School Readiness Assessment
The ASR Model™

2013

SCHOOL READINESS in Alameda County

Comprehensive Report

FUNDED BY:

FIRST 5 ALAMEDA COUNTY

INTERAGENCY CHILDREN'S POLICY COUNCIL
ALAMEDA COUNTY

Thomas J. Long FOUNDATION

PRODUCED BY:

ASR

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Participating Alameda County Districts, Schools, and Teachers

Alameda County Office of Education	**Teacher**
Cox Academy	Diane Carter
Alameda Unified	**Teacher**
Paden Elementary	Nishone Weymouth
Castro Valley Unified	**Teachers**
Chabot Elementary	Bridgette Emanuele
Independent Elementary	Teresa Hanson
Jensen Ranch Elementary	Tamara Reneau
Dublin Unified	**Teacher**
John Green Elementary	Kim Voyce
Emery Unified	**Teacher**
Anna Yates Elementary	Megan McLaughlin
Fremont Unified	**Teachers**
Ardenwood Elementary	Jamie Shimomura
Brookvale Elementary	Beate Divizich
Harvey Green Elementary	Alicia Norling
James Leitch Elementary	Mandi Boni
	Shirley Gunawan
John Blacow Elementary	Vicky Rodriguez
John G. Mattos Elementary	Melissa Means
	Shelby Aldinger
Mission San Jose Elementary	Kelly Berbereia
Mission Valley Elementary	Madelyn Cudney
Niles Elementary	Renee Gould
	Irma Bonilla
	Maria Lin
Oliveira Elementary	Tiffany Nakken
	Liloo Kaul
Patterson Elementary	Evelina Chao
	Sherry Miller-Lo

Hayward Unified	**Teachers**
Bowman Elementary	Margarita Hernandez
East Avenue Elementary	Tesha Holt
Eldridge Elementary	Julia Robia
Faith Ringgold School Of Arts And Science	Deborah Zacharoff
Glassbrook Elementary	Alice Wagner
Harder Elementary	Samantha Richardson
	Alice Groves
	Christine Oliveras
	Francisco Ambriz
Longwood Elementary	Evangela Dixon
Palma Ceia Elementary	Jeanne Vidal-Smith
Park Elementary	Linda Lanthier Taylor
Ruus Elementary	Edith Gessler-Carlson
Stonebrae Elementary	Christie Montenegro
Strobridge Elementary	Cynthia Shay
Tyrrell Elementary	Irene Sanchez
	Torri Bryant
Livermore Valley Joint Unified	**Teachers**
Jackson Avenue Elementary	Donna Andersen
	Brenda Lang
New Haven Unified	**Teacher**
Delaine Eastin Elementary	Sandy Burback
Newark Unified	**Teacher**
John F. Kennedy Elementary	Liz Chavez
Oakland Unified	**Teachers**
Allendale Elementary	Emma Coufal
Brookfield Elementary	Emily Ann Flores
	Luz Zurita
Carl B. Munck Elementary	Faustena Byrd-Linarez
Community United Elementary	Dana Parsons
	Dolores Mora-Mejia
East Oakland Pride Elementary	Celia Goetz
Esperanza Elementary	Dolores Beleche
Franklin Elementary	Tania Llambelis

Futures Elementary	Melisa Aielo-Been
	Monica Valerian
Garfield Elementary	Linda Pitts
	Pamela Mullen
Greenleaf Elementary	Katherine Gibson
Howard Elementary	Colleen Shepherd
Laurel Elementary	Grace Tso
Manzanita Community	Marian Marx
Markham Elementary	Brenda Theodore
New Highland Academy	Emily Blossom
Sankofa Academy	Kei Swensen
Sequoia Elementary	Elena Njemanze
Pleasanton Unified	**Teacher**
Phoebe Apperson Hearst Elementary	Kelly Maher
San Leandro Unified	**Teachers**
Garfield Elementary	Neema McCockran
	Jacob Clark
Jefferson Elementary	Irene La
	Elaine Pepares
Monroe Elementary	Diane Marasigan
	Stacy Smitter
Roosevelt Elementary	Nancy Endicott
	Diedre Reed
San Lorenzo Unified	**Teachers**
Bay Elementary	Kelly Archibald
Colonial Acres Elementary	Carmella Bongiorno
	Alberto Nodal
Corvallis Elementary	Margie Peneranda
	Kirsten Hynds
Del Rey Elementary	Flower Sawyer Brown
Grant Elementary	Tracy Cooper
	Angela Cattin
Hesperian Elementary	Yvonne Schaff
	Claudia Correa

Hillside Elementary	Cheryl Mosier
	Ann Villegas
Lorenzo Manor Elementary	Kathy Rolefson
	Fluer McJilton
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Background

In 2013, First 5 Alameda County, with support from the Interagency Children's Policy Council and the Thomas J. Long Foundation, commissioned an assessment of the school readiness levels of new kindergarten students. Although it was the fifth readiness assessment conducted by ASR and First 5 in Alameda County since 2008, it was the first one to seek the participation of most of the school districts in the county.

The study was based on data collected from three forms completed by teachers and parents of entering kindergarten students. Teachers indicated each of their students' proficiency levels on 24 readiness skills. Parents completed two surveys; one regarding their child's demographics and family background and one regarding the child's early care and education. Please note that the information presented in this report describes the students and families assessed; techniques were used to make the sample resemble the county in terms of race/ethnicity, but because of sample limitations, the findings should not assumed to apply to all schools in the county.

Findings

Research Question	Conclusion and Data Highlights
1. How ready for school were children assessed in Alameda County?	• Children in Alameda County were **"*In Progress*"** on the development of their readiness skills (overall readiness score: 3.24 on a four-point scale of readiness skill proficiency). • For each individual readiness skill, children were scored on a scale from *Not Yet* (1) to *Proficient* (4). Scores were highest in the *Self-Care & Motor Skills* area (3.42) and lowest for *Self-Regulation* (3.19).
2. What percentage of children were strong on all domains of readiness?	• **Forty-five percent** of children in Alameda County were at or near proficiency on all four domains of readiness (*Self-Care & Motor Skills, Self-Regulation, Social Expression,* and *Kindergarten Academics*). These children had an average overall score of 3.75 out of 4.
3. What factors are associated with higher levels of school readiness?	• Findings revealed that **child health/well-being** (not being hungry, tired, or ill) and **age** (being older) were the strongest predictors of readiness. • In addition, children **without special needs** and who were **not English Learners** were more ready for school. • **Girls** were more ready for school than boys and **Asian** students had higher readiness levels than students from other races/ethnicities. • When children had attended **preschool,** they also tended to have better readiness outcomes. • Children whose parents reported **higher maternal education** levels had higher readiness levels than children whose mothers were less educated. • Families who received **information about school readiness** had children who scored higher than families who did not.

Introduction

What is School Readiness?

School readiness is broadly defined as the set of physical, social/emotional, and academic skills students need to make a successful transition to kindergarten. To a great extent these skills are cultivated through the experiences and environments children have been exposed to over their first four to five years of life. This understanding of readiness highlights the importance of taking into account not only children's readiness as they begin kindergarten, but the readiness of families, communities and schools to support those children. As stated in a widely cited study of readiness:

> *Children are not innately "ready" or "not ready" for school. Their skills and development are strongly influenced by their families and through their interactions with other people and environments before coming to school (Maxwell & Clifford, 2004).*

NATIONAL EDUCATION GOALS PANEL
School Readiness Dimensions:

- Physical Well-Being & Motor Development
- Social & Emotional Development
- Approaches Toward Learning
- Communication & Language Usage
- Cognition & General Knowledge

APPLIED SURVEY RESEARCH
Building Blocks of Readiness:

- Self-Care & Motor Skills
- Self-Regulation
- Social Expression
- Kindergarten Academics

To observe the relationship between these different interactions and experiences, and children's development, it is necessary to identify the different domains or dimensions of readiness to be measured. In one of the early large-scale efforts to establish a common framework for addressing school readiness issues, the *National Education Goals Panel* (*NEGP*) organized school readiness skills into five domains: *Physical Well-Being & Motor Development, Social & Emotional Development, Approaches Toward Learning, Communication & Language Usage,* and *Cognition and General Knowledge.* More recent research conducted by ASR found that readiness skills measured by the *Kindergarten Observation Form* (*KOF*) reliably sort into four primary domains, termed the *Building Blocks of Readiness.* These *Building Blocks* overlap with, but are distinct from the *NEGP* dimensions: *Self-Care & Motor Skills, Self-Regulation, Social Expression,* and *Kindergarten Academics*.

Despite differences in the categorization and measurement of school readiness, there is great interest across the country in measuring it due to research suggesting its ability to predict future academic and social outcomes. Stakeholders in both the early education and K-12 communities are eager to gather information about children's strengths and needs—as well as an understanding of the experiences and environments that shaped those strengths and needs—as they enter kindergarten and begin their school careers.

Why Does School Readiness Matter?

This interest in assessing school readiness is based on research that has identified the relation of readiness to a range of key outcomes. Experts in the field have noted that cognitive and behavioral readiness skills generally predict children's ability to smoothly transition into and through elementary school (Pianta, Cox, & Snow, 2007). More specifically, children who demonstrate proficiency across an

array of readiness dimensions are more likely to succeed academically in first grade than are those who are competent in only one or two dimensions (Hair, Halle, Terry-Humen, & Calkins, 2003). Many other studies have also found linkages between early school readiness and later success in school. For example:

- Children's patterns of readiness just prior to kindergarten, particularly possessing social competence or advanced memory skills, predict fifth grade achievement (Sabol & Pianta, 2012).

- Fine motor, attention, and academic readiness skills in kindergarten predict later math, reading, and science scores better than academic readiness skills alone (Grissmer, Grimm, Aiyer, Murrah, & Steele, 2010).

- Kindergarten academic skills (e.g., knowing numbers and letters) and the ability to sustain attention significantly predict math and reading achievement later in elementary school and in early adolescence (Duncan et al., 2007).

- Mastery of basic numerical concepts prepares children to learn more complex math problems and problem-solving approaches (e.g., Baroody, 2003).

- Number competency skills at kindergarten entry predict both the rate at which children's math skills improve from first to third grade, as well as math performance in third grade (Jordan, Kaplan, Ramineni, & Locuniak, 2009).

- Children who are persistent, attentive, and able to regulate their emotions at kindergarten entry have better reading and math performance through fifth grade (Li-Grining, Votruba-Drzal, Maldonado- Carreno, & Haas, 2010).

School readiness predicts long-term education and employment outcomes.

Readiness is also considered critical to measure because of its potential long-term impacts on educational attainment, health and well-being, and financial stability. Children who demonstrate poor achievement early in their school careers are more likely to experience grade retention, which puts them at greater risk for school dropout, even if the retention occurs during elementary school (Alexander, Entwisle, & Kabani, 2001; Roderick, 1994). Additionally, the cognitive and self-regulation skills children develop prior to adolescence predict their labor market success and earnings as adults (Farkas, 2003; Caneiro & Heckman, 2003). Moreover, research has found early development and educational achievement to be associated with later health outcomes. For example, education has been linked to chronic disease rates, disability, engagement in risk behaviors, and later socioeconomic factors that in turn influence health status (Fiscella & Kitzman, 2009). Although there is somewhat less agreement on exactly which readiness skills matter most, and how broad and long-lasting their potential impact, there is a clear indication that *school readiness matters*, and that it is closely tied to the child's early development experiences.

Assessing School Readiness in Alameda County

Readiness assessments have been conducted in Alameda County since Fall 2008, when F5AC contracted with ASR to conduct a pilot readiness assessment in three of the county's school districts. These districts were of particular interest to F5AC because they included a relatively high proportion of schools with low Academic Performance Index (API) scores (i.e., schools with a statewide rank of 1, 2, or 3), and a number of F5AC programs and services had been targeted to families in these regions. Indeed, data gathered from that assessment showed that many of the students in the study came from low-income, at-risk family backgrounds. Some children had extensive pre-K educational experiences, but many did not. And, as a whole, the students were an exceedingly diverse group in terms of their ethnic and linguistic backgrounds.

Assessments were again conducted in 2009, 2010, 2011, and 2013, with additional schools and districts taking part in each subsequent study. As the figure below shows, the distribution of participants across districts has changed over the five years that school readiness assessments have been conducted in Alameda County. Participating districts in the 2013 assessment included Alameda County Office of Education, Alameda Unified, Dublin Unified, Emery Unified, Castro Valley Unified, Fremont Unified, Hayward Unified, Livermore Valley Joint Unified, New Haven Unified, Newark Unified, Oakland Unified, Pleasanton Unified, San Lorenzo Unified, and San Leandro Unified School Districts.

The 2013 sample was significantly larger than assessment samples from previous years in terms of both geographic range and the total number of participating districts and schools. Tables with participating districts and school types appear below. These tables are followed by a map indicating the locations of participating schools[1].

[1] A map of all public schools in Alameda County can be found in Appendix 6.

Figure 1. **An Overview of Participation in 2008-2013, by District**

District Information	Readiness Study Participants					Percent of Students in County 2013
	2008 (n=577)	2009 (n=521)	2010 (n=1,394)	2011 (n=1,597)	2013 (n= 1,696)	
Percentage from each district						
San Lorenzo	81%	56%	19%	21%	17%	5%
Livermore	16%	18%	14%	13%	2%	6%
Oakland	3%	4%	14%	17%	21%	24%
Hayward	--	17%	21%	12%	20%	10%
Emery	--	5%	2%	--	1%	<1%
Berkeley	--	--	18%	--	--	4%
Pleasanton	--	--	7%	6%	2%	5%
Castro Valley	--	--	5%	4%	4%	3%
Fremont	--	--	--	10%	20%	15%
New Haven	--	--	--	7%	1%	5%
San Leandro	--	--	--	11%	7%	4%
Dublin	--	--	--	--	1%	4%
Newark	--	--	--	--	1%	3%
Alameda	--	--	--	--	1%	5%
Alameda Office of Education	--	--	--	--	1%	3%

Source: Kindergarten Observation Form (2008, 2009, 2010, 2011, 2013), California Department of Education (2013)

Note: Small districts not participating in readiness studies are not listed. Percentages in far-right column reflect proportion of kindergartners in each district. Percentages may not sum to 100 due to rounding.

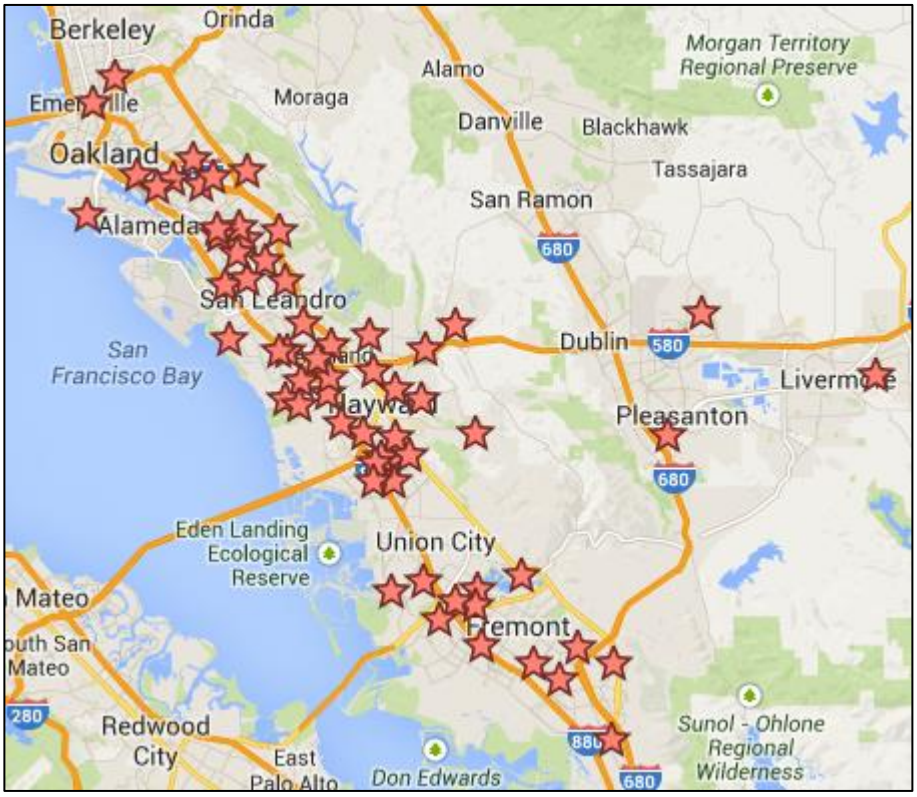
Figure 2. **An Overview of Participation in 2008-2013, by School API**

School Information	Readiness Study Participants					Percent of Students in County 2013
	2008 (n=577)	2009 (n=521)	2010 (n=1,394)	2011 (n=1,597)	2013 (n=1,696)	
Percentage in schools from each API level						
Low API school	48%	57%	39%	47%	49%	28%
Middle API school	52%	43%	34%	35%	23%	28%
High API school	0%	0%	27%	18%	28%	44%

Source: Kindergarten Observation Form (2008, 2009, 2010, 2011, 2013), California Department of Education (2013)

Note: Percentages in far-right column reflect proportion of all students in elementary schools of each API level. Low API is defined as a state rank of 1, 2, or 3; Middle API is state rank of 4, 5, 6, or 7. High API is 8 or above. 2012 state API ranks were used for Fall 2013 as that was the most recent data available at the time of this analysis. Percentages may not sum to 100 due to rounding.

Figure 3. **2013 School Readiness Assessment Participating Schools**



The sample did not reach a sufficient size and scope to be fully generalizable to the county, but ASR adjusted readiness results to make the sample resemble the county-wide kindergarten population in terms of race/ethnicity[2]. In some of the analyses, ASR also accounted for other ways in which the students in the sample may have differed from students in the full county population, including English Learner status, family income, and the API levels of their schools (see Methodology for details).

The key research questions examined in this year's study are the following:

1. How ready for school are the sampled kindergarten students?
2. How many of these students are proficient or near proficient across domains of readiness?
3. What family factors and child characteristics are associated with higher levels of school readiness?

This report aims to answers these questions – as well as to provide information on the characteristics of the children and families that made up the county-wide sample.

[2] Statistical weights based on the Alameda County kindergarten population were applied in analyses of readiness.

Methodology

This section first describes the instruments and procedures used for data collection in the Alameda County 2013 readiness assessment. It also includes information on how the data presented in this report were prepared, analyzed, and interpreted.

Data Collection Instruments and Administration

Three instruments were used to collect data for this assessment. Kindergarten teachers completed the *Kindergarten Observation Form,* while parents provided information about their child and family circumstances on the *Parent Information Form* and *Preschool Experience Form*. The figure that follows provides a summary of each of the instruments, their content, and who completed each one.

Figure 4. **Overview of Data Collection Instruments**

Instrument	What Key Data Are Assessed?	Who Completes It?
Kindergarten Observation Form (KOF)	24 school readiness skills of children in selected classrooms	Participating kindergarten teachers
Parent Information Form (PIF)	Kindergarten transition activities; activities and routines in the home; parental supports, attitudes, and stressors; demographic and SES variables	Consenting parents of children in the assessment
Preschool Experience Form (PEF)	Child care and education experiences in the year prior to kindergarten	Consenting parents of children in the assessment

Kindergarten Observation Form (KOF)

Kindergarten teachers assessed their students using a valid, reliable instrument: the Kindergarten Observation Form.

The *Kindergarten Observation Form* was originally developed in 2001 using guidelines from the *National Education Goals Panel* (*NEGP*) framework of readiness. The *KOF* uses teacher observation as the method of assessment across 24 readiness skills (see Appendix 1). This is the most appropriate, valid, and reliable method of assessment for the following reasons:

- Because student behavior can change from day to day, teachers are in a better position than outside observers to assess their students, as teachers can draw on the knowledge gained through four weeks of daily interactions.
- Teacher observation is less obtrusive and less intimidating for students than assessment by outside observers.
- Teachers are entrusted by the school system to be children's "assessors" in other respects, such as grading, and, therefore, it is presumed that they are aware of the need for assessments to be carried out in a fair manner.

Although teacher observation is most valid and reliable, there is some risk of natural variability between teacher observers. To minimize variability, the assessment tool includes measurable indicators (items), clear assessment instructions, a clearly defined response scale, a comprehensive scoring guide describing appropriate proficiency levels for each of the 24 readiness skills, and a thorough teacher training (see "Implementation" section for details on the trainings conducted).

Teachers are asked to observe and score each child according to his or her level of proficiency in each skill, using the following response options: *Not Yet* (1), *Beginning* (2), *In Progress* (3), and *Proficient* (4). An option of *Don't Know / Not Observed* is provided as well. If teachers feel they cannot provide an accurate assessment on items that require oral communication due to language barriers, they are instructed not to assess students on these items and instead check *Don't Know / Not Observed* or leave those items blank.

Teachers are able to complete most of the items on the *KOF* through simple, passive observation of the children in their classrooms. A few items, however, do require one-on-one, teacher-child interaction.

The *KOF* also includes fields to capture students' basic demographic information to understand who took part in the study and to examine what characteristics are associated with children's skill development (e.g., experience in curriculum-based early education settings, child age, child gender, child's presence of special needs).

Parent Information Form (PIF)

To better understand how family factors are related to children's levels of readiness, a *Parent Information Form* (see Appendix 2) was first developed in 2004 for completion by parents. The *PIF* collects a wide variety of information, including: types of child care arrangements for children during the year before kindergarten entry; ways in which families and children prepared for the transition to kindergarten; parent beliefs about their role in education; engagement in family activities and daily routines; use of parenting supports and family resources; parenting social support, attitudes, and stressors; health and health care measures; and several demographic and socioeconomic measures. Care was taken to ensure that the questions could be read at a sixth grade reading level. Versions of the form are offered in English, Spanish, Tagalog, Chinese, and Vietnamese. Parents are given a children's book (in their preferred language) as an incentive for their completion of the *PIF*. To enhance their privacy, parents are provided with an envelope in which they seal their completed survey prior to returning them to their child's teacher.

Preschool Experience Form (PEF)

The one-page *Preschool Experience Form* (see Appendix 3) was designed to capture information about the child's early care and education experiences in the event that the parent did not complete the *PIF* or did not answer the child care questions on the *PIF*.

Implementation

Obtaining Participation Agreement

ASR contacted district and school administrators and previous teacher participants in all the school districts. Of the 14 participating districts, nine (Fremont, New Haven, San Leandro, San Lorenzo,

Livermore, Oakland, Pleasanton, Hayward, and Castro Valley) had been involved in the Fall 2011 readiness assessment and agreed to continue their participation. The five new districts (Dublin, Emery, Newark, Alameda Unified, and Alameda County Office of Education) were targeted in order to build a county-wide sample beyond the service area of F5AC.

School and district administrators were provided with information about the assessment, including its purpose, what participation would involve on the part of the kindergarten teachers, and the timeline for completion of the study tasks.

Teacher Trainings

ASR prepared the F5AC School Readiness Program Manager to conduct the teacher trainings, which were required for all teachers who volunteered to participate in the study. Initially, the Program Manager shadowed ASR staff in conducting several teacher trainings, followed by jointly-led trainings. Eventually, the responsibility for the remaining 2013 teacher trainings was transferred over to F5AC.

Each training lasted approximately 75 minutes. After hearing a general overview of the project and study purpose, kindergarten teachers were given all project materials, including: (1) written instructions on how to complete the assessment (see Appendix 4 for *KOF* scoring guide); (2) consent letters for parents that explained the study purpose and asked parents to indicate whether or not their child would participate in the study; (3) *PIFs*; (4) *PEFs*; (5) *KOFs* and the accompanying *Scoring Guide*; (6) a sheet to track teachers' progress during the assessment; (7) return envelopes for teachers to post in their classrooms to facilitate the collection of parental consent forms; and (8) an envelope for the return of study materials to F5AC. All of these materials were reviewed with teachers so that they were familiar with both the teacher-completed instruments and the parent-completed instruments. Forms for parents were printed in five languages.

Obtaining Parent Consent

At the beginning of the school year, teachers distributed and then monitored collection of the parent consent letters, *PIFs,* and *PEFs* (see Appendix 5 for consent forms). Consent from a parent was required for a student to be able to participate in the study; if a parent did not consent, teachers did not assess the child. If parents did not return a consent form indicating consent or refusal, teachers were asked to send out reminder forms (provided in their training packets); if parents still did not return a consent form, teachers were instructed to assume that they declined to participate and their children were not assessed.

As an incentive to encourage participation by families, F5AC gave every child in each participating classroom a children's book. Teachers completed book order forms to specify the number of books needed in each language spoken by the children in their classrooms.

Conducting Student Assessments

Teachers were asked to conduct their student assessments approximately three to five weeks after the start of the school year, drawing upon their knowledge and observations of children during the first few weeks of school. The average length of time that elapsed between the start of school and teachers' observations was 26 days (a little under four weeks) after their classes had started. All completed forms were compiled by the teacher and returned to F5AC, who forwarded materials to ASR. After teacher observers had assessed all of their students and had returned study materials to F5AC, F5AC sent them a thank you letter and a stipend in appreciation of their participation.

Who Completed the Study?

Schools and Classrooms

Teachers from 64 schools representing 14 different school districts across Alameda County participated in the assessment. Sample sizes varied by district and school (see figure below). The number of participating schools in a district ranged from one to 17, with the greatest number of participating schools coming from Fremont, Hayward, and Oakland Unified School Districts. Similarly, in some schools, just one kindergarten teacher participated in the readiness study; in other schools, two or more teachers took part. Consequently, some districts were more strongly represented in the study than others. For example, over 30 percent of all the entering kindergarten students in San Lorenzo Unified participated in the study, but there were several districts with no representation (e.g., Berkeley, Piedmont, and Albany). The districts with the lowest participation rates tended to have higher proportions of high-API schools, leaving such schools under-represented in the final sample. Only in San Lorenzo Unified were there enough participating schools and students for the findings to be generalizable to the district. In all, 1,696 students from 90 classrooms were included in the study.

Figure 5. **Sample Size by District**

District	Number of schools in sample	Number of classrooms in sample	Number of students in sample	Percent of students in sample	Percent of K students in county*
Alameda County Office of Education	1	1	20	**1%**	<1%
Alameda Unified	1	1	17	**1%**	5%
Albany Unified	0	0	0	**0%**	2%
Berkeley Unified	0	0	0	**0%**	4%
Castro Valley Unified	3	3	68	**4%**	3%
Dublin Unified	1	1	21	**1%**	4%
Emery Unified	1	1	19	**1%**	<1%
Fremont Unified	11	17	340	**20%**	15%
Hayward Unified	13	17	331	**20%**	11%
Livermore Valley Unified	1	2	40	**2%**	6%
New Haven Unified	1	1	24	**1%**	6%
Newark Unified	1	1	22	**1%**	3%
Oakland Unified	17	21	363	**21%**	24%
Piedmont Unified	0	0	0	**0%**	1%
Pleasanton Unified	1	1	29	**2%**	6%
San Leandro Unified	4	8	119	**7%**	4%
San Lorenzo Unified	8	15	283	**17%**	5%
Sunol Glen Unified	0	0	0	**0%**	<1%
Total	64	90	1,696	**100%**	100%

Source: Kindergarten Observation Form (2013) and California Department of Education (2013)

Overall, the parental consent rate was 81 percent. Ninety-four percent of parents who agreed to have their child take part also completed and returned a parent survey. Most parents who returned a *PIF* also returned a *PEF*; only 52 parents returned *only* a *PEF*.

Figure 6. **How Many Completed the Study?**

Data	Alameda County Sample (14 districts)
Number of children the classrooms of participating teachers	2,105
Number of KOFs returned	1,696
Parent consent rate	81%
Number of PIFs that were matched to a KOF	1,586
Parent PIF response rate (# PIFs received/ # consents)	94%
Parent PEFs that were matched to a KOF	1,524

Data Preparation

Calculating and Adding Weights

Sampling weights were applied to make the sample distribution more proportional to the true population of kindergarten students across the county. To calculate these weights, the demographic background of the sample was compared to the demographic background of kindergartners in the county as a whole. Differences in the racial/ethnic backgrounds of these two groups were calculated to produce frequency weights (see below for differences between the sample and the county). These weights were applied to the sample in the analysis whenever it was appropriate to generalize the outcome to the county[3].

Figure 7. **Race/Ethnicity of Fall 2013 Sample and Alameda County Kindergarten Population**

Race/Ethnicity	Fall 2013 Sample	Alameda County
Hispanic/Latino	42%	36%
Asian	20%	22%
Caucasian/White	11%	20%
African American/Black	10%	11%
Filipino	4%	4%
American Indian/Alaska Native	1%	<1%
Native Hawaiian/Pacific Islander	1%	1%
Two or More Races	10%	6%

Source: Kindergarten Observation Form (2013) and California Department of Education (2013)

[3] Weights were used to analyze readiness scores except in the case of multivariate regressions that utilized multilevel modeling techniques. Within the statistics and social science communities, there is uncertainty surrounding the appropriate methods for incorporating weights into multilevel regressions.

The application of weights made the sample proportional to the county in terms of race/ethnicity, and also made the sample somewhat more representative of the county on other indicators such as API distribution and percentage of English Learners.

Figure 8. **Weighted Sample Distribution of API and English Learners, Compared to County Distribution**

Kindergarten Students	Study Sample	*Weighted* Sample	Alameda County
Students in Low API Schools (Deciles 1-3)	49%	45%	28%
Students in Middle API Schools (Deciles 4-7)	23%	23%	28%
Students in High API Schools (Deciles 8-10)	28%	32%	44%
English Learners	43%	39%	31%

Source: Kindergarten Observation Form (2013) and California Department of Education (2013)

Matching of Assessment Data and F5AC Services Records

One of the key research questions in this assessment involved looking at the receipt of F5AC programs and services among the children in the sample. To conduct this analysis, ASR was provided with information from F5AC's databases that allowed for matching of students' data across datasets. Specifically, F5AC provided ASR with a dataset of service recipients that included children's name, date of birth, sex, and mother's first name, along with variables indicating which F5AC services they had received. Strong precautions were taken to ensure the security of the data transfer between F5AC and ASR.

Once ASR received these data, matches were sought by looking across the two datasets for matches on date of birth, sex, child initials, and mother's first name. Two hundred and six of the 1,696 assessed children (12%) were matched to the F5AC dataset indicating they had received one or more F5AC services. Once the matching process was completed, all child names were deleted from the F5AC data records.

An Overview of Statistical Analyses Conducted

After data were cleaned, numerous statistical analyses were conducted to answer the research questions, as follows:

- Percentages were calculated and chi-square tests were run to test whether differences in percentages reached statistical significance.

- Average scores were calculated for all continuous measures and scaled items. For example, an average score was generated for each of the readiness items, excluding blank responses or responses of *Don't Know / Not Observed*.

- Composite scores (averages across multiple items) were calculated for each of the four *Basic Building Blocks* dimensions. Reliability analyses were first conducted (using Cronbach's alphas) to ensure that reliability was high before composite scores were calculated. Cronbach's alphas for each *Basic Building Blocks* scales are listed below:

    - *Self-Care & Motor Skills*: Alpha=0.80

  - *Self-Regulation*: Alpha=0.96
  - *Social Expression*: Alpha=0.95
  - *Kindergarten Academics*: Alpha=0.82
  - *Overall:* Alpha=0.96

- Cluster analysis was used to explore the pattern of readiness skills the children in the sample possessed.

- Independent t-tests were used to test whether differences in average scores were statistically significant between two groups.

- One-way analyses of variance were conducted to test whether differences in scores were statistically significant across more than two groups; if significant overall differences were found, post hoc LSD tests were used to determine which groups were significantly different from each other.

- Regressions were conducted to explore the strength of relations between readiness items and various student and family characteristics. This regression method helps determine the independent contribution of each of the factors to readiness scores. **Multilevel modeling** was used when conducting regression analyses to account for the fact that children within a classroom tend to be more similar to one another than children in different classrooms.

Statistical Notation

Throughout this report, ASR uses the following standard abbreviations:

- *N* is used when noting the sample size for a chart or an analysis.
- *P*-values (e.g., $p < .01$) are used to note whether certain analyses are statistically significant. *P*-values that are less than .05 are statistically significant; *p*-values that are between .06 and .10 are marginally significant. All significance tests were two-tailed tests (more conservative) rather than one-tailed tests (less conservative).

A Note about How to Interpret the Data in This Report

Teachers and parents participated in the readiness study voluntarily. This means that the information presented in this report describes only the students and families assessed, who may differ in important ways from students and families who did not participate. As a result, **although the data may hint at the broader picture of readiness county-wide and techniques were used to make the sample resemble county-wide kindergarten population, the findings do not apply to all schools across the county.**

It is also important that readers not draw conclusions about trends over time across multiple years of Alameda County readiness measurements. The number of students and schools assessed each year has increased and the schools participating in each district have also varied from year to year. Given the variations in sample size and location, comparing scores over the years would not be appropriate.

Section Summary

In the months leading up to the start of the Fall 2013 school year, district and school administrators were approached by F5AC and invited to have schools in their districts take part in an assessment of the school readiness of their students entering kindergarten. Teachers from the participating schools attended a training session in the summer or very beginning of the school year. They then secured consent from the parents of their students and distributed surveys that parents completed and returned in sealed envelopes. Shortly after obtaining parental consent, but within the first four weeks of school on average (when children were fairly comfortable in their new surroundings, but their skills had not yet grown significantly since kindergarten entry), teachers assessed the proficiency of each of their students across 24 readiness skills and recorded their observations. Teachers returned all of their forms and received participation stipends from F5AC. Data were processed and analyzed, and F5AC program and service recipient data were merged with the assessment data collected to examine associations between receipt of F5AC services and readiness levels.

PART 1

School Readiness in Alameda County 2013

Contents of this Chapter:

This section presents information on the readiness levels of students entering kindergarten in Fall 2013, including the following:

- Readiness levels according to four *Basic Building Blocks* of readiness
- An item-by-item summary of all 24 readiness skills measured by the *Kindergarten Observation Form* (*KOF*)
- Parents' perceptions of their children's general readiness levels

Key Findings:

- Children's overall readiness in 2013 was just above the "*In Progress*" level; their average readiness score was 3.24 on a four-point scale where four is "*Proficient.*"
- According to the *Basic Building Blocks* groupings of skills, children were most ready on their *Self-Care & Motor Skills* and they were least ready in their *Self-Regulation* skills.
- Parents perceived their children to be ready for school across a range of skills.

School Readiness in Alameda County

This section presents the following information on the readiness levels of students entering kindergarten in Fall 2013:

- Readiness levels according to four *Basic Building Blocks* of readiness
- An item-by-item summary of all 24 readiness skills measured by the *Kindergarten Observation Form*
- Parents' perceptions of their children's general readiness levels

The data presented in this section were adjusted so that the assessment sample reflected the county population in terms of racial/ethnic background. However, the results are not fully generalizable to the county due to limitations with the sample.

Readiness Levels according to the *Basic Building Blocks*[4]

Previous analysis of readiness data has shown that the underlying dimensions of readiness on the *KOF* are best represented by four skill groups that have been labeled the *Basic Building Blocks* of readiness. ASR utilizes this categorization of readiness skills because it is informed by the data gathered from teachers and has been found to carry intuitive appeal to school readiness experts and practitioners.

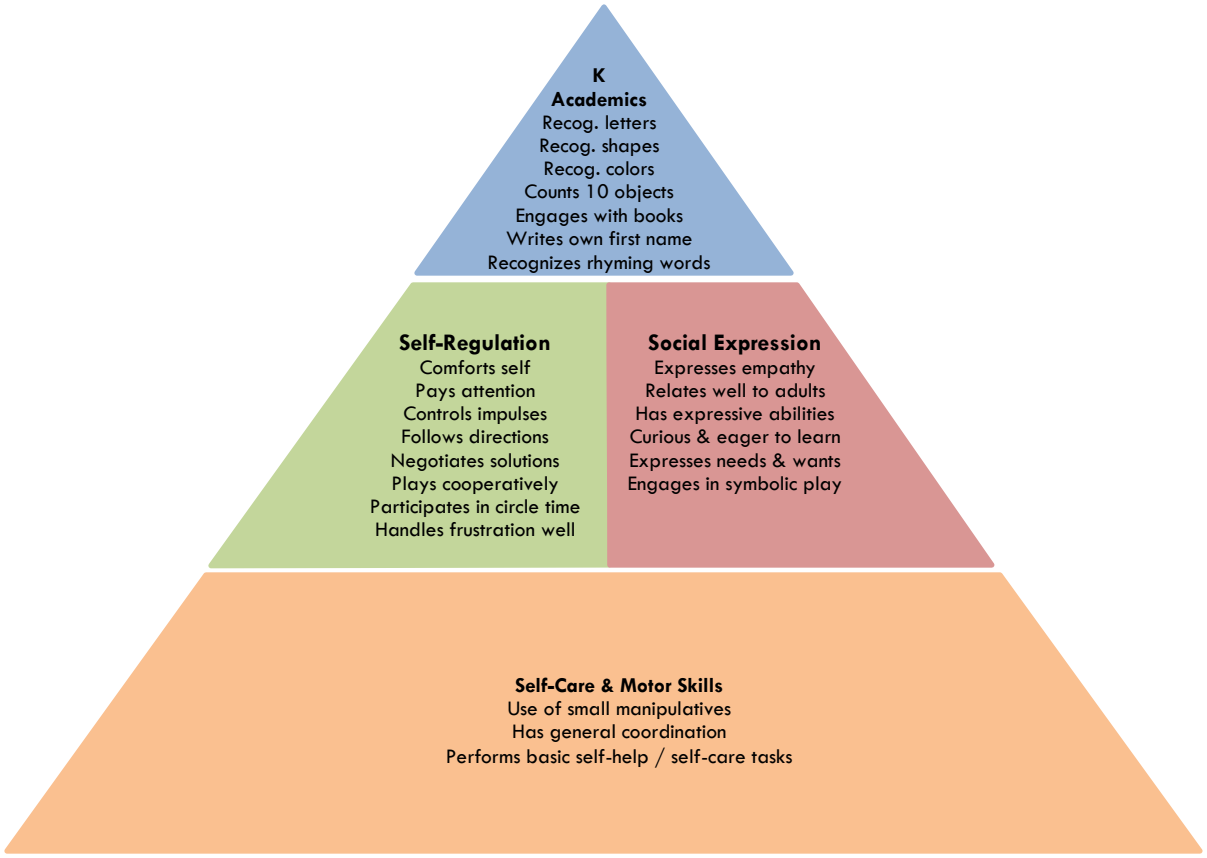
The 24 readiness skills sort into four domains that can be organized according to expected skill progression.

The sorting of the 24 readiness skills into the four *Basic Building Blocks – Self-Care & Motor Skills, Self-Regulation, Social Expression,* and *Kindergarten Academics* – are depicted in the figure on the following page. Although all of the skill dimensions are essential components of readiness, the pyramid representation in the figure below reflects a skill progression framework. That is, basic self-care skills are at the base because they are likely to precede the more advanced self-regulation and socio-emotional skills. The top of the pyramid contains the early academic skills that are a foundation for academic content covered in kindergarten and beyond[5].

[4] Appendix 8 provides a "crosswalking" of skills across the NEGP and *Building Blocks* domains.

[5] Longitudinal research has also found that entering kindergartners who had a combination of high scores in both *Kindergarten Academics* and *Self-Regulation* were particularly likely to be performing at grade level on their ELA and Math third grade CSTs three and a half years later.

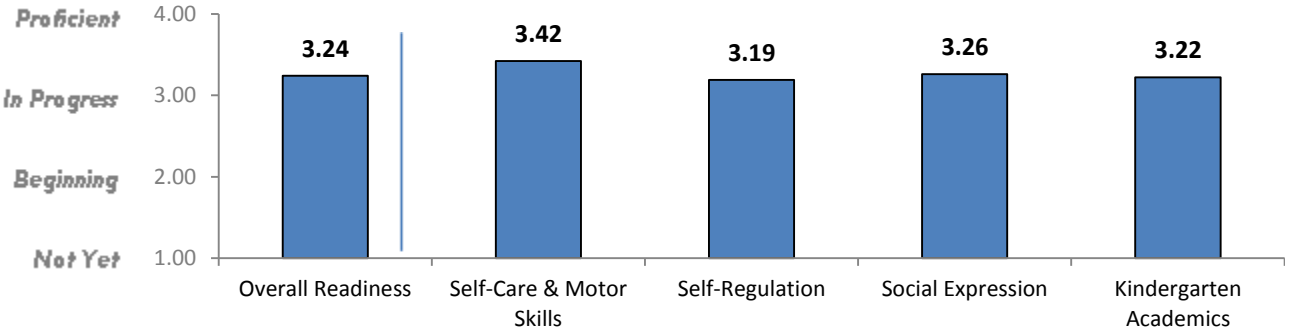
Figure 9. **Basic Building Blocks of Readiness**



Proficiency on the *Basic Building Blocks*

Students' average scores on each of the four *Basic Building Blocks* dimensions and overall were calculated (scores could range from 1.00="*Not Yet*" to 4.00="*Proficient*"). As seen in the following figure, in 2013, students' overall readiness level was 3.24, a score that is between the "*In Progress*" and "*Proficient*" levels. Students' scores were highest on *Self-Care & Motor Skills*, while students were least proficient in their *Self-Regulation* skills.

Figure 10. **Students' Proficiency across Four *Basic Building Blocks* of Readiness**

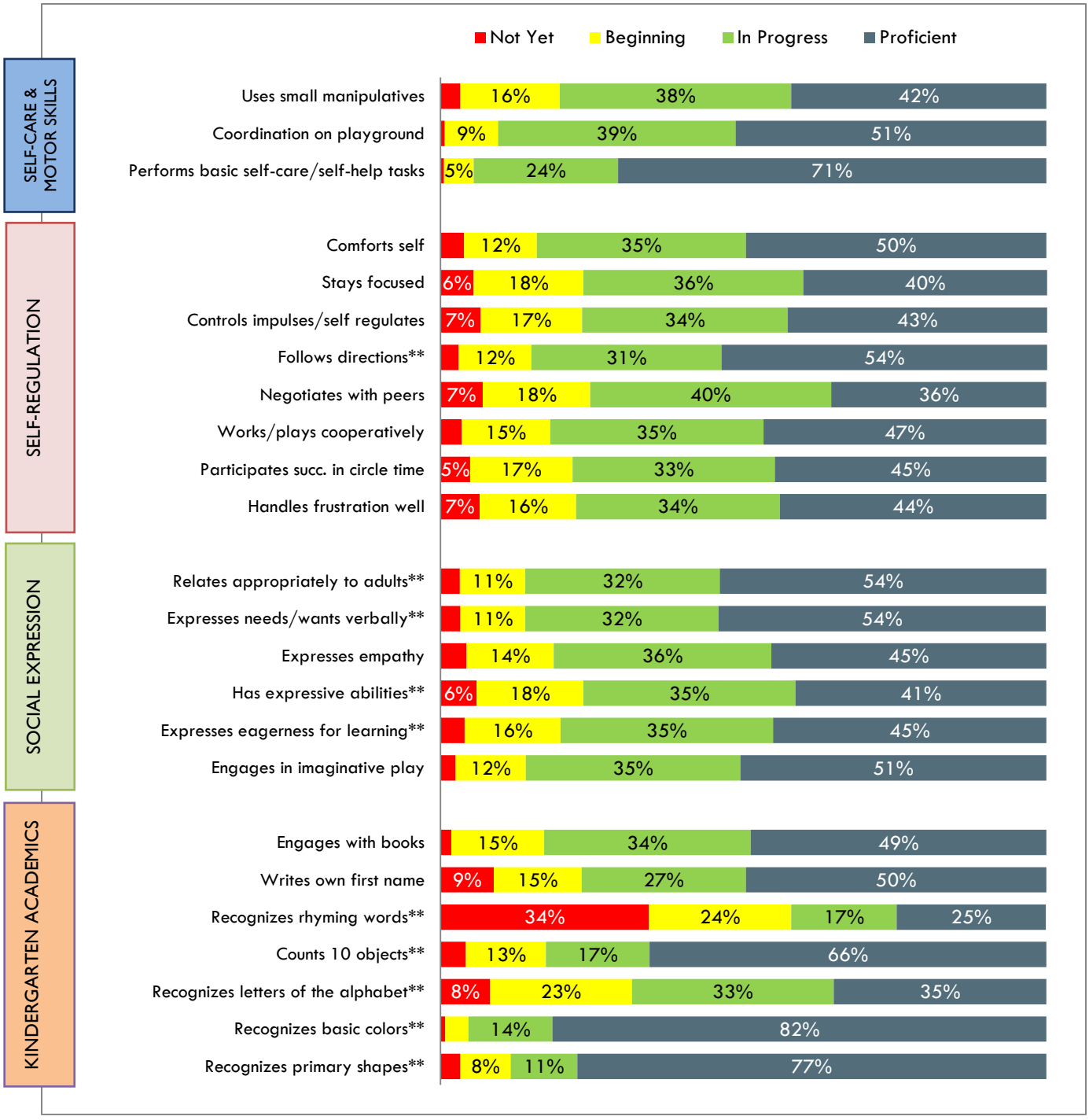


Source: Kindergarten Observation Form (2013)

Note: Means can range from 1 to 4. Scale points are as follows: 1=not yet, 2=beginning, 3=in progress, 4=proficient. Sample size=1,671-1,690.

The figure on the next page illustrates the distribution of scores for each of the 24 items on the KOF. Alameda County students entered Kindergarten strongest on the following specific readiness skills: performing basic self-help/self-care tasks (*Self-Care & Motor Skills*), showing general coordination on the playground (*Self-Care & Motor Skills*), counting to 10 (*Kindergarten Academics*), and recognizing basic colors and shapes (*Kindergarten Academics*). The skills they were still developing included recognizing rhyming words and letters (*Kindergarten Academics*), negotiating with peers to resolve conflicts (*Self-Regulation*), staying focused (*Self-Regulation*), and expressing themselves clearly (*Social Expression*). For details on average readiness levels on each of the 24 readiness skills, see Appendix 9.

Figure 11. **Students' Proficiency Levels across 24 School Readiness Skills**



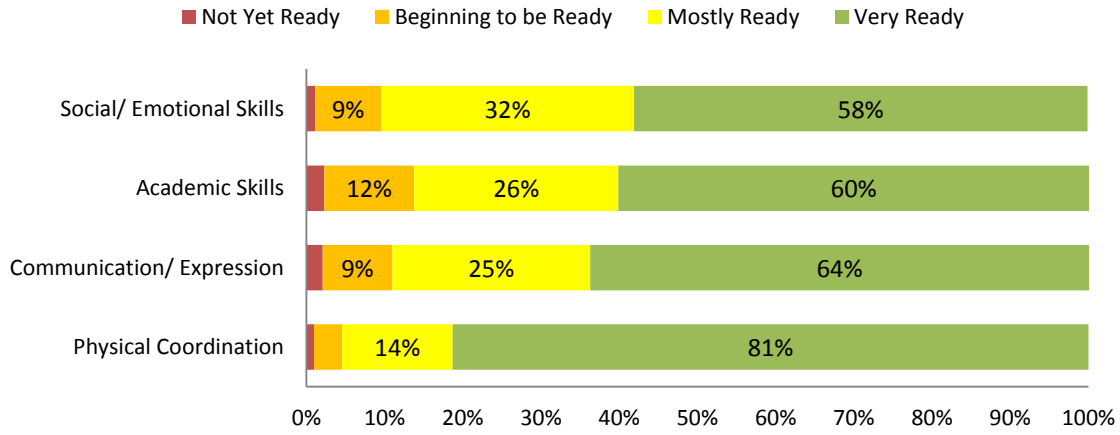
Source: Kindergarten Observation Form (2013). Sample size=1,504-1,687. Note: Scores range from 1 (Not Yet) to 4 (Proficient). Percentages may not sum to 100 due to rounding. Proportions of less than 5% are not labeled. ** Language dependent item: Scores were omitted for students for whom language barriers were a concern.

Parents' Perceptions of their Children's Readiness

On the *PIF*, parents were asked to rate their children's readiness for school based. They rated their skill levels on a set of four general types of school skills that loosely correlate with the four *Basic Building Blocks* of readiness (physical coordination, social/emotional skills, academic skills, and communication/expression).

Overall, parents felt confident their children were prepared for kindergarten. For example, about 95 percent of parents believe their children's physical coordination skills were at a level that they considered mostly or completely ready for school. Between 86 and 95 percent of parents reported that their children were mostly prepared for kindergarten entry when considering their socio-emotional, academic, and communication skills.

Figure 12. **Parents' Perceptions of Their Children's Readiness for Kindergarten**



Source: Parent Information Form (2013)

Note: Sample sizes (from top to bottom): 1,525, 1,526, 1,532, 1,534. Percentages may not sum to 100 due to rounding. Proportions of less than 5% are not labeled.

Section Summary

- Children's average readiness in 2013 was between "*In Progress*" and "*Proficient*" (3.24).
- The strongest *Building Blocks* skill set in Alameda County was *Self-Care & Motor Skills*, while students' greatest needs were in the *Self-Regulation* domain.
- Most parents felt their children were adequately prepared for kindergarten in terms of their physical, language, academic, and socio-emotional development.

PART 2
Identifying Portraits of Readiness

Contents of this Chapter:

The previous section provided a broad picture of children's readiness skills as they enter kindergarten. However, as any kindergarten teacher well knows, two children can have very different profiles of strengths and needs, even if they enter school with the same average levels of readiness. Some children may be strong in their social-emotional skills but weaker in the academic skills, while others may have exactly the opposite skill pattern.

In an effort to better describe the diversity of children entering school, ASR identified common groupings of children based on their patterns of readiness strengths and needs across the *Basic Building Blocks*. This analysis incorporated information from all four domains to help identify students' relative strengths and challenges. This section describes four common readiness patterns – called the *Readiness Portraits* – and takes a closer look at the characteristics of children who enter school with each readiness profile.

Key Findings:

Portraits of Readiness

- Forty-five percent had readiness profiles showing they were *Strong in all domains* (i.e., *Self-Care & Motor Skills, Self-Regulation, Social Expression,* and *Kindergarten Academics*).
- Thirteen percent had needs across all readiness domains.
- Twenty-eight percent of students were ready on their *Kindergarten Academics*, but were lacking some social and emotional skills.
- The remaining 15 percent of students were *Socially/emotionally strong*, but had room for growth in their *Kindergarten Academics* skills.

Factors Associated with Portraits

- Students who were *Strong in all domains* were
  - More likely to be female
  - Older than their peers
  - Less likely to be English Learners or to have special needs
  - More likely to be Asian
  - Healthier than their peers
  - Less likely to be absent or tardy
  - More likely to have attended preschool
  - More likely to have come from families with higher income and education levels
  - More likely to have come from families who had received information about how to prepare their children for kindergarten

Identifying Portraits of School Readiness

The previous section provided a broad picture of children's readiness skills as they enter kindergarten. However, children differ in the types of strengths and needs they possess, even if they enter school with the same average levels of readiness. This section describes four common readiness patterns – called the *Readiness Portraits* – and takes a closer look at the characteristics of children who enter school with each *Portrait*.

Readiness Portraits in Alameda County

Students' Readiness Portraits *were identified using a whole-child approach, considering a child's skills across all four domains.*

For a more detailed look at different patterns of readiness, children in Alameda County were sorted into one of four *Portraits*: *Strong in all domains*, *Needs in all domains*, *Academically strong*, and *Socially/emotionally strong*[6]. The technique used to sort children into *Portraits* considered children's scores across all four domains of readiness.

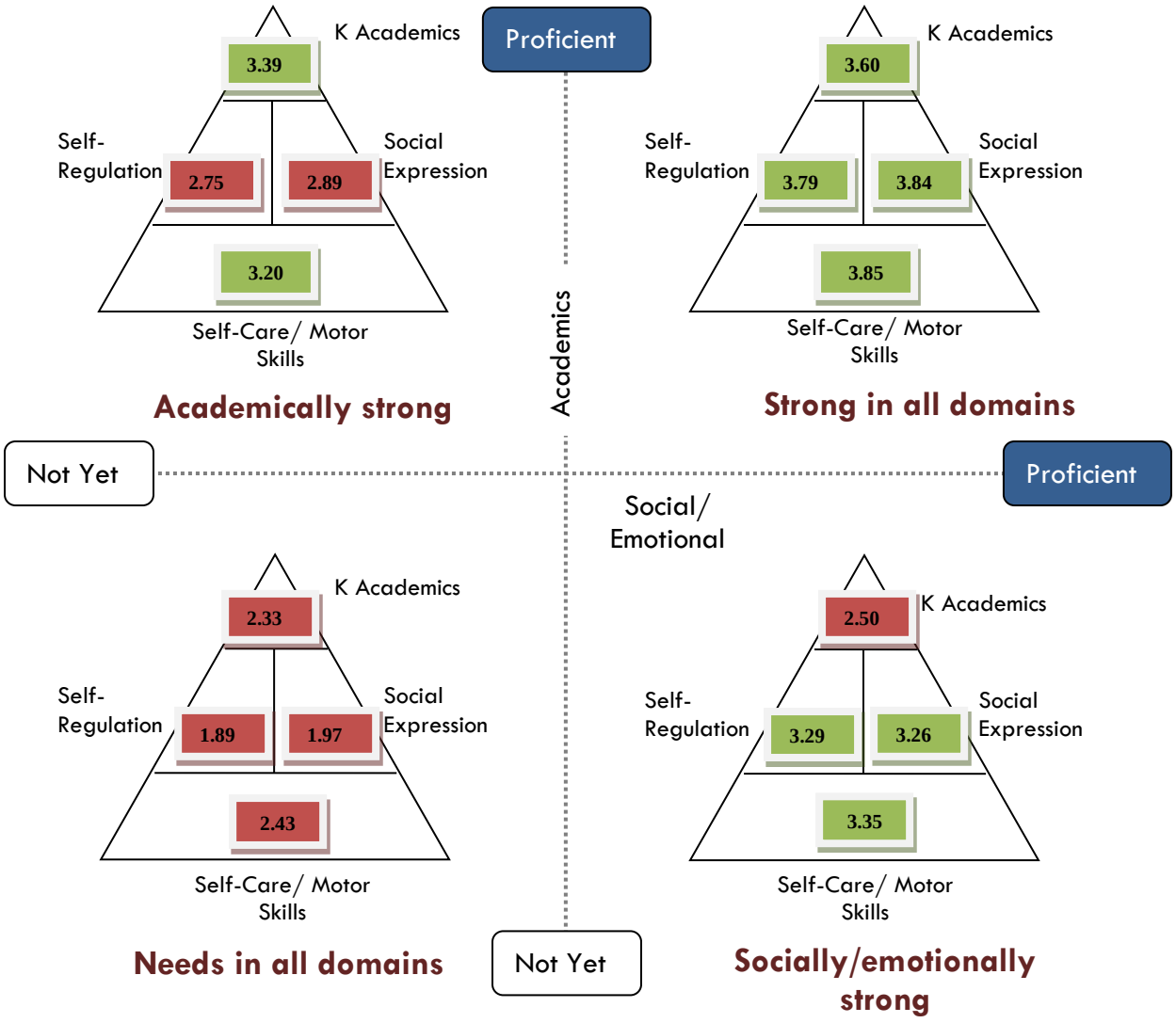
The following figure shows children's *Basic Building Blocks* scores across the *Readiness Portraits*.[7] The green shading in the pyramids indicates the domains in which children with a given portrait are at or near proficiency (with average scores of at least 3.20). Students with the Strong *in all domains* profile had the highest proficiency scores across the *Building Blocks*. That is, they possessed basic self-care and motor skills; were able to focus and manage their behavior in the classroom; expressed themselves clearly to adults and peers; and were competent in the basics of kindergarten content. Their average overall readiness score was 3.75, with domain scores ranging from 3.60 (*Kindergarten Academics*) to 3.85 (*Self-Care & Motor Skills*).

In contrast, as the figure indicates, students who fell into the *Needs in all domains* category were just beginning to build skills in all readiness areas, with domain scores ranging from 1.89 (*Self-Regulation*) to 2.43 (*Self-Care & Motor Skills*). Students with the *Socially/emotionally strong* profile were at or near proficiency in all areas except *Kindergarten Academics*, while children who were *Academically strong* performed well on *Self-Care & Motor Skills* and academic skills, but were still developing their S*ocial Expression* and *Self-Regulation* skills.

[6] Children were sorted into one of the four *Readiness Portraits* via a data-driven technique called cluster analysis. Following this analysis, weights accounting for the racial/ethnic makeup of the County population were applied to the data so that the distribution of students into each *Readiness Portrait* would be as close to that of County as possible.

[7] NEGP scores by *Readiness Portrait* are available in Appendix 10.

Figure 13. **Average Building Blocks Scores across Readiness Portraits**



Source: Kindergarten Observation Form (2013)

Note: Sample size=1,671-1,690. Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient.
On all four *Basic Building Blocks*, means for each readiness portrait significantly differed from all other portraits at $p < .001$, according to one-way analyses of variance and follow-up post hoc tests.

The proportions of Alameda County students in each of the four *Portraits* were as follows:

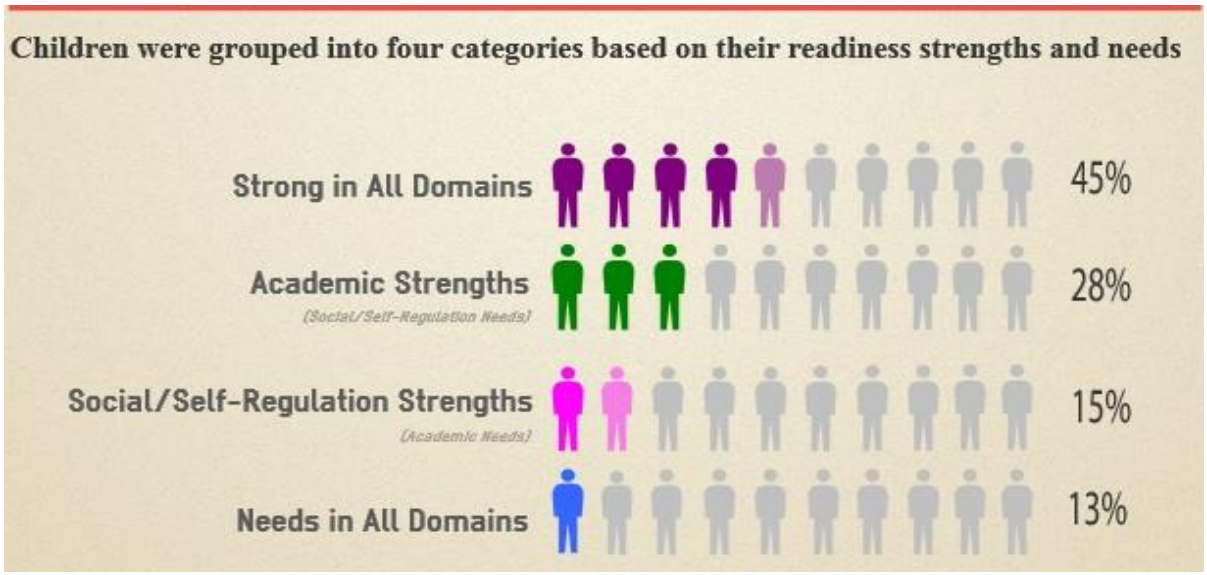
- *Strong in all domains:* Forty-five percent of the assessed students entered kindergarten classrooms at or near proficiency across all four *Basic Building Blocks* of readiness (corresponding to the pattern of readiness displayed in the upper right quadrant of the illustration above).

- *Needs in all domains:* Thirteen percent of students had significant readiness needs across all four skill domains. These students had not yet developed – or were just beginning to develop – almost all of the 24 readiness skills (lower left quadrant of the illustration).

- *Academically strong:* Just over one-quarter (28%) of Alameda County students entering kindergarten had strong skills in early academics (and *Self-Care & Motor Skills*) but demonstrated some challenges in the social-emotional areas of readiness, especially skills within the *Self-Regulation* dimension (upper left quadrant of the illustration).

- *Socially/emotionally strong:* The remaining 15 percent of students were well-equipped on the social-emotional dimensions of readiness, but they had needs in the realm of *Kindergarten Academics* – learning their letters, numbers, shapes, and colors (lower right quadrant of the illustration).

Figure 14. **Prevalence of Each *Readiness Portrait***



Source: Kindergarten Observation Form (2013)

Note: Sample size=1,692.

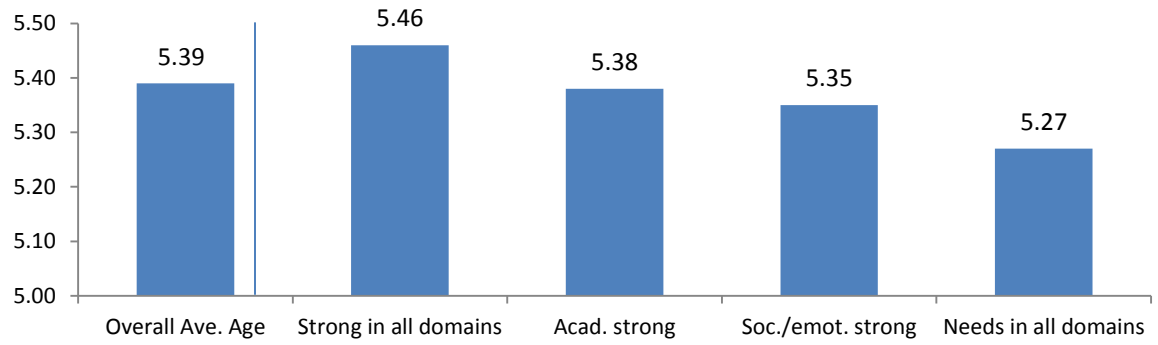
Who Are the Children in Each *Readiness Portrait*?

This section explores the ways that children with each of the *Readiness Portraits* differed from each other.

Children who were Strong in all domains *were significantly older than their peers.*

Students who were *Strong in all domains* were nearly 5 ½ years old on average, making them older than children in the other three readiness portraits. *Academically strong* students were approximately the same age as children with the *Socially/emotionally strong* profile, but *Needs in all domains* students were significantly younger than students who were *Academically strong* and *Strong in all domains.*

Figure 15. **Average Age of Students in Each *Readiness Portrait***



Source: Kindergarten Observation Form (2013)

Note: Sample sizes=1,695 overall; 759 *Strong in all domains*, 469 *Academically strong*, 250 *Socially/emotionally strong*, and 214 *Needs in all domains*. A one-way analysis of variance indicated that the portraits differed significantly overall ($p < .001$). After adjusting for multiple comparisons, all group comparisons were significant ($p<.001$), except *Academically strong* & *Socially/emotionally strong* and *Needs in all domains* & *Socially/emotionally strong.*

The proportion of students fitting each profile also differed by gender, race/ethnicity, English Learner status, special needs, and preschool experience. Below is a summary of how these groups differed:

- *Strong in all domains:* **Girls** were more likely than boys to have strengths across readiness skills. In addition, children **proficient in English** were more likely than English Learners and children with licensed, center-based **preschool** experience were more likely than children without preschool to be *Strong in all domains*. Additionally, students **without special needs** were more likely to be strong in all areas than students with special needs. **Black** and **Asian** students were also significantly more likely to demonstrate strengths in all domains than other students. Finally, children in families earning **$35,000 or more** and children whose mothers had **more than a high school** education were more likely to be in this category than children from poorer and less educated families.

- *Academically strong:* Children with **preschool** were more likely than children with no preschool to demonstrate strong academic skills, but relatively low socio-emotional skill levels. **Non-English Learners** were also more likely than English Learners to be in the *Academically Strong* category. In addition, **White** and **Asian** students were significantly more likely than black and Hispanic/Latino students to have the *Academically strong* profile. Finally, children in **higher income** (at least $35,000) and **better-educated** (in which mothers had more than a high

school education) families were more likely to have the *Academically strong* profile than other children.

- *Socially/emotionally strong:* Children **without preschool** were more likely than those with preschool to be low on academics, but high on social-emotional skills. **English Learners** were also more likely to be in this category than non-English Learners. **Hispanic/Latino** students were more likely than any other racial/ethnic group to have the *Socially/emotionally strong* profile. In addition, children in families making **under $35,000** and whose mothers had **no more than high school** were more likely than families with higher incomes and more education to demonstrate socio-economic strengths, but needs in academics.

- *Needs in all domains:* **Boys** were more likely than girls and **English Learners** were more likely than non-English Learners to have needs in all domains. Students with **special needs** were also significantly more likely to have this profile than typically developing students. In contrast, children with preschool were less likely than children **without preschool** to be in the *Needs in all domains* category. Finally, children from families with **lower incomes** (under $35,000) and **lower maternal education** levels (no more than high school) were more likely to have needs across readiness skills.

A Closer Look at Children with Strengths in All Domains

Possessing strengths in all domains was associated with a range of factors, including age, gender, race/ethnicity, family income, and preschool attendance.

To look at the *unique* relationships between various child and family characteristics and being *Strong in All Domains*, a separate analysis was conducted that accounted for the fact that many child and family characteristics are related to one another[8]. This allowed us to see what characteristics predict having a *Strong in All Domains* profile over and above other related factors. Using this technique, the children with strengths in all domains still differed from children who did not have this profile on a range of characteristics. For example, after controlling for (i.e., holding constant) many important child and family characteristics, children who were *Strong in all domains* were more likely to be girls; proficient in English; typically developing; and older than their peers with other profiles. Asian students were significantly more likely than children from other races/ethnicities to be *Strong in all domains*, holding constant other demographic and family characteristics. Children with strengths across domains were also more likely to have attended licensed, center-based preschool and to come from families that earned at least $35,000 a year. These children were also more likely to have parents who reported receiving information about how to prepare their children for kindergarten. Finally, children with this profile were more likely than their peers with other profiles to come to school without any health or well-being concerns and were slightly more likely to attend school regularly.

[8] The following variables were entered into a multivariate logistic regression predicting membership in *Strong in all domains*: preschool attendance, EL status, gender, special needs, race/ethnicity, income, mother's educational attainment, age, low birth weight, child health and well-being, child tardy or absent, parents' attitudes about caring for their child, and whether parent received school readiness information. School API and number of instruction days were entered as control variables.

Section Summary

- Just under half of students (45%) had readiness profiles showing they were *Strong in all domains*.
- A little over one in ten students (13%) had needs across all readiness domains.
- Nearly one third of students (28%) were ready on their *Kindergarten Academics* but were lacking some social and emotional skills.
- The remaining 15 percent were *Socially/emotionally strong*, but had needs for development in the *Kindergarten Academics* skills.
- Students who were *Strong in all domains* were more likely to
    - be older
    - be female
    - be a non-English Learner
    - have no special needs
    - be Asian than from another race/ethnicity
    - come from families with higher incomes
    - have attended licensed, center-based preschool
    - come to school without health or well-being concerns
    - attend school regularly
    - come from families who had received information about how to prepare their children for kindergarten.

PART 3

Student and Family Factors Associated with School Readiness

Contents of this Chapter:

This section discusses the results of analyses used to identify which child and family factors were most predictive of children's readiness for school.

Key Findings:

Predictors of Readiness

- The strongest predictors of readiness were age and students' basic well-being. Younger children and those who came to school hungry, tired, or ill, had readiness levels that were significantly below those of their peers.
- In addition, students who had no special needs, were proficient in English, were girls, and came from families with higher education levels entered school more ready than their peer without these characteristics.
- Some significant predictors of readiness in this study point to promising ways that community interventions can make a difference for students:
    - Licensed, center-based preschool was associated with enhanced readiness.
    - Students whose parents had received information about school readiness had stronger readiness skills than those whose parents had not.

Student and Family Factors Associated with School Readiness

Factors associated with readiness were examined using techniques that control for (hold constant) a range of child and family characteristics.

As part of the comprehensive readiness study, an additional analysis was conducted to examine the possible child and family characteristics and experiences that contribute to children's preparedness for school[9]. The techniques used allowed us to look at how selected variables are uniquely related to readiness levels, holding constant any other factors. For example, it allowed us to examine how preschool experience is related to readiness levels above and beyond the contribution to readiness from other factors, like family income and maternal education level. In addition, the analysis helped account for similarities that exist among students within a classroom and for the fact that classrooms differ from one another in a variety of ways that aren't always measured (e.g., different teachers, different classroom environments, and different groups of peers).

It is important to keep in mind that the analyses conducted here can help us better understand why children vary, but these are ultimately correlational – **not causal** – analyses. The only way to truly determine what causes increased readiness is by conducting a well-controlled experiment. It is also important to note that there are likely many other variables that could affect readiness that are beyond the scope of this assessment. Variables like temperament, intelligence, and style of attachment to parents/guardians, for example, were not measured in this study, but may play an important role in children's readiness for school.

Factors Associated with Overall Readiness

Figure 16 shows the factors that have a unique and significant contribution to readiness county-wide even after holding constant various other important child and family factors[10].

- The strongest predictor of readiness was students' **age**. Older students were more likely to be prepared for school than their younger peers, after controlling for other child and family characteristics.
- The next strongest predictor of readiness was **child well-being**. Although there were relatively few children who had such issues, those who were perceived by their teachers to be

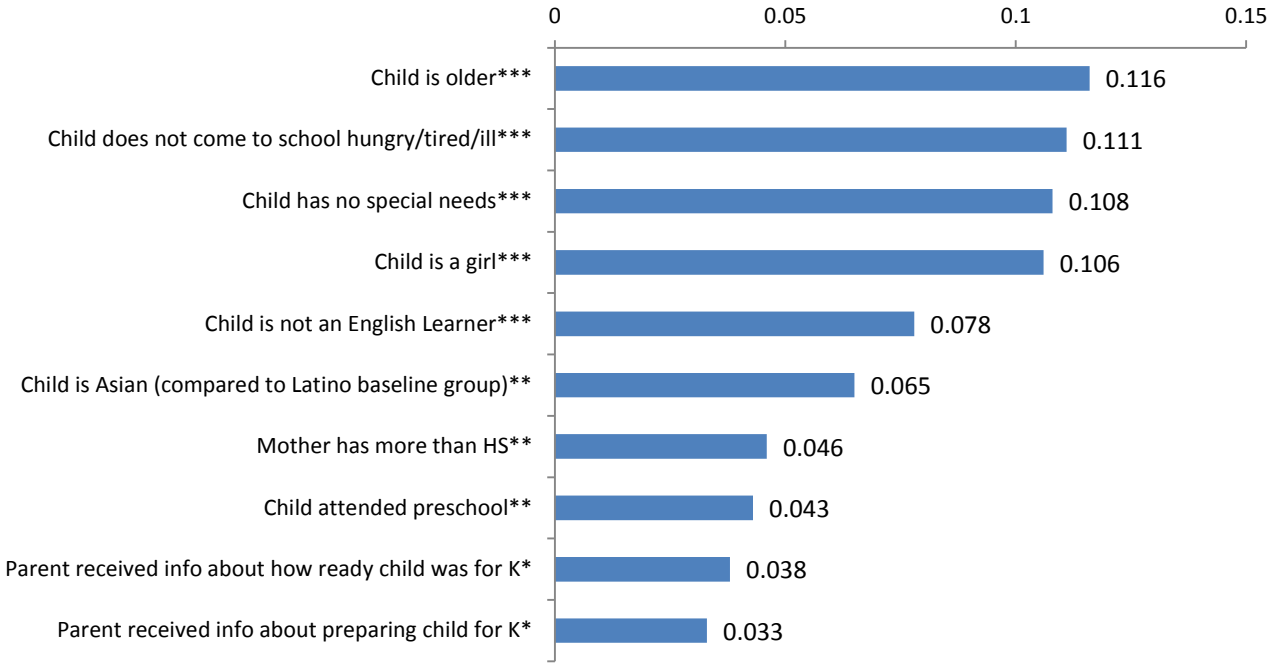
[9] Child and family factors were entered into a multivariate, multi-level regression model. Multi-level regressions are used for "nested" data (e.g., students nested within classrooms). There is no agreed upon method for incorporating sampling weights into multilevel modeling analyses. Because utilizing sample weights with these techniques is a topic of ongoing discussion among statisticians, regressions without sampling weights were conducted.

[10] The following variables were examined in this analysis: age at enrollment; gender; special needs status; race/ethnicity; English Learner status; child well-being (being hungry, tired, or ill); child absences or tardies; low birth weight; family income; maternal education; parents' attitudes about caring for their child; licensed, center-based preschool attendance; whether parents received information about readiness (e.g., how to help prepare their child for kindergarten); school API; instruction days at time of assessment.

frequently hungry, tired, or ill, had readiness levels that were much lower than their peers without well-being concerns.

- As might be expected, children with **special needs** scored lower than children without any developmental concerns.
- Likewise, children entering school as **English Learners** were behind their English-speaking peers in readiness.
- **Girls** tended to be more ready for school than boys.
- **Asian** children were moderately more prepared than Hispanic/Latino children (children of other racial/ethnic backgrounds had approximately the same readiness levels as Hispanic/Latino children).
- Children whose mothers had more than a high school **education** performed better than children whose mothers had only a high school diploma or less.
- Children who attended licensed, center-based **preschool** had higher scores than children who did not.
- Readiness scores were higher among children whose parents reported **receiving information** about how prepared their child was for school and among children whose parents received information about how to help their child develop readiness skills for kindergarten.

Figure 16. **Key Factors that Predict Overall School Readiness (in order of strength)**



Source: Kindergarten Observation Form (2013), Parent Information Form (2013), Preschool Experience Form (2013)

Note: ***Significant at p<.001; **Significant at p<.01; *Significant at p<.05. For a full listing of all variables entered into the model, see text. The overall regression model was significant (p<.001), explaining 25% of the variance in kindergarten readiness (R^2 = .25).

A Follow-up Look at Race/Ethnicity

For the above analysis, only one racial/ethnic group could be designated as the "baseline" or comparison group at a time. Therefore, follow-up analyses were conducted to make comparisons among the other three largest racial/ethnic groups. These analyses revealed that Asian students outperformed students from all other racial/ethnic groups. Black, white, and Hispanic/Latino students, on the other hand, did not significantly differ from one another in kindergarten readiness, controlling for the various other child and family characteristics described above.

Factors Associated with Each *Basic Building Blocks* Dimension of Readiness

The previous figure showed the factors that were associated with *overall* readiness scores. However, not all of these factors are equally predictive of the various dimensions of readiness. To see how each *Basic Building Blocks* dimension was related to child and family characteristics, ASR performed analyses on each domain, using the same set variables described previously.

Special needs and child **well-being** strongly predicted student scores on all domains, but this was particularly true for some of the more fundamental skills, like those in the *Self-Care & Motor Skills* domain. Other factors that consistently emerged as significant predictors of the four *Building Blocks* domains included child **age** and **gender**. Older children and girls scored higher on all four domains. Beyond these four child characteristics, the predictors associated with each domain varied; for complete findings, see Appendix 11.

Special needs, health/well-being, age, and gender were associated with all four domains of readiness.

Section Summary

- The strongest predictors of overall readiness in Alameda County were **age** and students' basic **well-being**. Students who were younger and those who came to school ill, hungry, or tired, had readiness levels that were significantly lower than those of their healthier peers.
- Other factors positively associated with readiness included
    - not having special needs
    - being proficient in English
    - being a girl
    - coming from families with higher maternal education levels
    - coming from families that received school readiness information
    - belonging to certain racial/ethnic groups; Asian students scored higher than children from other racial/ethnic groups
    - licensed, center-based preschool attendance

PART 4

Portrait of Students and Families in the Study

Contents of this Chapter:

This chapter presents a portrait of the students involved in the assessment – their gender, age, ethnicity, preferred language, special needs, physical health, and use of health care.

A profile of families is also presented, including a discussion of maternal education and income levels, home languages, household composition, family activities and routines, sources of parenting support and stress, and parents' beliefs about their role in their children's education.

Key Findings:

- *Student Characteristics:*
  - Nearly 1,700 kindergarteners were assessed (48% girls; 52% boys)
  - Average age: 5 yrs., 4 mos.
  - Ethnic/racial backgrounds: 42% Hispanic/Latino, 20% Asian, 11% Caucasian/white, 10% African American/black, 10% multiracial, and 7% other ethnicities
  - Forty-three percent were English Learners
  - Five percent of students had identified special needs; another 7% had *suspected* needs
  - Twelve percent were born with a low birth weight (a risk factor for delays in readiness)
  - Most students were well-connected to health care resources and 97% had health insurance
  - A small percentage of students in the sample (1-2%) were identified by teachers as coming to school feeling hungry, tired, or ill "on most days" or "just about every day"
  - One to three percent were absent or tardy "one most days" or "just about every day"
- *Family Characteristics*
  - Nearly 1,600 parents/guardians returned *Parent Information Forms*
  - Forty-eight percent of families earned less than $35,000 annually. Money and paying bills were "somewhat" or "a big concern" for 62% of the families, and 19% of children had a primary caregiver who had lost his/her job in the past year
  - More than half of parents (58%) reported reading with their children an average of five times a week or more
  - The most frequently used local family resources included parks (81% of families) and libraries (63% of families)
  - Although parents reported adequate social support for their parenting needs, many indicated that they needed some additional support to run an errand, take a break, or talk to someone to get advice about parenting
  - Parents generally reported taking an active role in their child's schooling, but responses indicated that some may need more tools and resources to feel that they can make a difference
  - Families enrolled in home visiting programs demonstrated higher levels of stress and lower levels of support in certain areas, but they were also more likely to have obtained a developmental screen for their child and were more confident in their ability to support their child's readiness for school

Kindergarten Students and Families in the 2013 Readiness Study

The *Kindergarten Observation Form,* the *Parent Information Form,* and the *Preschool Experience Form* gathered information on several demographic and socioeconomic characteristics of children and families, as well as measures of what their home and family environments were like. This section describes the students and families who were involved in the readiness assessment in terms of their demographics, socioeconomic backgrounds, and family environments.

Students

Basic Demographics

Forty eight percent of participants in the Alameda County Fall 2013 readiness assessment were girls and 52 percent were boys. The average age of students was 5.39 years old (just over 5 years and 4 months). Most children were between 5 and 6 years of age; only 15 percent were under 5 and just two percent were 6 or older.

Figure 17. **Students' Sex and Age Upon Kindergarten Entry**

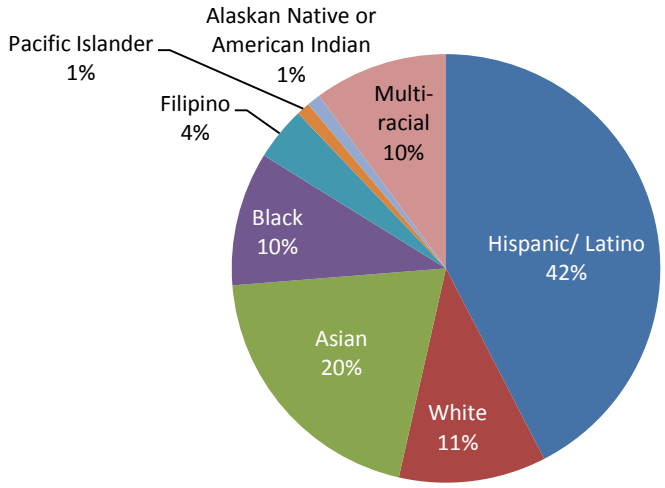
Demographics	Percent of students
Sex	
Boys	52%
Girls	48%
Age (average age = 5.39 yrs)	
Between 4 1/2 and less than 5	15%
At least 5 and less than 5 1/2	46%
At least 5 1/2 and less than 6	36%
6 and older	2%

Source: Kindergarten Observation Form (2013), Parent Information Form (2013)

Note: Sample sizes (from top to bottom)=1,693, 1,695. Percentages may not sum to 100 due to rounding.

Hispanic/Latino students comprised the largest racial/ethnic group in the sample, representing 42 percent of students. Twenty percent of students were Asian, 11 percent were Caucasian/white, and 10 percent were African American/black. Another 10 percent of students were of mixed racial/ethnic background. Other racial/ethnic groups made up the remaining seven percent of the sample.

Figure 18. **Percent of Kindergarten Students Representing Each Race/Ethnicity**



Source: Kindergarten Observation Form (2013)

Note: Sample size=1,696. Percentages may not sum to 100 due to rounding.

Language Variables

There was great linguistic diversity among the kindergarten students in the sample. According to teachers, just over 40 percent were English Learners. Sixty percent of the sample spoke English as their preferred language, while 30 percent spoke Spanish. Small percentages spoke other languages.

Figure 19. **English Learner Status and Preferred Language**

Children's Language	Percent
English Learner	43%
Not an English Learner	57%
Preferred language	
English	60%
Spanish	30%
Chinese/ Mandarin/ Cantonese	3%
Punjabi or Hindi	1%
Filipino/ Tagalog	1%
Farsi or Dari	1%
Vietnamese	1%
Other language	2%

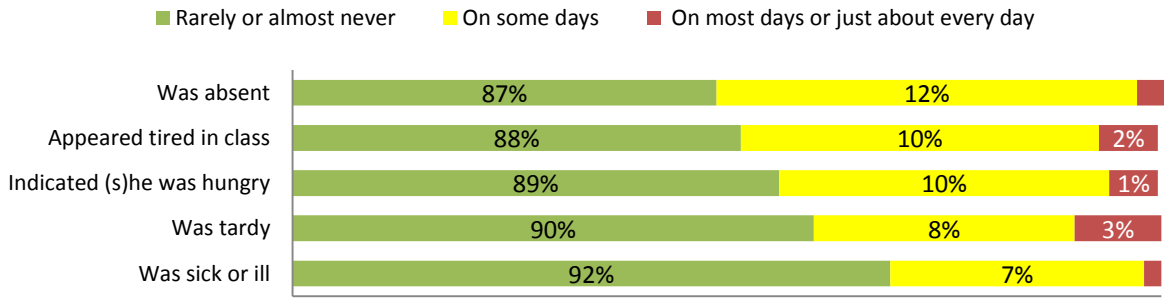
Source: Kindergarten Observation Form (2013)

Note: Sample sizes (from top to bottom)=1,686, 1,690. Percentages may not sum to 100 due rounding.

Physical Health, Well-Being, and Attendance

To better understand the health and well-being of entering kindergarten students, teachers were asked to report how frequently each child indicated (s)he was hungry, appeared tired in class, was sick or ill, was absent, or was tardy. As the figure below shows, nearly all students were healthy and came to school regularly. However, about 10 percent exhibited well-being or attendance concerns on at least some days.

Figure 20. **Teacher Reports of Children's Well-Being and Attendance**



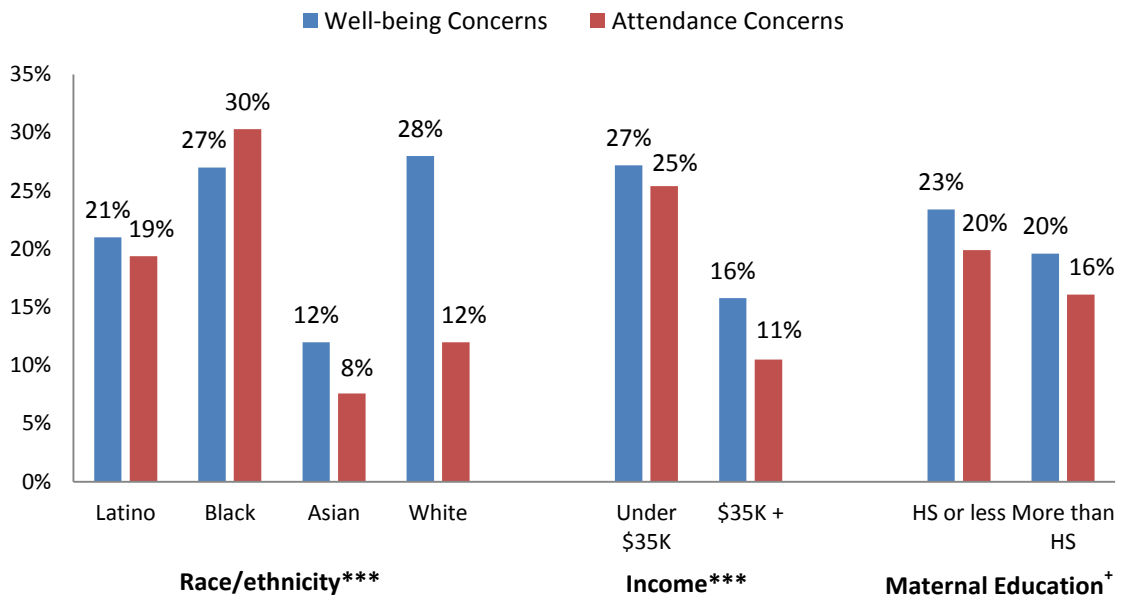
Source: Kindergarten Observation Form (2013)

Note: Sample sizes (from top to bottom) =1,687, 1,684, 1,685, 1,684, 1,684. Percentages may not sum to 100 due to rounding. Proportions under 1% are not labeled.

When the characteristics of children with well-being and attendance concerns were examined more closely, it became clear that these issues were associated with other demographic and socioeconomic factors. Asian students, for example, were significantly less likely than children of other races/ethnicities to have health or well-being problems (as reported by the teacher). Asian students were also less likely than Hispanic/Latino or black children to be tardy or absent.

Differences in child attendance and well-being were also found based on income and educational attainment. Children from families making under $35,000 were significantly more likely to have health or well-being concerns and to be tardy or absent from school than children from more affluent families. Likewise, children whose mothers had no more than a high school education were slightly more likely to have these problems than children with more educated mothers (though differences based on mother's educational attainment did not reach significance).

Figure 21. **Percent of Students with One or More Well-Being or Attendance Concerns**



Source: Kindergarten Observation Form (2013), Parent Information Form (2013)

Note: Sample sizes=700-701 (Latino), 175 (Black), 340-341 (Asian), 184-186 (White), 1,479-1,482 (income), and 1,524-1,528 (education). +All differences based on education marginally significant (p<.10). ***The following racial/ethnic group comparisons were significant for well-being, after adjusting for multiple comparisons: Latino & Asian (p<.001); Asian & white (p<.001); black & Asian (p<.001). The following racial/ethnic group comparisons were significant for attendance, after adjusting for multiple comparisons: Latino & Asian (p<.001); black & Asian (p<.001). All differences based on income significant (p<.001).

Low Birth Weight

Previous research has shown an association between low birth weight and early school difficulties and grade retention (e.g., Byrd & Weitzman, 1994). Therefore, a question about low birth weight was included on the *Parent Information Form*. Among the children in the assessment, about 12 percent had qualified as low birth weight, having weighed less than five pounds, eight ounces.

Health Insurance, Receipt of Health Screenings, and Access to Health Providers

The *Parent Information Form* contained several questions relating to children's access to and use of various health services. Nearly all students (97%) had health insurance of some form. Just under half of students (47%) were covered by private insurance, while 42 percent were insured by Medi-Cal and 9 percent were insured through Healthy Families.

Parents were also asked if their child had a regular source of medical care and a dentist. Almost all children (98%) had a regular doctor, pediatric provider, or clinic, and 90 percent had a regular dentist. Ninety-two percent of children had been to a dentist in the last year, 72 percent had received a hearing exam, while 75 percent had received a vision exam. Forty percent had received a developmental screening in the year prior to the readiness assessment.

Figure 22. **Children's Access to and Use of Health Care**

Use of Health Care	Percent
Health Insurance	
Private insurance	47%
Medi-Cal	42%
Healthy Families	9%
No insurance	3%
Has a regular doctor, pediatric provider, or clinic	98%
Has had a dental exam in the past year	92%
Has a regular dentist	90%
Has had a vision exam in the past year	75%
Has had a hearing exam in the past year	72%
Has received a developmental screening in the past year	40%

Source: Parent Information Form (2013)

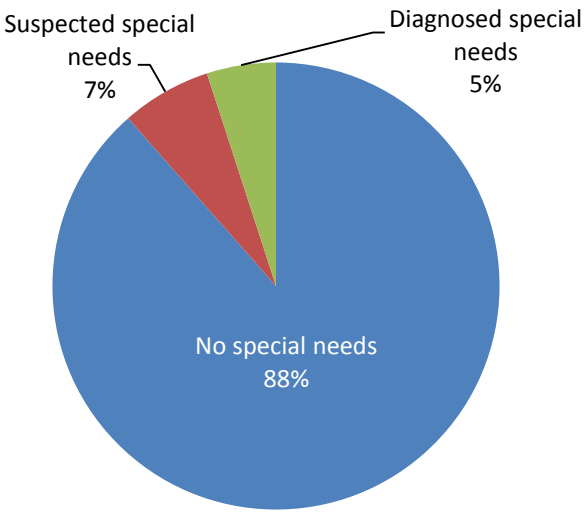
Note: Sample sizes (from top to bottom) =1,562, 1,562, 1,541, 1,577, 1,577, 1,577, 1,577,

Special Needs

Both parents and teachers were asked about children's special needs[11]. According to parents and/or kindergarten teachers, five percent of children had a diagnosed special need; another seven percent were suspected to have a special need by their teacher or parent, but had not been formally diagnosed by a professional. Parents and teachers who indicated that a child had a special need were asked to describe that special need and to provide more information about services sought and received. Over three-quarters of parents (76%) had sought treatment for the child's special need. The average age of diagnosis was 2 years, 11 months old (35.25 months).

[11] Parents were asked whether the child had a special need that had been diagnosed by a professional, while teachers were asked whether the child had an IEP or designated special need. If the child did not have a diagnosed special need or IEP, parents and teachers were asked to indicate whether they believed the child had a special need.

Figure 23. **Presence of Special Needs**

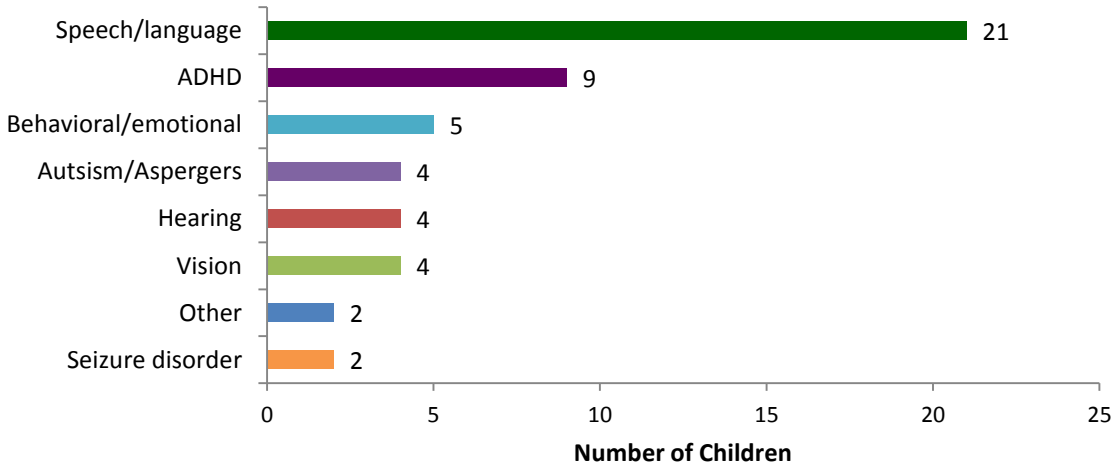


Source: Kindergarten Observation Form (2013), Parent Information Form (2013)

Note: Sample size=1,694. Percentages may not sum to 100 due to rounding.

Speech and language challenges were the most common concerns among children with special needs, affecting 42 percent of this subgroup. Many other children had attention deficit and/or hyperactivity challenges, while relatively few had seizure disorders.

Figure 24. **Types of Special Needs, as Reported by Parents and Teachers**



Source: Kindergarten Observation Form (2013), Parent Information Form (2013)

Note: Sample size=49 children with special needs. Parents could indicate more than one special need.

Families and Households

The *Parent Information Form* was also used to capture the characteristics of students' home and family environment. This section describes families' socioeconomic background, experiences of stress, daily routines, and utilization of community resources.

Maternal Education and Family Income

Previous research has identified a school readiness gap based on family socioeconomic status that often widens over time (e.g., Crosnoe & Cooper, 2010; Halle et al., 2009; Ryan, Fauth, & Brooks-Gunn, 2006). Children born to less educated parents and to poorer families have significantly lower readiness levels than their peers with more educated and affluent parents. To determine whether this factor was also associated with readiness levels among Alameda County kindergarten students, parents were asked to provide information about the child's mother's education level and the family's income. The children in the sample lived in families that were somewhat poorer and less educated than Alameda County as a whole[12]. The majority of children came from families making under $50,000 per year. In addition, only 31 percent of mothers had a bachelor's degree or higher.

Figure 25. **Maternal Educational Attainment and Family Income**

	Percentage
Mother's Education	
Less than High School	10%
High School Diploma	29%
Some College	21%
Associate's Degree	9%
Bachelor's Degree	19%
Advanced Degree	12%
Family Income	
Under $15,000	21%
$15,000-$34,999	27%
$35,000-$49,999	12%
$50,000-$99,999	17%
$100,000 or more	23%

Source: Parent Information Form (2013)

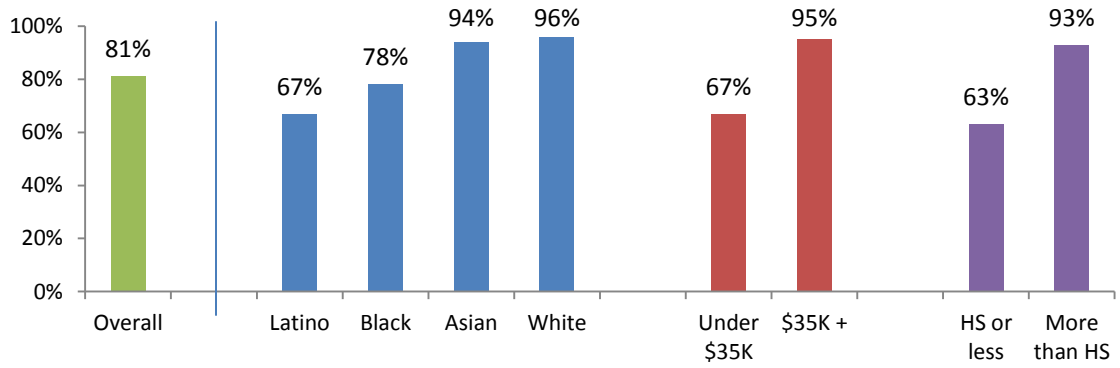
Note: Sample sizes (from top to bottom)=1,537, 1,490. Percentages may not sum to 100 due to rounding.

[12] Median household income in Alameda County is $71,516 and 41 percent of the population has a bachelor's degree or higher (U.S. Census, 2014).

Internet Access

Most families had access to the internet for their personal use (81%), but access to this amenity tended to be associated with income, mother's educational attainment, and race/ethnicity. The majority of families who did not have internet access came from families earning less than $35,000 and in which the child's mother had no more than a high school education. In addition, the children in these families were more likely to be Hispanic/Latino or black than white or Asian.

Figure 26. **Has Access to the Internet**



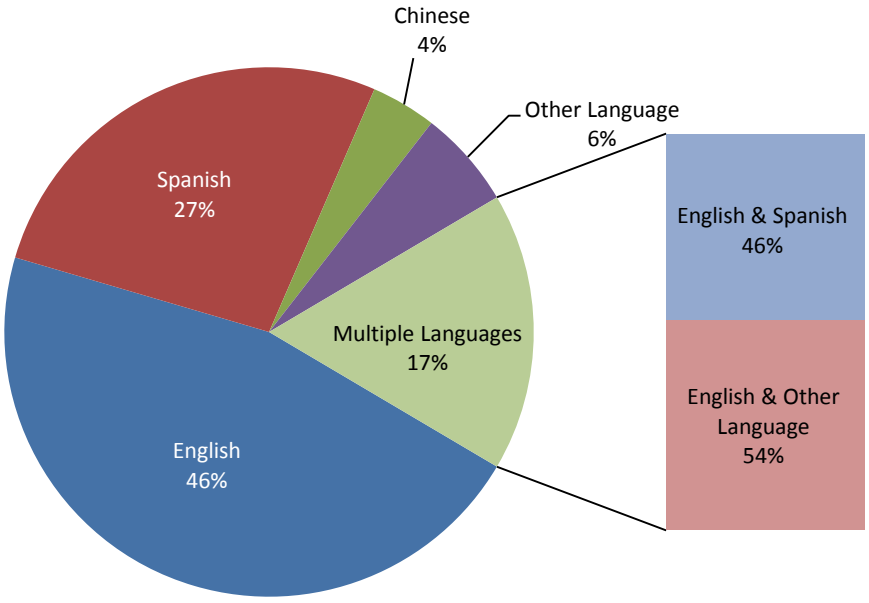
Source: Parent Information Form (2013)

Note: Sample sizes=1,484 (Overall), 607 (Latino), 142 (Black), 311 (Asian), 163 (White), 1,398 (income), and 1,452 (education). ***Differences based on income and education significant (p<.001). The following racial/ethnic group differences were significant after adjusting for multiple comparisons: Latino & Asian (p<.001); Latino & white (p<.001); black & Asian (p<.001); black & white (p<.001).

Home Languages

Parents were asked to indicate the language they used most often at home with their child. English (46%) and Spanish (27%) were the most commonly used languages reported by parents. About 17 percent of parents reported speaking more than one language at home. Of these, about 46 percent spoke English and Spanish, while the remaining 54 percent spoke English and another language at home.

Figure 27. **Language Used Most Often at Home**



Source: Parent Information Form (2013)

Note: Sample size=1,557. Percentages may not sum to 100 due to rounding.

Most parents (68%) indicated they spoke English very well, whether or not it was their primary language. Just over one in five (21%) reported that they did not speak English very well or at all.

Figure 28. **Parents' Self-Reported Level of English-Speaking Proficiency**

English-speaking Proficiency	Percent
Very well; English is my primary language	40%
Very well, but English is not my first language	28%
Somewhat well; I usually- but not always- can communicate what I want to say in English	12%
Not very well; I know some words in English, but often not enough to communicate what I want to say	15%
Not at all; I know very few or no English words	6%

Source: Parent Information Form (2013)

Note: Sample size=1,546. Percentages may not sum to 100 due to rounding.

Household Size

Families in the assessment reported an average of 4.96 people living in their household.

Figure 29. **Number of People in Household**

Household Residents	Average	Range
Number of children 0-5 years	1.52	0-7
Number of children 6-17 years	1.23	0-9
Number of adults 18 yrs and older	2.32	1-8
Total household residents	4.96	2-18

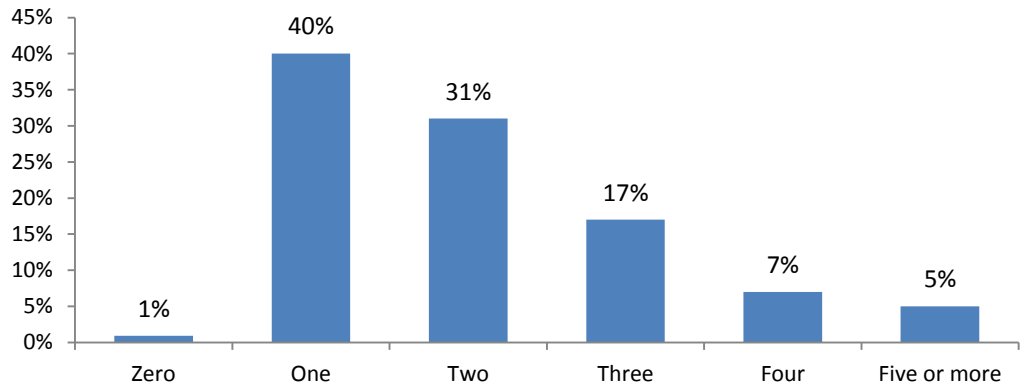
Source: Parent Information Form (2013)

Note: Sample sizes (from top to bottom)=1,464, 1,112, 1,402, 988.

Family Mobility

Parents were asked how many addresses they had lived at since the birth of their child. On average, families had lived at two addresses (mean = 2.04), but the responses ranged from zero to eleven different addresses.

Figure 30. **Number of Addresses Since Child's Birth**



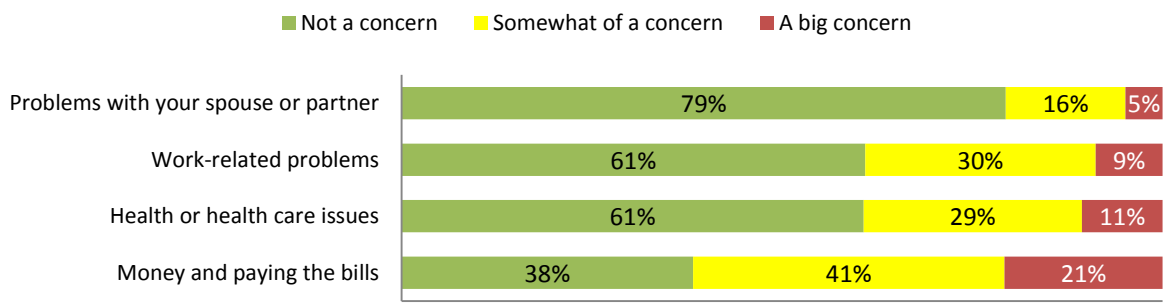
Source: Parent Information Form (2013)

Note: Sample size=1,482. Percentages may not sum to 100 due to rounding.

Potential Sources of Family Stress

Parents also indicated their experiences with various types of family stressors. The most frequently cited concern among parents was financial – a majority of parents who responded reported at least some anxiety over money and paying the bills; just over one-fifth of the sample felt this was "a big concern" for them. In addition, about 40 percent of families reported that work issues or health/healthcare issues were at least somewhat of a concern. Fewer families (21%) reported problems with their spouse or partner.

Figure 31. **Parent Reports of Life Concerns**



Source: Parent Information Form (2013)

Note: Sample sizes (from top to bottom) =1,515, 1,517, 1,530, 1,535. Percentages may not sum to 100 due to rounding.

Some families in the assessment also reported experience with challenging life circumstances. For example, nine percent of children were born to a teenage mother and 22 percent of parents reported being a single parent. Nineteen percent of parents had lost a job in the past year.

Figure 32. **Indicators of Possible Family Risk**

Risk Factor	Percent
Single parent	22%
Parent lost job in the last year	19%
Teen mother when child was born	9%

Source: Parent Information Form (2013)

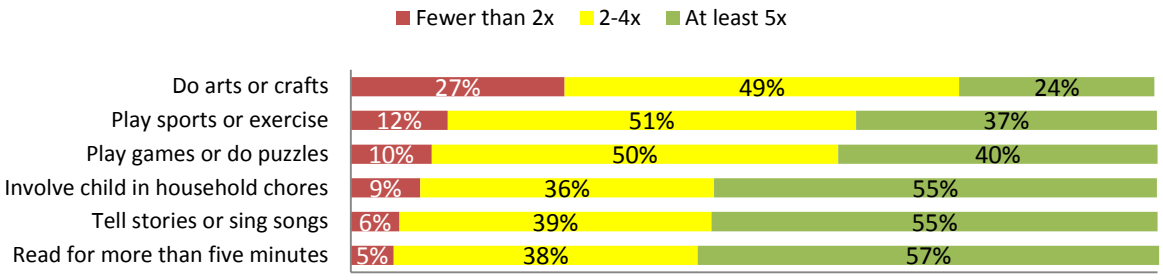
Note: Sample sizes (from top to bottom)=1,461, 1,538, 1,533.

Family Activities

To better understand families' routines and activities, parents were asked to report how often they spent time doing a variety of activities with their child during a typical week, including reading, telling stories or singing songs, doing household chores, playing games or doing puzzles, doing arts or crafts, and playing sports or exercising.

The majority of families reported that they regularly involved the child in household chores, told stories or sang songs, and read for more than five minutes. Families engaged in other activities (e.g., playing sports or doing arts and crafts together) less frequently.

Figure 33. **Frequency of Family Activities per Week**



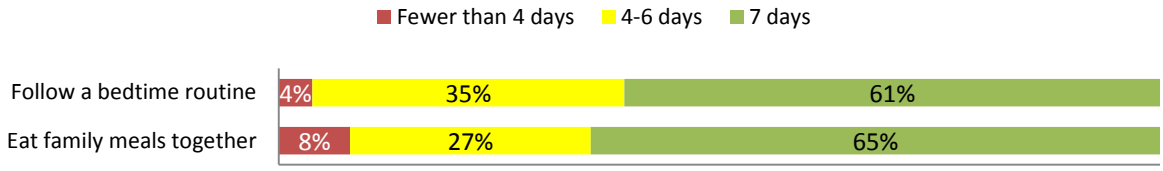
Source: Parent Information Form (2013)

Note: Sample sizes (from top to bottom)=1,453, 1,484, 1,486, 1,488, 1,497. Percentages may not sum to 100 due to rounding.

Daily Routines

Most families ate meals together and followed a bedtime routine every day. Only four percent followed a bedtime routine fewer than four days per week and eight percent ate family meals together this infrequently.

Figure 34. **Frequency of Daily Routines**

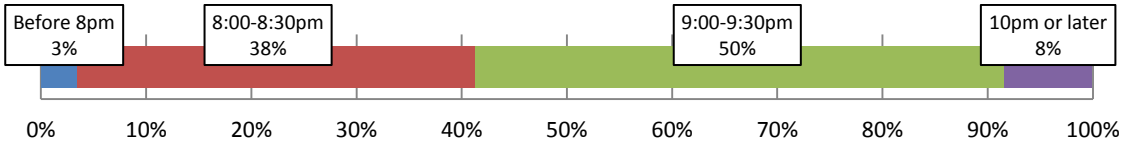


Source: Parent Information Form (2013)

Note: Sample sizes (from top to bottom)=1,491, 1,517. Percentages may not sum to 100 due to rounding.

The majority of children in the assessment (88%) had bedtimes between 8:00pm and 9:30pm, but eight percent went to bed at 10:00pm or later.

Figure 35. **Bedtimes**



Source: Parent Information Form (2013)

Note: Sample size=1,549. Percentages may not sum to 100 due to rounding.

Most children also ate breakfast each day before school (83%), but 17 percent missed at least one weekday breakfast. Poorer children (i.e., in families making under $35,000), children with less educated mothers (i.e., those with no more than a high school education), and Hispanic/Latino children were more likely to miss breakfast during the week. It is important to view this information in light of the fact that children have been shown to demonstrate stronger academic performance when they have proper nutrition (Alaimo, Olson, & Frongillo, 2001; Rampersaud, Pereira, Girard, Adams, & Metzl, 2005).

Amount of "Screen Time"

The American Academy of Pediatrics (AAP, n.d.) recommends that young children get no more than two hours of "screen time" per day, which includes time spent watching television or videos or playing video or computer games.

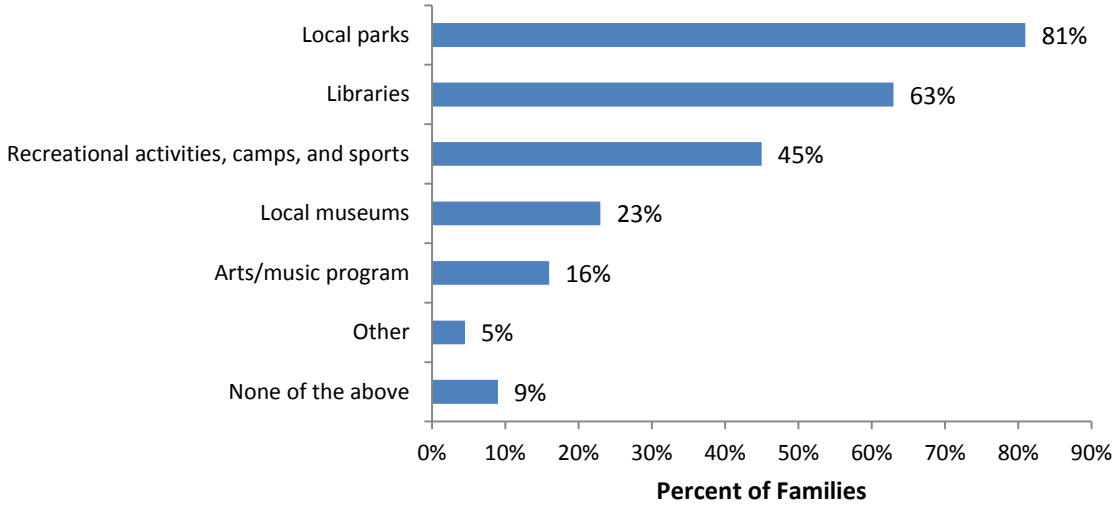
On average, children spent over two hours per day watching TV or playing video games, more than the amount recommended by American Academy of Pediatrics.

On average, children in this assessment spent over two hours per day on "screen time" activities (mean = 132 minutes). More than one-third of the children in this sample (38%) were spending more than the recommended two hours per day on screen time activities, according to parents.

Use of Local Family Resources

Parents indicated whether they had ever used any of five local family resources listed on the *PIF*, including local parks; libraries; recreational activities, camps and sports; local museums; and arts/music programs. The most widely used resources were local parks and libraries (utilized by 81 percent and 63 percent of families, respectively). Far fewer families reported attending arts and music programs, going to local museums, or using another resource that wasn't listed. A small percentage of families had not used any of the resources listed and did not indicate they utilized any other local family resources (9%).

Figure 36. **Local Family Resources Used**



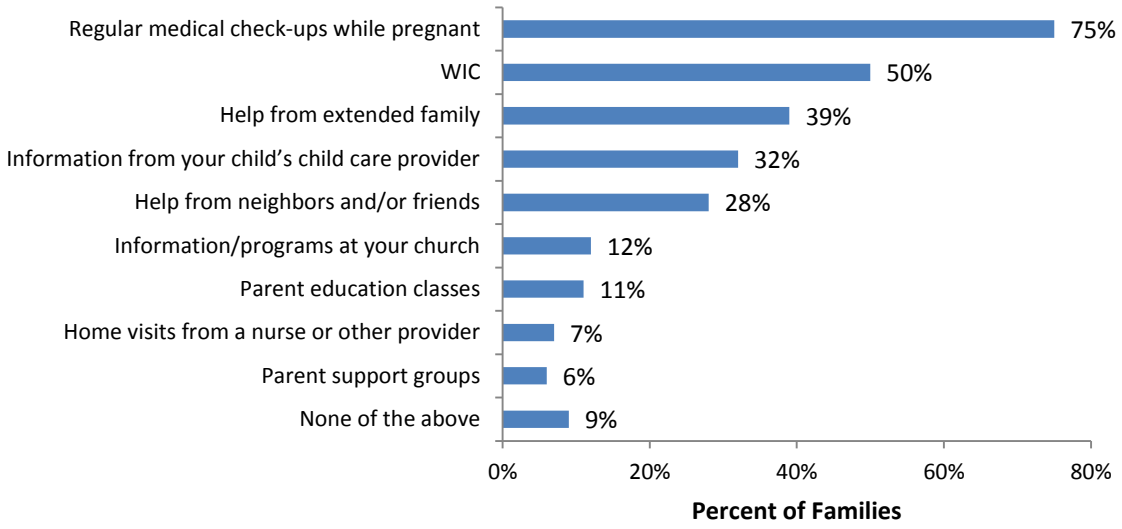
Source: Parent Information Form (2013)

Note: Sample size=1,541.

Use of Parenting Programs, Services, and Supports

Parents were also surveyed about their use of a variety of parent programs and services. The most commonly used parenting resource was regular medical care while pregnant; however, while this is recommended for all pregnant women, only 75 percent of women in this sample reported having received regular check-ups. Half of families had received assistance from WIC (Women, Infants, Children), the federal program to support the nutritional needs of low-income families with children under 5. Many parents also reported receiving help and information from family, neighbors, friends, and child care providers (see chart below). Nine percent of the families reported not using any parenting resources.

Figure 37. **Receipt of Parenting Programs, Services, and Supports**



Source: Parent Information Form (2013)

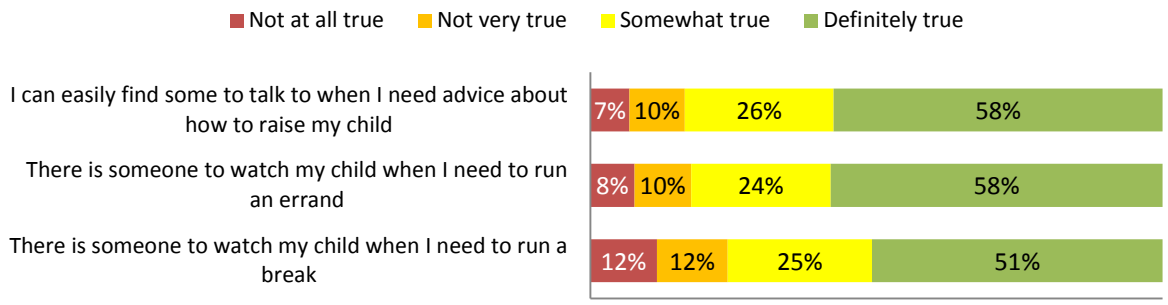
Note: Sample size=1,525.

Perceptions Related to Parenting

The *Parent Information Form* included a set of questions to assess parents' perceptions of being supported in their parenting and having adequate social resources to parent effectively.

The figure that follows shows that some parents felt they needed additional social support related to parenting. About 17 percent felt they did not have someone to rely on for parenting advice, while an even greater proportion felt they didn't have anyone to watch their children when needed.

Figure 38. **Parents' Perceptions of Support for Parenting**

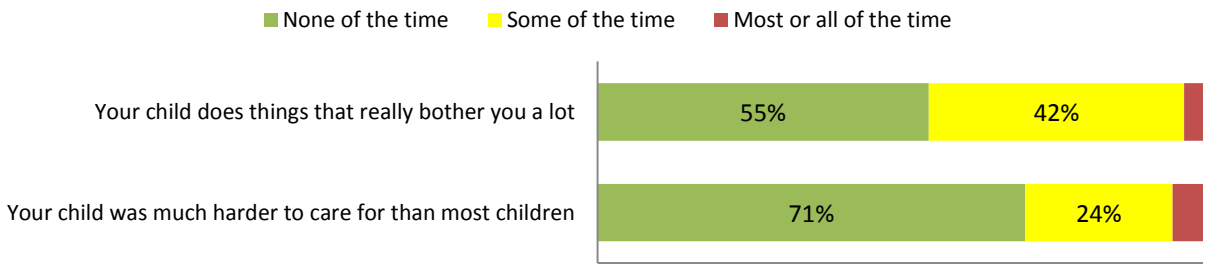


Source: Parent Information Form (2013)

Note: Sample sizes (from top to bottom)=1,524, 1,534, 1,538. Percentages may not sum to 100 due to rounding.

Parents also provided information about how often they experienced negative feelings about parenting in the last month, using a set of questions adapted from the National Survey of Children's Health (2003). Almost 30 percent of parents reported feeling that their child was much harder to care for than most other children, while nearly half of parents indicated that – at least some of the time – their child does things that really bother them a lot.

Figure 39. **Parenting Attitudes**

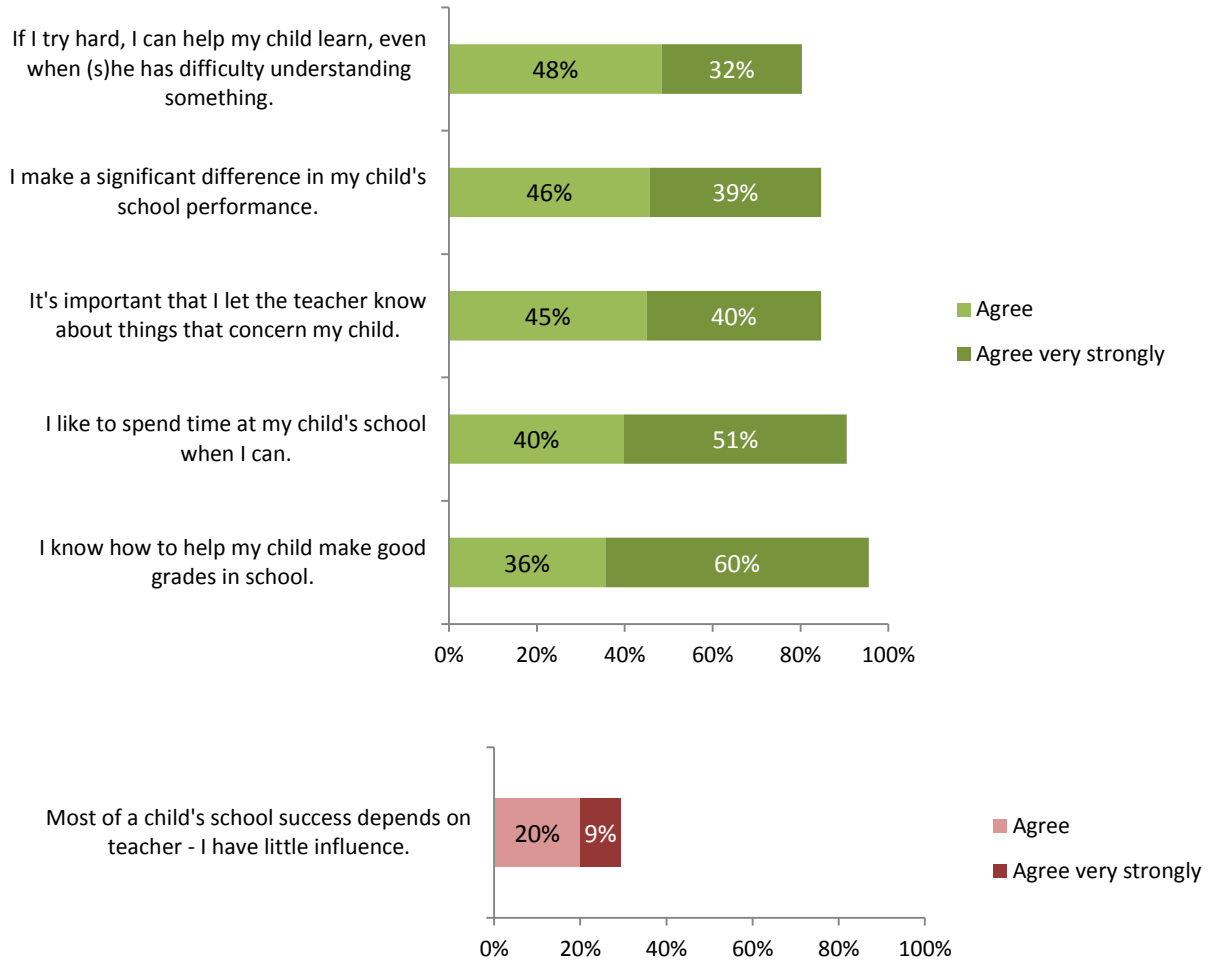


Source: Parent Information Form (2013)

Note: Sample sizes (from top to bottom)=1,542, 1,540. Percentages may not sum to 100 due to rounding. Proportions under 6% are not labeled.

Finally, parents were asked to report on their role in their child's education. These questions were adapted from a parent efficacy scale developed by Hoover-Dempsey and Sandler (2005). The following figure shows parents' responses to these questions, with the responses in green reflecting higher levels of efficacy and the responses in red reflecting lower levels of efficacy. As the figure shows, parents believed they play an important role in their child's education, but some parents may need additional tools and resources to feel empowered in making a difference. For example, nearly 30 percent of parents felt that they had limited influence on their child's success compared to the child's teacher.

Figure 40. **Parent Beliefs About Their Role in Child's Education**



Source: Parent Information Form (2013)

Note: Sample sizes (from top to bottom)=1,524, 1,495, 1,526, 1,526, 1,499, 1,524. Percentages may not sum to 100 due to rounding.

Home Visiting

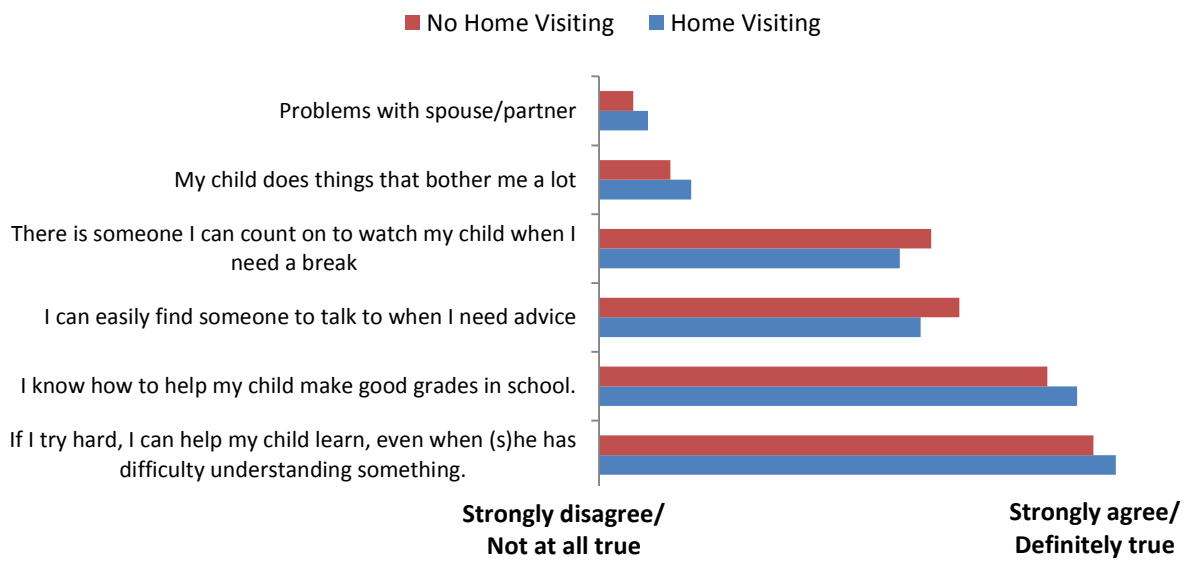
Participants in home visiting programs receive regular visits from nurses, family advocates or case managers, or community health workers who offer families case management services, mental health support, parenting training, and developmental screening. Parents whose families had received any such home visits (through F5AC and other providers) were compared with other families on screenings, parenting beliefs, and stress and support. As might be expected, enrollees in a home visiting program were significantly more likely to receive a developmental screen than those who were not in a home visiting program (55% versus 39%, p<.001).They also had greater confidence in their ability to help their child learn and earn good grades in school.

On the other hand, these families also showed some signs of greater stress, which likely reflected the targeted nature of F5AC and other home visiting programs to serve families at greater risk for poor outcomes (e.g., they are more likely to be low-income and their children are more likely to have special needs). Specifically, families enrolled in home visiting programs were more likely to report problems

with their spouse or partner and that they their child does things that bother them. They were also less likely to have support from others – they were less likely to have someone to talk to when they needed advice on parenting and to have someone to look after their child when they needed a break.

The chart below illustrates the significant associations that were found between home visiting participation and parenting attitudes and beliefs.

Figure 41. **Parenting Beliefs among Home Visiting Participants**



Source: F5AC services database and Parent Information Form (2013)

Note: Sample size=126-130 (Home Visiting); 1282-1301 (No Home Visiting). All differences significant at p<.05.

For Future Exploration: Help Me Grow

There were 25 children in the sample who participated in F5AC's Help Me Grow (HMG), a program that supports early screening and intervention. While this sample was not large enough to draw definitive conclusions about the impact of HMG, a simple analysis was conducted of the participation of HMG families in developmental screening and family activities. Future research with larger samples of HMG participants will allow for a deeper understanding of the effects of these programs.

Help Me Grow and Special Needs Screening

Of the 25 school readiness participants who had also enrolled in HMG, 13 (52%) had special needs or were suspected to have special needs, a much higher proportion than the sample overall. Nevertheless, among all children with special needs, there were few differences in diagnosis and treatment based on HMG program participation. Similar proportions of HMG participants and other children in the sample had received hearing, vision, and developmental screenings.

Figure 42. **Screening and Special Needs among Children in Help Me Grow**

	HMG	No HMG
Percent of sample with diagnosed or suspected special need* **	***52%***	***10%***
Percent of those with special need diagnosed by a professional	86%	86%
Percent of those with special need seeking treatment	78%	78%
If special need present, average age of diagnosis (yrs.)	2.89	3.01
Percent of sample with hearing screening	69%	72%
Percent of sample with vision screening	65%	75%
Percent of sample with developmental screening	50%	40%

Source: F5AC services database, Kindergarten Observation Form (2013), Parent Information Form (2013)

Note: Sample sizes (from top to bottom)=1,618, 79, 87, 74, 1,503, 1,503, 1,503. Significant difference: ***p<.001.

Section Summary

- The children assessed in the current study were **ethnically, linguistically, and socioeconomically diverse**. The largest racial/ethnic group in the sample was Hispanic/Latino (42%). About 43 percent of students were English Language Learners.

- Much of the sample was **socioeconomically disadvantaged**. Ten percent of children had mothers who had not graduated from high school, and almost half of families (48%) earned less than $35,000 per year. Over 60 percent of parents reported financial concerns and 19 percent had lost a job in the past year.

- In contrast to financial concerns, **health issues** were a problem for only a small minority of the sample. Students were generally healthy and well-connected to health care resources.

- Five percent of children had a diagnosed special need at the time of kindergarten entry, although an additional seven percent were suspected by their parent or teacher to have a special need but had not received a professional diagnosis.

- Many parents reported using **family resources and supports**. The most frequently used resources included parks and libraries, WIC, and social and informational support from family, friends, and childcare providers.

- Most parents reported positive **parenting attitudes** towards and engagement in their children's education.

- Families who received any kind of **home visiting** services demonstrated higher levels of stress, but they were more likely to have obtained a developmental screen for their child and more confident in their ability to support their child's school skills.

PART 5

Preschool and Other Early Care Experiences

Contents of this Chapter:

This chapter describes students' early care and education experiences in the year prior to kindergarten and explores the child and family characteristics that were associated with a greater likelihood of preschool attendance.

Key Findings:

- *Early Care and Education Experiences of Students in the Year Prior to Kindergarten Entry:*
  - Sixty-four percent of students had attended a licensed preschool or childcare center.
  - Five percent had attended a short-term pre-K program sponsored by First 5 Alameda County.
  - In addition to parental care, 24 percent of students assessed had spent time with an adult other than a parent (e.g., babysitter or relative), and six percent had attended licensed care in someone's home.

- *What Factors Were Associated with Licensed, Center-Based Preschool Attendance?*
  - As family income and education levels increased, so did the likelihood of children having attended preschool.
  - Hispanic/Latino students were least likely to have attended preschool, while Asian students were the most likely to have done so.

Preschool and Other Early Care Experiences

Preschool has long been known to help reduce gaps in readiness between poorer children and their more affluent peers (Heckman, 2006; Zhai, Brooks-Gunn, & Waldfogel, 2011). Furthermore, it has been shown to be associated with long-term benefits for attendees, including improved educational attainment, earnings, and employment in adulthood (Heckman & Raut, 2013). Consequently, it was of great interest to know how many children in the Alameda County sample were exposed to preschool prior to kindergarten.

Types of Early Care Experiences[13]

As the figure shows, the majority of children (62%) received their usual child care prior to kindergarten from a parent (alone or in combination with other sources). Likewise, most students in the assessment had attended a licensed preschool or childcare center, including Head Start, State Preschool, or private program (64%).[14] In contrast, just under one-quarter of students were cared for in informal settings (e.g., by a relative or baby sitter), and a small percentage were cared for in family child care homes (6%).

Figure 43. **Students' Early Care Experiences**

Type of Child Care Arrangements in the Year Prior to Kindergarten	Percent of students
Licensed preschool or childcare center (e.g., Head Start, State Preschool, private – teacher or parent report)	64%
Parent provided usual child care	62%
Relative, neighbor, babysitter, or nanny	24%
Licensed care in someone's home (teacher or parent report)	6%

Source: Kindergarten Observation Form (2013), Parent Information Form (2013), Preschool Experience Form (2013)

Note: Sample sizes (from top to bottom)=1,647, 1,634, 1,662, 1,663. Percentages sum to more than 100 because more than one source of care could be selected.

Some children in the sample also participated in short-term pre-K programs in the months leading up to kindergarten. One such program was sponsored by F5AC and involved five to six weeks of instruction for children with no prior preschool or licensed care experience. However, relatively few of the children in the sample participated in a F5AC-sponsored pre-K program, particularly compared to the number of children in other types of summer pre-K. More information on the children in the sample who participated in F5AC services can be found later in this report (see section titled *Readiness of Children in F5AC Pre-K Programs and Other Forms of Pre-K*).

[13] Teachers were also asked about whether child participated in Transitional kindergarten (TK), but because of inconsistent responses to this item, data for TK are not reported.

[14] More information about the calculation of preschool rates is included in Appendix 7.

Figure 44. **Attendance at First 5 Pre-K or Other Summer Pre-K**

Attended Summer Pre-K	Percent
F5AC pre-K	5%
Summer pre-K that was not F5AC	19%

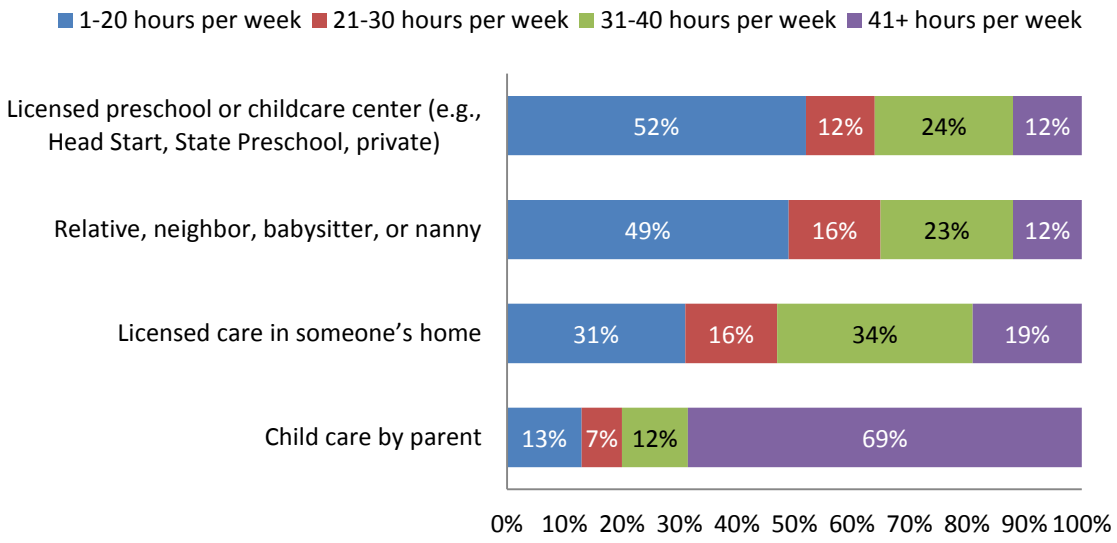
Source: F5AC services database, Kindergarten Observation Form (2013), Parent Information Form (2013)

Note: Sample sizes (from top to bottom)=1,696, 1,654. Children were counted as attending F5AC's pre-K if they were able to be matched to F5AC database records.

Amount of Time Spent in Care and Languages Spoken

Children who were cared for by a parent were most likely to be cared for in this setting for over 40 hours per week. In contrast, over half of children cared for in a licensed preschool spent no more than 20 hours in this setting each week. Children who were cared for in informal care settings typically spent no more than 30 hours per week in this type of care. Finally, the majority of children who spent time in licensed family care spent at least 30 hours per week in the setting.

Figure 45. **Students' Weekly Hours in Different Early Care Settings**



Source: Parent Information Form (2013)

Note: Percentages (from top to bottom)=797, 68, 366, 798. Percentages may not sum to 100 due to rounding.

Parents also indicated the languages spoken in the child care settings where their children spent time. English (85%) and Spanish (36%) were by far the most common languages spoken in these settings.

Figure 46. **Languages Spoken in Children's Child Care Settings**

Languages in Child Care Arrangements	Percent of students
English	85%
Spanish	36%
Chinese/ Cantonese/ Mandarin	5%
Filipino	3%
Vietnamese	2%
Farsi or Dari	1%
Other	5%

Source: Parent Information Form (2013)

Note: Sample size=1,528. Percentages sum to more than 100 because respondents could check more than one language.

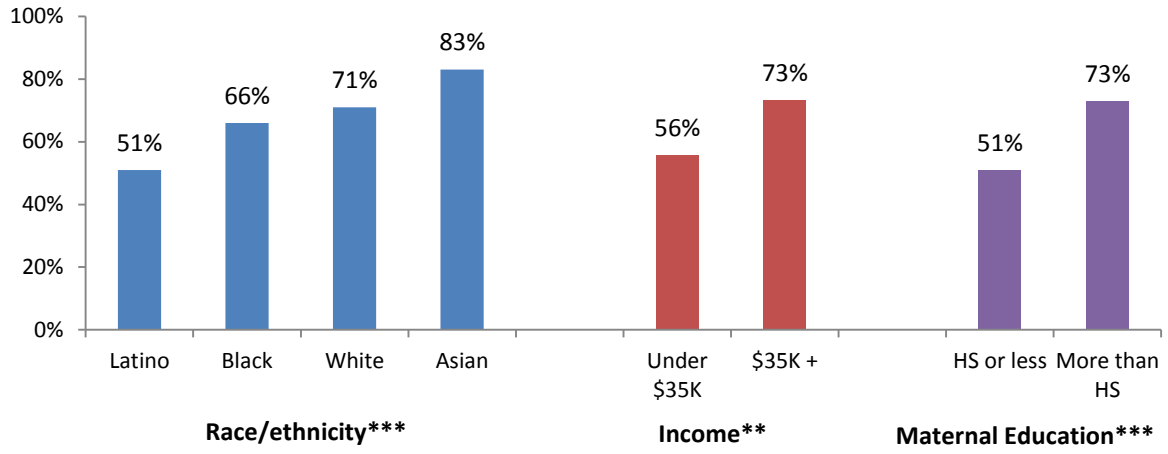
Who Attends Preschool?

Preschool attendance has been shown in countless studies to be strongly related to enhanced school readiness skills. Among children in this sample, 64 percent of children had attended a licensed preschool or childcare center, including Head Start, State Preschool, or a private program. However, preschool attendance was not uniform across subgroups of children in the sample. In this section, various child and family background factors are examined to see which children were more likely to have attended a licensed preschool.

Children exposed to preschool came from more affluent, educated families. Preschool attendance rates also were highest among Asians.

The figure that follows breaks down preschool attendance as a function of child and family characteristics, including race/ethnicity, income, and maternal education. Hispanic/Latino students had the lowest preschool attendance rates, while Asian students were most likely to have attended preschool. Preschool attendance was also associated with income and maternal education; children with more affluent parents and more educated mothers were more likely to have attended preschool.

Figure 47. **Licensed Preschool or Childcare Center Attendance (Head Start, State Preschool, or Private Program)**



Source: Kindergarten Observation Form (2013), Parent Information Form (2013), Preschool Experience Form (2013)

Note: Sample sizes=697 (Latino), 170 (Black), 183 (White), 339 (Asian), 1,489 (income), 1,536 (education). ***Overall chi-square tests significant (p<.001). After adjusting for multiple comparisons, preschool attendance rates differed significantly by race/ethnicity for all racial/ethnic group comparisons (p<.001) except black and white; rates also differed mother's education (p<.001). **Attendance rates differed significantly by income (p<.01).

Section Summary

- Sixty-four percent of children had attended a licensed preschool or childcare center, including Head Start, State Preschool, or a private program.
- Five percent of students had enrolled in F5AC's short-term pre-K program.
- As family income and education levels increased, so did the likelihood of children having attended preschool.
- Hispanic/Latino students were least likely to have attended preschool, while Asian students were the most likely to have done so.

PART 6
Transitions to Kindergarten

Contents of this Chapter:

This section describes the information parents received about the transition to kindergarten and the activities families engaged in to help their children prepare for school entry.

Key Findings:

Information Provided to Families

- Preschool/child care providers were the primary source of information about the transition to kindergarten for most parents.
- Nineteen percent of parents reported that they did not receive information about how and when to register their child for kindergarten.
- About 30 percent of parents did not receive information about their own child's readiness for school or general information about how to develop skills children need for kindergarten.
- Hispanic/Latino families, low-income families, and families in which the mother had no education beyond high school were less likely to report having received information about how to help their child develop readiness skills.

Families' Transition Activities

- About 61 percent of parents worked on school skills with their child and half had attended a parent meeting or orientation prior to the start of kindergarten.
- On average, parents had engaged in about three transition activities out of a list of nine possible activities. Three percent of parents had not done any of the nine activities to prepare their child for kindergarten.
- Families involved in home visiting participated in more transition activities than those who did not.

Transitions to Kindergarten

This section describes the information families received about the transition to kindergarten and the activities they engaged in to prepare their children for school entry. It also examines family characteristics associated with kindergarten preparation.

Families' Exposure to Kindergarten Information and Opportunities

Most families received readiness information from the child's preschool or child care provider.

Parents were asked about the types and sources of information they received to better prepare their child for entering kindergarten. The table that follows shows one-fifth of parents had not received information about how and when to register their child for school. Those that did receive registration information primarily received it from the child's elementary school. Seventy-four percent received general information about how to help their child develop skills for kindergarten, 69 percent received information about how ready their own child was for kindergarten, and 67 percent received general information about child development and parenting. Most parents obtained these types of information from their child's preschool or child care provider.

Figure 48. **Receipt of Information Related to Kindergarten Transition**

Type of Information	Percent who received	Among those who received it, percent who got it from…		
		Preschool/ Child care provider	Elementary school	Another source
Information about how and when to register child for school	81%	33%	49%	25%
General information about how to develop skills children need for kindergarten	74%	71%	23%	16%
Specific information about readiness of own child	69%	72%	19%	12%
General information about child development and parenting	67%	51%	12%	43%

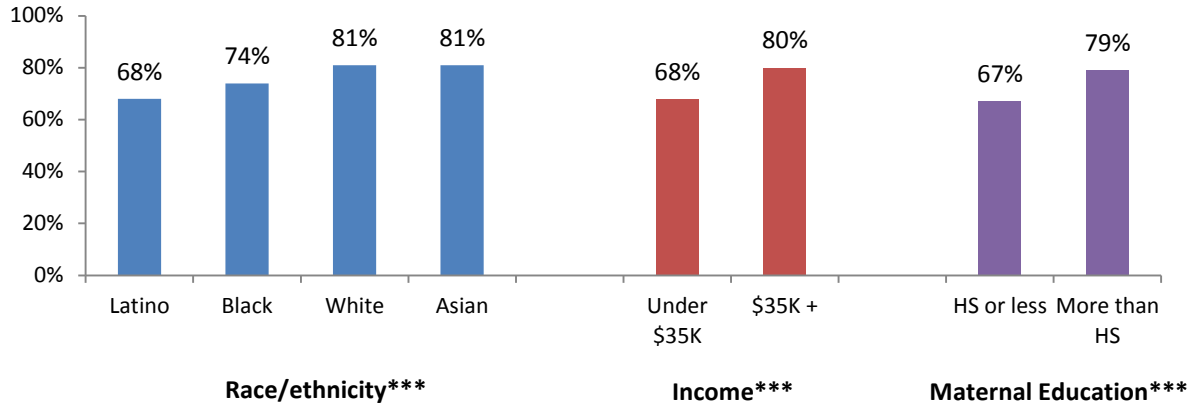
Source: Parent Information Form (2013)

Note: Percentages who received information/ opportunities sample sizes (from top to bottom): 1,480, 1,452, 1,384, 1,419. Percentages for the different sources of information are based on families who indicated that they did receive a particular type of information. Parents could choose multiple sources of information.

Families with certain characteristics were more likely to report that they received information about how to help their child develop school readiness skills. Hispanic/Latino families were significantly less likely to report receiving this readiness information than Asian and white families (other racial/ethnic group comparisons were not significant). Similarly, families that earned at least $35,000 and in which

the child's mother had education beyond high school were significantly more likely than families without these characteristics to report receiving information about how to prepare their children for kindergarten.

Figure 49. **Who Is Getting Readiness Information?**



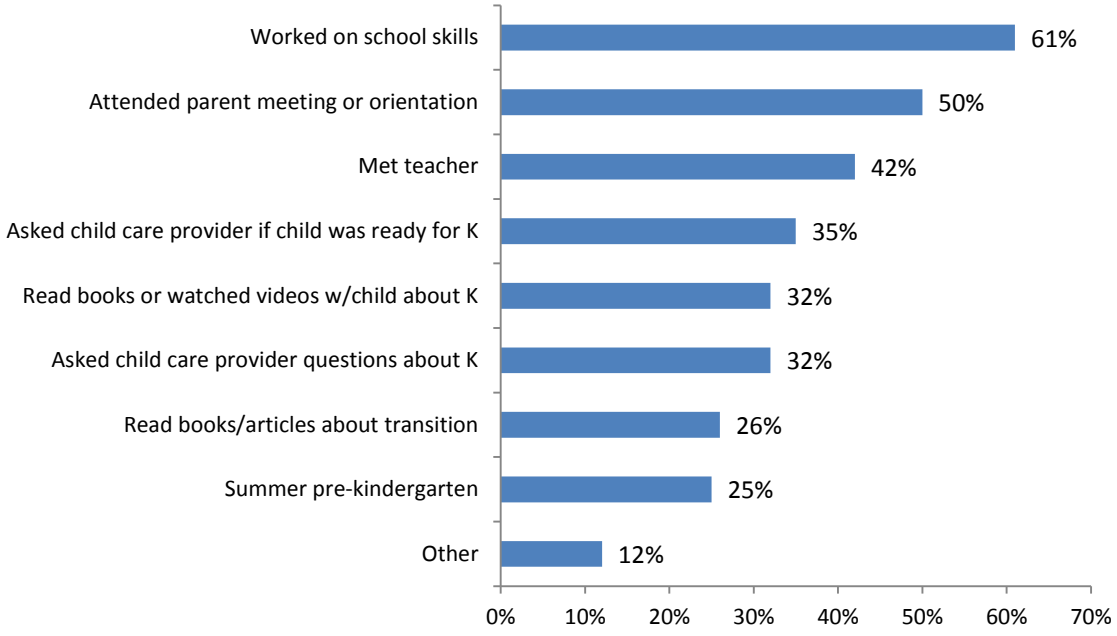
Source: Parent Information Form (2013)

Note: Sample sizes=583 (Latino), 144 (Black), 176 (White), 304 (Asian), 1,400 (income), 1,434 (education). Overall chi-square tests significant (p<.001). ***After adjusting for multiple comparisons, differences between Latino & white students and between Latino & Asian students significant (p<.001). Differences based on income and education also significant (p<.001).

Parents' Engagement in Transition Activities

Parents were also asked to report on kindergarten transition activities they had engaged in prior to the start of school. Most parents had helped their child with academic skills prior to school entry (61%) and half had attended a parent meeting or orientation. On average, parents engaged in about three transition activities out of nine possible (mean = 3.11). Only three percent of parents indicated that they had done none of these activities.

Figure 50. **Percentage of Parents Engaging in Transition Activities**



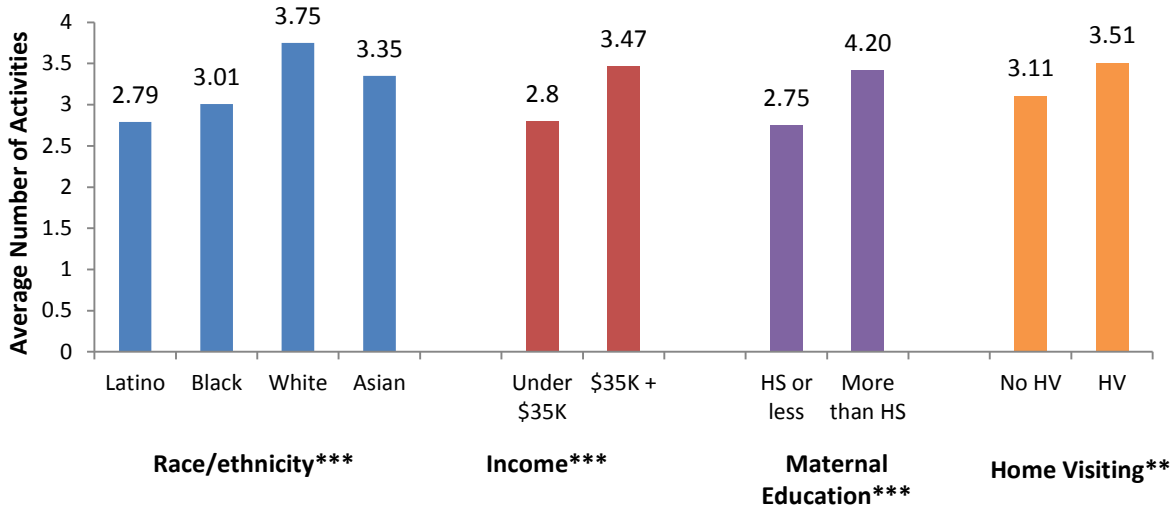
Source: Parent Information Form (2013)

Note: Sample size=1,570.

Similar to the findings on kindergarten readiness information, more affluent and educated families engaged in more readiness activities with their children prior to kindergarten than poorer and less educated families. There were also differences in readiness activity participation by race/ethnicity. Parents of Hispanic/Latino and black children participated in significantly fewer activities than parents of Asian and white children.

Families enrolled in home visiting activities, including those sponsored by First 5, were significantly *more* likely to be engaged in their child's schooling and preparation for kindergarten. As the graph below indicates, they participated in significantly more readiness activities with their child than families not enrolled in home visiting programs.

Figure 51. **Transition Activities by Child and Family Characteristics**



Source: Parent Information Form (2013)

Note: Sample sizes=1,570 (race/ethnicity), 1,477 (income), 1,523 (education), 1,455 (home visiting). ***The following racial/ethnic comparisons were significant after adjusting for multiple comparisons: Latino & white (p<.001); Latino & Asian (p<.001); black & white (p<.001). Differences based on income and education (p<.001) and home visiting (p<.01).

Section Summary

- Most parents received information about preparing for their child's transition to school, and this information was most likely to come from the child's preschool or caregiver.
- Children from low-income families or families with lower maternal education levels were less likely to have received readiness information than other families.
- The parents of Hispanic/Latino children were least likely to have received readiness information, while the parents of Asian children were most likely to report receiving this kind of information.
- Parents did a variety of things to assist their child in having a smooth transition to school. Most worked on school skills with their child and about half of parents attended a parent meeting or orientation.
- On average, parents had engaged in about three transition activities out of a list of nine possible activities.
- Parents of Asian and white children were more likely the parents of black and Hispanic/Latino children to engage in school transition activities.
- More affluent and educated families participated in more transition activities than poorer and less educated families.
- Families involved in home visiting participated in more transition activities than families not involved in home visiting.

PART 7

Readiness of Children in F5AC Pre-K Programs and Other Forms of Pre-K

Contents of this Chapter:

Promoting school readiness is a key objective of many First 5 Alameda County (F5AC) programs and services for children and families, particularly F5AC's pre-K programs. This section explores the following research question: To what extent is exposure to F5AC's pre-K programs associated with parents' readiness knowledge and behavior and children's readiness levels?

Key Findings:

- Children involved in F5AC short-term pre-K programs were
  - More likely than their peers to be Hispanic/Latino and less likely to be Asian, black, or of mixed race
  - More likely to be English Learners
  - More likely to come from a family in which the mother had not been educated beyond high school
- Compared to parents of children without any pre-K program experience, parents of those in F5AC's pre-K programs were more likely to have received information about developing their child's readiness skills.
- Families involved in F5AC pre-K programs engaged in significantly more kindergarten transition activities than families of children with no pre-K experience.
- Children with F5AC pre-K experience had significantly higher scores on *Social Expression* than children who did not and had marginally higher scores overall.
- Children in F5AC pre-K programs were also more likely than children without pre-K experiences to be *Strong in all domains* of readiness.

Special Section: A Closer Look at F5AC Pre-K and other Forms of Pre-K

This section focuses on the 90 children in the readiness study (5% of the sample) who participated in a F5AC short-term pre-K program for children who did not attend other licensed preschool or child care. Frequently offered in the summer, these five-to-six week programs are designed to provide children with an opportunity to learn in a developmentally appropriate classroom environment and help develop skills necessary for success in kindergarten. Parents and children are introduced to the school setting, easing the transition to kindergarten. Parent workshops are also provided through this program, as are developmental screenings if a teacher or parent sees a need for them.

F5AC Pre-K Participants in the Readiness Study

Half of the students participating in both the readiness study and First 5 pre-K programs were from San Lorenzo Unified School District. The next highest participation rate was found among students in Hayward Unified (20%). Few F5AC pre-K participants in the study attended schools in other districts.

Figure 52. **Attendance at First 5 Short-Term Pre-K Programs by District**

District	Number in F5AC pre-K	Percent of F5AC pre-K total
San Lorenzo Unified	45	50%
Hayward Unified	18	20%
Fremont Unified	9	10%
San Leandro Unified	7	8%
Livermore Valley Unified	3	3%
Oakland Unified	3	3%
Castro Valley Unified	2	2%
Newark Unified	2	2%
New Haven Unified	1	1%
Total	90	100%

Source: F5AC services database, Kindergarten Observation Form (2013)

Note: Sample sizes (from top to bottom)=68, 340, 331, 40, 24, 22, 363, 119, 283. Percentages may not sum to 100 due to rounding.

Children who participated in F5AC pre-K programs were more likely to be Hispanic/Latino than other students in the sample. Conversely, they were less likely to be Asian, black, or students of mixed race. Students in the F5AC pre-K programs were somewhat more likely than their peers to be English Learners and were also more likely to have a mother with no more than a high school education. There were no differences between the two groups of children in terms of special needs or family income.

Figure 53. **How Do F5AC Pre-K Participants Differ from their Peers?**

Child/Family Characteristics	Percentage of F5AC Pre-K participants	Percentage of those not participating in F5AC Pre-K
Child race/ethnicity***		
Hispanic/Latino	63%	40%
Caucasian/White	11%	11%
Asian	6%	21%
African American/Black	5%	10%
Multi-racial	5%	10%
Other	10%	8%
Child is English learner*	56%	42%
Mother has high school education or less**	57%	38%
Family income is less than $35,000/year	50%	52%
Child has diagnosed special needs	4%	5%
Child has suspected but not (yet) diagnosed special needs	10%	6%

Source: F5AC services database, Kindergarten Observation Form (2013), Parent Information Form (2013)

Note: Sample sizes=1,409-1604 (non-recipients), 81-90 (SPK participants). Significant differences according to chi-square tests or t-tests are indicated as follows: * p < .05; ** p < .01; *** p < .001.

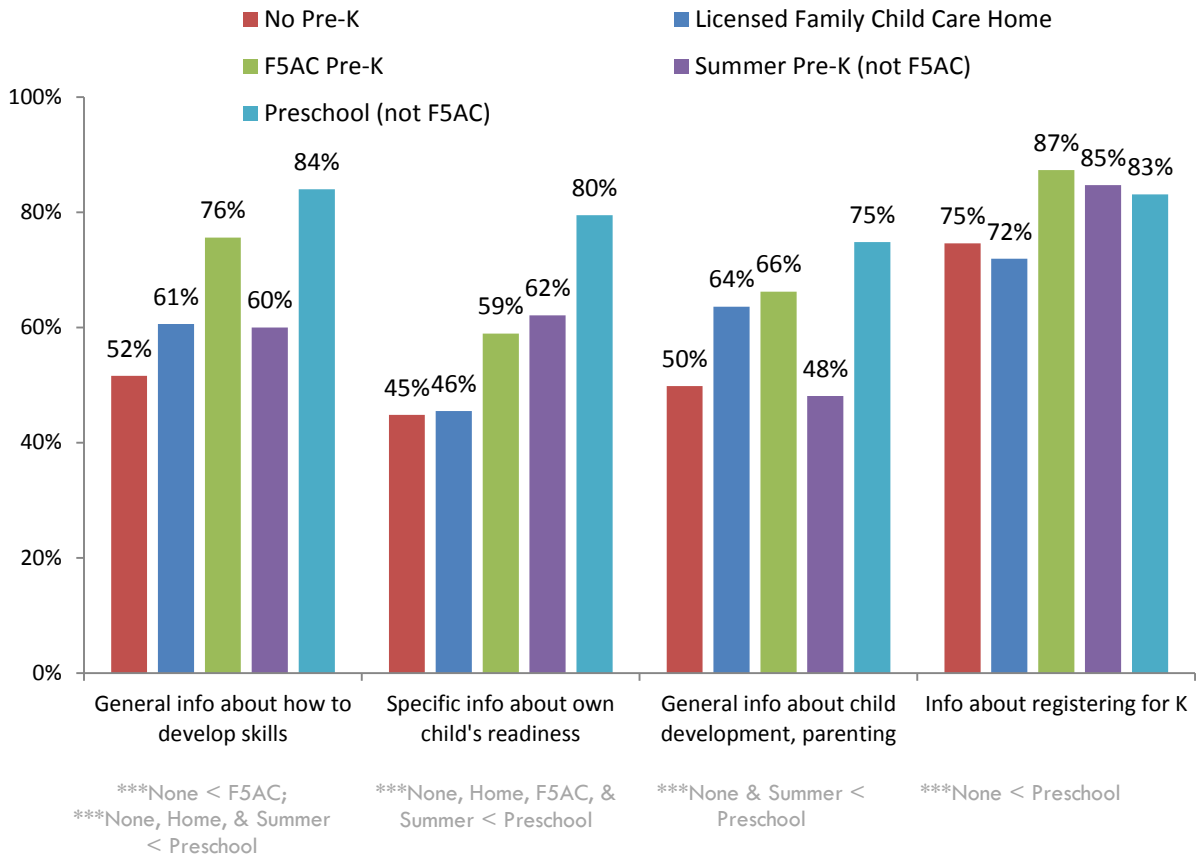
Is F5AC Pre-K Program Participation Associated with Parent Readiness Knowledge and Behavior?

The F5AC short-term pre-K programs include school readiness-promoting interventions that target both the child and his or her parents and caregivers. Therefore, ASR examined the association between child participation in these programs and whether or not parents received information about readiness.

Families of children who attended a First 5 pre-K program were more likely than children without any pre-K program experience to have received general information about developing their child's readiness skills. However, families involved in a licensed, center-based preschool were more likely than families of children without pre-K program exposure to have received *all* forms of readiness information: general information about developing their child's readiness skills, information about their own child's readiness skills, general information on parenting and child development, and information about registering their child for kindergarten.

Families involved in preschool were more likely than other families to have received readiness information.

Figure 54. **Parents' Receipt of Information Related to Readiness, by Pre-K Experience**

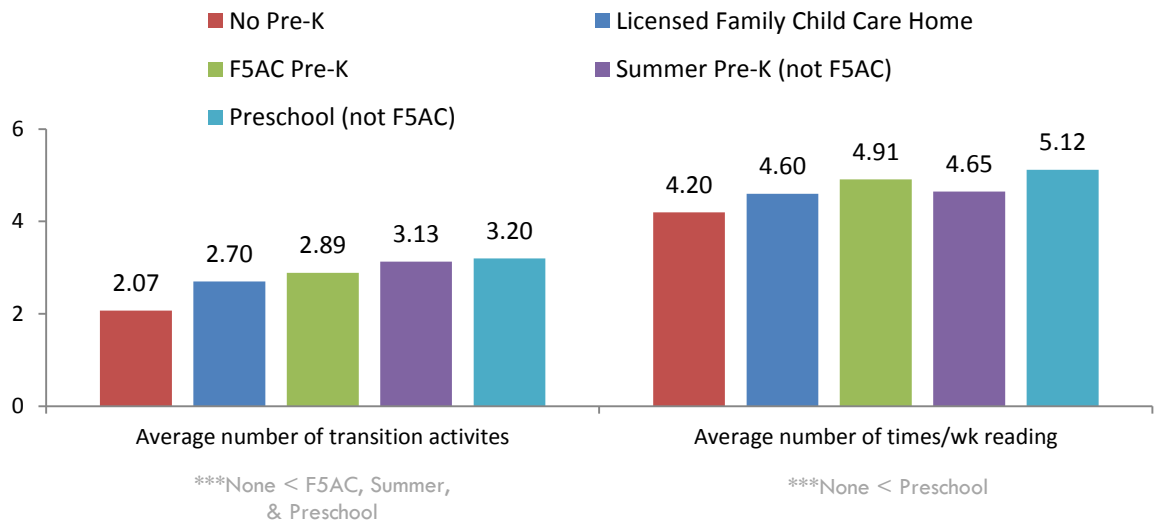


Source: F5AC services database, Kindergarten Observation Form (2013), Parent Information Form (2013)

Note: Sample size=1,150-1241. Overall chi-square analyses significant (p<.001). ***Only significant group differences after adjusting for multiple comparisons (p<.001) are indicated above.

Families who participated in a First 5 pre-K program also exhibited greater engagement in activities to prepare their child for the start of kindergarten compared to families without pre-K. As the following figure shows, F5AC pre-K families engaged in significantly more kindergarten transition activities than families of children with no pre-K experience. Similarly families involved in licensed preschool programs (not First 5-sponsored) read to their children on a more frequent basis than families with no pre-K.

Figure 55. **Transition Activities and Reading with Child, by Pre-K Experience**



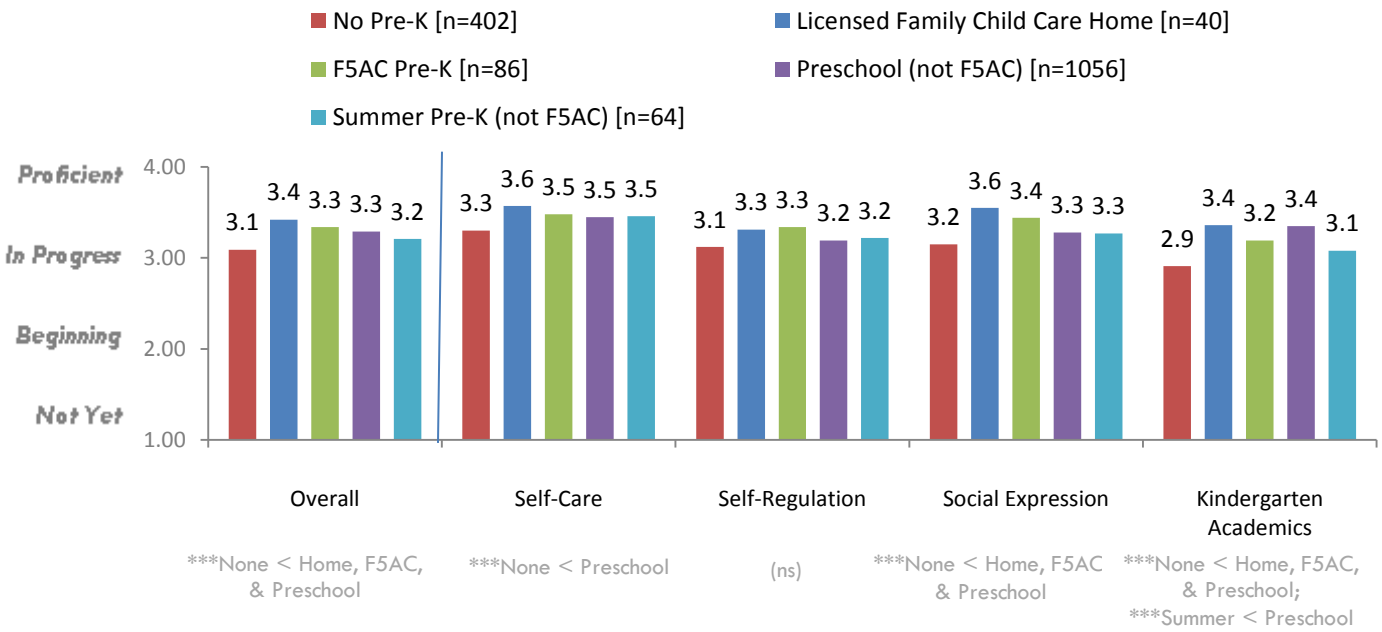
Source: F5AC services database, Parent Information Form (2013)

Note: Sample Size=1,264-1,331. Overall differences in mean scores were significant, according to one-way analyses of variance ($p < .001$). Transition activity totals were adjusted to remove "Had child attend summer pre-K" to avoid artificially inflating averages of summer pre-K groups. *** Only significant group differences after adjusting for multiple comparisons ($p<.001$) are indicated above.

Do Children Who Attend a Pre-K Program Show Enhanced Readiness Skills?

There were several differences in average readiness scores based on children's pre-kindergarten experiences (see figure on following page). In general, children without any pre-K experience had significantly lower readiness than children who had attended licensed, center-based preschool, a F5AC pre-K program, or licensed family home care, but their scores were no different from children who had attended a short-term summer pre-K that was not First 5-sponsored. The only exception to this trend was in the *Self-Regulation* domain: children without any pre-K had similar *Self-Regulation* scores to children attending short-term pre-K, licensed home care, or preschool. Although readiness levels were generally higher among children with short-term pre-K, licensed home care, or preschool compared to children without pre-K, there were few differences in readiness based on *type* of pre-K, preschool, or child care attended. Only in *Kindergarten Academics* was there a difference based on type of pre-K; specifically, scores were higher among children attending a licensed, center-based preschool than among children who attended a summer pre-K program that was not First 5-sponsored.

Figure 56. **Unadjusted Average Readiness Scores, by Pre-K Experience**



Source: F5AC services database, Kindergarten Observation Form (2013), Parent Information Form (2013)

Note: Sample Size=1,632-1,651. ***Only significant group differences after adjusting for multiple comparisons (p<.001) are indicated above.

Analyses were also run on the association between school readiness scores and various types of pre-K experiences, controlling for an array of other child and family factors[15]. The technique used allowed us to examine the independent contribution of different types of pre-K, holding other important factors constant. The figure on the next page shows differences in readiness scores between children with a given type of pre-K experiences and children without that type of pre-K experience. A positive number indicates that children participating in that form of care had higher scores than children who did not, while a negative number indicates the experience was associated with lower scores, controlling for other factors.

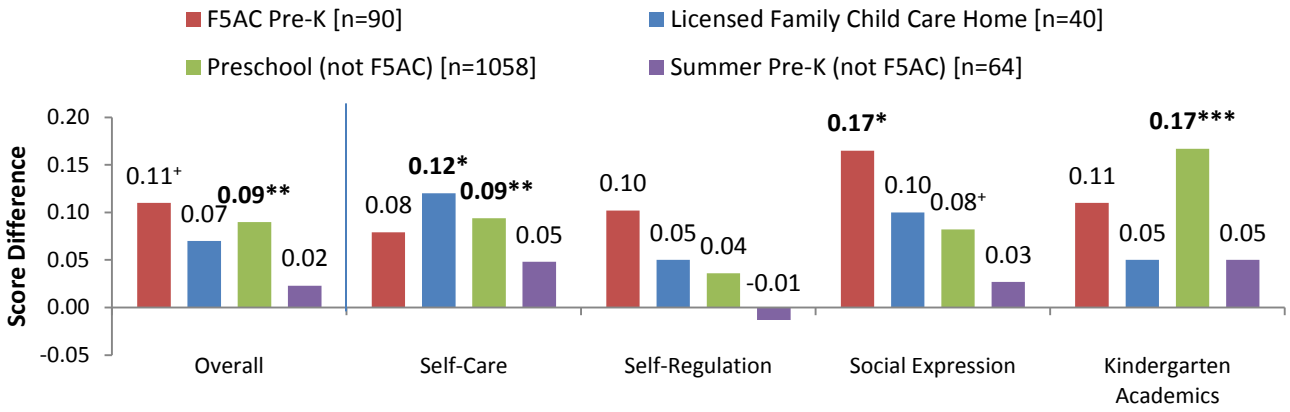
Children who participated in F5AC pre-K programs had higher Social Expression *scores than children who did not.*

The score differences represented in the figure below may appear small, but recall that readiness scores were only between 1 ("*Not Yet*") and 4 ("*Proficient*"), and many of the differences were nevertheless significant or marginally significant. Children who attended a First 5-sponsored pre-K program had significantly higher scores on *Social Expression* than children who did not and had marginally higher scores overall. Attending a licensed, center-based preschool was associated with better scores overall, in the *Self-Care & Motor Skills* domain, and in *Kindergarten Academics.* Scores among these children were also marginally higher in the *Social Expression* domain. It is noteworthy that no type of pre-K experience was significantly associated with higher scores in *Self-Regulation*.

[15] The predictors entered into these regressions were identical to those included in the regressions discussed in the previous section with the exception of "Preschool", which was removed and replaced by specific types of pre-K experiences: F5AC Pre-K; Summer Pre-K (not F5AC); Licensed Center-based Preschool; and Licensed Home Care.

Controlling for child and family characteristics and other types of pre-K experiences, there did not appear to be a significant relationship between readiness and attending a summer pre-K program that was not affiliated with F5AC.

Figure 57. **Adjusted Score Gains/Losses Associated with Pre-K Experiences**



Source: F5AC services database, Kindergarten Observation Form (2013), Parent Information Form (2013)

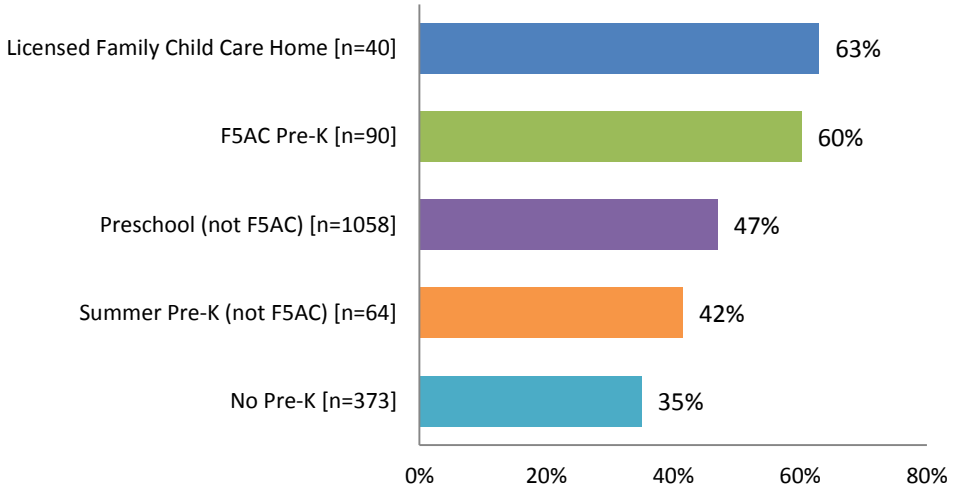
Note: Sample size=1,089-1,091. + Marginally significant at p<.10; *Significant at p < .05; **Significant at p < .01; ***Significant at p < .001.

Readiness Portraits of students, as a function of what type of pre-K experience they had, were also examined, with particular attention to the percentage of students who were *Strong in all domains*. This analysis revealed that children who attended a First 5 pre-K program were significantly more likely to be *Strong in all domains* than children with no pre-K. Children in licensed family homes were also more likely than children without pre-K to have strengths across readiness domains.

Children in F5AC pre-K programs were more likely to be Strong in all domains than children without pre-K.

It is important to note, however, that very few children attended licensed home care and summer pre-K, so the findings presented here may not generalize to the broader population of students attending these forms of pre-K.

Figure 58. **Percent *Strong in All Domains*, by Pre-K Experience**



Source: F5AC services database, Kindergarten Observation Form (2013), Parent Information Form (2013), Preschool Experience Form (2013)

Note: Sample size=1,653. Overall differences were significant according to chi-square test (p<.001). The following group differences were significant, after adjusting for multiple comparisons: No Pre-K & F5AC (p<.001), Home & No Pre-K (p<.001).

Section Summary

- Children/families involved in F5AC pre-K programs
    - were much more likely than their peers to be Hispanic/Latino and less likely to be Asian, black, or of mixed race.
    - were also more likely to be English Learners.
    - were more likely than their peers to come from a family in which the mother had not been educated beyond high school.
    - were more likely to have received information about how to develop readiness than families of children with no pre-K experience.
    - engaged in significantly more kindergarten transition activities than families of children with no pre-K experience.
    - had significantly higher scores on *Social Expression* than children who did not and had marginally higher scores overall.
    - were more likely than children without pre-K experiences to be *Strong in all domains* of readiness.

PART 8
Conclusions and Discussion

Contents of this Chapter:

This section draws upon the findings from five years of school readiness assessment research in Alameda County to suggest priorities for action and intervention to enhance children's readiness for school.

Conclusions and Discussion:

- The achievement gap starts before students enter kindergarten – and so should interventions to eliminate the gap.
- Children's basic health and well-being needs must be met for them to be successful in school.
- Home visiting programs may help parents better prepare their children for school.
- Both children and their families benefit from pre-K experiences.
- The findings prompted the following broad discussion questions:
    - Readiness levels among entering kindergartners tend to be lowest in the *Self-Regulation* domain. How might this finding inform classroom approaches in the first weeks of school?
    - Older children tend to have higher readiness skills than their peers. How might these findings be used to support interventions for younger children prior to or at kindergarten entry?
    - What steps can communities take to support children's health and well-being prior to kindergarten?
    - How can schools and communities best identify and support young children with developmental concerns and special needs?
    - Preschool consistently predicts higher readiness levels. What efforts can be made to expand access to high-quality preschool experiences?
    - What kinds of resources might be provided to parents who have a child who will soon enter (or has recently entered) kindergarten to help them support their child's readiness skills?

Conclusions and Discussion

Who is Ready for Kindergarten?

The current study found that children in Alameda County who entered kindergarten with strong readiness skills tended to have particular characteristics and experiences that separated them from their peers. Reflecting on these findings may help communities shape targeted, effective responses that boost children's preparation for school.

Child age, gender, and special needs are common predictors of readiness

The current study confirmed findings from other research: readiness is strongly related age, gender, special needs, and health/well-being.

Children who were ready for school were more likely to be female, typically developing, from relatively affluent and educated families, and older than their peers. These findings are in line with other research on factors related to school readiness. For example, an early study of school readiness found that "developmental age", which takes into account any developmental delays due to special needs, was more predictive of readiness than chronological age alone (Wood, Powell, & Knight, 1984). Other research has found kindergarten-aged girls tend to have better language and reading skills than boys, as well the social skills and classroom behavior more conducive to success in kindergarten (Tach & Farkas, 2006; Zill & West, 2001). Our findings also corroborate research showing that children from families with higher socioeconomic status tend to be better prepared for kindergarten entry than their peers (Crosnoe & Cooper, 2010; Entwisle, Alexander, & Olson, 1997; Isaacs, 2012).

The achievement gap between Asian students and students of other racial/ethnic groups has its roots before children even enter school

Ethnic minority groups have typically demonstrated lower achievement levels at school entry relative to white students (Lee & Burkham, 2002). In the current sample, however, only Asian students performed better than students from other racial/ethnic groups, after controlling for family environment and resource variables. The readiness levels of white students were comparable to those of black and Hispanic/Latino students.

The findings from this study suggest that the achievement gap seen in later school years between Asian students and students from other races/ethnicities begins even before children enter school. However, the fact that white students were no better prepared for kindergarten than their black and Hispanic/Latino peers was surprising. There are a few plausible explanations for this finding. White students were underrepresented in the sample compared to students of other racial/ethnic groups and it is possible that the white students who participated in the study differed from white students across the county in ways that were not measured. On the other hand, the racial gap in readiness has been partly attributed to differences in family and neighborhood environments and available resources (Crosnoe, 2005; Lee & Burkham, 2002). Some research has found that when other factors, like family income and maternal education, are controlled for (as they were in this study), the racial gap in school readiness narrows to insignificance (Issacs, 2012).

Gaps in readiness based on race/ethnicity have been found to narrow or disappear completely when other factors (e.g., family income) are controlled for.

Children need to be healthy to learn

One factor that stood out as a consistently strong predictor of readiness was child health and well-being. The results from the current study support research that has found that health significantly contributes to school readiness (Currie, 2005). This research suggests that children must have their basic health needs met before they can begin to focus on developing social, emotional, and academic skills.

Home visiting programs may help parents better prepare their children for school

The families enrolled in home visiting programs tended to face greater challenges than other families (e.g., they were more likely to be low income and report other family stressors), but they also demonstrated greater strengths in terms of preparing their children for kindergarten. For example, home visiting families were more likely than other families to have received developmental screenings that would help them identify and address any special needs their child might have. In addition, they engaged in significantly more school readiness activities than parents not enrolled in a home visiting program, such as working on school skills with the child or learning more about the transition to kindergarten. Finally, parents enrolled in a home visiting program appeared more confident in their ability to support their child's growth in school. These associations between home visiting and kindergarten preparation suggest there are great benefits to enrollment in these programs, particularly for high-need families.

Children and their families likely benefit from preschool and other pre-k experiences, including First 5 pre-K programs

Preschool attendance was strongly associated with higher readiness skills as well as enriching home environments. Children who attended preschool were read to more frequently each week, and their families engaged in more transition activities, like meeting with the kindergarten teacher and working on school skills. Other early education experiences also were related to better outcomes for children in the study. For example, children who attended a First 5-sponsored pre-K program were more likely than children without pre-K experiences to be *Strong in all domains* of readiness and they had significantly higher *Social Expression* scores.

Although most parents felt their children were very ready for school, kindergarten teachers rated most children as not fully ready.

Furthermore, both preschool attendees and First 5 pre-K attendees had parents who received information about how to prepare their child for school. Most parents also noted that they received readiness information from their preschool or other child care provider. Receiving such information, in turn, was associated with higher readiness skills among children, suggesting an added benefit to families who provide their children with pre-K experiences.

Pre-K programs can help parents develop a more accurate understanding of their own child's readiness and how to help him or her prepare for school.

The findings from this study also suggest preschools play an important role in helping families develop a more accurate picture of what readiness looks like and how ready their own child is. In general, parents felt strongly that their children were ready for kindergarten. However, for many parents, this perception did not match the readiness rating provided by the child's teacher. While just under half of children were rated by their teachers as ready on all domains, well *over* half of parents believed their children were "very ready" on each of the primary areas of readiness. That is, some parents may not have a clear understanding of what is expected of their child upon school entry or how to help the child achieve readiness. Preschools and other pre-K programs can help close

this gap: close to three-quarters of the parents who received information about their own child's readiness and how to develop readiness skills reported getting this information from their child's preschool or child care provider.

Discussion Questions

Over the past five readiness assessments in Alameda County, the significant predictors of enhanced student readiness have remained rather consistent. The following questions are based on these findings and designed to stimulate discussion of potential interventions and approaches to raise the readiness levels of Alameda County students.

Readiness levels among entering kindergartners tend to be lowest in the *Self-Regulation* domain. How might this finding inform classroom approaches in the first weeks of school?

In all five readiness studies conducted to date in Alameda County, students' *Self-Regulation* skills at kindergarten entry have been lower than their skill levels in any other domain. At the same time, building self-regulation skills has been shown to be instrumental in ensuring future academic success. Recent local longitudinal research linking school readiness at kindergarten to longer-term (third grade) academic outcomes found that students with a combination of strong skills in both *Kindergarten Academics* and *Self-Regulation* performed better at third grade than students with lower readiness in these domains – including students who had strong skills only in *Kindergarten Academics* (ASR, 2010). Other longitudinal research also demonstrates the benefit of early cognitive and self-regulation skills for labor market success and earnings in adulthood (Farkas, 2003; Caneiro & Heckman, 2003). In short, building *Self-Regulation* skills in young children is critical.

Older children tend to have higher readiness skills than their peers. How might these findings be used to support interventions for younger children prior to or at kindergarten entry?

Younger children need extra support and attention as they enter kindergarten.

Readiness was significantly and positively associated with age. Moreover, while the average age of students in the sample was 5.39 years, the average age of children who entered kindergarten *Strong in all domains* was 5.46 years. These findings suggest younger students need extra support as they transition to school. Transitional kindergarten (TK) may be one way to address the needs of younger entering students, but all kindergarten teachers, including those in classrooms without TK students, must be provided the time and resources (e.g., teaching aides) to support to their younger students, especially at the beginning of the school year.

What steps can communities take to support children's health and well-being prior to kindergarten?

In order for children to be successful in school, their basic needs for adequate food, sleep, and good health must first be met. The current study found that children's health is strongly related to their readiness skills across domains, even after taking into account the family's socioeconomic status. These findings suggest that across family backgrounds, programs that promote positive health and well-being in young children can go a long way toward improving academic and socio-emotional development.

How can schools and communities best identify and support young children with developmental concerns and special needs?

Students with special needs consistently have lower readiness levels than their peers without special needs across domains of readiness. This finding highlights the importance of early developmental screening and intervention. Many families in the sample had not yet sought treatment for their child's special need, and seven percent of the students were suspected to have a special need, but had not yet been diagnosed. Furthermore, just forty percent of children in the sample had received a developmental screen. It is important to continue county-wide efforts to ensure that children receive developmental screenings conducted by well-trained professionals in both medical and early care and education settings.

Preschool consistently predicts higher readiness levels. What efforts can be made to expand access to high-quality preschool experiences?

Licensed preschool attendance is related to higher readiness levels.

Preschool attendance, particularly initiatives like Head Start aimed at lower-income families, can help reduce the gaps in school readiness discussed earlier (Zhai et al., 2011). In fact, the effects of preschool may be greatest for the most disadvantaged children (Magnuson, Meyers, Ruhm, & Waldfogel, 2004). In the current study, preschool attendance was strongly associated with higher overall readiness skills. Although many students in this sample had attended preschool, attendance levels were low among particular subgroups of children (e.g., Hispanic/Latino children and children from lower socioeconomic backgrounds). Districts and community partners should continue to support access to high-quality early education experiences, particularly for children who are currently underrepresented in licensed preschool settings.

When parents received information about improving school readiness, their children demonstrated higher readiness scores. What kinds of resources might be provided to parents who have a child who will soon enter (or has recently entered) kindergarten to help them support their child's readiness skills?

Parents need information and training on how they can support school readiness.

NEGP definitions of school readiness include a specific component recognizing the role that families and communities play in preparing children for school. This study found that children whose parents received information about how ready their child was for school and information about how to better prepare them from school had stronger readiness skills than children of parents who did not receive this information.

The majority of parents who received such readiness information reported receiving it from their child's early care providers. However, as mentioned above, there are many families without access to preschool or other early care providers and there were also many parents with inaccurate perceptions of their child's own readiness levels. Perhaps because they are less likely to enroll their children in preschool, parents of Hispanic/Latino children and parents with lower income and education levels were less likely to report receiving readiness information. This suggests special efforts should be made to reach these families. For example, such families may benefit from public education programs that give families tools for building readiness skills at home.

About the Researcher

ASR is a nonprofit social research firm dedicated to helping people build better communities by creating meaningful evaluative and assessment data, facilitating information-based planning, and developing custom strategies. The firm has more than 30 years of experience working with public and private agencies, health and human service organizations, city and county offices, school districts, institutions of higher learning, and charitable foundations. Through community assessments, program evaluations, and related studies, ASR provides the information that communities need for effective strategic planning and community interventions.

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