0.208	0.267	0.295	0.154
Black			-0.801	0.001	-0.833	0.003

¹ 99.9 percent of the normal curve essentially ranges from -3 to 3 standard units.

Hispanic			-0.490	0.042	-0.408	0.133
First Generation			0.041	0.842	-0.022	0.924
Total scholarship			0.003	0.919		
Total distributed					0.490	0.000
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4-year College in Second Year						
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Constant	-1.303	0.000	-0.798	0.039	-2.487	0.000
NSC Start Year [2017]	-0.086	0.712	-0.140	0.561	0.126	0.670
NSC Start Year [2018]	-0.350	0.129	-0.426	0.073	0.252	0.384
School Level Y1 [4]	3.348	0.000	3.240	0.000	2.098	0.000
Male			0.084	0.656	0.256	0.265
Black			-0.878	0.001	-1.013	0.001
Hispanic			-0.598	0.016	-0.326	0.274
First Generation			0.038	0.861	-0.222	0.384
Total scholarship			0.013	0.644		
Total distributed					0.745	0.000
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Observations	881		866		871	

In Table 2, the NORC team presents models that attempt to capture interactions between OP Scholars and the program. We do this by counting the number of entries, and types of entries students have in the Scholar Doc file. We were able to limit this analysis to interactions with a date prior to the second year of college (which is why the sample is much smaller). Notably, Hispanic students do not persist at significantly lower rates than Asian/White/Other students in these models. More total interactions (entries) in the Scholar Doc file is predictive of higher probability of persistence in a 4-year college (Model 4). When we break down the interactions by type of entry, more interactions categorized as “grade” predict higher odds of persistence in a 4-year college, while higher numbers of f grades predict a lower probability of persistence in a 4-year college (Model 5). Interactions in the Scholar Doc file appear to be less predictive of students persisting to a 2-year college.

Table 2. Year 1 to Year 2 College Persistence and Scholar Doc Interactions

<i>Predictors</i>	Model 4		Model 5	
	<i>Slope</i>	<i>p</i>	<i>Slope</i>	<i>p</i>
Did Not Persist	Base level			
<hr/>				
2-year College in Second Year				
<hr/>				
Constant	2.538	0.001	2.576	0.001
School Level Y1 [4]	-1.737	0.000	-1.824	0.000
Male	-0.389	0.298	-0.317	0.410
Black	-1.178	0.020	-1.168	0.024
Hispanic	-0.313	0.540	-0.224	0.677
First Generation	-0.288	0.496	-0.323	0.460
Total Interactions	-0.016	0.881		
Number of F Grades	0.179	0.390	0.056	0.795
Probation	0.189	0.721	0.066	0.905
Class Schedule Int.			-0.215	0.233
Letter Int.			-0.142	0.548
Grades Int.			0.447	0.076

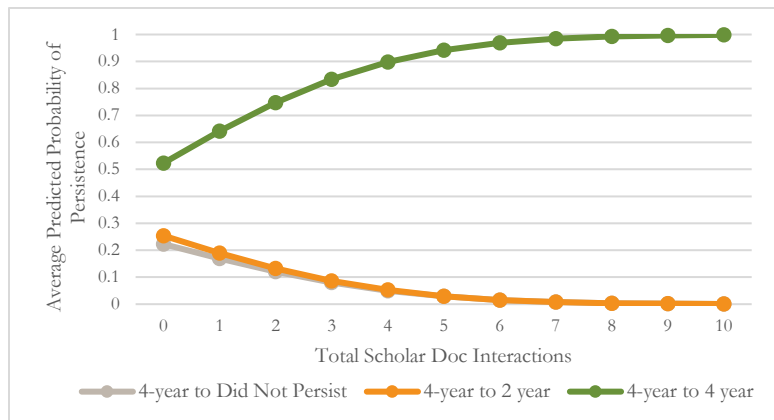
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4-year College in Second Year

Constant	-14.727	0.000	-15.054	.
School Level Y1 [4]	15.573	.	15.682	0.000
Male	0.103	0.789	0.293	0.469
Black	-0.979	0.065	-0.961	0.083
Hispanic	-0.154	0.774	-0.101	0.858
First Generation	0.429	0.342	0.439	0.354
Total Interactions	0.386	0.002		
Number of F Grades	-0.460	0.051	-0.525	0.031
Probation	-0.084	0.868	-0.268	0.612
Class Schedule Int.			0.124	0.513
Letter Int.			0.008	0.974
Grades Int.			1.042	0.000
Observations	273		273	

Exhibit 6 presents the effect of interactions (entries) in the Scholar Doc file for students that start in a 4-year college. More interactions leads to a higher predicted probability of college persistence, such that a student with 2 entries in the Scholar Doc file has close to a 75% predicted probability of persistence in our model, while a student with 4 entries in the Scholar Doc file has about a 15% higher predicted probability of persistence. Interestingly, the relationship between Scholar Doc interactions and persistence is practically identical for students that start in a 4-year college and either do not persist, or move on to a 2-year college.

Exhibit 6. OP Scholars with more Scholar Doc File interactions had a higher likelihood of persistence from Year 1 to Year 2 of college



Conclusions

This report presented initial findings from NSC persistence outcomes for OP scholars. Over three cohorts of data, roughly 88% of OP scholars persisted in college from their first to second year. Students that started out in a 4-year college, and students with more communication with the program, as defined by number of interactions (entries) in the Scholar Doc File, were more likely to remain in a college following their freshman year. The NORC team did not find meaningful variation by OP Advisor, and only slight evidence of an approximately 3% dip in persistence in the most recent cohort of OP Scholars with data (2018-19). In the future, the NORC team hopes to look at other components of the OP program as they become available, including but not limited to OP mentorship data as well other high school factors.

Appendix

Variables Used	Definition	File Retrieved From
NSC Start Year	The earliest school year with a record of college enrollment	NSC data file
College Type	2-year or 4-year, highest level student had record of being enrolled in	NSC data file
School Level	The highest of 2-year or 4-year college that a student attended during the school year	NSC data file
College persistence (y/n)	Was student enrolled in any school in the school year following their first year of college enrollment?	NSC data file
College persistence (categorical)	Following their first year of college, what type of school did students enroll in: a 2 year college, a 4-year college, did not enroll in a NSC college	NSC data file
OP advisor	Who was the students' OP advisor? (name masked)	scholardoc_bycase_contactID
Male	Is student male (y/n)?	student_cohort
Black	Is student black non-Hispanic; non-white/other (y/n)?	student_cohort
Hispanic	Is student Hispanic; non-white/other (y/n)?	student_cohort
First Generation	Is student First Generation (y/n)?	student_cohort
Total scholarship	Total Scholarship Amount	student_cohort
Total distributed	Total Scholarship Amount distributed	student_cohort
Total Interactions	Total number of "interactions" (rows) with program staff in the scholar doc file before students' 2nd year	scholardoc_bycase_contactID
Class Schedule Int.	Number of "interactions" (rows) within the scholar doc file before students' 2nd year with Record Type= "Class Schedule"	scholardoc_bycase_contactID
Letter Int.	Number of "interactions" (rows) within the scholar doc file before students' 2nd year with Record Type= "Financial Aid Award Letter" or "Donor Letter"	scholardoc_bycase_contactID
Grades Int.	Number of "interactions" (rows) within the scholar doc file before students' 2nd year with Record Type= "Grades"	scholardoc_bycase_contactID
Probation	Academic Probation="Yes"	scholardoc_bycase_contactID
Number of F Grades	Maximum "Number of F Grades" reported	scholardoc_bycase_contactID