

Extended Opportunity Program & Services (EOPS): A Case Study of a Local Community College District

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Introduction

- EOPS is offered at all Community Colleges (CCs) in California, and targets low-income and academically disadvantaged students. The expressed goal is to improve the academic outcomes of said students.
- Generally, only students who are low income (Promise Waiver) and/or academically disadvantaged are eligible
- Students who are part of the program receive some/all of select services*:
 - Designated counselor
 - Textbook & Transportation Vouchers (Parking Permits)
 - Priority Registration
 - Laptop Loans
 - Cap & Gown
 - Four-Year Application fee waivers
 - Tutoring
 - Summer Bridge programs
 - Associated Student Government
 - Community Partnerships
- Most current studies investigating impact(s) of EOPS do not employ statistical methods to investigate the causal effects, but the findings suggest EOPS is associated with more positive academic outcomes and that counseling specifically is the most costly but effective aspect of the intervention. [1-5]

RQ1:

Do EOPS students have different success rates in Associate degree/certificate achievement or transfer to a four-year university than otherwise similar Non-EOPS students?

RQ2:

Is counseling uptake an important mediator in explaining potential differences between EOPS and Non-EOPS students?

Methods

Participants

Includes six cohorts (2010-2015) of first-time enrollee college students at both colleges in the district (Non-EOPS n=25,199; EOPS n=1,191).

Predictors

Predictor of interest is EOPS enrollment, equal to one for any student who has at least one term of EOPS enrollment within their first two years of enrollment. The number of counseling sessions is a possible mediator between EOPS and outcomes.

Outcomes

Outcomes include degree/certificate completion and transfer to a four-year university by the end of their second (EOY2) or fourth year (EOY4).

Design

1. Comparison of outcome means using an Ind. Sample T-Test (Table 2)

2. Regression Models (Table 4)-

a. Ordinary Least Squares (OLS) Regression:

$$Outcome_i = \beta_0 + \beta_1 EOPS_i + \epsilon_i$$

b. OLS Regression w/ EOPS & Controls (Z):

$$Outcome_i = \beta_0 + \beta_1 EOPS_i + \beta_2 Z_i + \dots + \epsilon_i$$

c. OLS Regression w/ EOPS, Controls, & Propensity Weights*:

$$Outcome_i = \beta_0 + \beta_1 EOPS_i + \beta_2 Z_i + W_i \dots + \epsilon_i$$

d. OLS Regression w/ EOPS, Counseling, & Controls (Z) :

$$Outcome_i = \beta_0 + \beta_1 EOPS_i + \beta_2 Counseling_i + \beta_3 Z_i + \dots + \epsilon_i$$

e. OLS Regression w/ EOPS, Counseling, Controls (Z) & Propensity Weights*:

$$Outcome_i = \beta_0 + \beta_1 EOPS_i + \beta_2 Counseling_i + \beta_3 Z_i + W_i \dots + \epsilon_i$$

Controls (Z)

Cohort, First Term Enrollment Units, Gender, Foster Youth, Parent Education Level, Ethnicity, High School GPA, Residency Status, College (IVC/SC), Academic Goal, Disability Status, Financial Aid, Attempt of transfer Eng./Math in 1st Year (See Table 1)

* Inverse probability propensity weight to be in EOPS, generated with R package "twang" using aforementioned controls to predict EOPS usage (See Figure 3 for results of weighting)

Descriptives & Balancing

Table 1.

Characteristic	Sample Descriptives	
	Non-EOPS (%)	EOPS (%)
Academic Goal		
Certificate/AA	6.7	6.3
Transfer	75.2	81
Undecided	7	4.8
Other	11	7.9
California Resident	95	94.6
Disability Services	7.9	12.6
Ethnicity		
American Indian	0.2	0.1
Asian	14.5	11.8
Black/African American	1.6	5.9
Hispanic/Latino	27.8	54.3
More Than One Race	6.2	2.7
Native Hawaiian/Pacific Islander	0.3	0.1
White	47.9	23.4
Female	45.3	58.7
First Generation	11.3	26.4
First Term Enrollment		
Part-Time (<12 Units)	35.1	17.8
Full-Time (>= 12 Units)	64.9	82.2
Foster Youth	0.8	6.9
HS GPA		
0-2.0	11.3	13.2
2.1-4.0	66.1	64.1
Unknown	22.6	22.8
International Visa	1.2	3.1
Irvine Valley College	39.4	53.7
Promise Waiver	44.5	99.5
Transf. English Year 1	43	60.2
Transf. Math Year 1	37.8	42.9
Number of Students	25199	1191

Outcome Success Rates

Table 2.

Overall Outcome Success Rates & T-Test

Outcome	Time Point	EOPS	Non-EOPS	Difference	t
Degree/Certificate (Figure 1)	EOY2	0.07	0.09	-0.02***	-2.3
	EOY4	0.40	0.29	0.11***	7.2
Transferred (Figure 2)	EOY2	0.10	0.17	-0.07***	-8.0
	EOY4	0.41	0.40	0.01	0.34

*p<.05. **p<.01. ***p<.001

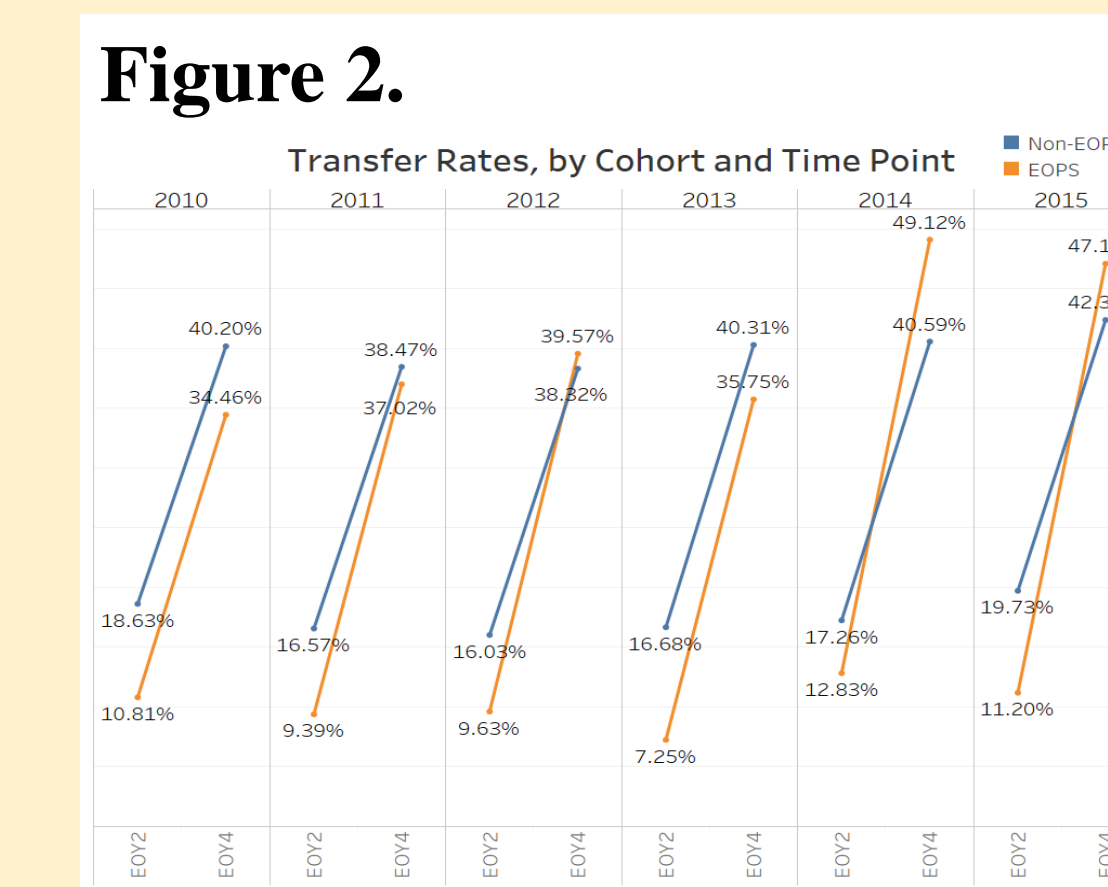
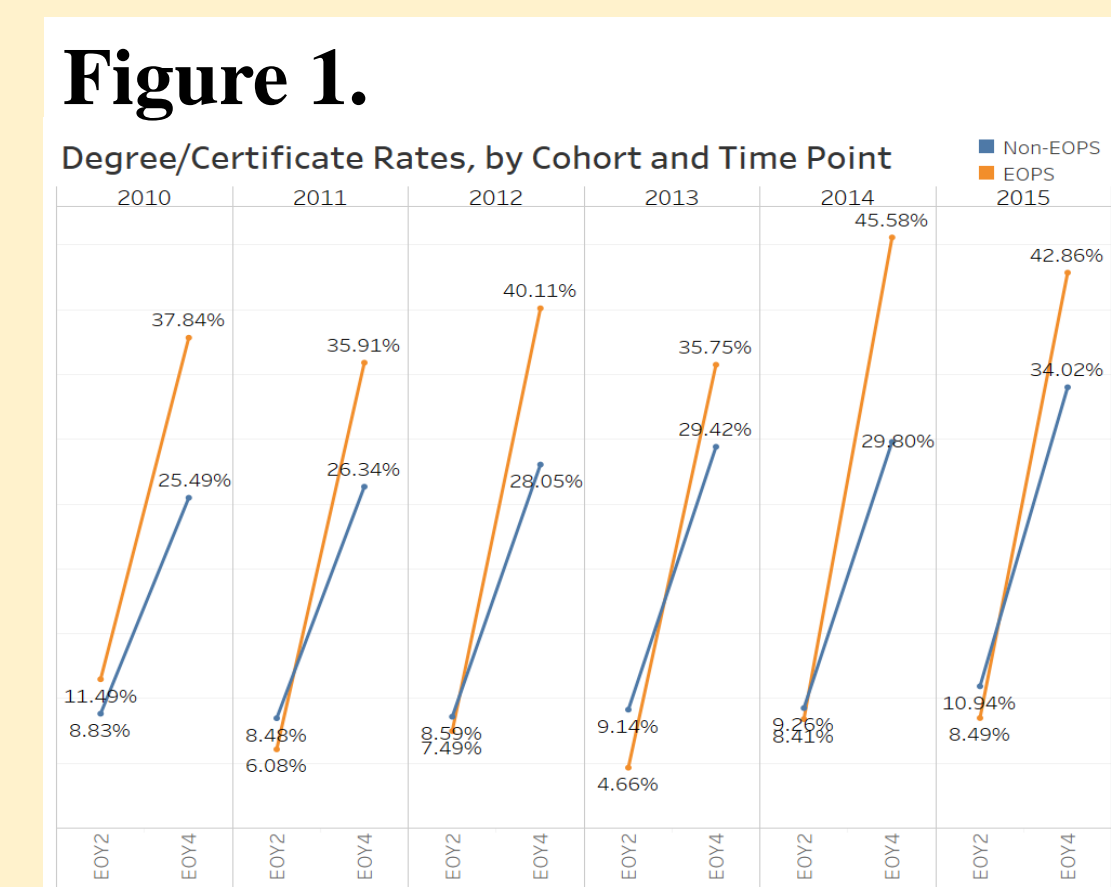


Table 3.

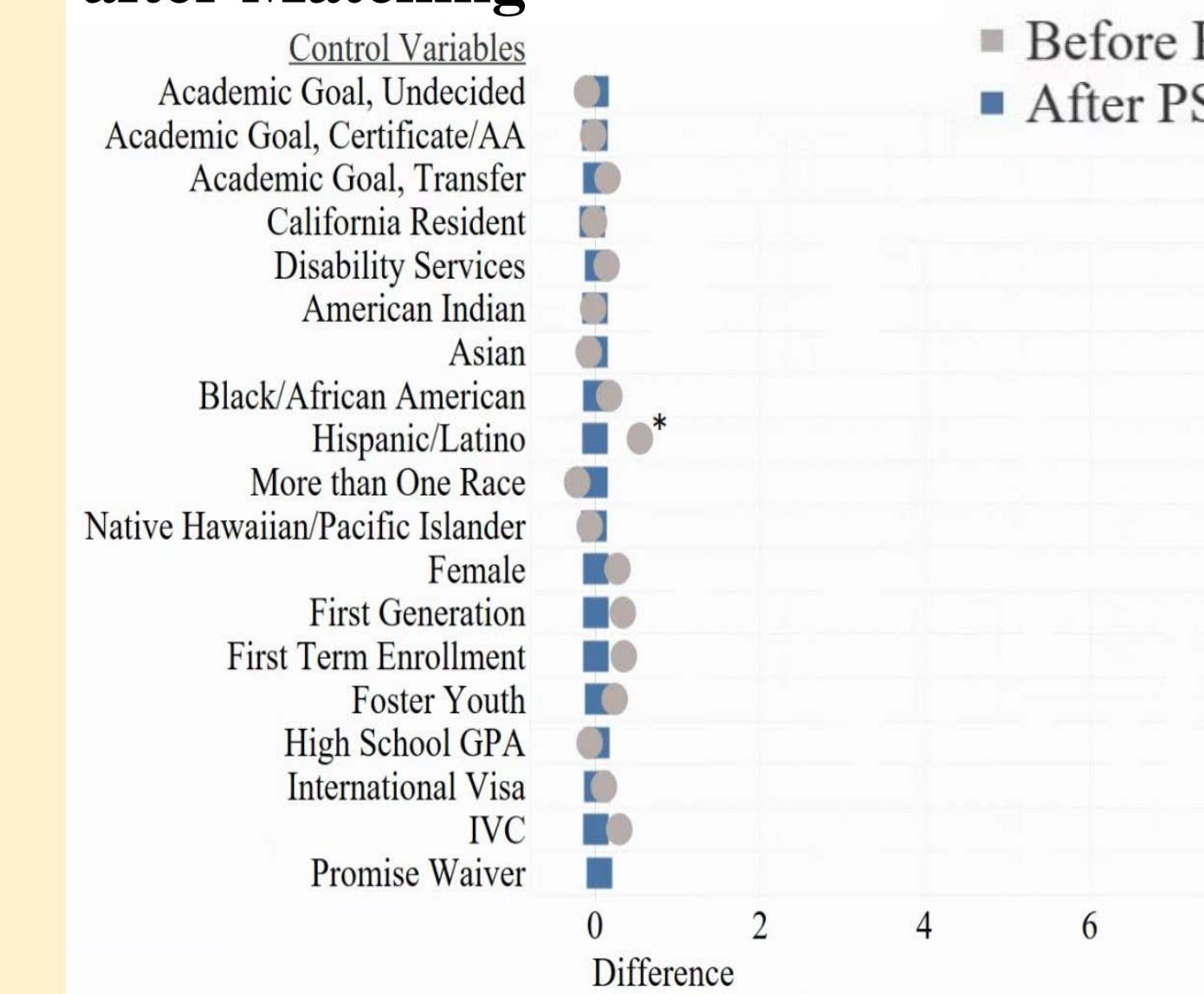
Average Counseling Usage

Measure	Time Point	Non-EOPS	
		EOPS	EOPS
Average Counseling Appointments Attended	EOY2	22	5.59
	EOY4	31	7.75
Average Counseling Appointments Attended, Adjusted*	EOY2	11	2.95
	EOY4	14	3.8

*Scaled by number of counseling visits divided by number of terms enrolled within a given time frame

Figure 3.

Propensity Score Balancing, Before & after Matching



*p<.05

Regression Results

Table 4.

OLS Models, a-e.

Outcome	Time Point	Model	EOPS Coefficient, β	Adjusted Counseling, Std. β
Degree Certificate	EOY2	a. EOPS Predicting	-0.02	
		b. EOPS & Controls	-0.01	
		c. EOPS, Controls, & Weights	0.00	
		d. EOPS, Counseling, Controls	-0.04***	0.03***
		e. EOPS, Counseling, Controls, & Weights	-0.01	0.02***
	EOY4	a. EOPS Predicting	0.10***	
		b. EOPS & Controls	0.08***	
		c. EOPS, Controls, & Weights	0.11***	
		d. EOPS, Counseling, Controls	0.04***	0.05***
		e. EOPS, Counseling, Controls, & Weights	0.07***	0.05***
Transfer	EOY2	a. EOPS Predicting	-0.07***	
		b. EOPS & Controls	-0.03*	
		c. EOPS, Controls, & Weights	-0.02	
		d. EOPS, Counseling, Controls	-0.05***	0.03***
		e. EOPS, Counseling, Controls, & Weights	-0.03**	0.01**
	EOY4	a. EOPS Predicting	0.01	
		b. EOPS & Controls	0.02	
		c. EOPS, Controls, & Weights	0.05***	
		d. EOPS, Counseling, Controls	0.00	0.03***
		e. EOPS, Counseling, Controls, & Weights	0.02	0.04***

*p<.05. **p<.01. ***p<.001

Discussion

Degree/Certificate:

My findings suggest that EOPS students have higher rates of degree/certificate achievement by the EOY4, even after controlling for a number of possible selection biases.

Transfer:

At EOY2, findings suggest that EOPS students are transferring at a significantly lower rate after using the controls and weights. At EOY4, EOPS students do not have significantly different rates of transfer after controlling for possible selection biases at EOY4.

Counseling as a Mediator:

Counseling visits show a significant and positive relationship with degree/certificate and transfer outcomes. The inclusion of this variable also somewhat reduces the coefficient of EOPS, suggesting that counseling partially explains EOPS' coefficient on the outcomes but that there may be other aspects of the program explaining the positive relationship between EOPS and the outcomes.

Limitations & Future Work:

- There likely are other aspects of the program that are explaining the outcome that are currently not captured (e.g., tutoring hours). These may be mechanisms that could be scaled up/replicated. Also, qualitative data (e.g., interviews/focus groups with participants & program staff) would help expand our understanding of the mechanisms of program effect.
- Include data from other districts to examine program variation and generalizability.
- Testing the interaction of EOPS with other variables to see if the effect varies depending on population subgroups.
- EOPS is an expensive program, so a cost/benefit analysis of the program would be useful to policy makers in understanding the return on investment of the program.
- It may be that many non-EOPS students meet the requirements for a degree/certificate but do not apply for it. This should be investigated further to understand whether EOPS is having an effect on the students' course taking patterns and success and/or merely degree/certificate application and receipt.

References

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