Choosing children's first school settings: The role of program and family characteristics

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Background

The earliest years of life form the foundation for learning, behavior, and health across the lifespan (Center on the Developing Child, 2016), yet poverty-related disparities in these dimensions of early child development are well documented (Gennetian et al., 2010). Low-income families have less access to the opportunities and resources necessary to ameliorate such disparities (Braverman et al., 2017), including high-quality early care and education (ECE; Harding & Paulsell, 2018). Publicly-funded universal ECE programs are designed to reduce barriers to participation and increase equitable access to ECE, and large-scale ECE programs have shown promise in efficacy and effectiveness trials in places such as Boston, MA (Weiland & Yoshikawa, 2013) and Tulsa, OK (Gormley et al., 2005). In line with these recent expansions, in 2014, New York City (NYC) launched a full day, free universal pre-K program, called Pre-K for All, and now serves about 70,000 4-year-olds each year in community-based organizations and school-based settings.

Even after costs are removed as a barrier to ECE access, however, inequities in access are still possible within free, universal systems if lower-income families have fewer high-quality ECE options available to them that meet their needs, have less access to information about options, or face other constraints like nontraditional work schedules that influence their choices. Indeed, how families choose ECE for their children is often a complicated calculus involving family background, work schedules, community contexts, and parental beliefs (Chaudry et al., 2010). Understanding how families experience and navigate the complex decision-making process in choosing among pre-K options and identifying remaining barriers to equitable access (besides cost) is critical to the success of universal pre-K initiatives, which continue to gain traction as a policy response to persistent poverty-related disparities.

Purpose

The current study examines pre-K and kindergarten choice patterns using data from families who applied to NYC's Pre-K for All in spring 2016, enrolled in pre-K in 2016-2017, and enrolled in kindergarten in NYC in 2017-2018. We ask:

1) What factors influence the choices families make about where to send their children to pre-K and kindergarten?
2) Do these factors differ across subgroups of the population?

Setting

As of 2016 (the year these data were drawn), Pre-K for All served nearly 70,000 children in over 1800 pre-K sites. The majority of programs are run by community-based organizations, called NYC Early Childhood Education Centers (NYCEECs), that offer Pre-K for All through contracts with the Department of Education (DOE; 43%) or the Administration for Children's Services (ACS; 19%). About 40% of pre-K programs are in public school settings.

In NYC, families apply to Pre-K for All programs through a centralized application process in which they may list up to 12 pre-K sites of their choosing, in order of preference. Importantly, families can apply to pre-K anywhere in the city; they are not restricted to their neighborhood or zoned school. Each child has a certain admissions priority for each pre-K site, which is based on factors such as residence within a geographic area, whether the student has a sibling at the site, and whether the student is already enrolled at the site as a 3-year-old. Assignment to pre-K is determined by these preferences and priority groupings. The NYC Department of Education collects and shares a wealth of information about pre-K programs via an interactive website (MySchools), including contact information, program type (public school or community-based organization), program quality, and school climate.

Participants

Participants in the current study were 55,379 children who applied to and subsequently enrolled in Pre-K for All in 2016-2017. The sample, like NYC, was diverse: 37% of participants were Hispanic, 21% were Black, 20% were White, 19% were Asian, and 3% were another race/ethnicity; 51% were flagged as low-income, and 34% spoke a first language other than English.

Intervention/Program/Practice

Not applicable.

Research Design

This paper describes a descriptive study that leverages families' choices on their pre-K applications, family demographic data, and site-level data.

Data Collection and Analysis

We leverage three administrative data sources from the NYC Department of Education: (1) pre-K application choices, (2) family demographic information, and (3) data made available to families via NYC's MySchools website on program quality, geographic location, and school climate as reported by teachers and families. We will estimate rank-ordered logit models to predict the rank ordering of preschool choices across the city overall and within key subgroups defined by race-ethnicity, home language, and poverty status. This statistical method has been widely used in the literature on predicting school choice (e.g., Glazerman & Dotter, 2017) and allows us to obtain families' "revealed" preference.

Findings/Results

Participants listed a total of 186,295 ranked preferences (M_{child}=3.36, *SD* = 2.84, *Range* = 1-12) to 1779 unique pre-K programs in the first application round. In prior analyses examining site-level predictors of site-level demand, we found that pre-K programs delivered in public school settings were more popular than community-based settings and other Department of Education-run pre-K centers (see Table 1 and Figure 1). Furthermore, program setting was more strongly associated with demand than other characteristics of sites, including student composition and site quality.

The current paper extends our prior work in three ways. First, we examine choices at the individual level and consider how site characteristics and family-specific characteristics (e.g., distance to a site, whether a sibling is enrolled) contribute to families' rank ordering of choices. Second, we explore how these same characteristics, as well as pre-K enrollment, contribute to *kindergarten* choice behavior. Finally, we test whether choice patterns vary across subgroups of the population defined by race-ethnicity, home language, and poverty status.

By advancing the science on effective policy levers that reduce inequities, we expect that the results from NYC will continue to inform policy and practice in early childhood education nationwide on how parents make pre-K choices and what barriers to access remain in a free, universal system.

Table 1. Site Predictors of Site Demand.

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	SE	B	SE	B	SE	B	SE	B	SE
Intercept	-0.32***	0.05	-0.20*	0.09	-0.32***	0.05	-0.31***	0.05	-0.23*	0.09
Pre-K Center	**-1.70*** **	**0.18**	**-1.63*** **	**0.21**	**-1.70*** **	**0.19**	**-1.77*** **	**0.18**	**-1.63*** **	**0.21**
NYCEEC DOE	**-0.58*** **	**0.07**	**-0.68*** **	**0.07**	**-0.59*** **	**0.08**	**-0.61*** **	**0.07**	**-0.72*** **	**0.08**
NYCEEC ACS	**-1.00*** **	**0.08**	**-0.91*** **	**0.06**	**-1.00*** **	**0.08**	**-1.01*** **	**0.08**	**-0.94*** **	**0.06**
Total Enrollment			-0.24***	0.02					-0.24***	0.02
Proportion Asian			0.16*	0.08					0.16*	0.08
Proportion Black			-0.18*	0.07					-0.18*	0.07
Proportion Hispanic			-0.03	0.09					-0.03	0.09
Proportion Spanish			0.10	0.09					0.11	0.09
Census Median Inc			0.38***	0.05					0.38***	0.05
Early Drop/Late Pickup					0.02	0.06			0.10+	0.06
ECERS-R Average							0.06*	0.02	0.02	0.02

Site type reference group is **Public School**. *** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

Other program types includes district-run pre-K centers and community-based organizations with contracts through the DOE (NYCEEC DOE) or ACS (NYCEEC ACS).

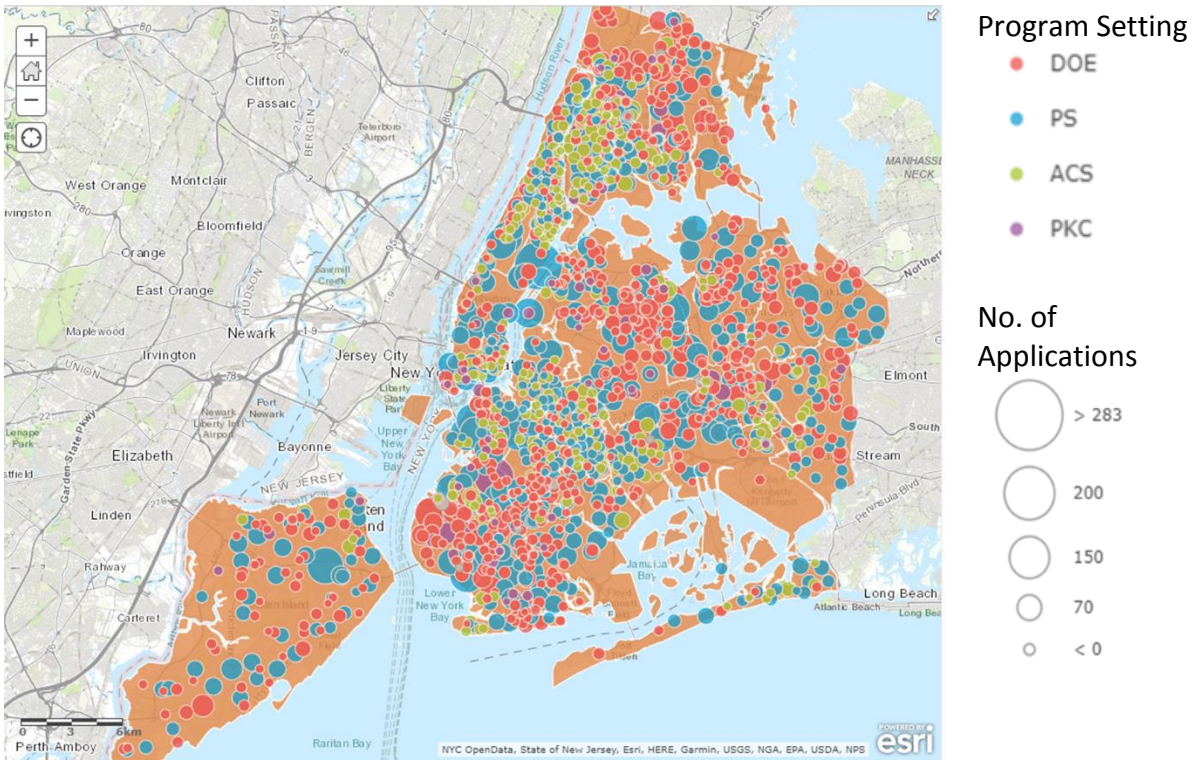

Figure 1. Pre-K for All applications, spring 2016. Circles represent pre-K sites sized by number of applications received in Round 1 and color coded by the program setting: public school (PS), district-run pre-K centers (PKC), and community-based organizations with contracts through the DOE (DOE) or ACS (ACS).