

# School Readiness Among Low-Income Children in Maryland: Associations with Prior Care Arrangements and Child Care Subsidy Use

Rolf Grafwallner<sup>1</sup>, Kate Welti<sup>2</sup>, Julia Wessel<sup>2</sup>, Nicole D. Forry<sup>2</sup>, John V. Spears<sup>3</sup>, and Martha Zaslow<sup>2</sup>

<sup>1</sup>Maryland State Department of Education <sup>2</sup>Child Trends <sup>3</sup>RESI of Towson University

The project described was supported by Grant Number 90YE0107/01 from the Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

The contents of this poster are solely the responsibility of the authors and do not necessarily represent the official views of the Office of Planning, Research and Evaluation, the Administration for Children and Families, or the U.S. Department of Health and Human Services.

## Background and Study Goal

A recent shift of the child care subsidy program to the Maryland State Department of Education in 2006 has allowed for increased collaboration among the child care licensing, subsidy, and credentialing offices and the State education system.

The goal of this project is to examine associations between child care subsidy receipt and kindergarten's school readiness. The three main components of this project include: (1) enhancing and analyzing administrative data, (2) contextualizing findings from administrative data through findings from focus groups, and (3) building a research consortium with the goal of refining early childhood education policy.

## Data Sources and Methodology

### Data Sources:

- Child care subsidy**- a broad range of data including family and child demographics, payment information, voucher detail, etc.
- Licensing/license monitoring**- provider type, licensing detail including capacity, compliance and enrollment data from inspections.
- Credentialing**- tiered reimbursement level, credentials, and accreditation of providers
- Kindergarten school readiness portfolio data** (see below for details)
- Other data:** Resource & Referral, Head Start, and Pre-K

### Maryland Model for School Readiness:

Children's school readiness skills are measured through the Maryland Model for School Readiness (MMSR), a portfolio-based assessment system. The MMSR is scored by kindergarten teachers based on work sample portfolios developed during the first quarter of the school year. Seven domains of developmental skills are assessed: **personal & social development, language & literacy, mathematical thinking, scientific thinking, social studies, the arts, and physical development.**

Children are scored into one of three categories on each of these domains:

- Fully ready (Proficient):** The student consistently demonstrates skills, behaviors, and abilities which are needed to meet kindergarten expectations.
- Approaching readiness (In Process):** The student inconsistently demonstrates skills, behaviors, and abilities which are needed to meet kindergarten expectations successfully, and requires targeted instructional support in specific domains or specific indicators.
- Developing readiness (Needs Development):** The student does not demonstrate skills, behaviors, and abilities which are needed to meet kindergarten expectations successfully, and requires considerable instructional support in several domains or many indicators.

## Methodology

### This poster draws on analyses of merged data that includes:

- Maryland Model for School Readiness (MMSR) fall kindergarten assessments for the 2008-2009 and 2009-2010 cohort of new kindergarten entrants in the state of Maryland (N=107,508)<sup>1</sup>
- State child care subsidy administrative data for children in 2007 and 2008 (the year prior to entering kindergarten)
- State child care provider licensing data

**Lower- vs. Higher-Income Children:** "Lower-income children" are those who are receiving free or reduced priced school meals (families at or below 185% of the federal poverty level). Children neither receiving free/reduced price meals in kindergarten, nor a child care subsidy the year prior to kindergarten are considered "higher-income".

**Early Care Arrangements:** As part of the kindergarten enrollment forms, parents were asked "Has your child been cared for **exclusively** at home or by a relative since last September?" If the answer was "yes" the child was considered to have been in *Parental/Relative Care*. If the answer was "no" parents were asked "What kind of early care did your child spend **most** of his/her time since last September (Check only one box)". Choices included: Head Start, Prekindergarten, Child Care Center, Family Child Care, and Non-Public Nursery School as well as Kindergarten (if the child was repeating the grade).

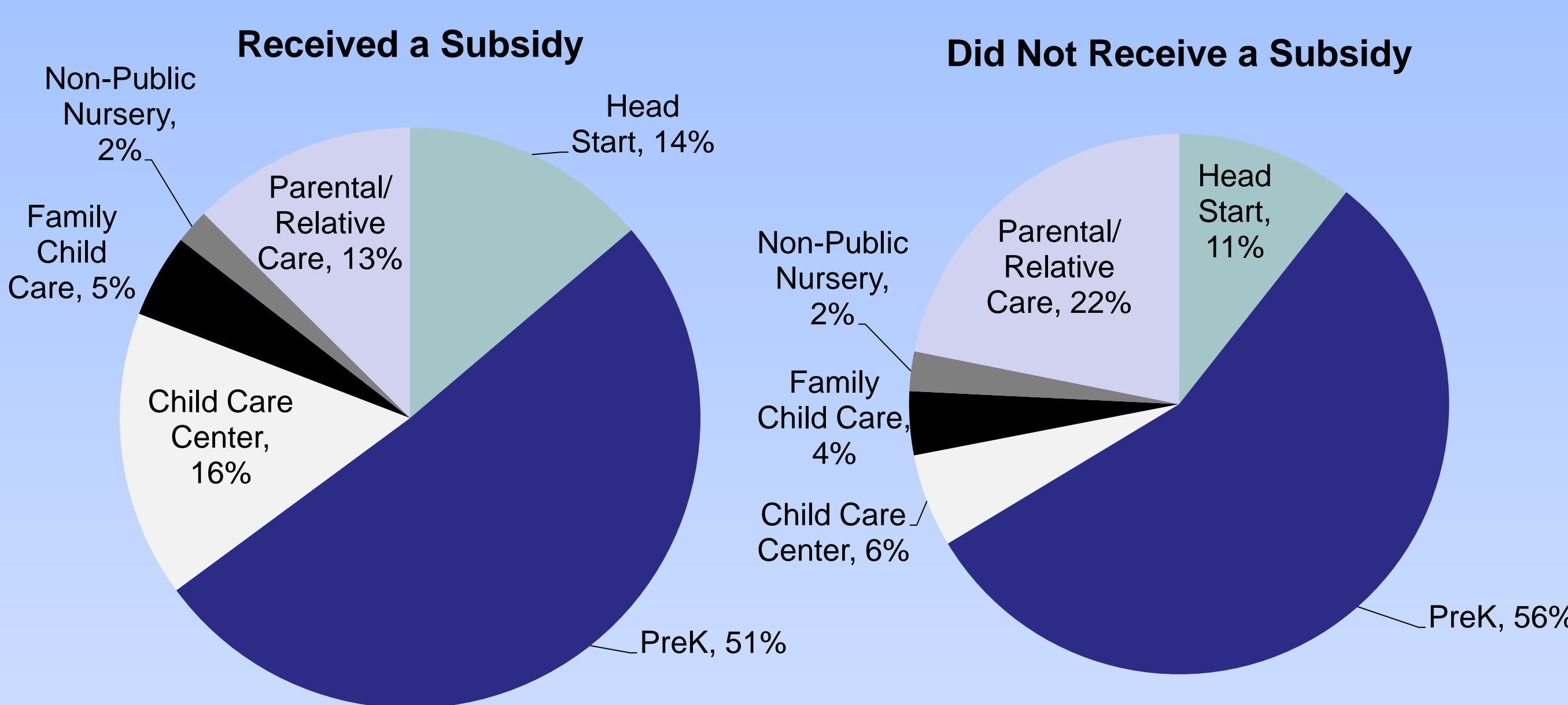
**Child Care Subsidies:** Children were coded as a subsidy recipient if they received a subsidy for at least one week in the 12 months prior to school entry. Detailed information on subsidy dosage was taken from longitudinal child care subsidy data files that covered the 52 weeks in the year prior to the child entering kindergarten. A "**subsidy spell**" was defined as a period of time during which the child consistently had a voucher for subsidized care. A spell ended if the child experienced one or more weeks without a subsidy.

## School Readiness by Type of Care

Compared to their higher-income peers, kindergarteners receiving free/reduced price meals were less likely to be rated as "fully ready" on all domains of school readiness. The highest disparities were in the academic domains (i.e., language and literacy, mathematical thinking, scientific thinking, and social studies).

Among lower-income children, 6,317 (15%) received a child care subsidy in the year prior to kindergarten. As compared to lower-income children without a subsidy, children with a subsidy were more likely to be in a Head Start program (14% vs. 11%;  $p < 0.001$ ), child care center (15% vs. 6%;  $p < 0.001$ ) or family child care (5% vs. 4%;  $p < 0.05$ ) and less likely to be in public Pre-K (51% vs. 56%;  $p < 0.001$ ) or parental/relative care (13% vs. 22%;  $p < 0.001$ ).

### Predominant Care Type of Lower Income Children, by Subsidy Status

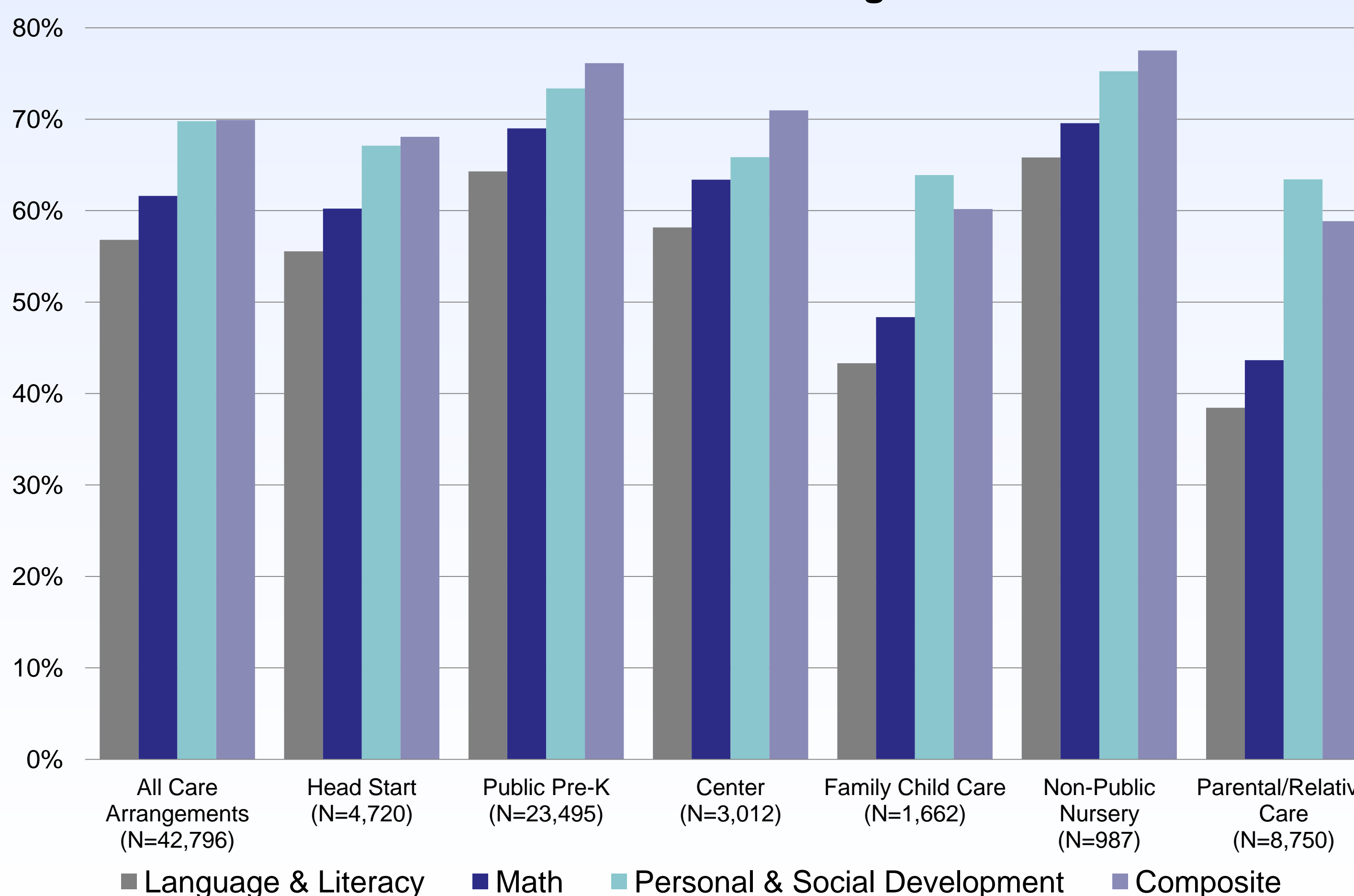


Note. Predominant care type is reported by the parent.

Among lower-income children, those in Parental/Relative in the year prior to kindergarten were statistically less likely to be fully ready than children in all other ECE arrangements across most domains of school readiness.

Across all domains, all other types of care are statistically different from Parental/Relative ( $p < 0.001$ ) except Family Child Care in the Personal & Social and Physical Health & Development domains and Center in the Personal & Social domain. The largest differences were found when comparing the proportion of children "fully ready" on academic domains in non-public nursery school and public pre-K to those in parental or relative care.

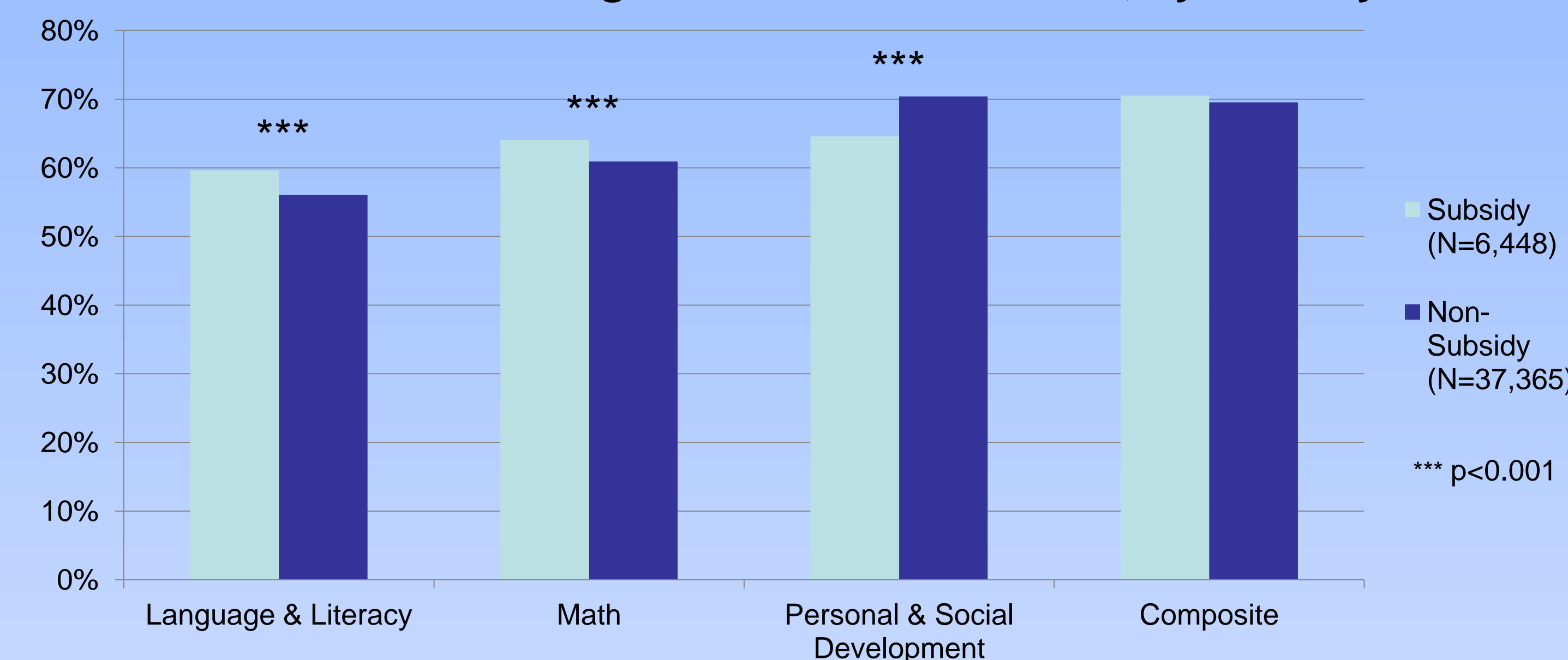
### Percent of "Fully Ready" Lower Income Children, by Type of Care In the Year Prior to Kindergarten



## School Readiness by Subsidy Status & Dosage

Lower-income children who received a subsidy the year prior to kindergarten were more likely to be fully ready on academic domains (e.g., language & literacy and math) as compared to their peers in non-subsidized care. Children receiving a child care subsidy were also more likely to be fully ready on the academic subjects of science and social studies, though these subjects are not shown below. Children receiving a child care subsidy in the year prior to kindergarten were less likely to be "fully ready" than lower-income children not receiving a subsidy on the personal and social development domain of the MMSR.

### School Readiness Among Lower-Income Children, by Subsidy Status



On average, regardless of the number of spells, children's longest subsidy spell in the year prior to kindergarten was 7 months. About one-third of children receiving a subsidy had a single spell of subsidized care that covered the entire 12 months prior to kindergarten.

Number of subsidy spells	% of children who received a subsidy in the year prior to kindergarten	Average length of longest spell
1	68%	8.2 months
2	24%	5.8 months
3	8%	4.7 months

Over two-thirds of children receiving a subsidy in the year prior to kindergarten had a single subsidy spell during that year, which lasted an average of 8 months. Almost one-quarter had two subsidy spells in that year, with the longest lasting an average of 6 months, and the remaining 8% of children had three or more spells during the year prior to kindergarten, with the longest lasting, on average, 5 months.

Controlling for the predominant type of subsidized care in the year prior to kindergarten, whether they were enrolled in Maryland's public pre-K program, and select family and child characteristics; the number of months a child spent in subsidized care in the year prior to kindergarten was positively and linearly associated with a higher likelihood of being fully ready on the following domains: Language & Literacy, Math, and Composite. Family and child characteristics included household size, TANF receipt, single parent status, race/ethnicity, gender, English language learner status, and region of residence within the state of Maryland. The number of months spent in subsidized care was not a statistically significant predictor of children's scores on the Personal & Social Development domain.

## Possible Directions for Future Research

Though findings from this study demonstrate an association between the use of child care subsidies and children's school readiness in academic domains upon kindergarten entry, the mechanisms through which child care subsidies may influence children's school readiness is not well understood. Future research on the association between child care subsidy use and children's school readiness could:

- focus on the role of child care quality in moderating the association between child care subsidies and academic preparation for kindergarten
- compare the school readiness outcomes of children in full-time subsidized community-based child care, Head Start, and pre-K

<sup>1</sup>Repeat kindergartners and those diagnosed with a developmental disability (N=10,877) were eliminated from the analyses.