Patterns of Enrollment, Migration, and Classroom Experiences Across 3- and 4-year-old Publicly Funded Preschool

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THE TULSA SEED STUDY: SCHOOL EXPERIENCES AND EARLY DEVELOPMENT

- Started in fall 2016 with 3-year-olds
- Following through 4th grade (2023)
- Designed to answer pressing questions about what children experience prior to Pre-k and sustaining the boost from Pre-k
- Intense focus on measurement of executive function and classroom features that support its development
ENROLLMENT AND MIGRATION: RESEARCH QUESTIONS

Q1: What were the patterns of enrollment migration across the 3- and 4-year old years in the Tulsa SEED sample?

Q2: What predicts exiting Head Start for Tulsa Public Schools after Y1?
WHY TULSA? UNIQUE FEATURES OF STUDY CONTEXT

- Large and diverse urban population
- Universal, high-penetration (~75%) 4-
  year-old pre-k since 1998
- Slots available for 18% of low-income 3-
  year-old children
RESEARCH Q1: MIGRATION PATTERNS – WHERE DID THEY GO?

CAP Y1 n = 387

- 54% (n = 208)
- 24% (n = 92)
- 19% (n = 76)
- 3% (n = 11)
- Attrited
- TPS
- CBC
- Educare
- Charter
RESEARCH Q1: MIGRATION PATTERNS – WHERE DID THEY GO?

Educare Y1  n = 131

- TPS: 52% (n = 68)
- Educare: 27% (n = 36)
- CBC: 16% (n = 21)
- Charter: 4% (n = 5)
- Attrited: 1% (n = 1)
RESEARCH Q1: MIGRATION PATTERNS – WHERE DID THEY GO?

CBC Y1  n = 113

CBC  Y

12% (n = 13)

44% (n = 49)

39% (n = 44)

2% (n = 2)

3% (n = 4)

CAP
TPS
Educare
CBC
Attrited
RESEARCH Q1: MIGRATION PATTERNS – WHERE DID THEY COME FROM?

**CAP (N = 213)**
- 98% (n = 208)
- 0.5% (n = 1)
- 2% (n = 4)

**TPS (N = 202)**
- 45% (n = 92)
- 34% (n = 68)
- 21% (n = 42)
RESEARCH Q2: PREDICTORS OF EXITING HEAD START FOR TPS (ANALYTIC MODEL)

• Logistic regression model (n = 132)
  • DV = 0 if remained in CAP (n= 109)
  • DV = 1 if switched to TPS (n = 23)

• Robust standard errors controlling for clustering within classrooms (n = 22)

\[
E(\text{leaving CAP for TPS}) = \alpha + \beta(\text{cognitive skills in the spring}) + \\
\beta(\text{behavioral skills in the spring}) + \beta(\text{classrooms processes}) + \beta(\text{parental values}) + \\
\beta(\text{child demographics}) + e
\]
DEMOGRAPHICS

The following demographic information came from a survey completed by the parent in the spring of the three-year-old year.

1. **Parent Education**
   - Less than high school (n = 46)
   - High School (n = 41)
   - More than high school (n = 25)

2. **Child Race**
   - Black (n = 35)
   - White (n = 43)
   - Hispanic (n = 37)
   - Other (n = 17)

3. **Gender**
   - Male (n = 73)
   - Female (n = 59)
DEMOGRAPHIC DESCRIPTIVES AND CHI-SQUARE TESTS

Parent Education (chi2 = 2.48, ns)

Gender (chi2 = 0.63, ns)

Race (chi2 = 2.52, ns)
The following child assessment data were collected in the spring of the three-year-old year:

<table>
<thead>
<tr>
<th>Cognitive Skills</th>
<th>Behavioral Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woodcock-Johnson Tests of Achievement</td>
<td>Teacher Observation of Classroom Adaptation (TOCA)</td>
</tr>
<tr>
<td>1. Applied Problems Subtest (math)</td>
<td>1. Concentration Problems Subscale, $\alpha = .95$</td>
</tr>
<tr>
<td>2. Letter-word Identification Subtest</td>
<td>2. Behavior Problems Subscale, $\alpha = .94$</td>
</tr>
<tr>
<td></td>
<td>3. Prosocial Behavior Subscale, $\alpha = .88$</td>
</tr>
</tbody>
</table>
Woodcock-Johnson Tests of Achievement

- **Letter-Word**
  - Stayed in CAP: ~100
  - Left for TPS: ~105

- **Applied Problems**
  - Stayed in CAP: ~95
  - Left for TPS: ~110

* Indicates a statistically significant difference.
BEHAVIORAL DESCRIPTIVES AND T-TESTS

Teacher Observation of Classroom Adaptation

- Concentration Problems
- Disruptive Behavior
- Prosocial Behavior

- Stayed in CAP
- Left for TPS
The following classroom observations were collected in the spring of the three-year-old year:

**Classroom Assessment of Supports for Emergent Bilingual Acquisition (CASEBA)**

1. Supports for English Language Acquisition, $\alpha = .84$
2. Supports for Home language, $\alpha = .81$

**The Narrative Record (Farran et al.)**

1. Total number of behavior disapprovals
Narrative Record

Classroom Assessment of Supports for Emergent Bilingual Acquisition (CASEBA)
Information on why parents chose a particular ECE center was collected through a survey sent home to parents in the spring of the 4-year-old year:

**CAP (N = 109)**

- It was the only program that had room for my child: 25%
- Convenience: 13%
- It offered the strongest support for my child's social development and learning: 13%
- It offered the strongest support for my family's culture, language and values: 9%
- Had room for all of my children who need child care: 4%
- Just had the 'best feeling' about it: 4%
- A friend recommended it strongly: 4%
- Other: 10%

**TPS (N = 23)**

- Other: 48%
- A friend recommended it strongly: 22%
- Had room for all of my children who need child care: 13%
- Just had the 'best feeling' about it: 4%
- A friend recommended it strongly: 4%
- Other: 9%
- Convenience: 4%
PARENTAL VALUES DESCRIPTIVES AND CHI-SQUARE
LOGISTIC REGRESSION RESULTS: DEMOGRAPHICS

N = 132
Pseudo R2 = 0.24
LOGISTIC REGRESSION RESULTS

Cognitive Skills in the Spring
- Letter-Word Identification (WJ)
- Applied Problems (WJ)
- Concentration Problems (TOCA)
- Disruptive Behavior (TOCA)
- Prosocial Behavior (TOCA)

Behavioral Skills in the Spring
- Supports for English Acquisition (CASEBA)
- Supports for Home Language (CASEBA)
- Total Behavior Disapprovals (NR)

Classroom Processes
- Values Supports for Learning
- Values Convenience

Parental Values

Pseudo R2 = 0.24
CONCLUSIONS

- **Research Question #1**
  - HS retains about half of its three year-olds
  - TPS pre-K has a much more diverse group of children in terms of prior ECE experience

- **Research Question #2**
  - In terms of demographics, only parent education seems to matter among variables included.
  - Kids who display higher math scores are more likely to leave for TPS.
  - Kids who display more behavior problems are more likely to stay in CAP.
  - Parents who value supports for social development and learning are more likely to stay in CAP.
  - Parents who value convenience are more likely to leave for TPS.
LIMITATIONS

- Not designed as a study to examine parent choice of care arrangements
  - Did not collect on key variables such as:
    - whether sibling in TPS elementary school
    - maternal employment intensity and schedule,
    - role of social networks
- Missing data
- Unable to look at patterns of migration for Educare and CBC kids.
- Only examined primary/observed ECE settings
IMPLICATIONS AND NEXT STEPS

- Implications for teachers in HS vs. TPS 4-year old classrooms of apparent sorting and mix of children
- Implications for parent selection processes – searching for “best” educational experiences for 4-year olds?
- Implications of what is NOT predictive of migration

- Multiple imputation to address missing data
- Associations of 3-4 year old care patterns and kindergarten readiness
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