



West Virginia Universal Pre-K Evaluation

Phase I. An RDD evaluation of the program in 2015.

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This presentation

- WV Universal Pre-K program
- Research Questions
- Program Quality
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- Next steps



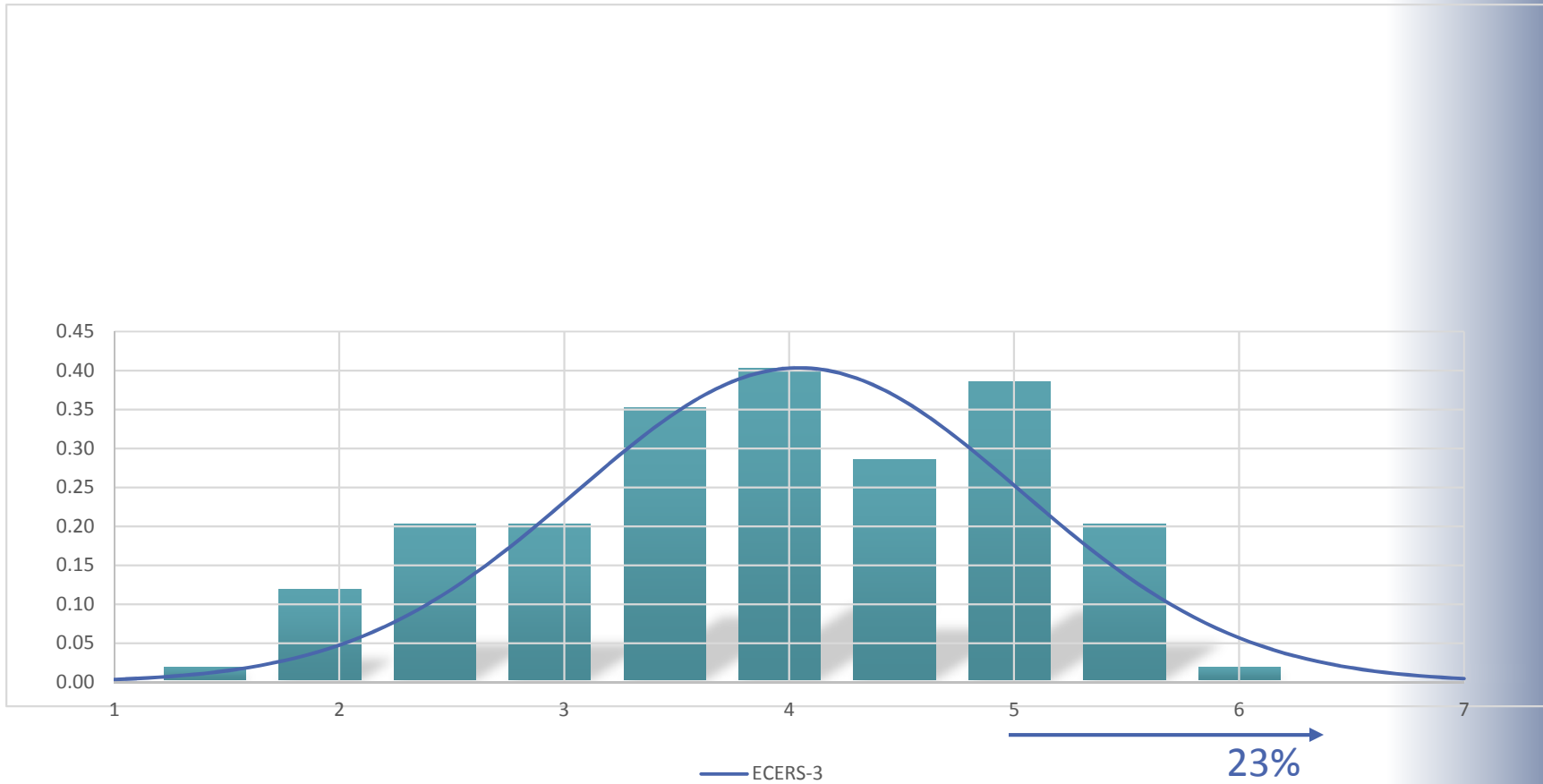
WV Universal Pre-K program

- Legislation in 2002 requiring expanded access to preschool available to all 4-year-olds by the 2012-2013.
- Program now available in all 55 counties: Ranks 5th in Access.
- About 75% of the programs operate in collaborative settings with private prekindergarten, child care centers, or Head Starts.
- Funding is part of the State School Aid Funding Formula.
- Meets all 10 of NIEER's quality benchmarks, w/ Lead and assistant teachers in public centers at salary parity with K-3 public school teachers.
- Since 2016-2017 school year, all programs must operate full day (1,500 minutes p/week; 48,000 annually); min. 4 days.
- State spending p/child= \$6,427 (all spending \$9,898)
- Ranks 13th in State spending (4th in total spending)

Research Questions

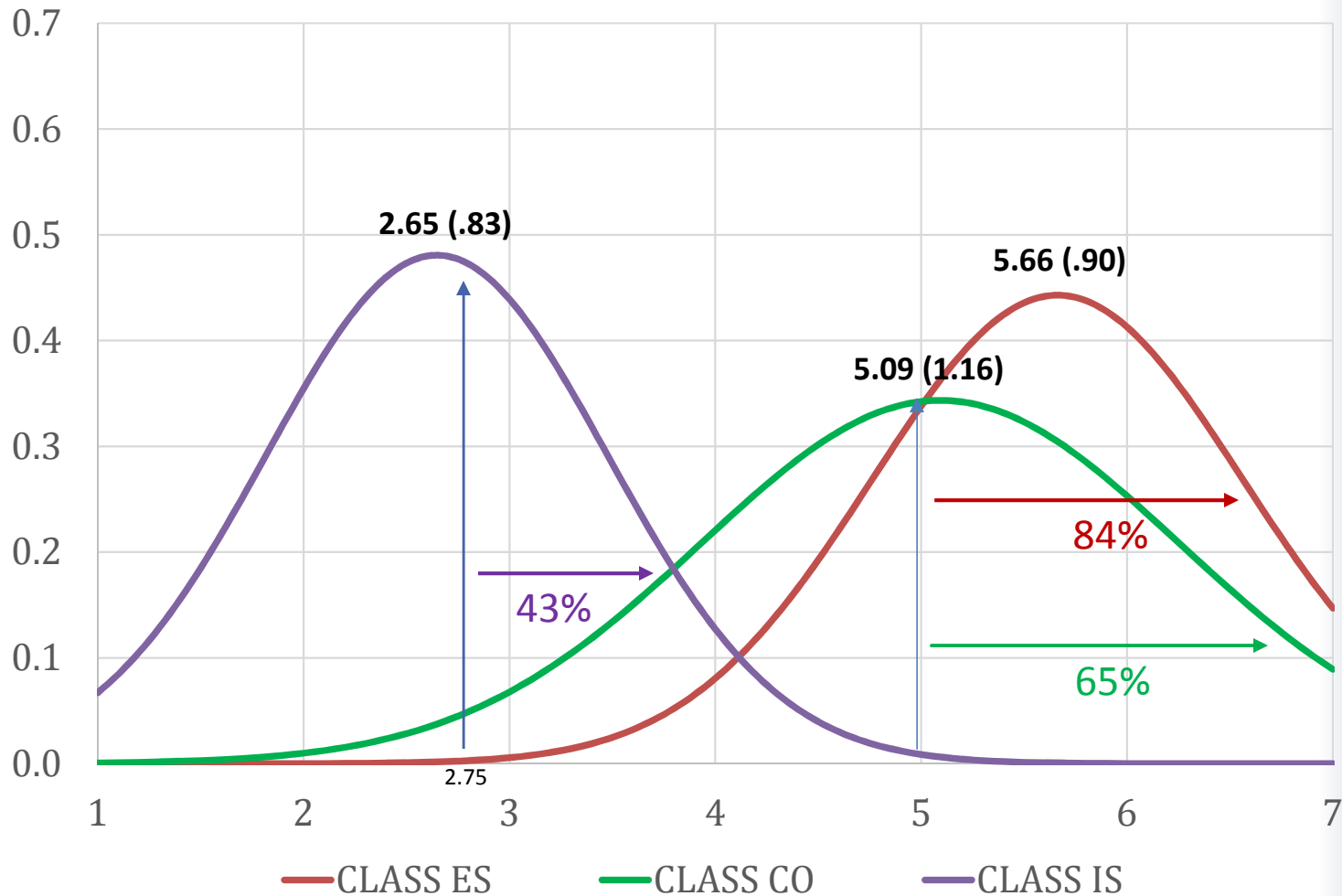
1. What is the overall observed quality of preschool classrooms in 2015-16?
2. Do children who attend the prekindergarten program show significantly greater progress on language, literacy, math and executive function measures than children who do not attend the prekindergarten program at Kindergarten entry? =>Short term impact
3. Do some child subgroups (as defined by low income and child gender) benefit more from the prekindergarten program than others?

Program Quality (n=130): ECERS



Mean: 4.15 (Range 1.51-6.06).

Program Quality (n=105): CLASS



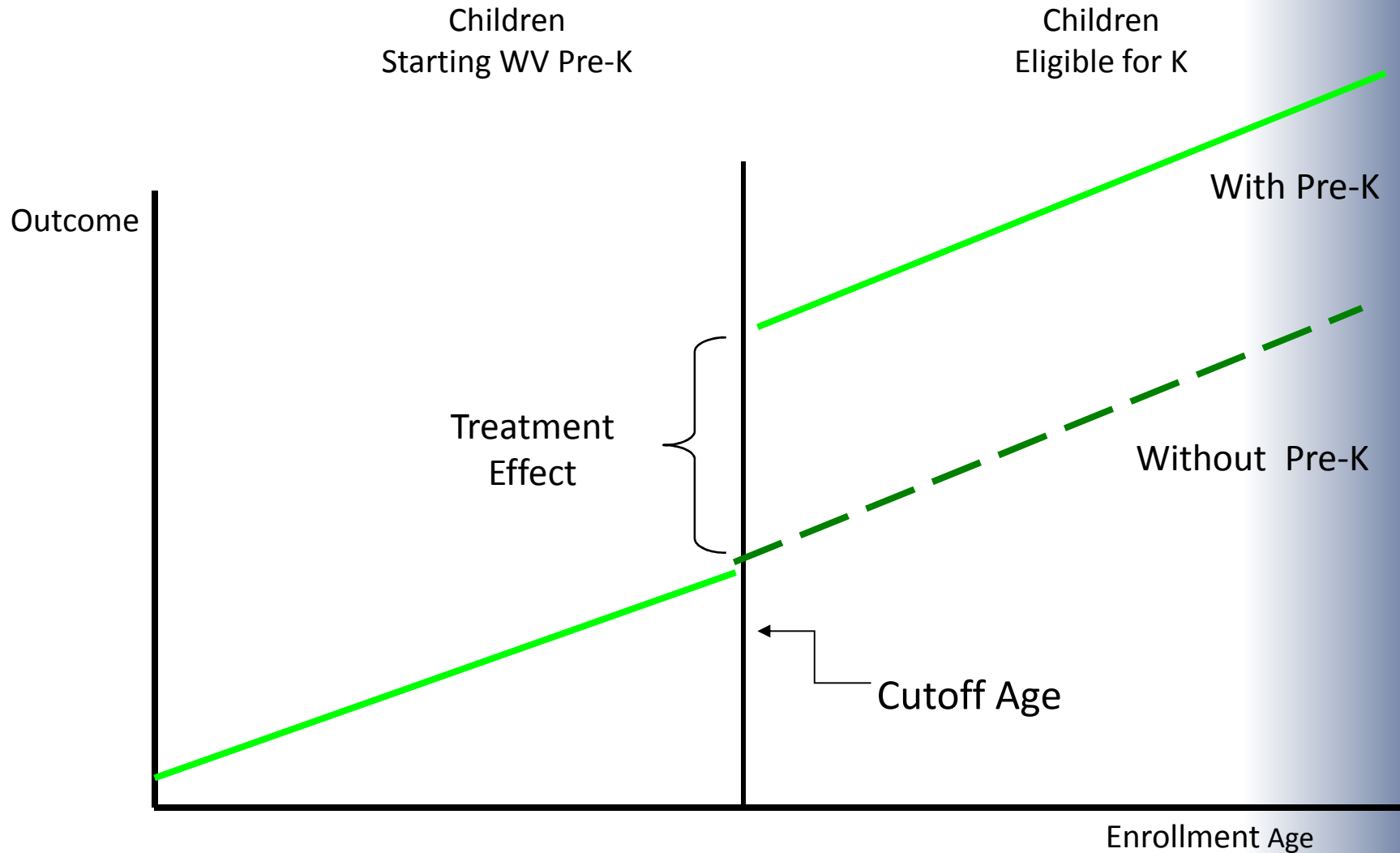
Note: lower n than ECERS due to one county refusing assessment.

Program Impact on Children

Regression discontinuity design (RDD):

- Assesses the effects of participation in WV Pre-K on children's skills at kindergarten entry using age as a cut off.
- The kindergarten sample of children who did attend prekindergarten is compared to 4-year-old children just entering prekindergarten.
- Measures the effects of WV Pre-K in the short term.

RDD design



Sample

- “Comparison group” = 599 children starting Pre-K (born after the K cutoff)
- “Treatment group” = 573 children starting K (which received the treatment=WV Pre-K the previous year, born before the cutoff)
- 7 counties: Fayette, Greenbrier, Kanawha, Nicholas, Putnam, Roane and Wood
 - PURPOSEFUL for longitudinal analyses

Children in the sample

		All	Comparison	Treatment
Female	N	572	292	280
	%	48.7%	48.7%	48.8%
White	N	1072	535	537
	%	91.3%	89.2%	93.6%
Black	N	44	28	16
	%	3.8%	4.7%	2.8%
Other race/ethnicity	N	45	29	16
	%	3.8%	4.8%	2.8%
Low Income	N	841	431	410
	%	72.4%	72.8%	72.1%

Measures

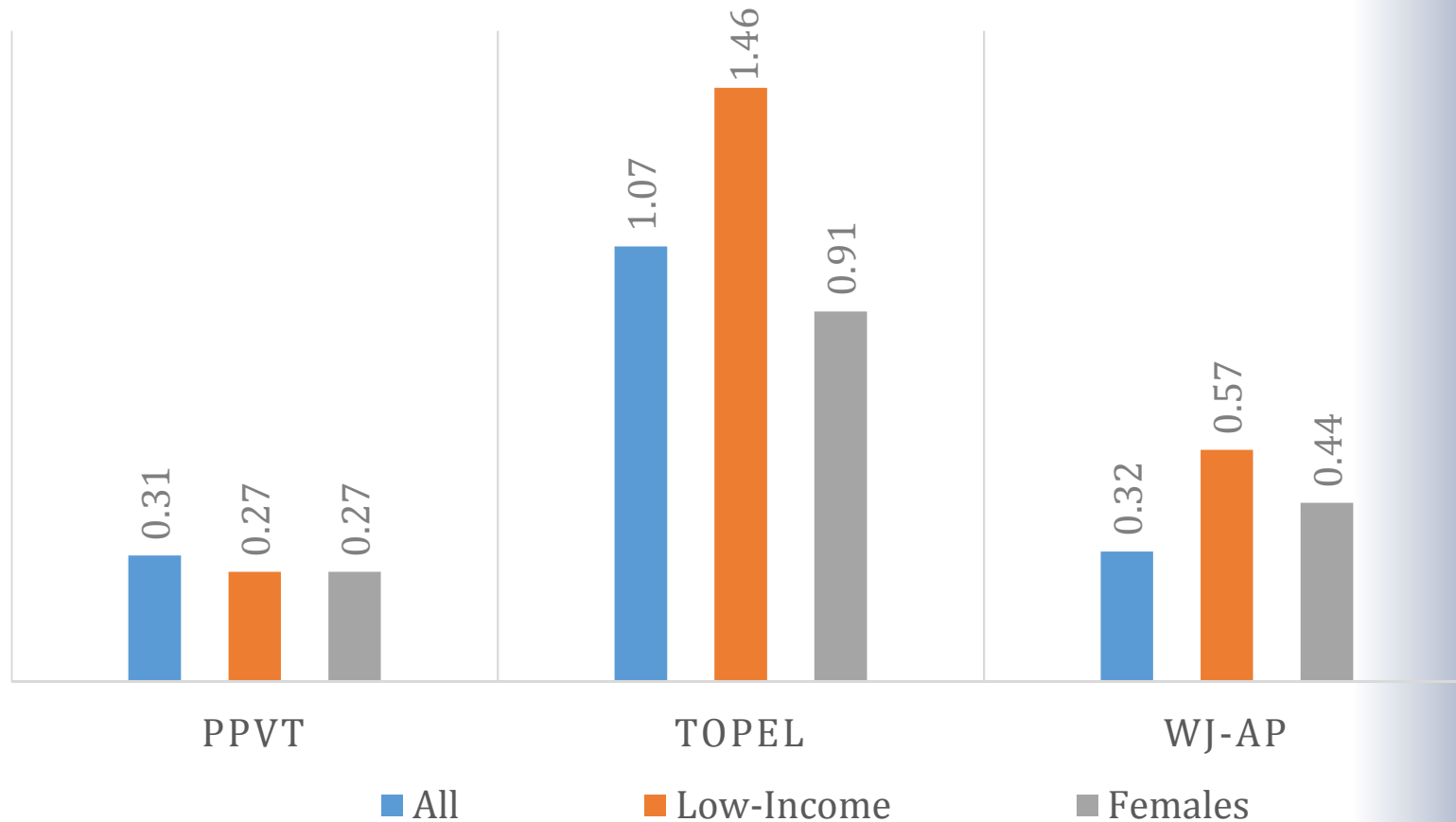
- Language: PPVT IV
- Print Knowledge: TOPEL (PK Subscale)
- Math: Applied Problems, WJ-III
- Executive Functions: Dimensional Change Card Sort (memory, attention shifting), Peg Tapping (inhibitory control and attention)

Overview of Outcomes

-Means (SD)-

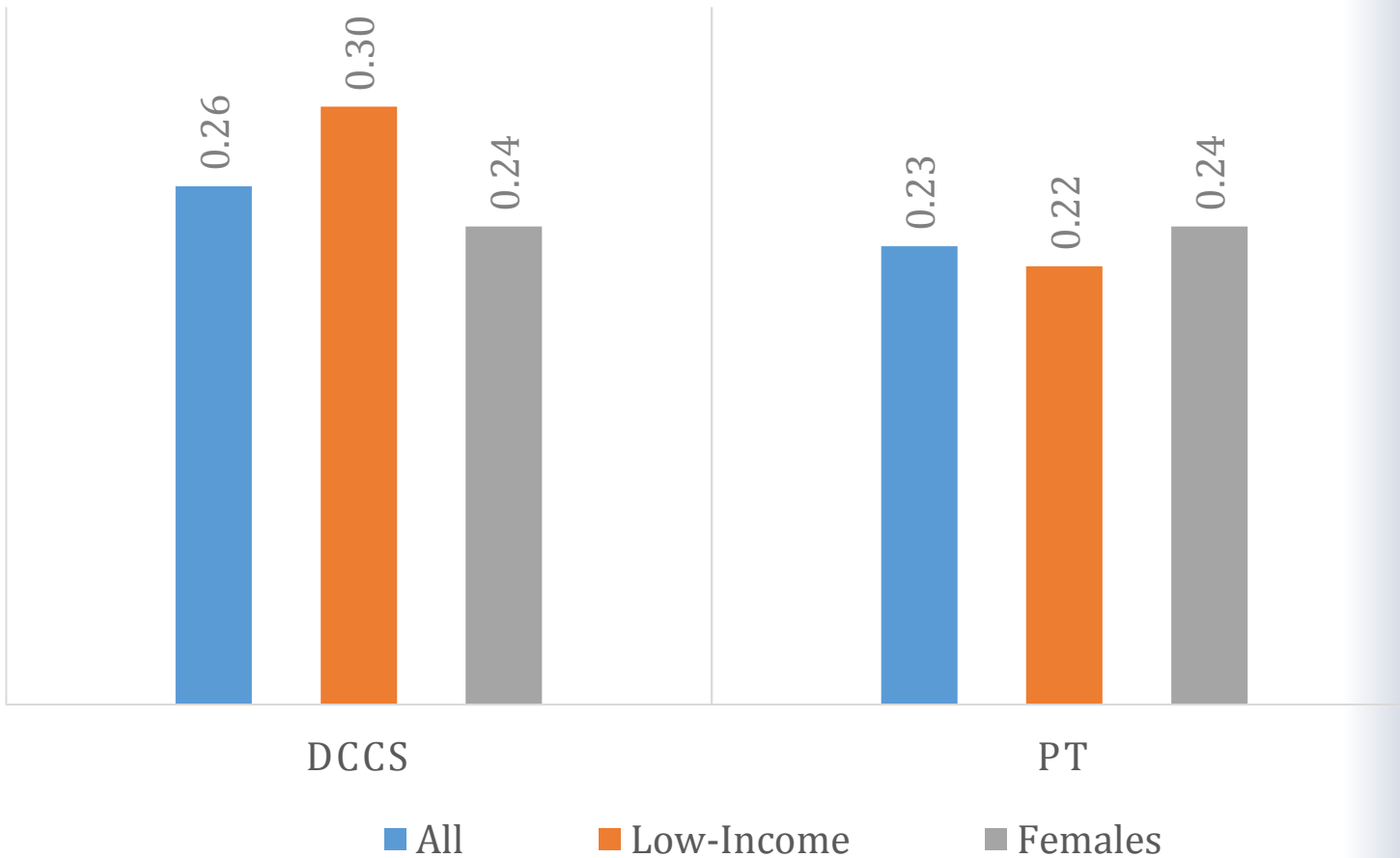
Outcome	All	Comparison	Treatment
PPVT	86.31 (24.16)	74.59 (22.94)	98.52 (18.74)
TOPEL	20.96 (11.44)	13.53 (9.72)	28.69 (7.18)
WJ-AP	13.90 (5.13)	11.32 (4.60)	16.60 (4.18)
DCCS	1.75 (0.56)	1.61(0.57)	1.91 (0.49)
Peg Tapping	11.14 (5.44)	8.90 (5.78)	13.47 (3.86)

Language, Literacy and Math



Sample sizes: All=1,174; LI=841, F=565. 12m, ITT, Linear estimations for PPVT and Topel, Quadratic for WJ-Ap.

Executive Functions



Sample sizes: All=1,174; LI=841, F=565. 12m, ITT, Linear estimations.

Child Outcomes Summary

- Effects for WV Pre-K are large & statistically significantly positive for all measures.
- Similar effects observed for Low Income children (73% of the sample), yet clearly larger for Print Knowledge and Math.
- Lower effects in Literacy and Math for Females.

Next steps

- Longitudinal follow-up of the Pre-K cohort embedded in this RDD (currently enrolled in K), together with a contrast group at K of non-VPK attenders.
- In 2 years, another RDD, in the second year into the change in legislation that requires provision of 1,500 minutes per week of pre-school provision.
- Continuous monitoring of Pre-K quality, and quality following the Pre-K cohort as it moves upwards in the elementary system.



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