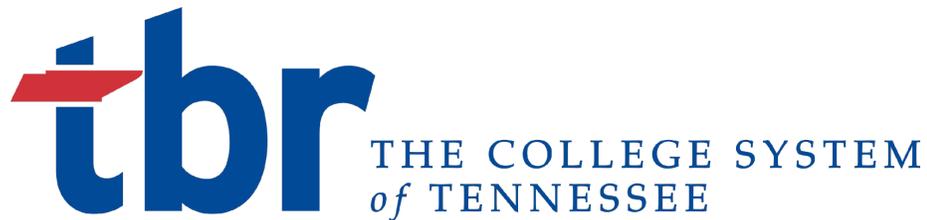


Service Learning and Student Outcomes

Investigating TBR High Impact Practices

Updated: 12/2021



**Statewide HIP Conference
January 13, 2022**

□ Estimate the impact of HIP participation.

1. Does service learning affect:

- Likelihood of graduation, transfer & departure?
- Academic performance?
- Progression to completion, transfer & departure?

2. Do effects differ by duration & frequency?

Key issue:

SL & non-SL students are systematically different

Approach:

- Compare similar students
- Weight on inverse probability of treatment
- Machine learning for propensity scores
- Binary & frequency analyses
- Logistic & OLS regression, EHA

Demographic:

- Age, gender, ethnicity, residency, Pell eligibility

Academic:

- ACT score, HS GPA, diploma type, learning support, Promise, attempted credits, attendance, delay, TTP, major groups

Financial aid:

- Grant amount: Pell, TN Promise, TN Lottery, TSAA

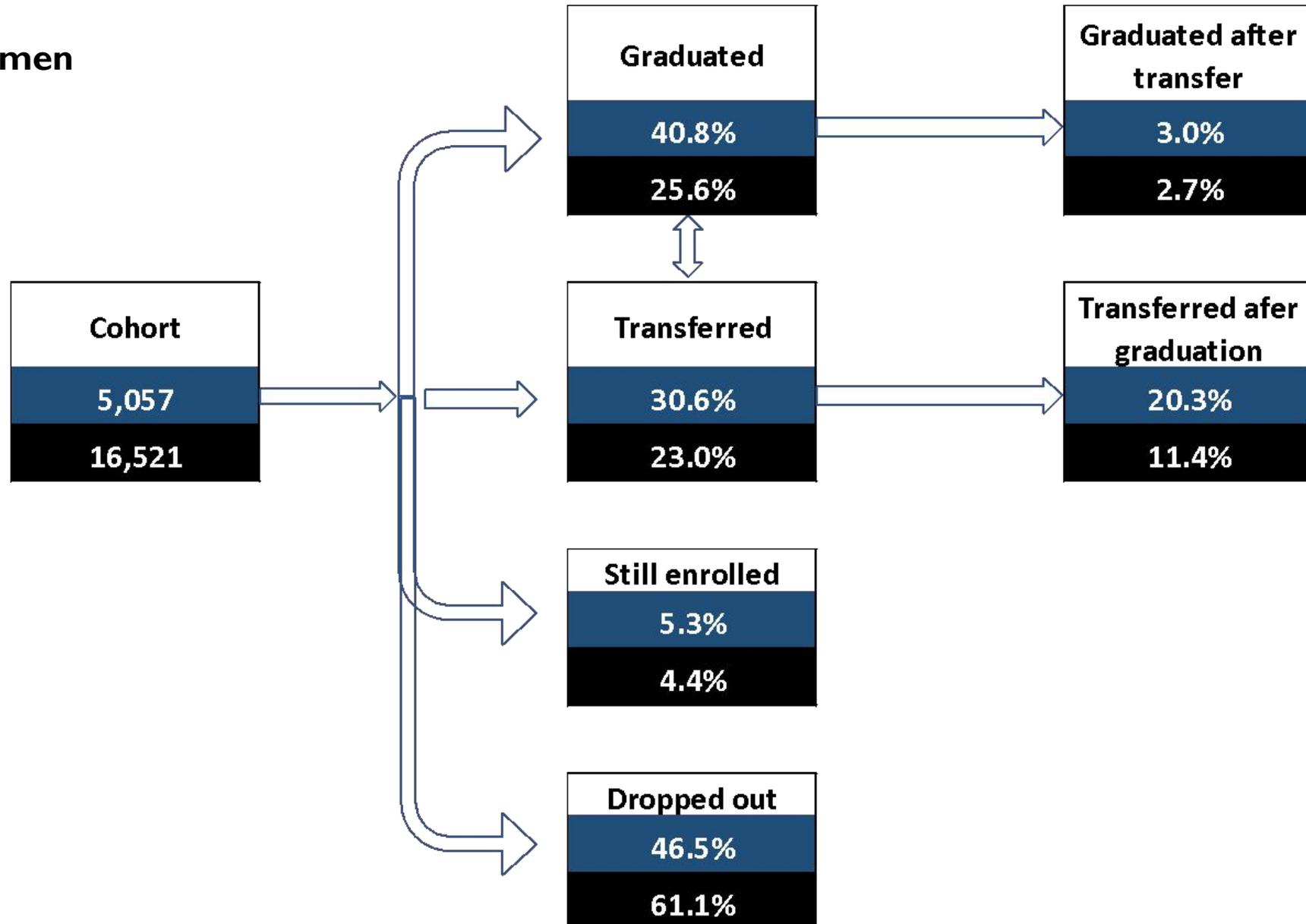
College of enrollment

Service learning participation: 2017 cohort

	Duration	Overall	Analytic sample
Any SL		5,057	5,057
SL - 1	< 10 hours	2,970	1,342
SL - 2	10 - 19 hours	3,490	1,886
SL - 3	> 20 hours	263	173
Multiple SL			1,656

Outcomes by SL participation

Track 21,578 freshmen
over 12 terms



Legend
SL participants
Non-participants

Data from:
TBR & NSC

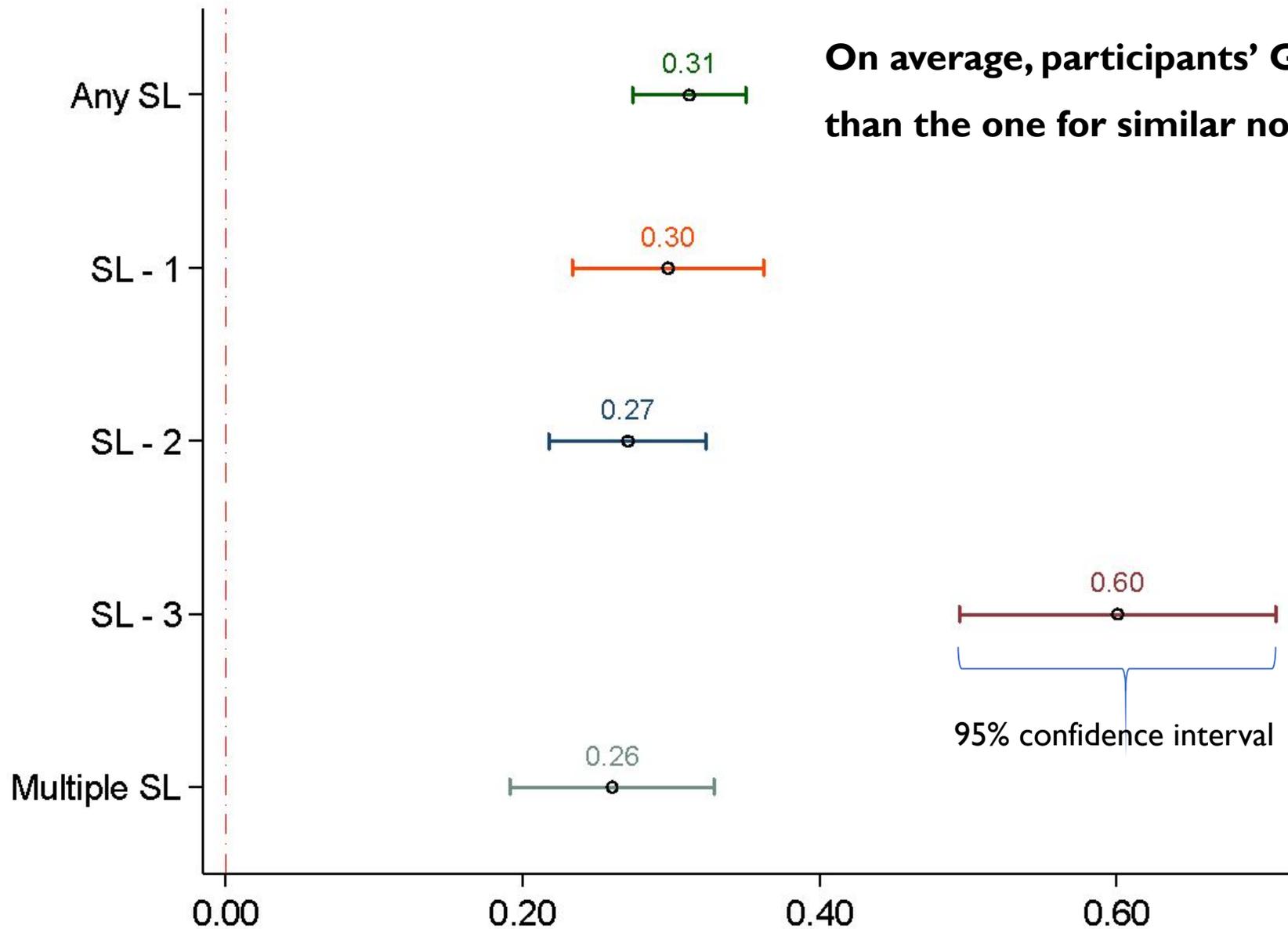
Outcomes for students who are similar in:

- Likelihood of SL participation
- Control variables

Averaged outcomes at the population level

Results that are unlikely to be due to chance alone

Increase in GPA for SL participants



On average, participants' GPA is .31 points higher than the one for similar non-participants

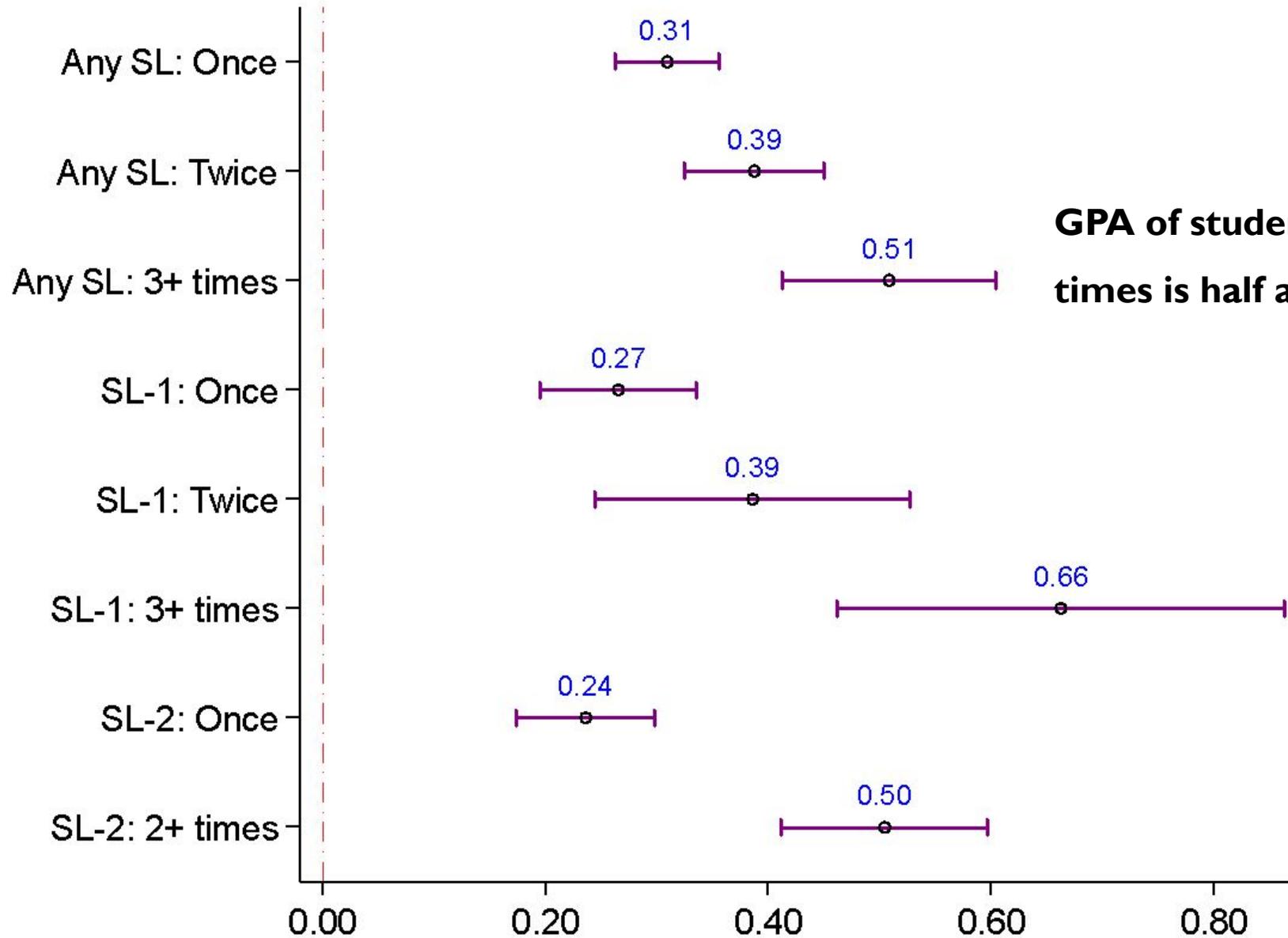
Mean GPA: 2.99

St. Dev.: 1.02

Smaller sample size

95% confidence interval

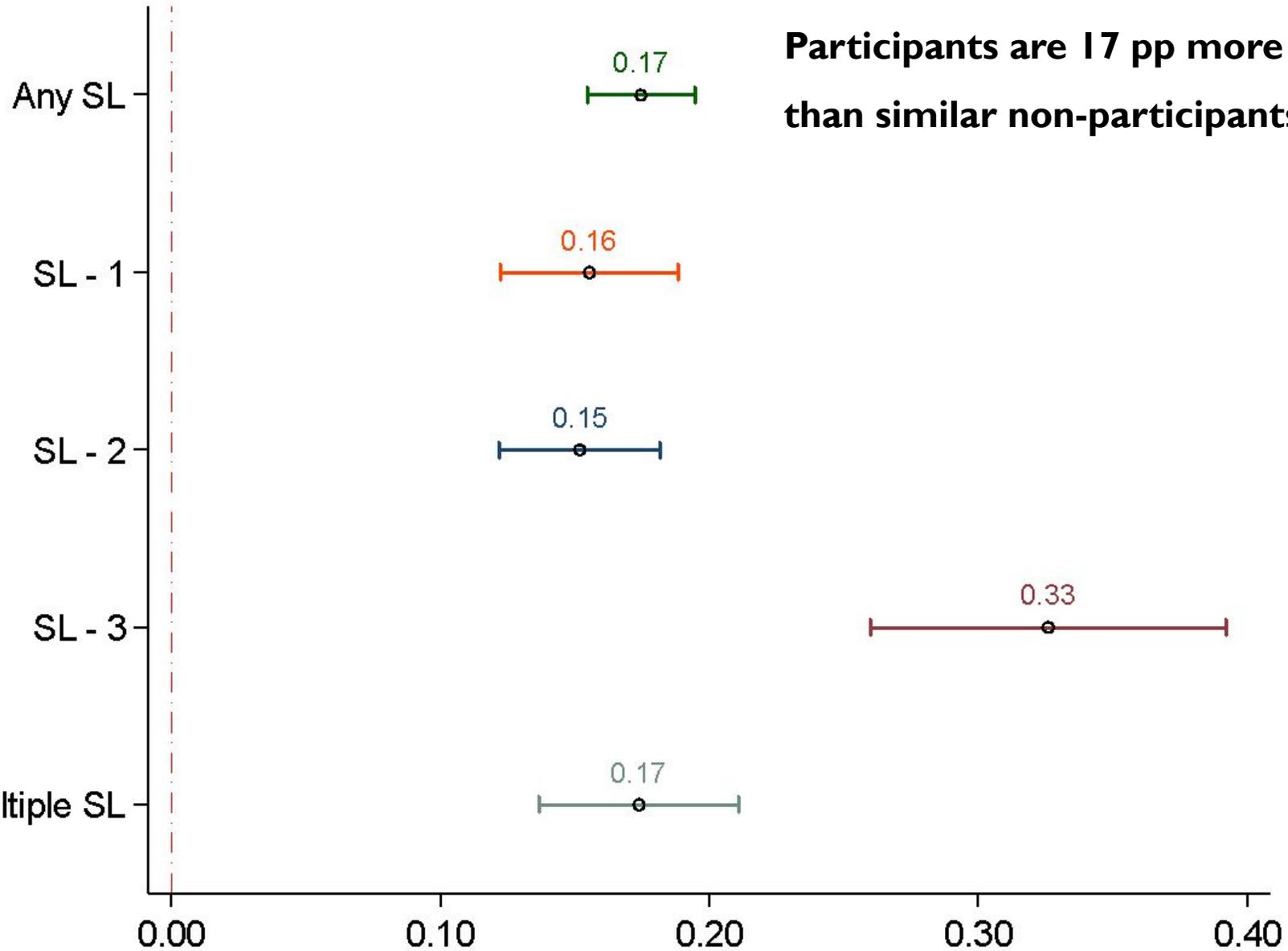
Increase in GPA by SL frequency



GPA of students who participated 3+ times is half a point higher, on average

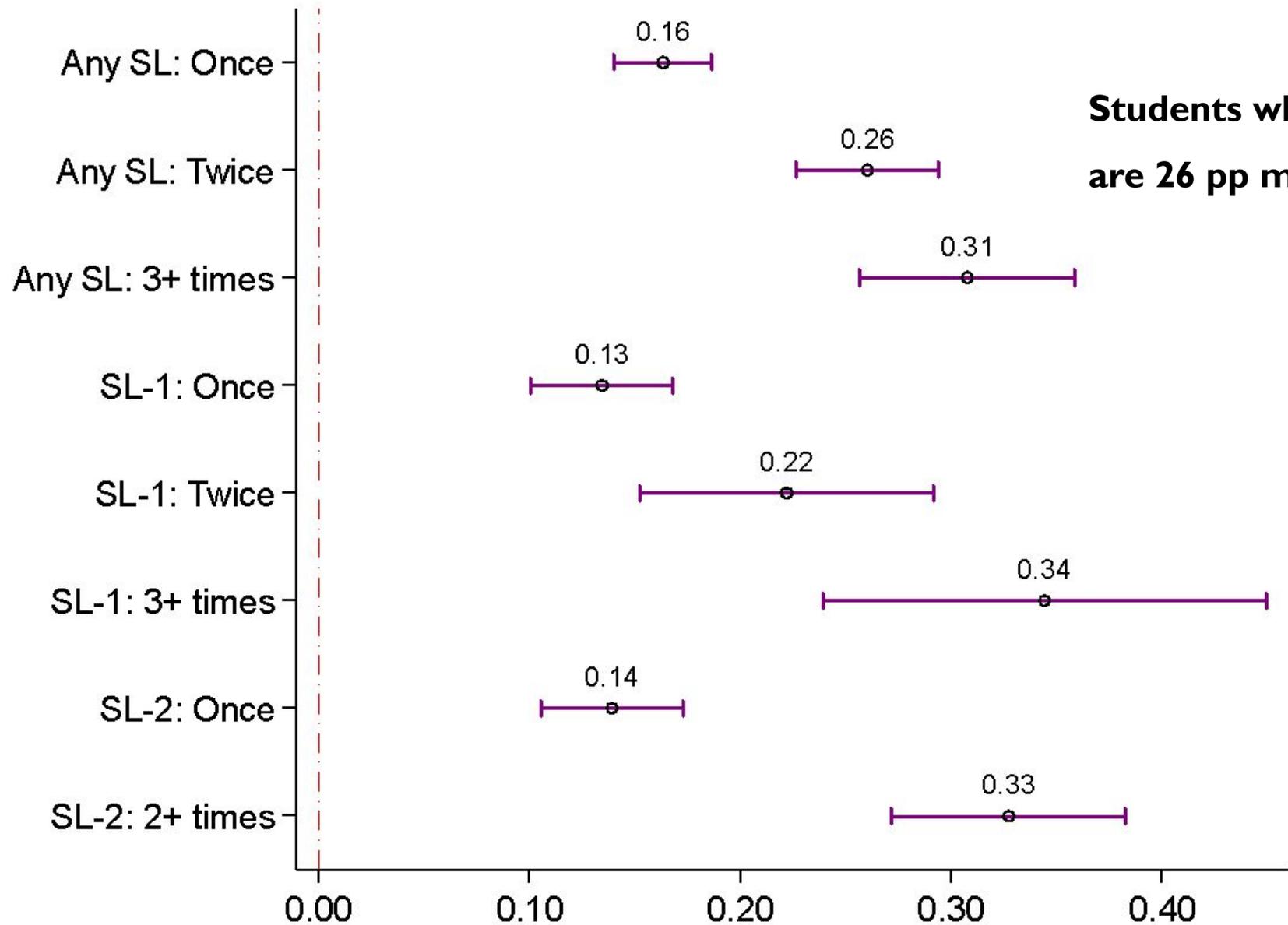
Small sample size

Increase in probability of graduation



Smaller sample size

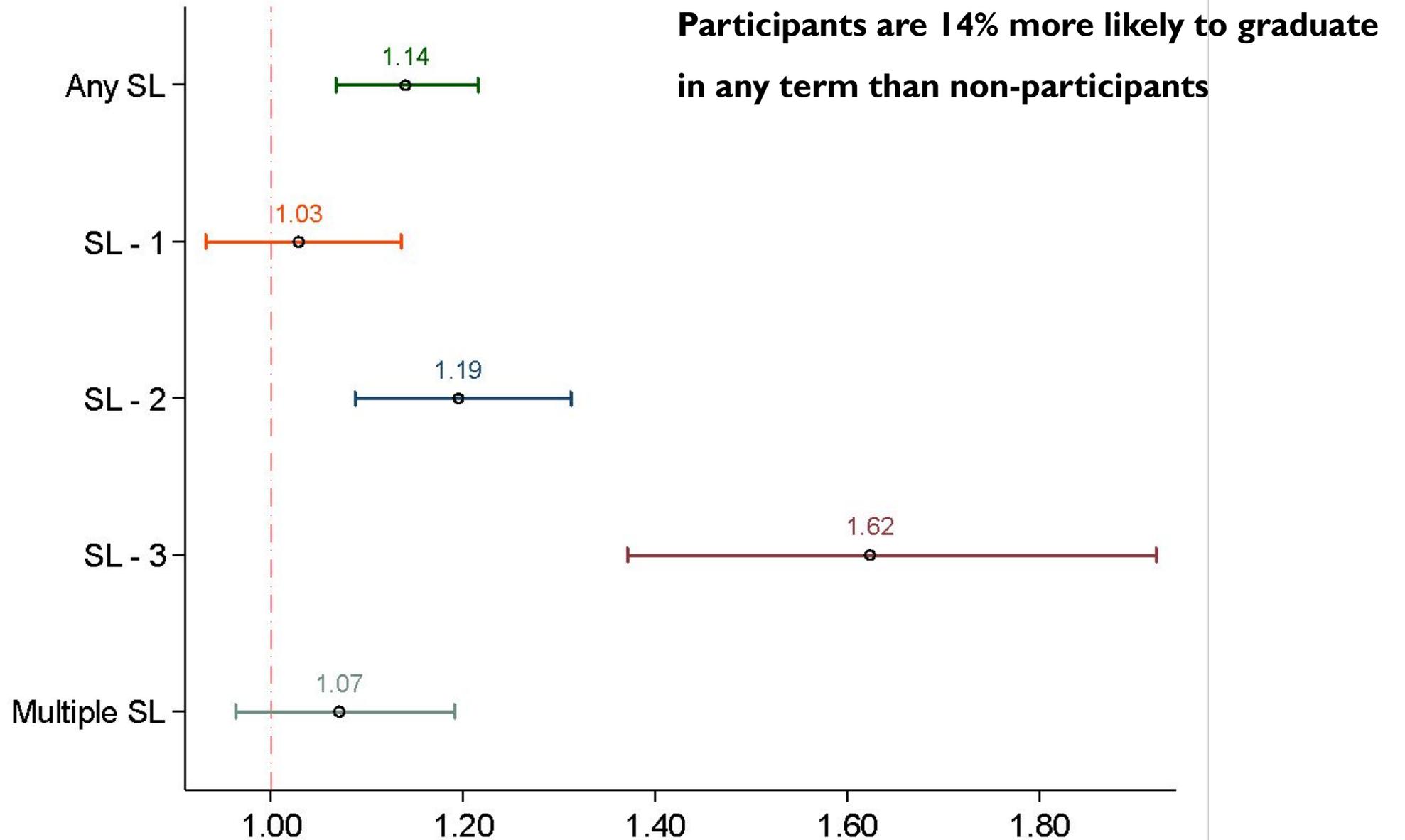
Probability of graduation by frequency



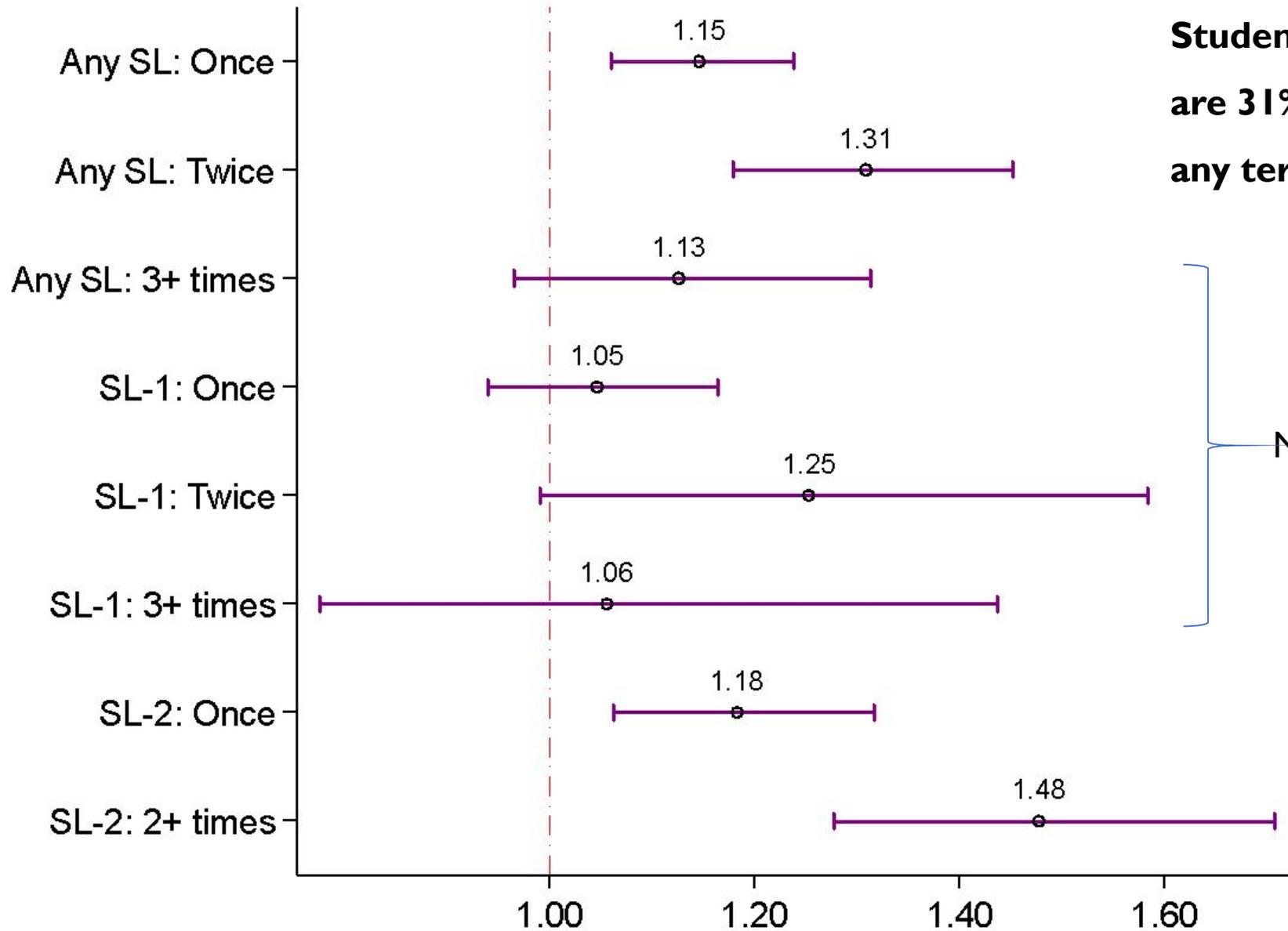
Students who participated twice are 26 pp more likely to graduate

Small sample size

SL participants progress to completion faster



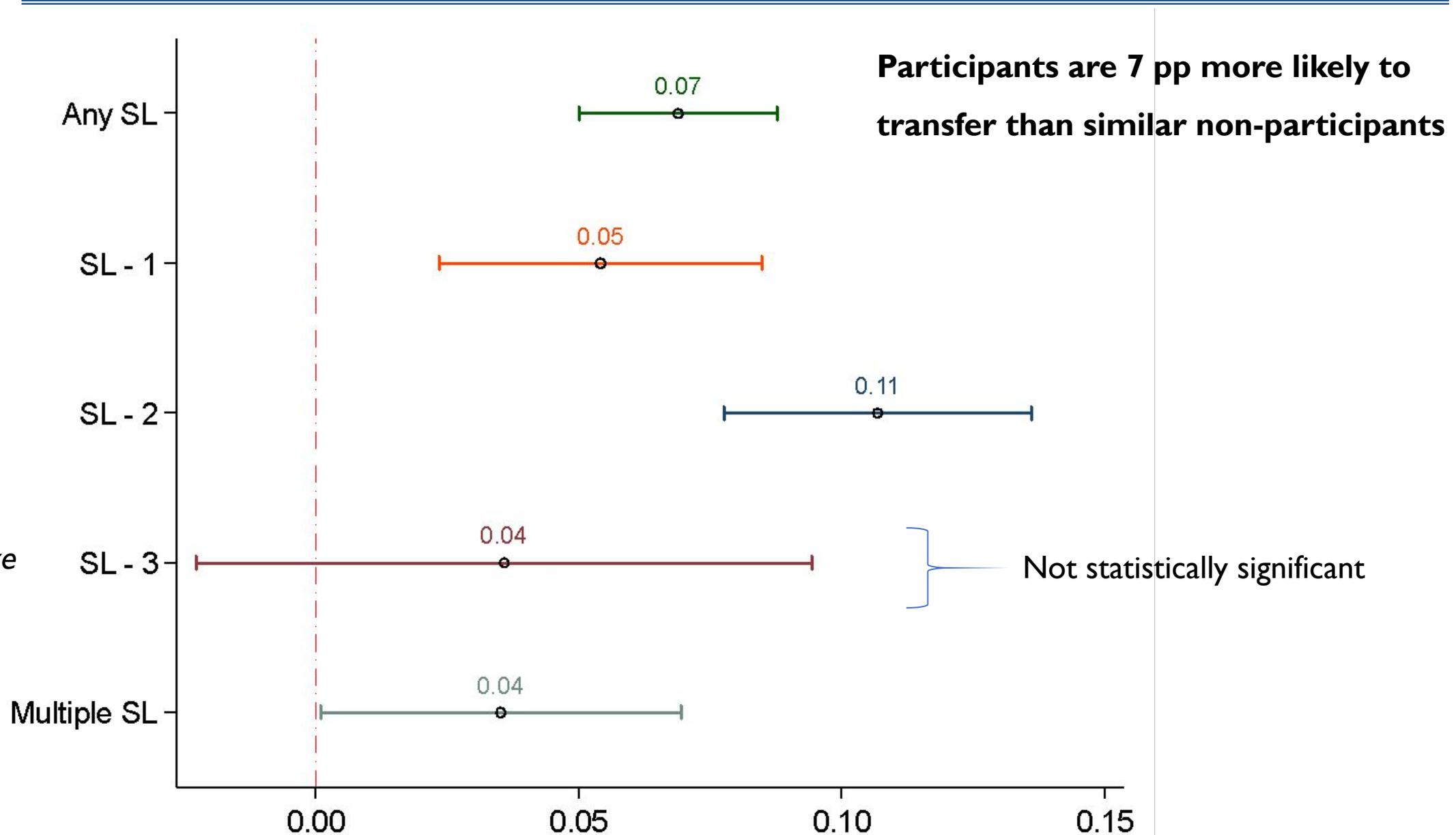
Progression to completion by frequency



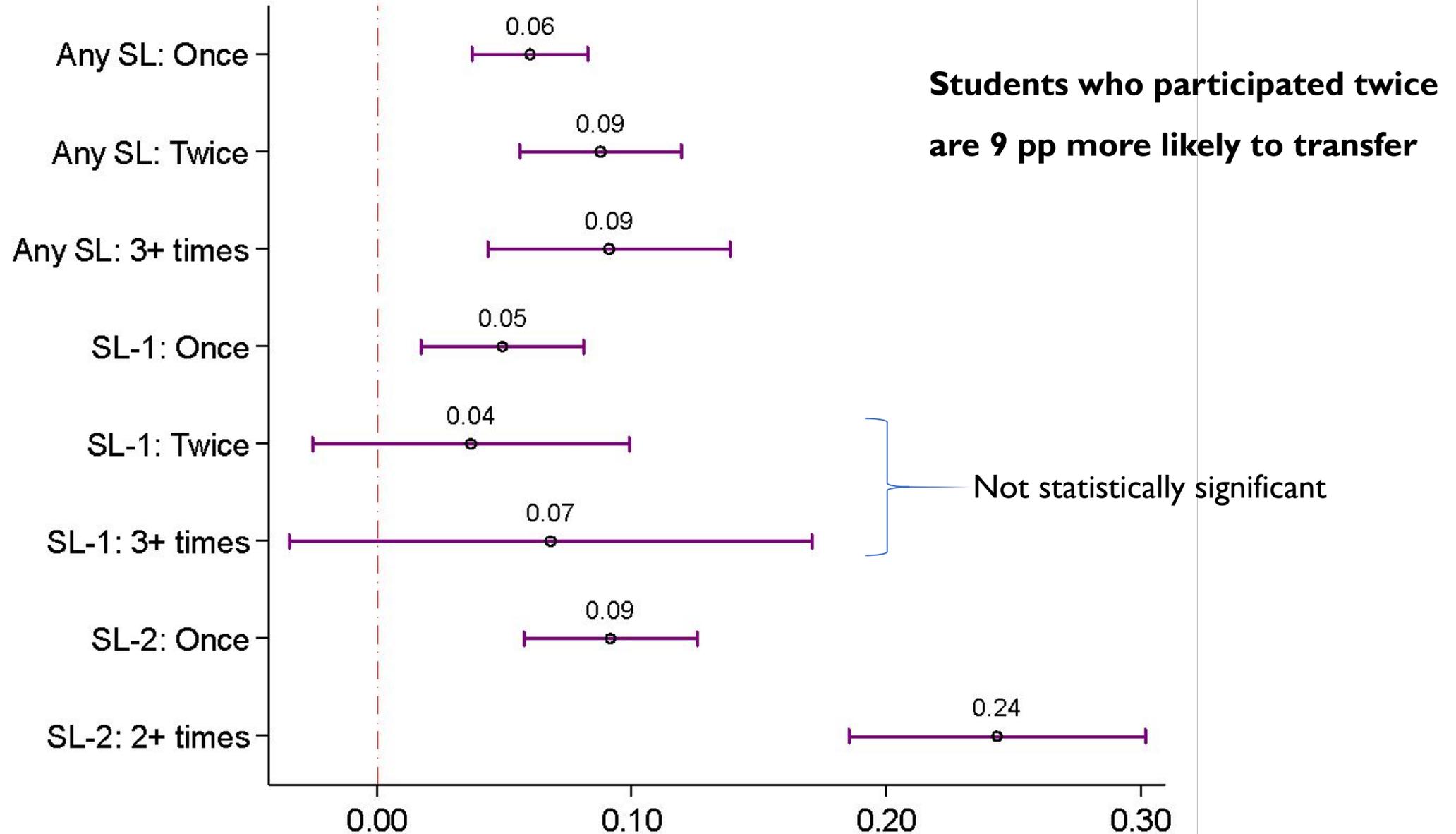
Students who participated twice are 31% more likely to graduate in any term than non-participants

Not statistically significant

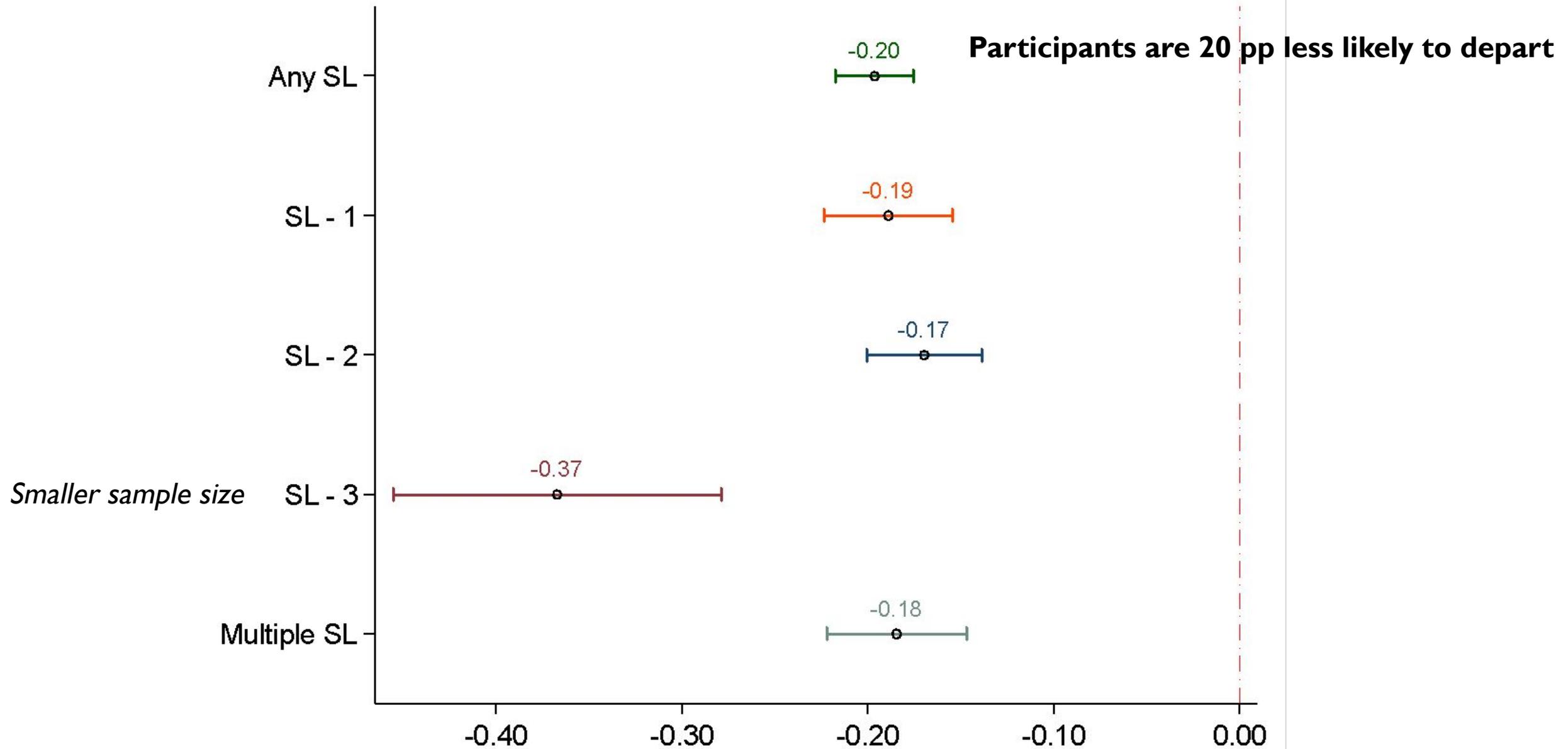
Increase in probability of transfer



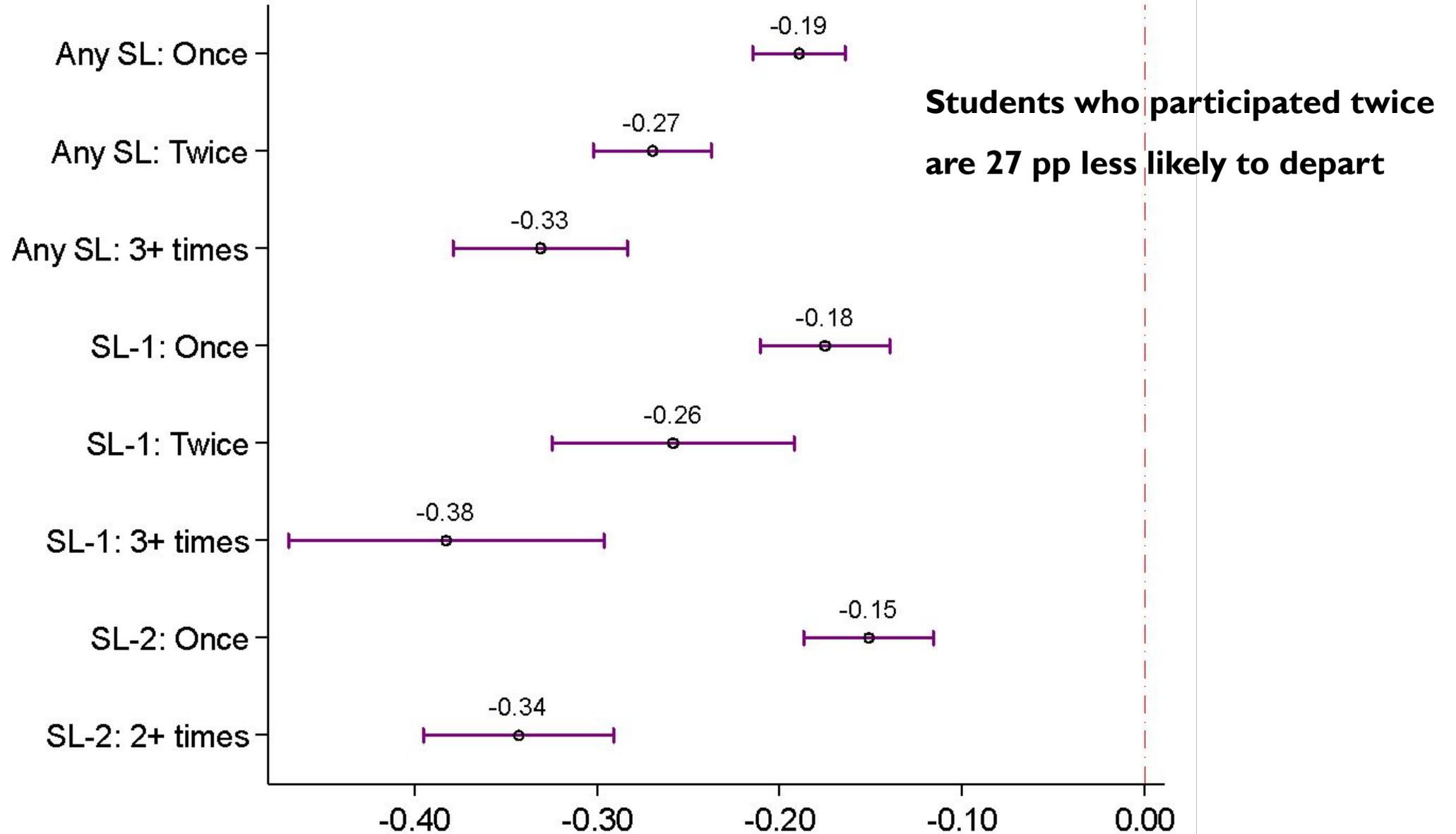
Probability of transfer by frequency



Decrease in probability of departure



Probability of departure by frequency



Key takeaways: Most analyses

Positive outcomes of SL participation:

- Higher probability of graduation & transfer
- Faster progression to graduation
- Higher GPA
- Lower probability & slower progression to departure

Results improve with an increase in duration & frequency.

Effect sizes are nontrivial.

www.tbr.edu/policy-strategy/presentations-and-papers

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Select findings: Summary

	Increase in GPA	Change in probability of:			Increase in hazard for graduation
		Graduation	Transfer	Departure	
Any SL	0.31	17 pp.	7 pp.	- 20 pp.	14%
SL - 1	0.30	16 pp.	5 pp.	- 19 pp.	-
SL - 2	0.27	15 pp.	11 pp.	- 17 pp.	19%
SL - 3	0.60	33 pp.	-	- 37 pp.	62%
Any SL - once	0.31	16 pp.	6 pp.	- 19 pp.	15%
Any SL - twice	0.39	26 pp.	9 pp.	- 27 pp.	31%
Any SL - 3+ times	0.51	31 pp.	9 pp.	- 33 pp.	-