Concerted Cultivation Among Low-Income Black and Latino Families

Susan Sonnenschein, Shari R. Metzger and Brittany Gay

There continue to be large and significant group-related differences in the percentage of children earning age-appropriate reading and math scores as they go through elementary school (Reardon & Portilla, 2016). For example, on the 2017 National Assessment of Educational Progress, 59% of Asian and 47% of White fourth graders (the youngest grade tested) received proficient or higher reading scores compared to 20% of Black and 23% of Latino fourth graders (NCES, 2018a). Only 22% of fourth graders eligible for free or reduced lunch, an index of low-socioeconomic status (SES; a composite based on parents' occupation prestige, education, and income), received proficient or higher scores in reading compared to 52% of those not eligible for free or reduced lunch. With math, 67% of Asians and 51% of White fourth graders received proficient or higher scores compared to 19% of Black and 26% of Latino children (NCES, 2018b). And only 25% of fourth graders eligible for free or reduced lunch received proficient or higher scores in math compared to 57% of those not eligible for lunch subsidies. Such demographic group-related differences in children's academic achievement are present at the start of school and generally continue or increase over time (Bradley & Corwyn, 2002; Burchinal et al., 2011; Cheadle, 2008; Sonnenschein & Sun, 2016). It is also important to realize that relative to their percentages in the population, Black and Latino children are more likely than White children to be growing up in low-income families (Patten & Krogstad, 2015).

These statistics, although important, do not tell us why certain groups of children fail to achieve age-appropriate reading and math skills. More importantly, they do not offer insights for closing group-related achievement gaps. This chapter focuses on the home-based reading and math experiences that low-income Black and Latino children have, their parents' views of these experiences, and, more generally,

S. Sonnenschein (✉) · S. R. Metzger · B. Gay
Department of Psychology, University of Maryland, Baltimore County (UMBC), Baltimore, MD, USA
e-mail: sonnensc@umbc.edu

S. Sonnenschein and B. E. Sawyer (eds.), *Academic Socialization of Young Black and Latino Children*, https://doi.org/10.1007/978-3-030-04486-2_3

parents' beliefs about how they socialize their children's academic development. We focus on these two groups because Black and Latino children from low-income backgrounds are disproportionately represented among children who experience academic difficulties (Jiang, Ekono, & Skinner, 2015; Taylor, Clayton, & Rowley, 2004). We know that what occurs at home, particularly in the early years before the start of formal schooling, has a powerful influence on children's academic progress (Puccioni, 2015; Wilder, 2014). Therefore, our goal in describing the academic socialization experiences available to low-income Black and Latino children is to understand what is occurring at home and the beliefs that guide these practices, in order to build upon existing strengths to increase children's academic success (Cabrera, Beeghly, & Eisenberg, 2012; Puccioni, 2015).

Much of the prior research on parents' academic socialization has focused more on reading than math practices (Sénéchal & LeFevre, 2002; Sonnenschein, Baker, & Serpell, 2010), included more middle-income than low-income children (Huntsinger & Jose, 2009), and more elementary school than preschool families (Sawyer, Cyczk, Sandilos, & Hammer, 2016; Suizzo, Pahlke, Yarnell, Chen, & Romero, 2014). Of particular relevance for this paper, research often has not distinguished between Black and Latino families but tended to compare Blacks/Latinos to Whites (Brooks-Gunn & Markman, 2005; cf., Sawyer et al., 2016; Stevenson, Chen, & Uttal, 1990). Such an approach focuses more on what is lacking in the practices of these two groups than on strengths upon which to build (Suizzo et al., 2014). However, building upon strengths already present in the family may lead to more effective interventions (Cabrera et al., 2012; Sonnenschein, 2002).

The theoretical framework for this study reflects sociocultural theories that stress the importance of heritage influences and the larger social structure when examining family practices (Vygotsky, 1978; Wong & Hughes, 2006). We also consider the role that the child-rearing philosophy of concerted cultivation plays in the reading and math home experiences that low-income Black and Latino children have. The term *concerted cultivation* was introduced by Lareau (2003, 2011) in an ethnographic study with a small group of 10-year-old children. The children, who were either Black or White, came from low- and middle-income families. The goal of the study was to document group-based differences in these children's academic socialization experiences. Lareau (2011) discussed differences in how the low- and middle-income parents socialized their children's academic development. She focused on three aspects of socialization: activities made available to the children, nature of language interactions between parents and children, and parents' interactions with the school. In general, the middle-income parents engaged in concerted cultivation whereby they actively and purposely fostered their children's growth through the provision of academic and leisure activities. In contrast, low-income parents engaged in a philosophy of child-rearing more consistent with the "accomplishment of natural growth." Rather than parents seeking enrichment activities for their children, the children engaged in more spontaneously occurring activities or "hung out" with their families or other children. The present chapter focuses on one of the three socialization aspects of concerted cultivation that Lareau (2011) studied, the frequency and nature of activities children engage in.

There is a growing body of research on concerted cultivation as a philosophy underlying parents' academic socialization of their children's educational progress. Research generally has confirmed income and racial/ethnic differences in these practices (e.g., Cheadle, 2008; Cheadle & Amato, 2011; Crosnoe, Ansari, Purtell, & Wu, 2016). For example, Bodovski and Farkas (2008) used the nationally representative Early Childhood Longitudinal Study-Kindergarten cohort (ECLS-K: 1998, Tourangeau et al. 2006) and found that SES was positively and strongly associated with concerted cultivation practices which, in turn, were associated with children's reading scores. Concerted cultivation was based on scales created by the authors from items in the dataset, parents' perceptions of their responsibility to their child's cognitive development, how children reportedly spent their leisure time, parent–school involvement, and the number of books in the home. The data were collected when children were in the spring of first grade. Despite the relations found with concerted cultivation and academic outcomes and despite SES-related differences in practices, it is not clear whether these differences in concerted cultivation are due to philosophical differences in child-rearing or differences in resources available to different demographic groups of families. For example, Yeung, Linver, and Brooks-Gunn (2002) used data from the 1997 Child Development Supplement of the Panel Study of Income Dynamics to explore the relation between income and children's (N = 753) early academic scores. Yeung et al. (2002) concluded that the relation between income and academic scores was mediated by the families' abilities to allocate funds to provide an intellectually stimulating environment for their children. That is, the low-income families had less discretionary income to spend on their children's activities.

The present study further explores whether concerted cultivation reflects low-income Black and Latino parents' views of child-rearing by focusing on the activities these parents provide for their preschool children, and how these parents discuss the activities their children engage in. First, however, we provide a brief review of what we know about low-income Black and Latino parents' academic socialization of their young children's early academic skills, including parents' practices and beliefs about reading and math education.

Parents' Academic Socialization

Although concerted cultivation is most commonly described as a set of practices (Lareau, 2011), another way to conceptualize concerted cultivation is to include the parents' beliefs about how to foster their children's development. Concerted cultivation, therefore, is an aspect of academic socialization. Parents' academic socialization includes parents' attitudes, values, goals, expectations, and beliefs about education as well as the opportunities and activities they make available to their children (Puccioni, 2015; Taylor et al., 2004). Parents' academic socialization is associated with their children's academic development (Puccioni, 2015; Sonnenschein & Galindo, 2015; Wilder, 2014) and reflects parents' cultural and socioeconomic background (Keels, 2009; Sonnenschein, 2002; Suizzo et al., 2014).

Parents' Practices with their Children

In a recent synthesis of nine meta-analyses, Wilder (2014) found that parents' involvement in their children's education was positively associated with their academic achievement. This relation occurred across racial/ethnic and income groups. Nevertheless, there are some group-based differences in actual practices. Low-income parents were less likely than middle-income ones to engage in practices traditionally associated with fostering children's academic skills (Bradley, Corwyn, McAdoo, & Garcia Coll, 2001). Similarly, Black and Latino parents of kindergarten and third graders from the ECLS-K dataset were less likely than White parents to engage in such practices (Cheadle & Amato, 2011). In a review of racial/ethnic differences in children's school readiness, Brooks-Gunn and Markman (2005) noted that Black and Latino parents talked less to their children, used a more limited vocabulary, and were less likely to read to their children than White parents. Sonnenschein and Galindo (2015), using the ECLS-K dataset, found that Latino families were less likely than Black families who, in turn, were less likely than White families to report reading with their kindergarteners or providing them with other academically enriching activities. Keels (2009) found that low-income, Black and Latino (Spanish or English speaking) parents of children in Early Head Start were less likely to report reading with their children than were low-income White parents. In contrast to Sonnenschein and Galindo (2015), differences between Black and Latino families were not statistically significant. However, Keels' (2009) sample included low-income children who were younger than the low- and middle-income children in Sonnenschein and Galindo (2015).

As noted above, most of the research on parents' practices has compared low- and middle-income groups and various racial/ethnic groups with White families. Such an approach has found important differences between the groups in what might be considered traditional practices. Thus, we know that low-income and Black and Latino parents are less likely than middle-income or White parents to make certain forms of activities available to their children or engage in certain practices with their children. Such an approach, however, emphasizes deficits without highlighting possible strengths to build upon. Therefore, it is important to consider what beliefs about children's learning are characteristic of low-income Black and Latino families and what learning opportunities are available in these homes.

Parents' Goals and Beliefs About Children's Development

Parents have specific goals for their children's development and beliefs about how such development occurs as well as their role that predict the experiences they make available to their children which subsequently predict children's development (Keels, 2009; Serpell, Baker, & Sonnenschein, 2005; Sonnenschein, Metzger, & Thompson, 2016). For example, Stevenson et al. (1990), in a study with

approximately 3000 participants, found that Black and Latino parents expressed higher educational aspirations for their first, third, and fifth graders than did White parents (see also Suizzo et al., 2014). Although they collected data on children's reading and math scores, they did not relate to parents' beliefs to children's academic outcomes.

The results of a 5-year longitudinal study on literacy development beginning when children were in prekindergarten found that parents who endorsed a socialization approach that focused on engaging the child's interest and making interactions enjoyable had children who scored higher on various measures of literacy than children whose parents endorsed an approach more directly focused on the cultivation of skills (Serpell et al., 2005). More low-income than middle-income parents endorsed a skills approach. Serpell et al. (2005) did not include a Latino sample and focused primarily on reading. A more recent study by Sonnenschein et al. (2016) found that the academic socialization beliefs of low-income Black and Latino parents and the activities their young children engaged in were positively associated with children's reading and math skills (see also Sonnenschein et al., 2012). Consistent with findings by Serpell et al. (2005), the majority of parents endorsed a skills-based approach.

Black and Latino Families' Socialization

As previously noted, not much research has compared academic socialization between Black and Latino families. Although Black and Latino parents both express high aspirations for their children's future academic success (Sonnenschein & Galindo, 2015; Stevenson et al., 1990; Suizzo et al., 2014) and endorse similar home literacy practices (Sawyer et al., 2016), there are several important differences between the two groups in terms of history, country of origin, English language fluency, and other factors that may impact their academic socialization of their children. These differences suggest the need to look separately at the two groups. For instance, although families of Black and Latino heritage both engage in racial socialization (e.g., what parents tell their children about discrimination and how to react to it; Hughes, 2003; Suizzo, Robinson, & Pahlke, 2008), Black parents more frequently tend to prepare their children for potential bias they may encounter in society than Latino parents (Hughes, 2003; Suizzo et al., 2014). Racial socialization, specifically preparation for bias, informs parents' academic socialization. For example, Suizzo et al. (2008) conducted a focus group with five mothers of children between 3 and 6 years of age to investigate the issue of racial socialization. These mothers discussed teaching their children about racial socialization and noted the importance of education for their children to overcome barriers of racism (see also Suizzo et al., 2014).

There are also important differences in parenting styles and other socialization practices between Black and Latino families. Black families tend to engage in what Brooks-Gunn and Markman (2005) call tough love. They more often use stricter,

more controlling forms of parenting combined with warmth and responsiveness. This combination is positively associated with their children's general as well as cognitive/academic development (Brooks-Gunn & Markman, 2005; Suizzo et al., 2014).

Latino families, many of whom are immigrants, may lack familiarity with US societal institutions and have limited English skills to interact with school personnel (Sonnenschein et al., 2018). Thus, they may be less likely to attend school functions and participate in classroom activities (Wong & Hughes, 2006). In addition, their definition of education is typically broader than that of Black or White parents. Their definition emphasizes social and moral development (Zuniga, 2011) which may result in less emphasis on more traditional academic areas taught in the US. Relatedly, Latino parents focus more on motivational practices (e.g., telling their children about the sacrifices they have made for them to do well in school) than traditional academic activities such as book reading or counting (Azmitia, Cooper, & Brown, 2009; Ceballo, Maurizi, Suarez, & Aretakis, 2014). Latino parents also seem to view academic education as the teachers' job and either do not engage in much academic socialization when children are in preschool (Goldenberg, 2001) or are more likely to follow the teacher's lead for what to do with their children than initiate their own activities (Sonnenschein et al., 2018).

Reading and Math

Much of the research on children's early academic skills has focused on reading and home-based activities that foster reading skills (e.g., Sénéchal & LeFevre, 2002; Serpell et al., 2005) with far less attention given to children's math development. The frequency of reading age-appropriate texts of different genres and engaging in oral language activities is associated with children's reading skills (Serpell et al., 2005; Snow, Burns, & Griffin, 1998). Similarly, the frequency with which preschool through early elementary school-aged children play board or card games, cook, and shop (LeFevre, Polyzoi, Skwarchuk, Fast, & Sowinski, 2010; LeFevre et al., 2009; Ramani & Siegler, 2008; Skwarchuk, Sowinski, & LeFevre, 2014) and the amount and type of math talk they hear (Eason & Levine, 2017; Ramani, Rowe, Eason, & Leech, 2015; Susperreguy & Davis-Kean, 2016) is associated with the development of children's math skills.

Although parents report that their kindergarten children engage in math-related activities at home (Skwarchuk et al., 2014), they place less emphasis on children's early math knowledge than on reading (Barbarin et al., 2008; Musun-Miller & Blevins-Knabe, 1998). Moreover, middle-income parents report knowing less about how to foster their preschool children's math than reading skills (Cannon & Ginsburg, 2008), which has implications for what they do with their children. Consistent with such findings, Tudge and Doucet (2004) found that low- and middle-income Black and White 3-year-olds, who were observed at home or in daycare, engaged in more reading than math activities, although neither occurred particularly often and many children never engaged in either activity.

The Present Study

Current research on parents' academic socialization of children's learning suggests possible demographic group-based differences in parents' engagement in practices consistent with concerted cultivation (Cheadle, 2008; Cheadle & Amato, 2011; Lareau, 2011). Much of that research has been done with elementary school-aged children and not younger children. However, as Crosnoe et al. (2016) suggest, the years right before the start of school may be a particularly important time to consider. More importantly, with a few notable exceptions (Sonnenschein et al., 2016), much of the research focuses on the actual activities without considering parents' beliefs about the activities.

The research reported in this chapter addresses reading and math opportunities available in the homes of a group of low-income Black and Latino preschool-aged children. Of particular interest are low-income Black and Latino parents' beliefs about the reading and math experiences they make available to children. We address one aspect of Lareau's (2003, 2011) concerted cultivation triad, the activities children engage in. We begin by presenting parents' beliefs about the importance of children engaging in reading and math activities at home and parents assisting with such engagement. We turn next to the frequency with which the children engage in various reading and math activities. We then discuss what parents like about the activities and what they look for when choosing activities for their children. Although we present these findings separately for Black and Latinos, we do present some comparison of findings for the two groups.

The data in this chapter come from a larger study investigating the relations between parents' beliefs, practices, and children's early reading and math skills (see Sonnenschein et al., 2016). The focus here, however, is the parents' views and not the quantitative relations between beliefs, practices, and children's achievements. It is important to note that inquiry into concerted cultivation was not the original purpose of the study and no specific questions about concerted cultivation were asked. Nevertheless, many of the questions asked parents to discuss purposeful provision of learning opportunities and artifacts. Therefore, we believe these findings are pertinent for a discussion about concerted cultivation.

Method

Participants

Participants were 23 Black and 35 Latino parents and their children (Black: $n = 11$ boys, $n = 12$ girls; Latino: $n = 24$ boys, $n = 11$ girls) recruited from two Head Start centers, run by the same director, in Baltimore, Maryland. The majority of the children attending these centers were Black or Latino. Parents were recruited through parent meetings and invitational letters, in English and Spanish, sent home with the children.

The majority of the Black parents (n = 21, 91%) were born in the USA, whereas the majority of Latino parents (n = 33, 94%) were born outside the USA (Mexico n = 21, 60%, South America n = 7, 20%, Central America/Caribbean n = 5, 14%). Immigrant Latino parents had lived in the USA for M = 9.16 years (SD = 5.39); only 20% of Latino parents were schooled in the USA. Not surprisingly, given the country of origin, all Latino parents who responded to this question (n = 32) indicated that English was their second language. Only a third of these parents reported speaking English at home.

Most of the participants in this study were mothers (Black: n = 18, 78%; Latina: n = 31, 89%) although some were fathers (Black: n = 1, 4%; Latino: n = 4, 11%) or other relatives (Black: n = 4, 17%; Latino: n = 0, 0%). The mean age was 34.21 years (SD = 12.07) for Black parents and 30.11 (SD = 5.94) years for Latino parents. Sixty-five percent of Black and 54% of Latino parents reported working outside the home in primarily non-professional jobs. Most of the parents reported having high school or less formal education (did not complete high school: Black: n = 6, 26%, Latino: n = 19, 54%; completed high school: Black: n = 10, 44%, Latino: n = 7, 20%; completed some college or vocational training: Black: n = 7, 30%, Latino: n = 6, 17%; completed a bachelor's degree: Black: n = 0, 0%; Latino: n = 2, 6%). There were no significant differences in the highest educational level earned by Black and Latino parents or any other demographic variables.

In addition to the focal (interviewed) parent, there typically were other adults living in the home (Black: other parent—n = 10, 44%, other adult non-parent—n = 8, 35%, both—n = 0; Latino: other parent—n = 10, 29%, other adult non-parent—n = 7, 20%, both—n = 14, 40%). Most families also reported that children other than the focal child lived in the home (Black: no other children—n = 6, 26%, other children—n = 17, 74%, range: 1–4 other children; Latino: no other children—n = 13, 37%, other children—n = 22, 63%, range: 1–4 other children). About 39% (n = 9) of the Black children were the oldest child or only child in the family. About 63% (n = 22) of the Latino children were the oldest or only child in the family.

Procedures

Trained research assistants conducted individual interviews with parents at the child's school or parent's home. Parents were interviewed in English or Spanish, according to their preference. The majority of the Latino parents (n = 30, 86%) were interviewed in Spanish. Responses were audiotaped, and interviewers took field notes. Interviews were transcribed verbatim and translated/back-translated with any discrepancies reconciled (Peña, 2007). Trained research assistants coded responses to the open-ended question. A kappa of 0.70 or above was achieved for all coding categories.

Measures

The *Parents' Beliefs about Children's Activities at Home* questionnaire, available in English and Spanish, contained open-ended questions as well as rating scales addressing parents' socialization of their children's reading and math development. The questionnaire was developed by the investigators (Sonnenschein et al., 2016) based on Serpell et al.'s (2005) work on children's reading development. An adapted version of this questionnaire also has been used by Sonnenschein et al. (2018). The English version of the questionnaire was translated into Spanish and back-translated according to recommended practices (Peña, 2007).

The questionnaire contained sections on demographics (race/ethnicity, languages spoken at home, child's fluency in these languages, household members, and parents' schooling and occupation), parents' beliefs about children's reading and math, and the frequency of child's engagement in these activities. Specifically, parents were asked to rate on a 5-point scale (1 = *not very,* 3 = *somewhat,* 5 = *very*) the importance of children doing reading/math activities at home and assisting their children with such activities. Parents also were asked about the frequency with which their children engaged in 11 reading-related activities and 20 math-related activities. Examples of reading activities included reading storybooks, preschool books, informational books, using workbooks and flashcards. Examples of math activities included counting, adding/subtracting things, writing numbers, measuring things, using workbooks or flashcards. Response options ranged from 0 (never/not at all) to 3 (every day/almost every day). Separate composites of the frequency of children's engagement in activities were created for reading and math by averaging the frequency scores across all activities in each domain (Cronbach's alpha for reading = 0.55, math = 0.84). The alpha for reading engagement, based on a broad range of activities, was less than optimal but consistent with that found by other researchers (Crosnoe & Cooper, 2010; Sonnenschein & Galindo, 2015).

In addition to completing rating scales, parents were asked several open-ended questions: "What is the best way to help your child learn to read (learn math)?" "Which type of reading materials (math activities) do you like best for your child?" "What do you like best about [mentioned reading/math materials]?" and "When you pick out or look for a book (math toy/book/activity) for your child, what kinds of things do you look for?" Coding categories were formed using inductive thematic analysis (Braun & Clarke, 2006); in other words, the coding categories were based on participants' responses and not a pre-developed coding scheme. Coding involved consideration of responses to individual questions as well as a review of the entire interview. Every response was coded at least once; however, it was possible for a participant's complete answer to a question to receive more than one code. Table 1 presents key questions and examples of scoring/coding categories.

Table 1 Questions and rating scales from the parents' beliefs about children's activities at home

Question	Rating scale
How important is it that your child read [do math activities] at home?	1 (not at all important)–5 (very important)
How important is it that you help your child with reading [math]?	1 (not at all important)–5 (very important)
What is the best way to help your child learn to read [learn math]?	Open ended—coded 0/1 for the following categories: entertainment/engagement approach, skills approach, daily living approach
How often does your child [engage in reading/math activities (reading = 11 activities, math = 20 activities) at home?[a]	0—Never, 1—Occasionally (less than once a week), 2—Often (at least once a week), 3—Daily (every day or almost every day)
What do you like best about [mentioned reading/math materials]?	Open ended—coded 0/1 for the following categories: reading: fosters skills, engages child's interest, learned lessons from the book; math: foster's skills, engages child's interest, age/skill appropriate, aids in school readiness, and fosters autonomy
When you pick out or look for a book (math toy/book/activity) for your child, and what kinds of things do you look for?	Open ended—coded 0/1 for the following categories: reading: fosters skills, engages child's interest, and age/skill appropriate; math: fosters skills, engages child's interest, and age/skill appropriate

Note [a]Reading activities included reading storybooks, preschool books, informational books, using workbooks and flashcards. Math activities included counting, adding/subtracting things, writing numbers, measuring things, using workbooks or flashcards, etc.

Results

Black Parents' Socialization of Reading and Math

Black parents strongly supported the need for their children to engage in reading and math activities at home and to assist their children with such activities. About 87% (n = 20) of Black parents strongly endorsed (4 or 5 out of 5) the importance of children reading at home, and 91% (n = 21) parents strongly endorsed the importance of assisting with reading. Although support for math was lower, it was still strong. Fifty-seven percent (n = 13) of Black parents strongly endorsed the importance of children doing math activities at home, and 70% (n = 16) strongly endorsed the importance of assisting with math. Black parents rated the importance of their children reading at home (M = 4.74, SD = 0.69) significantly higher than doing math (M = 3.96, SD = 1.30), $t(22) = 3.33$, $p = 0.003$, Cohen's $d = 0.70$. They also rated the importance of assisting their children with reading (M = 4.78, SD = 0.60) significantly higher than assisting with math (M = 4.17, SD = 1.30), $t(22) = 2.61$, $p = 0.016$, Cohen's $d = 0.54$.

The parents also expressed views about how to socialize their children's reading and math skills. As shown in Table 1, parents' responses to the question, "What is the best way to help your child learn to read (do math)?" were coded as an engagement approach (activities that engage the child's interest as a way of facilitating the learning process), skills approach (a focus on skills practice and/or repetition), and a daily living approach (activities that take place in their daily lives that can facilitate learning). Consistent with what Serpell et al. (2005) found with low-income families discussing reading, the majority of parents emphasized a skills approach for helping their children learn to read. Ninety-six percent of the Black parents mentioned such an approach ("*…we are starting her off with words, and she knows those words by recognition…we have her put the words down and [we say] 'Make a sentence. Read what you just wrote.'*"). About 52% of Black parents mentioned an engagement approach ("*[I] make sure [the storybook] has a lot of pictures… stuff that he is going to be interested in.'*"). Again, consistent with Serpell et al. (2005), none of the parents in this sample mentioned a daily living approach for learning to read.

When discussing the best way for parents to help their children learn math, 87% of the Black parents mentioned a skills approach ("*…helping her count on her fingers and using her little blocks as well as showing her the numbers on paper*"). About 39% of the parents mentioned an engagement approach ("*Whatever really interests him is what I'll get. Noisy stuff. [about V-tech games] It's like he's playing a video game, but it's also educational*"). Unlike their discussions about facilitating their children's reading development, about 22% of Black parents mentioned a daily living approach ("*It's like when we're driving… I tell him to count how many lights it's taken us to get from our house to wherever we are going*").

Frequency of Engagement in Reading and Math

Black parents reported that their children engaged in reading ($M = 1.25$, $SD = 0.46$) and math ($M = 1.48$, $SD = 0.56$) activities, on average, about once a week. However, the actual frequency of engagement in any one activity varied from almost never to several times a week. The most common reading activities children engaged in were looking at ABC books and storybooks, and completing workbooks. The most common math activities were using the TV remote/guide, counting objects, and watching math TV programs. For a complete list of means for each activity by group, see Table 2.

What Parents like and Look for in Children's Activities

Most Black parents mentioned providing artifacts for their children's learning (e.g., LeapFrog devices, books, alphabet flashcards); 100% mentioned this for reading and 87% for math (e.g., number flashcards, math books, blocks). Parents' provision of these artifacts and their discussions about them suggested that they had given

Table 2 Frequency of children's reading and math home engagement

Activity	Mean frequency (SD)	
	Black	Latino
Reading		
ABC/preschool books	2.35 (0.83)	1.71 (0.93)
Storybooks	2.26 (0.75)	2.11 (0.72)
Workbooks	1.78 (1.00)	1.74 (1.09)
Flashcards	1.57 (1.20)	1.06 (1.00)
eBooks	1.35 (1.23)	0.40 (0.88)
Magazines	1.09 (1.04)	0.43 (0.74)
Informational/nonfiction books	1.04 (1.15)	0.91 (1.12)
Books on tape/CDs	0.70 (1.02)	0.77 (1.06)
Religious books	0.65 (0.98)	0.60 (0.95)
Comics	0.52 (0.95)	0.91 (1.12)
Newspapers	0.43 (0.84)	0.34 (0.84)
Math		
Uses TV guide or remote	2.45 (0.96)	1.97 (1.27)
Watches math TV programs	2.30 (0.88)	2.20 (0.96)
Counts objects	2.30 (0.88)	2.37 (0.88)
Answer/ask about quantity amounts	2.04 (1.15)	2.31 (1.02)
Play with or uses money	1.96 (1.02)	1.06 (1.00)
Match or identify shapes	1.87 (0.92)	1.85 (0.89)
Blocks or construction toys	1.87 (1.14)	1.37 (1.14)
Jigsaw puzzles	1.70 (1.26)	1.47 (1.19)
Patterns with beads or blocks	1.70 (1.11)	1.50 (1.14)
Match numbers to amounts	1.61 (1.08)	1.09 (1.11)
Writes numbers	1.52 (1.04)	1.35 (1.20)
Order objects by size	1.36 (1.09)	1.91 (0.95)
Dial telephone	1.26 (1.21)	1.17 (1.25)
Add or subtract	1.13 (1.18)	0.60 (1.01)
Math/board games	1.09 (1.04)	0.66 (0.87)
Math flashcards	0.83 (1.03)	0.89 (1.11)
Calendars	0.70 (1.15)	0.44 (0.93)
Measure things	0.70 (1.02)	0.97 (1.22)
Math workbooks	0.70 (0.77)	0.40 (0.81)
Math books (storybooks)	0.65 (0.89)	0.83 (0.99)

thought to facilitating their children's reading and math skills. Some parents, 35% for reading and 22% for math, further described their role in choosing artifacts for learning in a way consistent with concerted cultivation. For example, a parent discussing reading said, "*I will…read the book first and see if it is something that [she] would be interested in.*" A parent discussing math said, "*I look for activity*

books…when you read the book and it has…a quiz behind it…I ask him a question and let him answer it."

Parents also discussed what they liked best about their favorite activities for helping their children learn to read or do math. For reading, about 65% of Black parents mentioned fostering skills ("*[Leap Frog] teaches him how to pronounce the letters [and words]*"), and 39% mentioned engaging the child's interest ("*To me it seems like if it's a game or something they catch onto it quick*"). For math, 70% of Black parents mentioned fostering skills ("*I like the flashcards…because it shows him different strategies*"), 13% mentioned engaging their child's interest ("*Because he wants to do it more*"), 9% mentioned age/skill appropriateness ("*[about counting] I think that's the only activity she can do right now… [with blocks] she able to count, move them around*"), and 9% mentioned that the activity fosters their child's autonomy ("*Well I like it because it gives him a chance to count by himself and be independent*").

Parents also commented on things they look for when choosing reading and math activities for their children. For reading, 44% of the Black parents mentioned choosing activities that fostered their children's skills ("*Pictures and…words that she's seen, like sight words*"), 26% mentioned engaging child's interest ("*Something that really catches her eye…like Dora…books and all that, she really likes that*"), and 26% mentioned age/skill appropriateness ("*I just start with four to five, because he just turned four and he's doing pretty good so [I buy him] ones four to five…he'll be ready when he gets to kindergarten*"). For math, 48% of the parents mentioned choosing activities that fostered skills ("*Something that will advance him to the next stage in math*"), 35% mentioned engaging child's interest ("*Something that really catches her eye*"), and 39% mentioned age/skill appropriateness ("*Easy enough for her to learn or do*").

Latino Parents' Socialization of Reading and Math

Latino parents strongly supported the need for their children to engage in reading and math activities at home and to assist their children with such activities. About 89% (n = 31) of Latino parents strongly endorsed (4 or 5 out of 5) the importance of children reading at home and 97% (n = 34) strongly endorsed the importance of assisting with reading. As with Black parents, although support for math was lower than for reading, it was still strong. Eighty-three percent (n = 29) of Latino parents strongly endorsed the importance of children doing math activities at home and 80% (n = 31) strongly endorsed the importance of assisting with math. Unlike for Black parents, there was not a statistically significant difference between Latino parents' ratings of the importance of their children reading (M = 4.69, SD = 0.76) and doing math activities (M = 4.49, SD = 0.85) at home, $t(34) = 1.48$, $p = 0.147$, Cohen's $d = 0.25$. Similarly, there was not a significant difference in parents' ratings of the importance of assisting their children with reading (M = 4.86, SD = 0.43) and math (M = 4.66, SD = 0.87), $t(34) = 1.65$, $p = 0.109$, Cohen's $d = 0.26$.

Parents also expressed views about how to socialize their children's reading and math development. Seventy-seven percent of the Latino parents mentioned a skills approach as the best way to help their children learn to read ("*Letter by letter and word by word…sentences…to go on getting to know [how] to write*"). About 54% mentioned engaging their child's interest ("*I like things that make her use her imagination, that really gets her involved and interested in the book*"). None of the parents mentioned a daily living approach to learning to read.

For math, 80% of Latino parents mentioned focusing on skills ("*Showing her the order of numbers so that she learned them right and doesn't skip any*"). About 40% mentioned engaging their children's interest ("*Something that he can work with and that won't lose his attention quickly; puzzles, blocks…he's a hands-on guy*"). About 23% mentioned a daily living approach ("*Taking advantage of everyday activities that incorporate math in them. For example…she likes to help set the table so I tell her 'can you please get me one spoon or four spoons,' that way she learns the numbers*").

Frequency of Engagement in Reading and Math

Parents reported that their children engaged in reading (M = 1.00, SD = 0.38) and math (M = 1.32, SD = 0.48) activities on average about once a week. However, the actual frequency of engagement in any one activity varied from almost never to several times a week. The most common reading activities children engaged in were storybooks, workbooks, and ABC books. The most common math activities were counting objects, answering/asking questions about quantities, and watching math TV programs. For a complete list of means for each activity by group, see Table 2.

What Parents like and Look for in Children's Activities

Most Latino parents mentioned providing educationally relevant artifacts for learning at home (89% for reading; 71% for math). As with Black parents, some Latino parents, 29% for reading and 11% for math, described their role in choosing artifacts for learning in a way consistent with concerted cultivation. For reading, one parent mentioned, "*the other day I bought him a book…so that it will teach him writing.*" For math, a parent stated, "*I look for most a book of various little animals and that it has numbers so that I may explain to her the number and how many little animals or figures the book has.*"

Further indication of parents' purposely trying to foster their children's reading and math development comes from how many of them responded to a question about what they like best about their favorite activities to help their children learn to read. About 54% of the Latino parents mentioned looking for books that foster skills ("*… he is learning the alphabet well*"), 20% mentioned engaging their child's interest "*I want her to have fun and to learn.*"), and 26% mentioned learning lessons from books ("*The teaching…the discipline…for example, if the dog of the book behaves badly, they punish this dog…but it is for his good behavior*").

When asked what parents like best about their favorite activities to help their children learn math, 71% of Latino parents mentioned the activities fostered skills ("*That she learns to write and to recognize the numbers*"), 3% mentioned engaging child's interest ("*I think because he doesn't get bored not just for the numbers but he also has drawing, it shows him how to count*"), 3% mentioned that the activity aided in school readiness ("*[Geometric figures, numbers, and writing numbers] prepares her for school*"), and 3% mentioned that the activity fosters their child's autonomy ("*That she's able to see/do these things by herself*").

Parents also discussed things they look for when choosing activities for their children. For reading, 26% of Latino parents mentioned fostering skills ("*[Reading materials] that have letters and are educational…that prepares her for kindergarten or for school*"), 46% mentioned engaging child's interest ("*I select stories… about animals for him because I know that he will like it*"), and 17% mentioned age/skill appropriateness ("*The stories are short, so that he can sit down and read them in one sitting*").

When asked what parents look for when choosing activities to help their children learn math, 26% of Latino parents mentioned fostering skills ("*The toys that say the numbers…asks 'how much is one plus one' and later it gives him the answers*"), 49% mentioned engaging child's interest ("*Something that he finds interesting*"), and 11% mentioned age/skill appropriateness ("*I always see that it is appropriate for her age…*").

Comparison Between Black and Latino Families

Quantitative analyses showed few differences between Black and Latino families' socialization practices or views. Black parents ($M = 1.25$, $SD = 0.46$) reported significantly higher frequency of children's engagement in reading activities at home than Latino parents ($M = 1.00$, $SD = 0.38$), $t(56) = 2.27$, $p = 0.027$. However, the reported frequency of reading in both groups was only about once or week. In contrast to reading, the difference in engagement in math activities was not statistically significant (Black: $M = 1.48$, $SD = 0.56$; Latino: $M = 1.32$, $SD = 0.48$), $t(56) = 1.20$, $p = 0.235$. More generally, there were no statistically significant differences ($p > 0.05$) between Black and Latino parents in the approaches parents advocated for fostering their children's reading and math skills or their own involvement in these activities.

Summary

These results show that both Black and Latino low-income parents of preschool age children are engaging in one aspect of what Lareau (2003, 2011) has called concerted cultivation. Almost all the parents in each group strongly endorsed the

importance of children engaging in reading and math activities at home and assisting their children with such activities. Black and Latino parents were thoughtful in their approaches to fostering their children's reading and math skills. That is, they reflected upon the approaches they took toward fostering these skills, the activities they provided, and why they provided such activities. There were few significant differences between the groups with the exception of the frequency with which children engaged in reading activities. Black children reportedly read more frequently than Latino children; however, engaging in reading activities occurred only about once a week.

Discussion

The study reported in this chapter describes reading and math opportunities available in the homes of a sample of low-income Black and Latino children. We documented these parents' beliefs about the types and nature of reading and math learning opportunities they make available to their children and the frequency with which children engage in such activities at home. We considered our findings in terms of Lareau's (2003, 2011) notions of concerted cultivation, specifically focusing on one component, the activities children engage in.

The low-income Black and Latino parents in this study clearly expressed a philosophy consistent with Lareau's (2003, 2011) notions of concerted cultivation of their children's reading and math development. They emphasized the importance of providing their children reading and math learning opportunities and assisting their children in these endeavors. They also had given thought to the types of activities they sought for their children and how to foster their children's skills. Such findings are consistent with what Yeung et al. (2002) found; they suggested that low-income parents may not engage in concerted cultivation (although they did not use the actual term in their article) not because of ideological differences, but because they lack the resources to optimally foster their children's educational skills.

Despite the learning opportunities offered in these children's homes, and despite these parents having given thought to how to best foster their children's early reading and math skills, many low-income Black and Latino children enter kindergarten with lower reading and math skills than middle-income and White and Asian children do (Reardon & Galindo, 2009; Sonnenschein & Sun, 2016). In fact, data we collected on these children's language, early literacy, and math scores (not included in this chapter) show that the children, particularly the Latino children, received below age-level scores (Sonnenschein, Baker, Thompson, & Ramos, 2008).

Although these low-income parents may well advocate an approach to fostering their children's reading and math skills that is consistent with concerted cultivation, they may be less knowledgeable about how to best do that (Sawyer et al., 2016). For example, Sonnenschein and Sun (2016), using a large, nationally representative

dataset (Early Childhood Longitudinal Study—Birth Cohort), found that middle-income and White families were more knowledgeable about children's development. This may affect the specific experiences provided to the children and their academic outcomes. In addition, many of the families in this study endorsed a skills approach for reading and math rather than one that fostered children's interest in engaging in relevant activities. Research on both reading and math has shown the importance of fostering children's interest in reading and math activities (e.g., Sonnenschein et al., 2010; Sonnenschein & Dowling, 2018). Similarly, Serpell et al. (2005) found that only an engagement approach and not a skills approach was positively associated with children's reading growth. Although some parents in the present study also mentioned the importance of engaging the child's interest in learning, more of them focused on a skills approach.

Another reason that low-income Black and Latino children may enter school with more limited reading and math skills is the amount of exposure they have to such activities at home. Recall that the children in this study engaged in reading and math activities about once a week, on average. This may not be sufficient exposure. As Serpell et al. (2005) found for reading, engaging in daily interactions with a variety of genres of print optimized children's reading development. They followed two groups of first graders both of whom started with below-grade-level reading scores as they progressed through third grade. One group achieved grade-level reading skills by third grade, and the other group continued to demonstrate below-grade-level reading skills. The group whose reading skills ended up on grade level had daily reading experiences with a wide variety of different print genres. The other group did not. It is also possible that it is not only the amount of exposure to learning activities that matters but the nature of the interactions. Unfortunately, we were not able to assess the quality of the interactions in this study.

As suggested above, the specific activities children engage in also may be important. In this study, we used a composite average score for frequency of engagement in activities, but there was a large variation in the frequency of engagement in individual activities. For example, one of the math activities with the highest frequency was using the TV guide or remote. Although this activity would include exposure to numbers, it is not likely to have the same impact on number sense as counting objects or matching numbers to object quantities (Jordan, Kaplan, Oláh, & Locuniak, 2006).

It is also possible that it is not only the amount of exposure to learning activities that matters but the nature of the interactions (Sonnenschein & Munsterman, 2002). Unfortunately, we were not able to assess the quality of the interactions in this study.

This study focused on the importance of learning opportunities available in children's homes. However, both the home and school and how they interact are important for children's school success (Epstein, 2001; Mapp & Kuttner, 2013). The schools these children attend may have more limited resources to foster their academic development and may not build upon strengths available in the children's

homes nor compensate for weaknesses (Rothstein, 2013; Welner & Carter, 2013). On the other hand, knowing that these low-income Black and Latino parents believe in the importance of purposely facilitating their children's early academic growth provides a foundation for future interventions. It should be far easier to suggest alternative or additional approaches to parents who already believe that it is their role to directly foster their children's early academic development than it would be to parents who do not have such views.

Limitations

This study used a preexisting dataset to explore one aspect of concerted cultivation. There are several limitations to consider that may limit the generalizability of the findings. One, we focused on the opportunities parents provided their children and their reasons for doing so. However, Lareau's (2003) notion of concerted cultivation includes the nature of conversations and interactions with children as well as interactions with the schools. Neither of those were addressed in this study but should serve as the basis for future work. Two, because this dataset was not originally used to specifically measure concerted cultivation, we never explicitly asked the parents about concerted cultivation but inferred it from their responses. Three, the sample of parents was fairly small. Four, our questionnaire asked about specific reading and math activities, and although we included what we believed was a quite comprehensive list, it is possible that the parents were doing things with their children not mentioned in our questionnaire. In other words, we may not have captured all the ways that parents engage in concerted cultivation practices. Despite these limitations, we think the findings are an important addition to the corpus of work on parents' socialization of children's reading and math skills.

Conclusion

The research reported in this chapter focused on the reading and math learning opportunities available in the homes of a group of low-income Black and Latino preschool-aged children. We considered these opportunities through the lens of concerted cultivation. The parents in this study expressed a philosophy that encompassed purposeful facilitation of their children's academic learning. They clearly had given thought to the ways that they can facilitate their children's learning. Future research can build upon these notions to optimize what parents are doing with their children and, hopefully, close the academic gaps.

References

Azmitia, M., Cooper, C. R., & Brown, J. R. (2009). Support and guidance from families, friends, and teachers in Latino early adolescents' math pathways. *Journal of Early Adolescence, 29,* 142–169. https://doi.org/10.1177/0272431608324476.

Barbarin, O. A., Early, D., Clifford, R., Bryant, D., Frome, P., Burchinal, M., et al. (2008). Parental conceptions of school readiness: Relation to ethnicity, socioeconomic status, and children's skills. *Early Education and Development, 19,* 671–701. https://doi.org/10.1080/10409280802375257.

Bodovski, K., & Farkas, G. (2008). "Concerted cultivation" and unequal achievement in elementary school. *Social Science Research, 37,* 903–919. https://doi.org/10.1016/j.ssresearch.2008.02.007.

Bradley, R. H., & Corwyn, R. F. (2002). Age and ethnic variations in family process mediators of SES. In M. H. Bornstein & R. H. Bradley (Eds.), *Socioeconomic status, parenting, and child development* (pp. 151–188). Mahwah, NJ: Erlbaum.

Bradley, R. H., Corwyn, R. F., McAdoo, H. P., & Garcia Coll, C. (2001). The home environments of children in the United States Part I: Variations by age, ethnicity, and poverty status. *Child Development, 72,* 1844–1867. https://doi.org/10.1111/1467-8624.t01-1-00382.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3,* 77–101. https://doi.org/10.1191/1478088706qp063oa.

Brooks-Gunn, J., & Markman, L. B. (2005). The contribution of parenting to ethnic and racial gaps in school readiness. *The Future of Children, 15,* 139–168. https://doi.org/10.1353/foc.2005.0001.

Burchinal, M., McCartney, K., Steinberg, L., Crosnoe, R., Friedman, S. L., McLoyd, V., … NICHD Early Child Care Research Network. (2011). Examining the black-white achievement gap among low-income children using the NICHD Study of Early Child Care and Youth Development. *Child Development, 82*, 1404–1420. https://doi.org/10.1111/j.1467-8624.2011.01620.x.

Cabrera, N. J., Beeghly, M., & Eisenberg, N. (2012). Positive development of minority children. Introduction to the special issue. *Child Development Perspectives, 6,* 207–209. https://doi.org/10.1111/j.1750-8606.2012.00253.x.

Cannon, J., & Ginsburg, H. P. (2008). "Doing the math": Maternal beliefs about early mathematics versus language learning. *Early Education and Development, 19,* 238–260. https://doi.org/10.1080/10409280801.

Ceballo, R., Maurizi, L. K., Suarez, G. A., & Aretakis, M. T. (2014). Gift and sacrifice: Parental involvement in Latino Adolescents' education. *Cultural Diversity and Ethnic Minority Psychology, 20,* 116–127. https://doi.org/10.1037/a0033472.

Cheadle, J. E. (2008). Educational investment, family context, and children's math and reading growth from kindergarten through the third grade. *Sociology of Education, 81,* 1–31. https://doi.org/10.1177/003804070808100101.

Cheadle, J. E., & Amato, P. R. (2011). A quantitative assessment of Lareau's qualitative conclusions about class, race, and parenting. *Journal of Family Issues, 32,* 679–706. https://doi.org/10.1177/0192513X10386305.

Crosnoe, R., Ansari, A., Purtell, K. M., & Wu, N. (2016). Latin American immigration, maternal education, and approaches to managing children's schooling in the United States. *Journal of Marriage and Family, 78,* 60–74. https://doi.org/10.1111/jomf.12250.

Crosnoe, R., & Cooper, C. E. (2010). Economically disadvantaged children's transitions into elementary school: Linking family processes, school contexts, and educational policy. *American Educational Research Journal, 47,* 258–291. https://doi.org/10.3102/0002831209351564.

Eason, S. H., & Levine, S. C. (2017). Math learning begins at home. *Zero to Three, 37*(5), 35–43.

Epstein, J. (2001). Building bridges of home, school, and community: The importance of design. *Journal of Education for Students Placed at Risk*, *6* (1 and 2), 161–168. https://doi.org/10.1207/S15327671ESPR0601-2_10.

Goldenberg, C. (2001). Home and communities. In S. Neuman & D. K. Dickinson (Eds.), *Handbook of literacy research* (pp. 211–231). NY: Guilford.

Hughes, D. (2003). Correlates of African American and Latino parents' messages to children about ethnicity and race: A comparative study of racial socialization. *American Journal of Community Psychology, 31*(1/2), 15–33. https://doi.org/10.1023/A:1023066418688.

Huntsinger, C. S., & Jose, P. E. (2009). Parental involvement in children's schooling: Different meanings in different cultures. *Early Childhood Research Quarterly, 24,* 398–410. https://doi.org/10.1016/j.ecresq.2009.07.006.

Jiang, Y., Ekono, M., & Skinner, C. (2015). *Basic Facts about low-income children: Children under 6 Years, 2013*. New York: National Center for Children in Poverty, Mailman School of Public Health, Columbia University.

Jordan, N. C., Kaplan, D., Oláh, L. N., & Locuniak, M. N. (2006). Number sense growth in kindergarten: A longitudinal investigation of children at risk for mathematics difficulties. *Child Development, 77,* 153–175. https://doi.org/10.1111/j.1467-8624.2006.00862.x.

Keels, M. (2009). Ethnic group differences in Early Head Start parents' parenting beliefs and practices and links to children's early cognitive development. *Early Childhood Research Quarterly, 24,* 381–397. https://doi.org/10.1016/j.ecresq.2009.08.002.

Lareau, A. (2003). *Unequal childhoods: Class, race, and family life*. Berkeley, CA: University of California Press.

Lareau, A. (2011). *Unequal childhoods: Class, race, and family life* (2nd ed.). Berkeley, CA: University of California Press.

LeFevre, J.-A., Polyzoi, E., Skwarchuk, S.-L., Fast, L., & Sowinski, C. (2010). Do home numeracy and literacy practices of Greek and Canadian parents predict the numeracy skills of kindergarten children? *International Journal of Early Years Education, 18,* 55–70. https://doi.org/10.1080/09669761003693926.

LeFevre, J.-A., Skwarchuk, S.-L., Smith-Chant, B. L., Fast, L., Kamawar, D., & Bisanz, J. (2009). Home numeracy experiences and children's math performance in the early school years. *Canadian Journal of Behavioral Science, 41,* 55–66. https://doi.org/10.1037/a0014532.

Mapp, K. L., & Kuttner, P. J. (2013). *Partners in education: A dual capacity-building framework for family–school partnerships*. Austin, TX: SEDL and U.S. Department of Education.

Musun-Miller, L., & Blevins-Knabe, B. (1998). Adults' beliefs about children and mathematics: How important is it and how do children learn it? *Early Development & Parenting, 7,* 191–202. https://doi.org/10.1002/(SICI)1099-0917(199812)7:4%3c191:AID-EDP181%3e3.0.CO;2-I.

National Center for Education Statistics. (2018a). *The nation's report card 2017 mathematics & reading assessments; national achievement-level results: Achievement levels by student groups.* Retrieved from: https://www.nationsreportcard.gov/reading_2017/#/nation/achievement?grade=4.

National Center for Education Statistics. (2018b). *The nation's report card 2017 mathematics & reading assessments; national achievement-level results: Achievement levels by student groups.* Retrieved from: https://www.nationsreportcard.gov/math_2017/#/nation/achievement?grade=4.

Patten, E., & Krogstad, J. M. (2015). Black child poverty rate holds steady, even as other groups see declines. http://www.pewresearch.org/fact-tank/2015/07/14/black-child-poverty-rate-holds-steady-even-as-other-groups-see-declines/.

Peña, E. D. (2007). Lost in translation: Methodological considerations in cross-cultural research. *Child Development, 78,* 1255–1264. https://doi.org/10.1111/j.1467-8624.2007.01064.x.

Puccioni, J. (2015). Parents' conceptions of school readiness, transition practices, and children's academic achievement trajectories. *The Journal of Educational Research, 108,* 130–147. https://doi.org/10.1080/00220671.2013.850399.

Ramani, G. B., Rowe, M. L., Eason, S. H., & Leech, K. A. (2015). Math talk during informal learning activities in Head Start families. *Cognitive Development, 35,* 15–33. https://doi.org/10.1016/j.cogdev.2014.11.002.

Ramani, G. B., & Siegler, R. S. (2008). Promoting broad and stable improvements in low-income children's numerical knowledge through playing number board games. *Child Development, 29,* 375–394. https://doi.org/10.1111/j.1467-8624.2007.01131.x.

Reardon, S. F., & Galindo, C. (2009). The hispanic-white achievement gap in math and reading in the elementary grades. *American Educational Research Journal, 46,* 853–891. https://doi.org/10.3102/0002831209333184.

Reardon, S. F., & Portilla, X. A. (2016). Recent trends in income, racial, and ethnic school readiness gaps at kindergarten entry. *AERA Open, 2*(3), 1–18. https://doi.org/10.1177/2332858416657343.

Rothstein, R. (2013). Why children from lower socioeconomic classes on average have lower academic achievement than middle-class children. In P. L. Carter & K. G. Welner (Eds.), *Closing the opportunity gap: What America must do to give every child an even chance* (pp. 61–74). Oxford: New York, NY.

Sawyer, B. E., Cycyk, L. M., Sandilos, L. E., & Hammer, C. S. (2016). "So many books they don't even all fit on the bookshelf": An examination of low-income mothers' home literacy practices, beliefs and influencing factors. *Journal of Early Childhood Literacy*, online. https://doi.org/10.1177/1468798416667542.

Sénéchal, M., & LeFevre, J.-A. (2002). Parental involvement in the development of children's reading skill: A five-year longitudinal study. *Child Development, 73,* 445–460. https://doi.org/10.1111/1467-8624.00417.

Serpell, R., Baker, L., & Sonnenschein, S. (2005). *Becoming literate in the city: The Baltimore early childhood project*. NY: Cambridge University Press.

Skwarchuk, S.-L., Sowinski, C., & LeFevre, J.-A. (2014). Formal and informal home learning activities in relation to children's early numeracy and literacy skills: The development of a home numeracy model. *Journal of Experimental Child Psychology, 121,* 63–84. https://doi.org/10.1016/j.jecp.2013.11.006.

Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, D.C.: National Academy Press.

Sonnenschein, S. (2002). Engaging children in the appropriation of literacy: The importance of parental beliefs and practices. In O. Saracho & B. Spodek (Eds.), *Contemporary perspectives in early childhood education* (pp. 127–149). Greenwich, CT: Information Age Publishing.

Sonnenschein, S., Baker, L., & Serpell, R. (2010). The Early Childhood Project: A 5-year longitudinal investigation of children's literacy development in sociocultural context. In D. Aram & O. Korat (Eds.), *Literacy: Development and enhancement across orthographies and cultures* (pp. 85–96). NY: Springer.

Sonnenschein, S., Baker, L., Thompson, J., & Ramos, M. (2008). *Evaluation of Core Knowledge preschool program at St. Vincent South East Head Start Centers: Year 2.* Report prepared for the Abell Foundation.

Sonnenschein, S., & Dowling, R. (2018, in press). Parents' socialization of their young children's interest in math. In O. Saracho (Ed.), *Contemporary perspectives on research on motivation in early childhood education.* NY: Information Age Publishing.

Sonnenschein, S., & Galindo, C. (2015). Race/ethnicity and early mathematics skills: Relations between home, classroom, and mathematics achievement. *The Journal of Educational Research, 108,* 261–277. https://doi.org/10.1080/00220671.2014.880394.

Sonnenschein, S., Galindo, C., Metzger, S. R., Thompson, J. A., Huang, H. C., & Lewis, H. (2012). Parents' beliefs about children's math development and children's participation in math activities. *Child Development Research Journal Online*. https://doi.org/10.1155/2012/851657.

Sonnenschein, S., Galindo, C., Simons, C. L., Metzger, S. R., Thompson, J. A., & Chung, M. (2018). How do children learn mathematics? Chinese and Latino immigrant perspectives. In S. S. Chuang & C. L. Costigan (Eds.), *An international approach to parenting and parent-child relationships in immigrant families*. Springer Science + Business Media: New York, NY.

Sonnenschein, S., Metzger, S. R., & Thompson, J. A. (2016). Low-income parents' socialization of their preschoolers' early reading and math skills. *Research in Human Development, 13,* 207–224. https://doi.org/10.1080/15427609.2016.1194707.

Sonnenschein, S., & Munsterman, K. (2002). The influence of home-based reading interactions on 5-year-olds' reading motivations and early literacy development. *Early Childhood Research Quarterly, 17,* 317–338. https://doi.org/10.1016/S0885-2006(02)00167-9.

Sonnenschein, S., & Sun, S. (2016). Racial/ethnic differences in kindergartners' reading and math skills: Parents' knowledge of children's development and home-based activities as mediators. *Infant and Child Development.* https://doi.org/10.1002/icd.2010.

Stevenson, H. W., Chen, C., & Uttal, D. H. (1990). Beliefs and achievement: A study of African American, European American and Hispanic children. *Child Development, 61,* 508–523. https://doi.org/10.1111/j.1467-8624.1990.tb02796.x.

Suizzo, M.-A., Pahlke, E., Yarnell, L., Chen, K.-Y., & Romero, S. (2014). Home-based parental involvement in young children's learning across U.S. ethnic groups: Cultural models of academic socialization. *Journal of Family Issues, 35,* 254–287. https://doi.org/10.1177/0192513X12465730.

Suizzo, M.-A., Robinson, C., & Pahlke, E. (2008). African American mothers' socialization beliefs and goals with young children: Themes of history, education, and collective independence. *Journal of Family Issues, 29,* 287–316. https://doi.org/10.1177/0192513x07308368.

Susperreguy, M. I., & Davis-Kean, P. E. (2016). Maternal math talk in the home and math skills in preschool children. *Early Education and Development, 27,* 841–857. https://doi.org/10.1080/10409289.2016.1148480.

Taylor, L. C., Clayton, J. D., & Rowley, S. J. (2004). Academic socialization: Understanding parental influences on children's school-related development in the early years. *Review of General Psychology, 8,* 163–178. https://doi.org/10.1037/1089-2680.8.3.163.

Tourangeau, K., Nord, C., Lê, T., Pollack, J. M., Atkins-Burnett, S, & Hausken, E. G. (2006). Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), Combined user's manual for the ECLS-K fifth-grade data files and electronic codebooks (NCES 2006–032). *National Center for Education Statistics*. U.S. Department of Education. Washington, DC.

Tudge, J. R. H., & Doucet, F. (2004). Early mathematical experiences: Observing young black and white children's everyday activities. *Early Childhood Research Quarterly, 19,* 21–39. https://doi.org/10.1016/j.ecresq.2004.01.007.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Welner, K. G., & Carter, P. L. (2013). Achievement gaps arise from opportunity gaps. In P. L. Carter & K. G. Welner (Eds.), *Closing the opportunity gap: What America must do to give every child an even chance* (pp. 1–9). Oxford: New York, NY.

Wilder, S. (2014). Effects of parental involvement on academic achievement: A meta-synthesis. *Educational Review, 66,* 377–397. https://doi.org/10.1080/00131911.2013.780009.

Wong, S. W., & Hughes, J. N. (2006). Ethnicity and language contributions to dimensions of parent involvement. *School Psychology Review, 35,* 645–662.

Yeung, W. J., Linver, M. R., & Brooks-Gunn, J. (2002). How money matters for young children's development: Parental investment and family processes. *Child Development, 73,* 1861–1879. https://doi.org/10.1111/1467-8624.t01-1-00511.

Zuniga, M. (2011). Families with Latino roots. In E. Lynch & M. Hansen (Eds.), *Developing cross-cultural competence: A guide for working with children and their families* (4th ed., pp. 190–232). Baltimore, MD: Paul H. Brookes.