American Educational Research Journal
Month XXXX, Vol. XX, No. X, pp. 1–43
DOI: 10.3102/0002831219899356
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Teacher-Child Racial/Ethnic Match and Parental Engagement With Head Start

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Parental engagement is central to Head Start's two-generation mission. Drawing on research linking teacher-child racial/ethnic match to educational outcomes, the present study explores whether teacher-child match increases parental involvement in Head Start activities designed to support children and families. Using data from the 2006 and 2009 waves of the Head Start Family and Child Experiences Survey, we estimate the relationship between teacher-child racial/ethnic match and parental involvement both across and within Head Start centers. Findings suggest that match enhances parental engagement and decreases student absences, particularly among Hispanic families, suggesting that family engagement may be one potential mechanism by which racial/ethnic match improves educational outcomes. Findings also have implications for policies that reduce the diversity of the Head Start workforce.

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KEYWORDS: early childhood education, Head Start, parent involvement, racial/ethnic match

As calls for heightened professionalization have intensified in the early childhood education (ECE) sector, so too have concerns that hiring more degreed teachers will lead to a less diverse workforce (Greenberg et al., 2018; Institute of Medicine [IOM] & National Research Council [NRC], 2015). Systemic inequalities in the United States have led to disparities in the attainment of bachelor's degrees (BAs) across racial and ethnic groups, and moreover, Black and Hispanic adults with BAs are less likely to enter educational professions than their White counterparts. Data from Head Start—a $9 billion, federally funded early education program designed to support the development of children from low-income families and children who have special needs in the United States—provide suggestive evidence for this hypothesis. Between 2006 and 2011, a time in which there was a rapid increase in teacher education levels in Head Start, the percentage of White teachers in Head Start increased by 10%, although there was no corresponding increase in White enrollees; moreover, *within* centers an increase in education level was correlated with an increase in White staff (Bassok, 2013). This shift resulted in heightened racial/ethnic mismatch between Head Start teachers and the children they served over this time period. Moreover, data from Head Start Program Information Reports suggest that the percentage of White teachers has continued to increase since 2011.

Head Start is the federal government's flagship investment in ECE, and as such, it is often at the forefront of efforts to improve program quality. Currently, many conversations around the quality of ECE revolve around increasing the education of ECE teachers (e.g., IOM & NRC, 2015); but the increasing racial/ethnic mismatch between the Head Start workforce and Head Start participants may be a potentially important unintended consequence of such efforts (e.g., Greenberg et al., 2018), especially if racial mismatch implies diminished capacity to effectively provide services to Head Start children and families, who, because of Head Start's mission, overwhelmingly come from racial and ethnic minority communities. Existing research suggests that child-teacher racial/ethnic match is positively linked to children's academic achievement in the first years of school (Dee, 2004; Downer et al., 2016) as well as teacher ratings of children's academic and social development (Bates & Glick, 2013; Downer et al., 2016; Downey & Pribesh, 2004). These findings parallel results in an accumulating literature in K–12 settings demonstrating positive educational outcomes for students taught by a same-race teacher, particularly students of color (e.g., Dee, 2004; Egalite et al., 2015; Grissom & Redding, 2016). Thus, understanding whether and how racial/ethnic match may be important for Head Start families is of considerable importance, but to date, it has not been studied.

Hypothesized mechanisms linking teacher-child racial/ethnic matching to more positive outcomes for students of color typically include teachers' responses to same-race students—for example, teachers' differential perceptions or expectations of own-race students (Gershenson et al., 2016; Ouazad, 2014) and greater capacity to create culturally responsive classrooms for students with similar backgrounds (Irvine, 1988)—and students' responsiveness to own-race teachers, including role modeling effects (Grissom et al., 2015). A third—but to date understudied—reason for why racial/ethnic match between teachers and students may matter is through the potential effect of teacher-child racial/ethnic match on parental engagement. A large literature discusses both barriers to engagement for families of color (Sosa, 1997; Tinkler, 2002) and how schools might dismantle these barriers (Gaitan, 2012; McWayne et al., 2016; Montoya-Ávila et al., 2018), providing suggestive support for an important role for match. When children share racial and ethnic characteristics with their teacher, teachers may be more likely to act as cultural brokers, who identify the ways in which parents are contributing to their child's education and build on that foundation (Gaitan, 2004; Ishimaru et al., 2016; Martinez-Cosio & Iannacone, 2007; Olivos, 2006). Shared backgrounds and values may also facilitate parent-teacher communication, which may be particularly relevant for Head Start's large, and growing, population of Spanish-speaking families (De Gaetano, 2007; Gaitan, 2004; Melzi et al., 2018; Montoya-Ávila et al., 2018).

Building on this literature, we test the hypothesis that teacher-child racial/ethnic match promotes parental engagement in a national sample of Head Start centers. This study provides new evidence linking racial/ethnic match to parental involvement and does so in an early childhood context. Understanding the role of teacher-child racial/ethnic match on parental engagement is particularly relevant in the context of Head Start both because early involvement with school may be particularly beneficial for children's development and because of Head Start's historic "two-generation" approach to investing in ECE, which focuses on providing services to both enrolled children and their families. Despite the centrality of parent engagement to Head Start's mission and the particular importance of building authentic relationships with educational institutions among Head Start families (Gaitan, 2004; Melzi et al., 2018; Montoya-Ávila et al., 2018), to our knowledge, no prior research has examined whether teacher-child racial/ethnic match is relevant for parental engagement in Head Start, or in the pre-K years more broadly.

Using multiple waves of a large data set tracking Head Start participants, this article fills this gap by exploring whether teacher-child racial/ethnic match in Head Start associated with parents' (1) child-specific involvement with Head Start (e.g., volunteering, classroom observations, and student attendance), (2) general involvement with Head Start (e.g., Head Start policy council and fund-raising efforts), and (3) take-up of services offered by Head

Start to promote family well-being (e.g., parent workshops, family health, and job search services).We explore these variables separately in part to explore differential associations between match and parent engagement in activities that value parents' contributions to their child's education (e.g., volunteering in the classrooms, contributing to children's experiences) as compared with engagement measures that are more indicative of passive listening (e.g., attending conferences, serving as fund-raisers; Baquedano-López et al., 2013; McWayne et al., 2016). Because we observe multiple families and teachers within the same Head Start center, we can leverage *within-center* variation in teacher-child racial/ethnic match to better isolate the causal link between racial match and parental engagement than previous studies.

Understanding how teacher-child racial/ethnic match relates to parental engagement with their child's ECE setting is critical, especially in light of growing efforts to raise the educational credentials of early childhood educators. While drops in the percentage of non-White teachers are often raised as an unintended consequence of these policies, there has been little empirical evidence on the benefits of racial/ethnic match within early childhood settings—despite the work of many scholars suggesting that having a teacher or school that values the cultural spaces families inhabit is important (Gaitan, 2004; Montoya-Ávila et al., 2018). This article provides new evidence to inform policymakers looking to scale up or pull back from education requirements as a method for improving quality in Head Start programs by explicitly exploring if and how a diverse staff may serve Head Start children and families.

Head Start and Its Two-Generation Mission

Head Start is the largest federal investment in ECE in the United States, serving more than 900,000 children and families (as of 2016). The Head Start program was authorized in 1964 and designed primarily to support the early development of low-income children and their families. Head Start is a two-generation intervention; it aims to improve both children's developmental outcomes and the overall economic security and well-being of their families. Indeed, the Economic Opportunity Act of 1964, which authorized Head Start, mandated "maximum feasible participation" of parents in Head Start programming (Parker et al., 1995, p. 137). In their efforts to achieve this vision, Head Start offers a suite of comprehensive services, including (1) ECE programs at Head Start centers; (2) developmental screenings, meals for children, and connections between families and medical, dental, and mental health services; and (3) assistance for parents seeking stability and well-being through resources for housing, job training, and educational advancement.

Head Start centers often provide a host of opportunities for parent involvement, including volunteering opportunities, decision making and input into Head Start's operations, parenting education experiences, social

activities to facilitate community among parents, and the provision of social services. Moreover, Head Start typically uses a variety of strategic efforts to engage parents, beginning by offering parents simple opportunities to engage with Head Start and scaffolding parents up to greater involvement and responsibility (Duch, 2005; Henrich & Gadaire, 2008; Parker et al., 1995). By providing services to children and families, Head Start aims to both improve the immediate school readiness of disadvantaged children and provide families with the resources they need to sustain the benefits of the program, including the ability to agentically advocate for their child in future educational spaces. Promoting family engagement in their child's education—both through engagement with Head Start and through educational efforts at home (Ansari & Gershoff, 2016; Fagan & Iglesias, 1999; McWayne et al., 2013)—is central to Head Start's mission; thus, it is important for Head Start to understand what role, if any, staffing decisions may have in promoting the involvement of diverse families.

Benefits of Head Start for Children and Families

Several rigorous studies have demonstrated immediate benefits of Head Start for children's academic and socioemotional school readiness (Gormley et al., 2010; Puma et al., 2010; Zhai et al., 2011; Zhai et al., 2013). The evidence on the medium and long-term impacts of Head Start is more mixed. The Head Start Impact Study (HSIS), which is the only large-scale randomized experiment in the Head Start literature, found small immediate benefits for Head Start enrollees in language, literacy, and parent-reported socioemotional development, which diminished rapidly and were null by the third grade (Puma et al., 2010). However, quasi-experimental studies document persistent Head Start impacts through elementary school (Phillips et al., 2016). Furthermore, several quasi-experimental studies have also shown that Head Start improves educational attainment, earnings, adult social and emotional outcomes, and adult parenting practices (Deming, 2009; Garces et al., 2002; Ludwig & Miller, 2005; Schanzenbach & Bauer, 2016).

Research also indicates that, consistent with Head Start's two-generation mission, program participation affects parenting and family processes. For instance, findings from the HSIS (Puma et al., 2010) indicate that access to Head Start was associated with decreases in parental spanking and the use of "time out" and increases in parents' reading to children and taking them to experience cultural enrichment activities. Additionally, access to Head Start was associated with warmer, less controlling parenting styles.

Reanalyses of the HSIS have extended these findings. For example, Gelber and Isen (2013) found that Head Start increased parental involvement across a variety of domains, including reading, practicing the alphabet, math activities, and cultural experiences, as well as increased the likelihood that the child had a medical, dental, hearing, or vision checkup. Pratt et al.

(2015) found that Head Start participation was associated with receipt of support services and decreased spanking. Finally, some evidence suggests that Head Start also supports the development of parents' skills in other domains. Using data from the HSIS, Sabol and Chase-Lansdale (2015) found that parents of children randomly assigned to enroll in Head Start as 3-year-olds had greater increases in their educational attainment by the time the child was 6 years old than parents whose children were not randomly assigned to Head Start, suggesting that Head Start also supports parents' educational attainment. Taken together, these findings highlight the two-generation role of Head Start and suggest that parents' take-up of Head Start supports may be important for both child development and family well-being.

Head Start Policy and Changing Demographics

The two most recent Head Start reauthorizations focused on increasing the quality of Head Start classrooms and, hypothesizing a link between teacher education and program quality, mandated an increase in the average education levels of the Head Start workforce. By 2013, 96% of Head Start teachers had at least an associate's degree, and 73% had at least a BA—representing a tripling of BAs since 1999. This rapid change in average education levels has coincided with other changes to Head Start. Using three nationally representative waves of Head Start data, Aikens et al. (2016) report that from 2006 to 2014 classroom instruction improved as assessed by two widely used quality measures, the Classroom Assessment Scoring System and the Early Childhood Environmental Rating Scales and that overall child/adult ratios have decreased. However, using a panel data set constructed using information taken from all Head Start programs nationwide, Bassok (2013) found that in centers where education levels increased, child/adult ratios had increased, turnover rates increased, the percentage of teachers who were White increased, and the percentage of Head Start parents who work on staff decreased. Though these studies are descriptive, they highlight the importance of understanding how changing education requirements in Head Start may lead to other important changes in children's Head Start experiences, including changes to the race/ethnicity of the adults children spend time with.

Notably, the increased proportion of White Head Start teachers occurred at a time when the United States is becoming more diverse, particularly with respect to families of Hispanic ethnicity. The U.S. Census predicts that by 2045, the United States will be a "majority-minority" country and that much of this demographic change will be due to increases in the proportion of Hispanic families. Indeed, between 2006 and 2016, there was about a 12-percentage-point increase in the proportion of Hispanic families served by Head Start (now 37% of enrollees), while the proportion of Black families remained stable at 30%. These concurrent trends led to an increase in the

racial/ethnic mismatch of Head Start staff and enrolled children; for each 1% increase in the proportion of teachers with a BA or more, there was a 5-percentage-point increase in mismatch between Head Start teachers and children served.

Benefits of Teacher-Child Racial/Ethnic Match for Children and Families

Calls for increased education levels for Head Start teachers coupled with evidence of increasing racial/ethnic mismatch in Head Start during the early 2000s (Bassok, 2013) raise concerns about potential unintended consequences of demographic misalignment between Head Start teachers and children or families (e.g., Greenberg et al., 2018; IOM & NRC, 2015). A relatively large literature documents that children—particularly children of color—benefit from exposure to teachers of the same race and ethnicity. In K–12 settings, these benefits have been documented for a variety of student outcomes, including achievement (Dee, 2004; Egalite et al., 2015), receipt of exclusionary discipline (Lindsay & Hart, 2017), attendance (Holt & Gershenson, 2015), and assignment to gifted services (Grissom et al., 2017; Grissom & Redding, 2016). Some recent evidence suggests, though somewhat inconsistently across outcomes, that similar benefits from a racial/ethnic match with one's teacher may accrue to students in kindergarten and ECE settings as well (Bates & Glick, 2013; Downer et al., 2016; Downey & Pribesh, 2004; Wright et al., 2017).

Racial/Ethnic Match Mechanisms

As Grissom et al. (2015) explain, researchers have not fully explored the mechanisms linking teacher-student demographic match and student outcomes, though a large literature has identified the ways in which schools may fail to serve the needs of children and families of color (e.g., Montoya-Ávila et al, 2018). Based on this literature, hypothesized mechanisms generally fall into three groups. First, demographic match may affect the behavior of teachers. For example, teachers may allocate individualized attention to same-race students, express higher expectations for those students (Gershenson et al., 2016), advocate for the needs of same-race students within the school, or employ culturally responsive pedagogical strategies more in tune with the needs of students from the same demographic background (Rueda et al., 2004; Villegas & Lucas, 2002). They may also be more able to communicate with students from the same cultural or linguistic background.

Second, teacher-student racial/ethnic match may affect the behaviors of students. In particular, the presence of a same-race teacher may induce role modeling effects, in which students are inspired to work harder or hold

higher expectations for themselves because they can identify with a teacher from the same background (Mercer & Mercer, 1986).

Third, demographic similarity may affect the behaviors of parents. Many studies—including several meta-analyses—have documented the importance of parental engagement in K–12 (Avvisati et al., 2014; Castro et al., 2015; Jeynes, 2010; LaRocque et al., 2011; Wilder, 2014) and ECE settings (Ansari & Gershoff, 2016; Fagan & Iglesias, 1999; Galindo & Sheldon, 2012; Ma et al., 2016), particularly for the development of nonacademic skills. For example, an experiment designed to increase parental involvement by randomly assigning parents to offers of additional parent-school meetings demonstrated that increased involvement led to decreased truancy and improved disciplinary outcomes (Avvisati et al., 2014). In the context of Head Start, Ansari and Gershoff (2016) found that center policies designed to increase parent participation were associated with the use of cognitively stimulating activities at home and, in turn, with gains in children's academic and behavioral skills. Moreover, a meta-analysis of 37 studies of parental involvement in K–12 settings taken from 2000 to 2013 finds a modest but persistent association between parent involvement and student development (e.g., $d = 0.124$; Castro et al., 2015). Parental engagement likely affects student outcomes by creating alignment between behavioral expectations at home and at school, promoting parents' use of cognitively challenging activities in the home, and by facilitating communication between teachers and parents to allow for both consistent supports for children's development and advocacy on the child's behalf. These processes may be influenced by racial/ethnic match, but to date, these have not been explored as a potential mechanism in the match literature.

A racial/ethnic match between teachers and parents can facilitate greater parental engagement with schooling by encouraging teacher-parent relationships, easing communication, and reducing substantial cultural barriers (Hornby & Lafaele, 2011; LaRocque et al., 2011; Montoya-Ávila et al., 2018; Olivos, 2006). Indeed, in their work on how teacher race/ethnicity predicts differences in assignment to gifted services for students of color, Grissom and Redding (2016) and Grissom et al. (2017) highlight parental responses to the presence of a same-race teacher as a key potential driver. That is, they suggest that parents from historically marginalized groups, who believe their child may be gifted, may be more likely to advocate that their children be evaluated if they share demographic characteristics, cultural background, or language with their child's teacher and thus feel more comfortable, but they were unable to test this empirically.

Although conceptual work outlines specific barriers to parental engagement for low-income families of color and suggests that teachers who can provide cultural and language support to families are critical, it is less clear that teacher-child racial/ethnic match on its own could provide sufficient easing of these barriers to promote parental involvement (e.g., Hornby &

Lafaele, 2011; Ishimaru et al., 2016; LaRocque et al., 2011; Montoya-Ávila et al., 2018; Rueda et al., 2004). If parents' engagement is predominantly determined by available time and resources, for example, rather than their trust in or comfort with their child's school, racial/ethnic match is not likely to affect parental involvement. However, if parents are engaged with their child's education in ways typically not valued by schools, it is possible that working with a teacher who understands a parent's cultural space and values their contributions (Gaitan, 2012; McWayne et al., 2016) may generate further involvement with Head Start. Perhaps unsurprisingly, the literature linking match to involvement is mixed.

Grissom and Redding (2016) examine whether specific measures of parental involvement, such as parent attendance at school meetings, are higher in classrooms where students share the race of their teacher. They do not find evidence of differences, though they acknowledge that the measures of parental involvement they examined are limited. Indeed, some research suggests that the ways in which bicultural families are engaged in their child's education may not be captured by traditional measures of engagement (Baquedano-López et al., 2013; McWayne et al., 2013; Olivos, 2006). Similarly, Nzinga-Johnson et al. (2009) found no evidence that racial/ethnic match is associated with parental involvement, teacher-reported home-school relationship, and parent-reported home-school relationship in a large, multistate sample of kindergarten parents. Notably, in this study, 87% of families who experienced racial/ethnic match were White, preventing subgroup analyses and potentially limiting generalizability to low-income samples or to Black or Hispanic families, for whom match may be more salient. Vinopal (2017) did find that teachers reported greater involvement among elementary school parents with whom they shared a racial/ethnic background than among other parents in their classrooms, though this analysis only considered child-specific parental involvement (e.g., contacting a teacher or attending parent-teacher meetings). No previous studies, however, have considered this relationship between match and parental engagement in an early childhood sample.

Some earlier studies have examined predictors of parent involvement in Head Start (Castro et al., 2004; Hindman et al., 2012), but they have not considered the role of racial/ethnic match. Because Head Start is targeted at low-income families, it may be the case that time and resource constraints are the fundamental driver of parent involvement, and racial/ethnic match may be unrelated. However, given the large proportion of Head Start families from Black and Hispanic communities, evidence suggesting schools create barriers to family engagement for families of color (Lareau & Horvat, 1999; Lewis & Diamond, 2015; Montoya-Ávila et al., 2018; Valenzuela, 1999), and the importance of parental engagement to the two-generation mission of Head Start, understanding how racial/ethnic match may affect parents'

engagement with Head Start is vital to assessing the overall impact of policies that may change the racial composition of the Head Start workforce.

Although little research has explicitly explored racial/ethnic match as a predictor of parents' involvement in K–12 educational settings, and no work on this topic exists in Head Start, there is some evidence that racial/ethnic match is important for engagement in related domains. In particular, because Head Start aims to support both child development and family well-being, research on engagement in counseling and service provision programs may be an appropriate parallel for engagement in Head Start, particularly Head Start's parent-focused programming. Research in these domains finds that racial/ethnic match is important in promoting therapist-client engagement and retention (e.g., Huang & Zane, 2016) and is positively associated with parental engagement in family support services (Filene et al., 2013; McCurdy et al., 2003; Orrell-Valente et al., 1999), suggesting that investigation of the role of racial/ethnic match in Head Start is warranted.

Present Study

Using data from two waves of nationally representative Head Start data, we estimate whether teacher-child racial/ethnic match is associated with parental engagement with Head Start across a variety of measures of parental engagement with Head Start specifically related to their own child's development, general parental involvement with Head Start, and parental engagement with Head Start's support for parents. Additionally, we explore these associations both overall and by child race/ethnicity, both overall and within Head Start centers. This analysis presents a novel exploration of the role of racial/ethnic match in promoting parental engagement in an early childhood setting, informing both the broader racial/ethnic match literature and Head Start policy issues.

Based on previous research, we hypothesize a positive association between teacher-child racial/ethnic match and parental engagement, particularly for Black and Hispanic children. If this is the case, our findings may inform federal policymakers issuing policies aimed at increasing the education of the Head Start workforce while hoping to avoid a further loss of diversity in this group. More generally, results from this study will provide the first large-scale empirical evidence on the role of teacher-child racial/ethnic match on parental involvement within a low-income, largely non-White sample and will provide a preliminary test of the hypothesis that parental involvement may be one mechanism by which teacher-child racial/ethnic match enhances academic and behavioral outcomes. This broader evidence may be of use to leaders of ECE programs as well as policymakers at the state and local levels considering using education requirements as a mechanism for improving ECE quality.

Data and Methods

Data are drawn from the Head Start Family and Child Experiences Surveys (FACES). FACES is an ongoing, nationally representative study of Head Start conducted every 3 years from 1997 through 2009.[1] It uses a multistage probability sampling design with stratification to ensure a nationally representative sample at the program, center, classroom, and child level (West et al., 2011). The FACES study tracks characteristics of the population served by Head Start; Head Start program features, including staff qualifications and characteristics, classroom characteristics and quality measures; and child and family outcomes, including direct assessment of children's skills and survey information regarding parental engagement with Head Start.

This study used FACES data from the 2006 and 2009 survey years. We restricted the sample to first-time Head Start attendees in classrooms with valid information on teacher and child race. White, Black, and Hispanic children, who make up 92% of the full child sample, were included. Children of other racial/ethnic groups (e.g., Asian, Pacific Islander, American Indian, or Alaskan) were excluded due to the very low rates of teacher-child racial/ethnic match (5 children total across 2 cohorts). Similarly, children who reported they were an "other" race or were biracial were excluded since it was impossible to determine whether their racial/ethnic composition matched their teacher.

The sample was further restricted to children with valid covariate information, resulting in a sample of 3,852; 1,237 three-year-olds and 793 four-year-olds in 121 centers in the fall of 2006 and 1,068 three-year-olds and 754 four-year-olds in 124 centers in the fall of 2009. Final sample restrictions occur based on missingness in the dependent variable; sample size ranges from 3,735 to 3,841 for most parent outcomes; however, items asked only in 2009 result in a total sample size of 1,814, and items asked only of children who could return to Head Start for a second year (e.g., those who are 3 years old when they first enter the program) result in a total sample size of 2,305. Results were not sensitive to the use of multiple imputation.

Descriptive statistics for the full sample, as well as the matched and unmatched samples are presented in Table 1. Overall, 60% of the children in the sample were racially/ethnically matched with their teacher. While 37% of Head Start teachers were White, just 22% of Head Start children were White. In contrast, 24% of Head Start teachers were Hispanic compared with 43% of Head Start children. Both White and Black students were more likely to be in a classroom with a teacher with the same race/ethnicity than not, whereas Hispanic children were more likely to be in a classroom without a same race/ethnicity teacher. About 50% of children had teachers with a BA or more; however, children who matched race/ethnicity with their teacher were less likely to have a teacher with a BA. As expected, given Head Start regulations, the children in the sample came from highly disadvantaged families. The plurality of families earned between $5,000 and

Table 1
Sample Descriptive Statistics

	Full Sample			No Match			Match		
	N	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
Teacher/child match	3,852	0.60		1,546	0.00		2,306	1.00	
Teacher covariates									
Teacher White	3,852	0.37		1,546	0.52		2,306	0.27	
Teacher Black	3,852	0.33		1,546	0.25		2,306	0.38	
Teacher Hispanic	3,852	0.24		1,546	0.06		2,306	0.36	
Teacher other race	3,852	0.06		1,546	0.16		2,306	0.00	
Teacher less than AA	3,852	0.17		1,546	0.16		2,306	0.18	
Teacher has AA	3,852	0.37		1,546	0.30		2,306	0.41	
Teacher has BA or more	3,852	0.46		1,546	0.54		2,306	0.41	
Teacher experience (years)	3,852	13.26	8.02	1,546	13.35	8.21	2,306	13.20	7.88
Child and family covariates									
Child White	3,852	0.22		1,546	0.14		2,306	0.27	
Child Black	3,852	0.36		1,546	0.33		2,306	0.38	
Child Hispanic	3,852	0.43		1,546	0.53		2,306	0.36	
Family income									
$0 to $5000	3,852	0.14		1,546	0.14		2,306	0.14	
$5,001 to $10,000	3,852	0.42		1,546	0.41		2,306	0.42	
$10,001 to $15,000	3,852	0.25		1,546	0.26		2,306	0.25	
$15,001 to $20,000	3,852	0.10		1,546	0.09		2,306	0.10	
$20,001 to $25,000	3,852	0.04		1,546	0.05		2,306	0.04	
$25,001 or more	3,852	0.05		1,546	0.05		2,306	0.05	
English as second language	3,852	0.31		1,546	0.37		2,306	0.26	
Male	3,852	0.51		1,546	0.52		2,306	0.51	
Child age (months)	3,852	53.17	6.57	1,546	53.55	6.54	2,306	52.92	6.58
Immigrant parent	3,852	0.38		1,546	0.48		2,306	0.32	
Disability	3,852	0.04		1,546	0.04		2,306	0.04	
Parental depression	3,852	5.06	6.01	1,546	4.90	5.97	2,306	5.18	6.04
Single-parent household	3,852	0.66		1,546	0.66		2,306	0.66	
Mom education less than high school	3,852	0.38		1,546	0.42		2,306	0.35	
Mom has high school degree	3,852	0.32		1,546	0.31		2,306	0.33	
Mom has some college	3,852	0.24		1,546	0.22		2,306	0.26	
Mom has a BA or more	3,852	0.06		1,546	0.05		2,306	0.06	
Child behavior problems	3,852	5.62	3.51	1,546	5.77	3.47	2,306	5.52	3.53
Full-day Head Start	3,852	0.55		1,546	0.57		2,306	0.53	
Cohort	3,852	0.42		1,546	0.45		2,306	0.40	
2009	3,852	0.48		1,546	0.52		2,306	0.45	

Note. Data are drawn from the 2006 and 2009 waves of FACES data. AA = associate degree; BA = bachelor's degree; FACES = Family and Child Experiences Surveys.

$10,000 annually (about 40%), and about 80% earned less than $15,000. About two thirds of children lived in single-parent households, and about 40% of parents had not earned a high school diploma.

Measures

Teacher-Child Racial/Ethnic Match

Consistent with previous literature on the role of sociodemographic match and educational outcomes, the independent variable in this analysis was teacher-child racial/ethnic match, which was coded using spring teacher self-reported race/ethnicity and parents' report of their child's race/ethnicity. Both teacher and child race/ethnicity were coded into four mutually exclusive categories: White, Black, Hispanic, and other race. As noted above, children reported as "other race" were removed from the sample. Children were coded as "1" for racial/ethnic match if their race/ethnicity was the same as that of their teacher's and "0" otherwise.[2] About 11% of the sample reported a different teacher in the fall than in the spring, and about 4% of the sample reported different match status in fall and spring. Removing children who had a different teacher in the fall and spring, or those whose match status changed, did not alter the findings, nor did coding racial/ethnic match using fall teacher characteristics.

Parent Engagement With Head Start

The FACES survey included an extensive set of items related to parental engagement. All items were assessed in the spring of the Head Start year (i.e., Spring 2007 and Spring 2010). We constructed several distinct measures of parental engagement. The first was a measure of the breadth of parental involvement. Through 11 items, parents were asked to report whether or not they participated in a host of Head Start activities, such as "volunteered or helped out in child's classroom," "participated in policy council," or "attended parent education meetings or workshops" (see Appendix A for a complete list). We dichotomized the 11 items such that "0" indicated no participation and "1" indicated any participation, and then we summed them. This scale measured the number of different ways in which parents engaged with Head Start and ranged from 0 to 11. It was standardized for ease of interpretation.

In addition to testing whether racial/ethnic match was linked to higher rates of parental engagement overall, we also considered three sets of conceptually related parent engagement items: parents' child-specific involvement with Head Start, parents' general Head Start involvement, and parents' engagement with Head Start's parent supports.

Child-specific involvement. Parent's child-specific involvement with Head Start was defined as parent participation in activities that specifically support children's learning or development in Head Start and was measured with nine items. The first was a dichotomous FACES-created item assessing whether parents visited Head Start during the year to either observe their child's class or meet with Head Start staff.

Second, parents reported the frequency with which they (1) volunteered in their child's Head Start classroom, (2) observed in the child's classroom, (3) prepared food or materials for their child's class, (4) helped with field trips, (5) attended parent-teacher conferences, and (6) visited with Head Start staff in their home on a 5-point Likert-type scale ranging from *not at all* to *at least once a week*. For our main analyses, items were recoded into a dichotomous measure, where "1" indicates any participation and "0" otherwise. We also conducted sensitivity tests designed to test whether racial/ethnic match promotes not just any involvement but high levels of involvement. In these analyses, we created a second dichotomous measure, where "1" indicated parent participation in the activity more than twice and "0" otherwise.

Third, parents reported on the number of times their child was absent from Head Start during the program year. For young children, absenteeism is typically driven by parent, rather than child, factors (e.g., Gottfried & Gee, 2017); thus, it is possible that racial match leads parents to feel more committed to bringing their child to Head Start. We code absences in two ways, first as a continuous variable ranging from 0 to 90 indicating the number of days absent, and second as a dummy variable indicating chronic absenteeism that is greater than or equal to 15 days.

Finally, we created a dummy variable indicating whether a child continued in the same Head Start in the 2007–2008 or 2010–2011 academic years, a measure of parents' longer term commitment to the center. Children were coded as "1" if they were in the 3-year-old cohort, and thus eligible for a second year of Head Start, and if their data appeared in the next year of FACES data collection; children were coded as "0" if they were eligible for a second year of Head Start but did not appear in the same center in the following year.

General Head Start involvement. We defined parents' general Head Start involvement as parent involvement with activities that reflect general engagement with and support of Head Start but are not directly linked to their child's development. Specifically, parents were asked to report the frequency with which they (1) participated in Head Start's policy council, (2) prepared Head Start newsletters, and (3) attended Head Start fund-raising events on a 5-point Likert-type scale, ranging from *not at all* to *at least once a week*. As above, items were recoded into two measures: a dichotomous measure of any participation used in the main analyses and a dichotomous measure of a high level of participation, defined as parents who had participated in the activity more than twice, used in sensitivity tests.

Engagement with Head Start parent supports. Engagement with Head Start supports for parents was defined as participation in parent-specific events designed to provide social or practical support, as well as the use

of Head Start resources to support the family's needs. First, parents reported the frequency with which they (1) attended a social event and (2) attended a workshop on a 5-point Likert-type scale ranging from *not at all* to *at least once a week*. As above, items were recoded into two measures: a dichotomous measure of any participation and a dichotomous measure of a high level of participation, defined as parents who had participated in the activity more than twice. We also use a FACES-constructed dichotomous measure of whether parents indicated any participation in either of these parent-focused events.

Second, we used 12 items to assess parents' take-up of specific services provided by Head Start. In 2009, parents answered a set of 14 questions assessing whether or not they received assistance from Head Start in accessing a host of services, such as housing services, job training programs, finding and enrolling in school, child care, and others. We included in our analyses all variables in which at least 1% of families reported taking up Head Start help, resulting in a total of 11 items (items assessing help from Head Start with "drug and alcohol treatment," "advice from a lawyer," and "other family problem" were omitted). We also created a 12th item measuring whether parents received any type of help from Head Start using all 14 questions. This item is a dichotomous indicator where "1" indicates parents received some type of help from Head Start and "0" otherwise. See Table 2 for a list of the types of assistance provided by Head Start included in this analysis.

Covariates

A rich set of teacher, family, and child covariates were included in all models. Teacher covariates included a three-level measure of teacher education (less than an associate degree [AA], AA, or BA or more), a four-group measure of teacher race/ethnicity (White, Black, Hispanic, other race/ethnicity, described above), and a continuous measure of years of teacher experience. Family covariates included a dichotomous indicator for a single-parent household; a dichotomous indicator of immigrant status, coded such that "1" indicates at least one parent is an immigrant and "0" otherwise; an indicator for English as a second language (ESL) in the household; a continuous measure of maternal depressive symptoms (constructed by FACES, taken from the Center for Epidemiological Studies Depression Scale, Radloff, 1977); a four-level indicator of maternal education (less than a high school degree, a high school degree, some college, BA or more); and a six-level measure of family income (see Table 1). Finally, we included child's age in months, race/ethnicity (described above), gender, and disability status, and a measure of parent-reported child behavior problems in the fall (Behavior Problems Index; Zill & Peterson, 1986). We included Behavior Problems Index to account for the fact that behavior problems may be correlated with many

Table 2

Bivariate Relationships Between Racial/Ethnic Match and Parental Engagement

	Overall			No Match			Match			
	N	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*	Sig
Teacher/child match	3,852	0.60		1,546	0.00		2,306	1.00		
Overall parent involvement (standard)	3,841	−0.03	1.01	1,543	−0.17	0.98	2,298	0.07	1.01	**
Child-specific involvement with HS										
Parent visited HS	3,834	0.97		1,538	0.97		2,296	0.97		
Volunteered	3,839	0.60		1,541	0.54		2,298	0.63		**
Observed in the classroom	3,840	0.71		1,542	0.69		2,298	0.73		+
Prepared food or materials	3,835	0.52		1,541	0.50		2,294	0.54		
Helped with field trips	3,838	0.42		1,542	0.39		2,296	0.45		*
Attended parent-teacher conference	3,838	0.86		1,541	0.85		2,297	0.86		
HS staff visited child's home	3,838	0.70		1,541	0.68		2,297	0.71		
Number of absences	3,763	6.43	6.01	1,511	6.72	6.43	2,252	6.23	5.71	+
Chronic absenteeism	3,763	0.09		1,511	0.11		2,252	0.08		**
Returned to same HS	2,305	0.71		892	0.72		1,413	0.71		
General involvement with HS										
Participated in policy council	3,741	0.21		1,505	0.20		2,236	0.22		
Prepared newsletters	3,838	0.14		1,542	0.10		2,296	0.16		**
Attended fund-raising events	3,837	0.28		1,541	0.24		2,296	0.31		*
Engagement with parent supports										
Parent attend event or workshop	3,832	0.75		1,537	0.72		2,295	0.77		**
Attended HS social events	3,837	0.50		1,541	0.47		2,296	0.51		+
Attended HS workshops	3,838	0.51		1,540	0.47		2,298	0.53		*
Type of assistance from HS										
Got some type of help	1,814	0.35		769	0.39		1,045	0.33		
Housing	1,813	0.01		768	0.01		1,045	0.01		
Job training	1,813	0.01		769	0.01		1,044	0.01		
Job search	1,813	0.02		769	0.02		1,044	0.02		
School/college	1,813	0.04		769	0.06		1,044	0.03		+
ESL classes	1,813	0.04		769	0.05		1,044	0.04		
Transportation work/training	1,813	0.01		769	0.01		1,044	0.01		
Child care	1,814	0.04		769	0.04		1,045	0.03		
Mental health	1,814	0.01		769	0.01		1,045	0.02		
Family violence	1,812	0.01		767	0.01		1,045	0.01		
Dental	1,813	0.10		768	0.09		1,045	0.10		
Medical	1,814	0.03		769	0.03		1,045	0.02		

Note. Data are drawn from FACES 2006 and 2009; means are weighted using FACES sampling weights. "Sig" indicates statistically significant differences. HS = Head Start; ESL = English as second language; FACES = Family and Child Experiences Surveys.
$^{+}p < .10$. $*p < .05$. $**p < .01$.

engagement items, including the frequency of attending parent-teacher conferences or visiting/observing in Head Start.

Finally, we included an indicator for full-day (rather than half-day) Head Start centers, an indicator of child cohort (i.e., 3 or 4 years old at Head Start entry), and an indicator for whether the child's data came from the 2006 or 2009 wave of FACES.

Analytic Strategy

To estimate the relationship between teacher-child racial/ethnic match and parental engagement with Head Start, we estimated two models. First, we use an ordinary least squares (OLS) regression to estimate the association between teacher-child racial/ethnic match and each individual parental engagement outcome for parent *i* in center *j*, as shown in Equation 1.

$$\begin{aligned} Parent\ Engagement_{ij} = \alpha + \beta_1(teacher\ child\ racial/ethnic\ match_{ij}) + \\ \beta_3(teacher\ covariates_{ij}) + \beta_4(child\ and\ family\ covariates_{ij}) + \varepsilon_i \end{aligned} \quad (1)$$

In Equation 1, the coefficient β_1 represents the difference in each parent engagement outcome between children who do experience racial/ethnic match and children who do not experience match, net of teacher, family, and child characteristics. For example, in the OLS model predicting parental volunteering, a coefficient of 0.10 (β_1 on teacher-child racial/ethnic match would indicate that parents in families where there is teacher-child racial/ethnic match were 10 percentage points more likely to volunteer than parents in families without racial/ethnic match.

As in all OLS regressions, however, β_1 only represents a causal relationship between racial/ethnic match and parental involvement if all variables that are associated with both racial/ethnic match and engagement are included in the model. Because centers are likely to differ in many ways that are both correlated with teacher-child racial/ethnic match and parental engagement and unobserved in the data—for example, in parent outreach efforts or in community wealth—this estimate likely includes omitted variable bias. To address such potential omitted variables, we estimate versions of Equation 1 that include center fixed effects. Including center fixed effects is akin to estimating a separate intercept for each center and accounts for unobserved center traits that are fixed across time—including center outreach, culture, or policy—by making comparisons *within* centers.

$$\begin{aligned} Parent\ Engagement_{ij} = \alpha + \beta_1(teacher\ child\ racial/ethnic\ match_{ij}) + \\ \beta_3(teacher\ covariates_{ij}) + \beta_4(child\ and\ family\ covariates_{ij}) + \gamma_j + \varepsilon_i \end{aligned} \quad (2)$$

In Equation 2, γ_j represents center fixed effects. Thus, the coefficient β_1 represents the average difference in parental engagement for the parents of children who experience racial/ethnic match as compared with children without a racial/ethnic match *but who attend the same center*, net of all teacher, family, and child covariates. This model provides a more rigorous estimate of the impact of teacher-child racial/ethnic match on parental engagement by making comparisons within centers. The tradeoff, however, is that fixed effects models require a high level of within-center variability in teacher-child racial/ethnic match to generate precise estimates[3] and may be underpowered to detect true associations. Given this tradeoff, we present results of

estimates both with and without fixed effects in all tables. We have greatest confidence in associations that are statistically significant across both models, and associations that retain their magnitude in fixed effects models, even if statistical significance is lost.

All models, including those with dichotomous dependent variables, are estimated linearly rather than as a logit or probit model. Linear estimates accommodate the inclusion of a large set of fixed effects and ease interpretation.[4]

All models were estimated in the full sample and then, to explore potential heterogeneity, were disaggregated by child race/ethnicity. All analyses included the full set of covariates discussed above and were weighted using FACES-provided sampling weights to ensure nationally representative estimates. Finally, we calculate all p values with a Bonferroni correction to account for multiple comparisons.

Results

The first columns of Table 2 provide descriptive statistics for all parental engagement measures. Most Head Start parents have some level of engagement with their child's program—97% of parents visited Head Start in some capacity over the course of the year. However, there is also wide variation in how parents participate. For example, while 86% of parents report attending at least one parent-teacher conference, only 60% of parents volunteer, about half of parents participate in social events or workshops (though 75% report participating in at least one of these types of events), 35% receive some type of assistance from Head Start, and 21% participate in policy council.

The remaining columns of Table 2 compare these measures for children who do and who do not share racial/ethnic background with their teacher. They show that across nearly all outcomes, parental involvement is higher in families experiencing racial/ethnic match than those who do not. For example, 72% of parents of children who do not share racial/ethnic background with their teachers report attending an event or workshop compared with 77% of parents of children who do. Parents of children who share racial/ethnic background with their teachers are 6 percentage points more likely to report preparing Head Start newsletters and 7 percentage points more likely to report attending fund-raising events. These associations are presented graphically in Figure 1.

Appendix Table B1 disaggregates these comparisons for the White, Black, and Hispanic, subsamples. It highlights a stronger association between racial/ethnic match and parental engagement among Hispanic families (see also Figure 2). For instance, parents of Hispanic children who were taught by Hispanic teachers were 16 percentage points more likely to report volunteering, 8 percentage points more likely to help with a field trip, and 15 percentage points more likely to attend a Head Start fund-raiser compared with the parents of Hispanic children taught by White or Black teachers. This pattern is not present for items assessing parents' receipt of specific services from

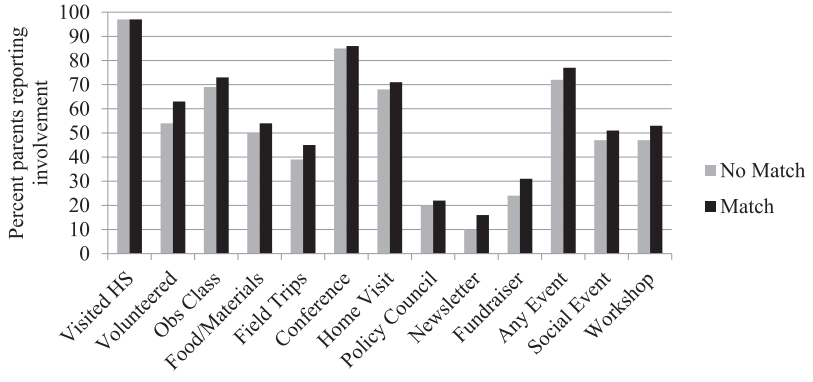

Figure 1. **Bivariate associations between racial/ethnic match and parental engagement with Head Start, full sample.**

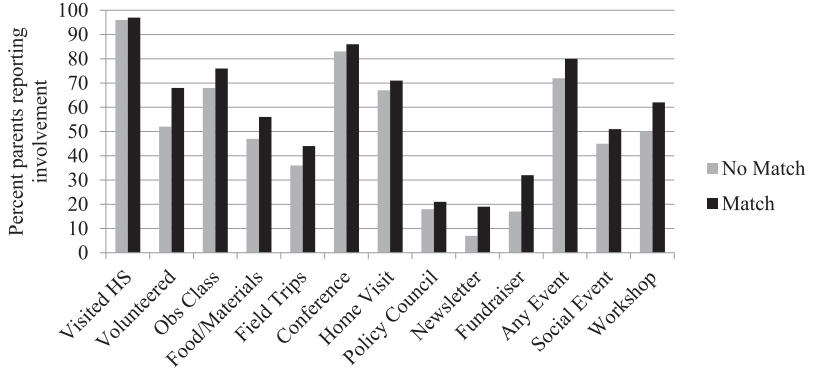

Figure 2. **Bivariate associations between racial/ethnic match and parental engagement with Head Start, Hispanic subsample.**

Head Start (e.g., housing, job training). Parents report very low levels of take-up of these items, and there is no clear trend across match groups.

Overall, Child-Specific, and General Involvement With Head Start

Table 3 presents associations between teacher-child racial/ethnic match and parents' overall involvement, their child-specific Head Start involvement, and general Head Start involvement, both in the overall sample and by child race. Model 1 presents OLS results, model 2 presents results from models including Head Start center fixed effects.

Table 3

Associations Between Teacher-Child Racial/Ethnic Match and Parents' General and Child-Specific Involvement With Head Start

	Full Sample		White Sample		Black Sample		Hispanic Sample	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Overall parent involvement at HS (standard)	0.13* (0.05)	0.14* (0.06)	−0.04 (0.19)	0.07 (0.22)	0.03 (0.09)	0.07 (0.10)	0.32** (0.11)	0.17* (0.07)
Child-specific involvement with HS								
Parent visited HS	0.01 (0.01)	0.01 (0.01)	0.01 (0.02)	0.02 (0.02)	−0.04* (0.01)	0.01 (0.02)	−0.02^{+} (0.01)	0.01 (0.02)
Volunteered	0.06* (0.03)	0.07** (0.03)	0.17* (0.08)	0.19* (0.08)	0.04 (0.04)	0.06 (0.06)	0.13* (0.06)	0.04 (0.05)
Observed in the classroom	0.03 (0.02)	0.02 (0.02)	−0.01 (0.10)	−0.15^{+} (0.08)	0.00 (0.04)	−0.04 (0.06)	0.05 (0.04)	0.03 (0.05)
Prepared food or materials	0.01 (0.03)	0.05^{+} (0.03)	−0.09 (0.11)	0.19^{+} (0.10)	0.05 (0.05)	−0.04 (0.07)	0.12* (0.05)	0.02 (0.04)
Helped with field trips	0.05^{+} (0.03)	0.08** (0.03)	0.04 (0.07)	0.10 (0.16)	0.01 (0.04)	0.04 (0.04)	0.07 (0.04)	−0.09 (0.06)
Attended parent-teacher conference	0.02^{+} (0.01)	0.05** (0.02)	0.03 (0.06)	0.05 (0.09)	−0.07* (0.03)	0.03 (0.04)	0.01 (0.03)	0.11^{+} (0.05)
HS staff visited child's home	0.02 (0.03)	0.01 (0.02)	0.08 (0.08)	0.06 (0.05)	−0.14* (0.06)	−0.04 (0.05)	−0.11^{+} (0.06)	0.02 (0.04)
Number of absences	−0.85* (0.34)	−0.49 (0.35)	−0.62 (0.97)	−0.05 (1.42)	−0.44 (0.43)	−0.63 (0.55)	−1.03* (0.42)	−0.97^{+} (0.49)
Chronic absenteeism	−0.04** (0.02)	−0.03^{+} (0.02)	−0.02 (0.05)	0.06 (0.11)	−0.04* (0.02)	−0.04 (0.02)	−0.04* (0.02)	−0.04 (0.03)
Returned to HS in following year	0.07* (0.03)	0.05 (0.03)	0.16 (0.12)	0.28^{+} (0.15)	−0.04 (0.07)	−0.05 (0.07)	−0.06 (0.04)	−0.10^{+} (0.06)
General involvement with HS								
Participated in HS policy council	0.00 (0.02)	−0.01 (0.03)	−0.08 (0.07)	0.02 (0.07)	0.01 (0.04)	0.06 (0.05)	0.01 (0.02)	0.04 (0.04)
Prepared HS newsletters	0.03^{+} (0.02)	0.03 (0.02)	−0.08 (0.11)	−0.18 (0.22)	0.06* (0.03)	0.01 (0.03)	0.12** (0.03)	0.08** (0.02)
Attended HS fund-raising events	0.02 (0.03)	0.01 (0.02)	−0.14^{+} (0.07)	0.11^{+} (0.06)	0.01 (0.05)	−0.05 (0.04)	0.16** (0.05)	0.02 (0.04)
Covariates	X	X	X	X	X	X	X	X
Center fixed effects		X		X		X		X

Note. Data are drawn from the 2006 and 2009 waves of FACES data. Sample size is based on the dependent variables and shown in Table 2. Model covariates include teacher education, race, and experience; child age, race, gender, disability status, and behavior problems; family income, family structure, immigrant status, English as a second language, maternal depressive symptoms, and maternal education; full-day Head Start, child cohort (3 or 4 year old), and wave of data. Models are weighted using FACES provided sampling weights. Standard errors are in parentheses. HS = Head Start; FACES = Family and Child Experiences Surveys.
$^{+}p < .10$. $*p < .05$. $**p < .01$. To account for multiple comparisons, we use a Bonferroni correction; symbols for p values reflect this adjustment.

Overall Involvement

Racial/ethnic match was associated with an increase in parents' overall involvement at Head Start in the full sample in both between-center (b = 0.13, $p < .05$) and within-center regressions (b = 0.14, $p < .05$). Associations were positive but nonsignificant in the within-center analyses for White and Black families; in the Hispanic subsample, associations were larger in magnitude and statistically significant for both the between-center (b = 0.32, $p < .01$) and within-center regressions (b = 0.17, $p < .05$). The magnitude of this association is modest, but meaningful; racial/ethnic match is associated with parental involvement in an additional one third of an activity.

Child-Specific Involvement

In the full sample, racial/ethnic match was consistently associated with parent volunteering, helping with field trips, and attending parent-teacher conferences. Magnitudes of this association ranged from 5 to 8 percentage points. Racial/ethnic match was associated with 0.85 fewer absences in OLS models, but this effect was reduced to about half a day and no longer statistically significant in fixed effects models. However, the relationship between racial/ethnic match and chronic absenteeism was more robust. Across centers, racial/ethnic match was associated with a 4-percentage-point decrease in chronic absenteeism ($p < .05$); within centers, the association was similar at 3 percentage points ($p < .10$). Together, these models are suggestive of an association between racial/ethnic match and absenteeism—a finding consistent with previous research on racial/ethnic match and school attendance (Holt & Gershenson, 2015).

In the White subsample, racial/ethnic match was not consistently associated with most of the 10 child-specific involvement outcomes tested. The one exception is that among White parents, racial/ethnic match was associated with a greater likelihood that parents volunteered. This association persisted across models and was modest in size (b = 0.17, $p < .05$ in Model 1, and b = 0.19, $p < .05$ in Model 2).

In the Black subsample, there were few consistent associations between racial/ethnic match and child-specific involvement. In OLS regressions, racial/ethnic match was associated with a lower likelihood that a parent would visit Head Start ($b = -0.04$, $p < .05$), attend a parent-teacher conference ($b = -0.07$, $p < .05$), or visit with Head Start staff in their homes ($b = -0.14$, $p < .05$); however, these associations attenuated to zero in fixed effects models, suggesting that these associations may be linked to center characteristics rather than to racial/ethnic match. Racial/ethnic match was associated with a 4-percentage-point decrease in the likelihood of chronic absenteeism in OLS models ($p < .05$); though no longer statistically significant in fixed effects models, the association was identical in magnitude providing suggestive evidence of an association.

In the Hispanic subsample, racial/ethnic match was associated with about one fewer absence a year in both OLS ($p < .05$) and fixed effects ($p < .10$) models. Similar to the Black subsample, racial/ethnic match was associated with a 4-percentage-point decrease in the likelihood of chronic absenteeism in OLS models ($p < .05$), and this association retained its size but not its significance in fixed effects models. Additionally, across centers, racial/ethnic match was associated with increased probability of volunteering ($b = 0.13$, $p < .05$) and preparing food and materials ($b = 0.12$, $p < .05$), although both associations were attenuated and no longer significant in fixed effects models, suggesting that center characteristics may play a role.

General Involvement With Head Start

There were no conventionally significant associations between teacher-child racial/ethnic match and general involvement with Head Start in either the full sample or the White subsample. Among Black families, racial/ethnic match was associated with a greater likelihood of being involved with preparing Head Start newsletters ($b = 0.06$, $p < .05$) in the OLS model only. Among Hispanic families, racial/ethnic match was associated with a greater likelihood of being involved with preparing Head Start newsletters in both OLS ($b = 0.12$, $p < .01$) and fixed effects models ($b = 0.08$, $p < .01$), and with attending Head Start fund-raising activities in OLS models ($b = 0.16$, $p < .01$), providing some suggestive evidence linking match to parents' general Head Start involvement for Hispanic families only.

Engagement With Head Start Parent Supports

Table 4 presents associations between teacher-child racial/ethnic match and parents' engagement with parental supports provided by Head Start, both in the overall sample and by child race. Model 1 presents OLS results and Model 2 presents results from models, including Head Start center fixed effects. In general, Table 4 shows few associations.

In the full sample, there was some limited evidence that teacher-child racial/ethnic match was associated with parents' attendance of social events or workshops. Match was associated with parents' likelihood of attending any social event or workshop across the year ($b = 0.05$, $p < .05$) and of attending a workshop in particular ($b = 0.06$, $p < .05$) in OLS specifications, though these associations attenuated in size by about a third in fixed effects models and were no longer significant.

In both the White and Black subsamples, racial/ethnic match was not associated with engagement with parent supports at conventional levels. In the Hispanic subsample, racial/ethnic match was associated with increased likelihood of attending a social event or workshop ($b = 0.09$, $p < .05$ in Model 1, $b = 0.09$, $p < .10$ in Model 2) and of attending a workshop in particular ($b = 0.16$, $p < .05$ in Model 1, $b = 0.09$, $p < .10$ in Model 2).

Table 4

Associations Between Teacher-Child Racial/Ethnic Match and Parents' Engagement With Head Start's Parent Supports

	Full Sample		White Sample		Black Sample		Hispanic Sample	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Engagement with parent supports								
Parent attends social events or workshop at HS	0.05* (0.02)	0.03 (0.02)	0.15 (0.12)	−0.07 (0.13)	0.01 (0.04)	0.05 (0.06)	0.09** (0.03)	0.09^{+} (0.05)
Attended HS social events	0.03 (0.03)	0.00 (0.03)	0.04 (0.13)	−0.04 (0.14)	0.03 (0.04)	0.09^{+} (0.05)	0.06 (0.04)	0.06 (0.07)
Attended HS workshops	0.06* (0.03)	0.04 (0.03)	−0.04 (0.15)	−0.13 (0.21)	0.07^{+} (0.04)	0.04 (0.07)	0.16** (0.04)	0.09^{+} (0.05)
Type of assistance from HS, 2009								
Got some type of help	−0.01 (0.01)	−0.01 (0.02)	−0.12 (0.09)	−0.01 (0.11)	−0.03 (0.02)	−0.04 (0.04)	−0.03 (0.03)	0.00 (0.05)
Housing	−0.01 (0.01)	−0.03 (0.02)	0.01 (0.01)	0.00 (0.01)	0.01 (0.01)	0.01 (0.02)	−0.01 (0.01)	0.01 (0.01)
Job training	−0.02 (0.01)	−0.02 (0.02)	0.00 (0.01)	−0.02 (0.04)	0.00 (0.01)	0.02 (0.01)	0.00 (0.01)	0.01 (0.01)
Job search	−0.01 (0.01)	0.01 (0.01)	0.00 (0.01)	0.01 (0.02)	0.01 (0.02)	0.04^{+} (0.02)	−0.01 (0.01)	−0.03 (0.03)
School/college	−0.04^{+} (0.02)	−0.04^{+} (0.02)	0.02 (0.02)	0.00 (0.03)	−0.03 (0.02)	0.03^{+} (0.01)	−0.07* (0.03)	−0.12^{+} (0.06)
ESL classes	0.00 (0.01)	−0.01 (0.02)	0.01 (0.01)	0.00 (0.01)	−0.02* (0.01)	−0.02 (0.02)	−0.02 (0.04)	0.04 (0.04)
Transportation for work/training	−0.01 (0.01)	−0.01 (0.01)	0.01 (0.01)	0.04* (0.01)	0.01 (0.00)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Child care	0.00 (0.01)	−0.01 (0.01)	−0.08 (0.08)	−0.10* (0.04)	−0.01 (0.02)	0.03 (0.02)	−0.01 (0.02)	−0.02 (0.03)
Mental health	0.00 (0.01)	0.00 (0.01)	0.02 (0.02)	0.02 (0.03)	0.01^{+} (0.00)	0.00 (0.00)	−0.01 (0.01)	−0.02 (0.02)
Family violence	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.03^{+} (0.02)	0.01 (0.01)	0.00 (0.00)	−0.01 (0.01)	−0.02 (0.03)
Dental	−0.02 (0.03)	−0.04 (0.02)	−0.22^{+} (0.13)	−0.12 (0.09)	0.03 (0.03)	0.04 (0.04)	−0.03 (0.03)	0.02 (0.04)
Medical	−0.01 (0.02)	−0.03 (0.02)	0.02 (0.03)	0.12^{+} (0.06)	0.01 (0.01)	−0.01 (0.04)	−0.03 (0.02)	0.01 (0.02)
Covariates	X	X	X	X	X	X	X	X
Center fixed effects		X		X		X		X

Note. Data are drawn from the 2006 and 2009 waves of FACES data. Sample size is based on the dependent variables and shown in Table 2. Model covariates include teacher education, race, and experience; child age, race, gender, disability status, and behavior problems; family income, family structure, immigrant status, English as a second language, maternal depressive symptoms, and maternal education; full-day Head Start, child cohort (3 or 4 years old), and wave of data. Models are weighted using FACES provided sampling weights. Standard errors are in parentheses. HS = Head Start; ESL = English as second language; FACES = Family and Child Experiences Surveys.

$^{+}p < .10$. $*p < .05$. $**p < .01$. To account for multiple comparisons, we use a Bonferroni correction; symbols for p values reflect this adjustment.

Although these associations were not conventionally significant in fixed effects models, they retained much of their size, and retained significance at trend level, providing suggestive evidence of a link between teacher-child racial/ethnic match and engagement with parent supports for Hispanic families only.

There were no relationships between teacher-child racial/ethnic match and receiving some type of assistance from Head Start in the full sample. In subgroup analyses, there are a few scattered associations; however, these associations were small in magnitude and not consistently statistically significant at conventional levels.[5]

Sensitivity Analyses

Taken together, results from the main models suggest that racial/ethnic match is associated with parental involvement with Head Start, particularly in child-specific activities, and more consistently for Hispanic families than for White or Black families. We further probe these associations in two ways.

First, it is possible that racial/ethnic match promotes engagement on the extensive margin—that is, that it encourages families to become involved with Head Start—or that it promotes engagement on the intensive margin—that it encourages parents to become *more* involved with Head Start. Our primary analyses show that match is associated with involvement on the extensive margin; to test whether match also promotes more intensive involvement, we conduct an additional analysis in which we explore whether racial/ethnic match is associated with high levels of parental involvement, defined as engagement in any activity (e.g., volunteering, observing in the classroom) more than twice during the year.

Results are presented in Appendix Table B2. In the full sample, racial/ethnic match was associated with higher levels of preparing food or materials and helping with field trips in both between- and within-center models, and with higher levels of newsletter preparation and workshop attendance, but only in between-center models. There were no consistent associations in the White or Black subsamples. In the Hispanic subsample however, we find evidence that racial/ethnic match is positively related to both general involvement and take-up of parental supports. Match was associated with high levels of policy council participation, fund-raiser attendance, and workshop attendance in within-center models. This last association was quite large; match was associated with a 13-percentage-point increase in the likelihood that Hispanic parents attended more than two Head Start workshops. With respect to child-specific involvement in Head Start for the Hispanic subsample, we find that racial/ethnic math is positively associated with high levels of volunteering, food and materials preparation, and helping with field trips, and negatively associated with visiting with Head Start staff, but only in the between-center models.

Across all analyses, associations between racial/ethnic match and involvement were strongest and most consistent in the Hispanic subsample. This finding is consistent with previous literature documenting a particular preference for caregivers of similar cultural backgrounds among Hispanic families (e.g., Fuller et al., 1996; Liang et al., 2000; Magnuson & Waldfogel, 2005). It may be the case that insofar as these families have a preference for a culturally similar caregiver, they may respond by engaging more in classroom activities. It may also be the case that racial/ethnic match is more salient among recent immigrants and/or families for whom English is a second language, for whom this preference may be stronger. We test this possibility by running our primary models separately on four Hispanic subsamples: Hispanic immigrant families, Hispanic nonimmigrant families, Hispanic ESL families, and Hispanic families who primarily speak English.

A large proportion of the Hispanic children in the FACES sample are from immigrant-origin families or speak a language other than English at home. Specifically, about 78% of Hispanic children have at least one parent who is of immigrant origin, and 68% of Hispanic children primarily speak a language other than English at home. As would be expected, these subgroups are broadly, though not entirely, overlapping: 83% of Hispanic children with at least one immigrant-origin parent primarily speak a language other than English at home, and 96% of Hispanic children who primarily speak a language other than English at home are from immigrant-origin families.

Put another way, just 19% of Hispanic children in our sample were in families that did not have an immigrant-origin parent and spoke only English at home, and 65% of our sample both primarily spoke a language besides English at home and had at least one immigrant-origin parent. Because of this substantial overlap, we expected findings to be similar across subgroups. Notably, teacher-child racial/ethnic match occurred at a rate of about 50% across all four Hispanic subgroups.

Results from these subgroup analyses are presented in Appendix Tables B3 and B4. Findings suggest that, counter to our hypothesis, the larger associations for Hispanic families as compared with White or Black families are not exclusively driven by immigrant families or families for whom English is a second language. Associations are largely consistent across Hispanic subgroups for 12 of the 16 outcomes tested; for example, among all groups match is associated with higher levels of overall involvement, and in particular parent volunteering and work on the Head Start newsletter.

For four outcomes, however, there are differences across subgroups. Specifically, the relationship between teacher-child racial/ethnic match and attendance was present for immigrant and ESL subgroups only. Conversely, associations between match and parent-focused involvement—including participation in policy council, attendance at Head Start social events, and attendance at Head Start workshops—are present for nonimmigrant, non-ESL families only.

Overall, our results suggest that match is linked with an overall boost in engagement among families across our Hispanic sample, irrespective of immigrant or language status—findings are largely consistent, and differences that do exist are small and not always statistically significant. Still, there is some suggestive evidence that non–English language learner parents may be more willing to engage in the kinds of volunteer and social opportunities at Head Start that are more likely to require English language skills or involve socializing with other Head Start parents.

Discussion

Since its inception, Head Start has been defined by its two-generation mission: to improve children's developmental outcomes and support the overall economic security and well-being of families (Parker et al., 1995). Parent engagement is central to achieving Head Start's goals for each generation. Parental involvement in children's education has been associated with enhanced developmental outcomes for children both in Head Start (e.g., Ansari & Gershoff, 2016) and across a variety of educational and early educational settings (e.g., Avvisati et al., 2014; Castro et al., 2015; Ma et al., 2016), and Head Start's ability to provide services to families is contingent on Head Start's ability to cultivate relationships with Head Start parents (e.g., Gaitan, 2004; Ishimaru et al., 2016; Lightfoot, 2004; López et al., 2001; Olivos, 2006). Thus, understanding policy-malleable predictors of parental engagement, while relevant across ECE program types, is particularly critical in the context of Head Start. Drawing on the growing literature on the importance of racial/ethnic match in both educational (Downer et al., 2016; Grissom et al., 2015) and other family service settings (Filene et al., 2013; Huang & Zane, 2016; McCurdy et al., 2003) as well as critical analyses of the ways in which schools engage with bicultural students or students from nondominant groups (Baquedano-López et al., 2013; Lewis & Diamond, 2015; Montoya-Ávila et al., 2018; Valenzuela, 1999), the present study provides a novel exploration of the links between teacher-child racial/ethnic match and parental engagement with Head Start.

We find consistent evidence that teacher-child racial/ethnic match is positively associated with both child-specific involvement with Head Start and general involvement, with weaker evidence for parent engagement with Head Start's parent supports (see Figure 1). For example, *within* centers, teacher-child racial/ethnic match was associated with a 0.14 standard deviation increase in overall parental involvement in Head Start and increases in parent volunteering, helping with field trips, and attending parent-teacher conferences. *Across* centers, teacher-child racial/ethnic match was associated with increased attendance at Head Start's parent-focused workshops and social events, as well as about one fewer absence a year, a 4-percentage-point decrease in the likelihood of chronic absenteeism,

and a 5-percentage-point increase in the likelihood of returning to the same center for a second year of Head Start.

Associations were particularly strong among items measuring parents' engagement with their child's development in Head Start, among absenteeism items, and among Hispanic families. In the Hispanic subsample, racial/ethnic match was associated with newsletter preparation and attending fundraisers and Head Start workshops (see Figure 2). Moreover, teacher-child racial/ethnic match was associated with about one fewer absence a year among Hispanic families. We did not find evidence of a strong association between teacher-child racial/ethnic match and parent involvement among Black families, a surprising finding given the literature on the importance of match for Black children's outcomes. It may be that the larger proportion of Black as compared with Hispanic teachers (33% vs. 24%) in our sample indicates that Black children are more likely to be in programs with Black educators, who may provide some of the benefits of teacher-child match. However, it may also be that the benefits of teacher-child racial/ethnic match for the academic outcomes of Black children do not primarily occur through increased parental engagement. These issues warrant further study.

The estimated associations were modest. Moreover, it is difficult to assess how meaningful the estimated changes in parental involvement are, defining meaning as relevant to the goal of supporting children's development. The causal evidence on the specific impacts of the parental involvement measures examined here and child outcomes is underdeveloped. Moreover, the present study does not capture the potential long-term benefits of parents' developing a sense of agency in their child's schooling or other ways in which parents' greater involvement with Head Start may generate benefits for themselves or their child. Still, our findings suggest modest but meaningful relationships. For example, in our study, on average, children in Head Start were absent about 6 days a year in our sample, such that the 1 day decrease in absenteeism associated with racial/ethnic match among Hispanic children amounts to a 17% reduction. We also conducted back-of-the-envelope calculations to probe the relationship between our estimated increases in involvement and children's developmental gains. Using the same data set, Ansari and Gershoff (2016) estimated the relationship between parental involvement in Head Start and parents' cognitive stimulation at home (β = 0.24) and cognitive stimulation and children's developmental gains over the Head Start year (β = 0.07–0.09). Based on this, we estimate that in the full sample racial-ethnic match would be associated with a 0.03 standard deviation increase in parental cognitive stimulation of their child at home and a 0.003 standard deviation gain in math and literacy. These estimated effect sizes were similar to other studies linking racial ethnic match to student achievement in K–12 (Egalite et al., 2015) but smaller than previous estimates in pre-K (Downer et al., 2016). Associations with absenteeism were somewhat larger than for other

interventions designed to increase parental engagement with school (e.g., Avvisati et al., 2014) and larger than estimated associations between match and absenteeism in later grades (Holt & Gershenson, 2015).

Parent take-up of services provided by Head Start was less consistently associated with racial/ethnic match. While there is some suggestive evidence that among White families match is associated with greater use of medical and family support services and that among Black families match is associated with take-up of job search and educational and training services, these associations were weak and not consistently statistically significant at conventional levels. This inconsistency may be due to very low base rates of parent use of these services; no service was taken up by more than 4% of families with the exception of dental care (10%). It may also be because parents' take up of these services may be more reflective of family need than the other involvement items, may require a higher level of openness with Head Start staff, or may be less under the direct control of teachers and thus more weakly associated with *teacher-child* racial/ethnic match. Head Start's efforts to connect parents with services may be particularly beneficial for both children and families. Future research should continue to probe what factors promote parent take-up of these services.

Not only is racial/ethnic match related to whether or not parents had "any" parental engagement (e.g., Did you ever volunteer in Head Start?), it was also associated with more intensive engagement (e.g., volunteering "several times" or more over the course of the year, see Appendix Table B2). These findings suggest that racial/ethnic match may both help parents overcome initial obstacles to involvement and facilitate relationships that promote further engagement. Future research on the mechanisms by which racial/ethnic match engenders parent engagement may shed light on how programs can best leverage resources to promote parental involvement.

This study makes two contributions to the broader educational literature. First, although research has documented the importance of racial/ethnic match for children's academic and social development, as well as teacher's ratings of child behavior (Bates & Glick, 2013; Downer et al., 2016; Downey & Pribesh, 2004; Wright et al., 2017), the mechanisms by which racial/ethnic match influence children are not well understood. We provide evidence that teacher-child racial/ethnic match leads to increased parental engagement in activities that are hypothesized to promote child development, including volunteering in the classroom and with class activities as well as attending parent-teacher conferences, suggesting that parental engagement may be one mechanism through which racial/ethnic match provides benefits for children both across all ECE types and in K–12 settings. Parents may form more productive relationships with teachers—one in which teachers look to parents as key sources of information about children's education—or feel more comfortable being involved in classrooms when they share a racial/ethnic or cultural background with the teacher

(Gaitan, 2004, 2012; Hornby & Lafaele, 2011; Ishimaru et al., 2016; Lareau & Horvat, 1999; LaRocque et al., 2011). Our findings suggest that teachers hoping to support students of varied racial/ethnic or cultural backgrounds should consider the use of strategies that explicitly consider the role of racial/ethnic differences (De Gaetano, 2007; Montoya-Ávila et al., 2018).

Indeed, our findings were strongest among Hispanic families for whom language and cultural factors may be even more salient than for English-speaking White or Black families. Previous research on parents' early education choices suggest that finding a provider with a cultural or language match is particularly important for Hispanic families (Fuller et al., 1996; Liang et al., 2000; Magnuson & Waldfogel, 2005) and difficulty in finding this match may be one reason this group has low levels of participation in center-based care (with families instead opting for home-based or family providers). For Hispanic parents who do choose Head Start, having this preference met by having their child in a classroom with a same-race/-ethnicity teacher may drive engagement in Head Start activities.

We ran sensitivity analyses exploring the association between racial/ethnic match and parental involvement among immigrant families and families for whom English is a second language (see Appendix Tables B3 and B4), hypothesizing that parents may have a stronger preference for a matched caregiver in these subgroups. We found, however, that associations between racial/ethnic match and child-specific involvement items were largely consistent in size and significance across all Hispanic subgroups; that is, among all Hispanic families, we saw an association between match and engagement. These across-the-board benefits of racial/ethnic match suggest either that match preferences are similar across these subgroups or that match preference is not the only mechanism by which match promotes engagement among Hispanic families. It is worth noting two limitations of this analysis, however. First, we cannot account for whether or not the teacher speaks Spanish; that is, this is not a direct test of language match. Second, it may be that the Spanish language is an important cultural touchstone for bicultural families, whether the families claim Spanish or English as their first language (Gaitan, 2012), which is why we may not see a distinction between families for whom English is a second language and those for whom it is not. Both of these caveats warrant further research attention.

There were several exceptions: The positive association between match and attendance was larger for immigrant and ESL families, and the association between match and parental attendance of workshops and social events—which may require more language fluency than other volunteer or engagement opportunities but may also more directly provide services for children and families—was larger for nonimmigrant, non-ESL families. Thus, although the associations between racial/ethnic match and engagement do not appear to be *driven* by immigrant families or families for whom English is a second language, our results suggest that parental engagement may be

a mechanism by which racial/ethnic match supports child development among families who may be more vulnerable because of immigrant and language-minority status, a finding consistent with qualitative research on barriers to engagement (Bermudez & Marquez, 1996; Gaitan, 2012; Hornby & Lafaele, 2011; Sosa, 1997; Tinkler, 2002). Indeed, a majority of the children from Hispanic families in our sample both spoke a language other than English at home and had an immigrant-origin parent.

A second way in which this study contributes to the existing literature is by documenting that teacher-child racial/ethnic match increases parental engagement in Head Start specifically and providing empirical support for the notion that policies designed to increase the educational levels of ECE teachers may have unintended consequences (e.g., Greenberg et al., 2018; IOM & NRC, 2015), particularly in settings that serve a large number of racial/ethnic minority students. In recent years, there has been a substantial push by policymakers and advocacy groups to increase the overall education levels of the ECE workforce across all program types (e.g., IOM & NRC, 2015; Whitebook et al, 2014); such changes, however, are likely to increase the proportion of White teachers serving children of color (e.g., Bassok, 2013; NCES, 2016, 2017). For example, between 2005 and 2015, the proportion of teachers with a BA in Head Start has risen about 30 percentage points, with a corresponding 7-percentage-point increase in the proportion of White staff members. Indeed, in the present study, more than 50% of children who had a White teacher did not experience racial/ethnic match (Table 1), a pattern that is likely to be repeated across all types of publicly funded programs that serve a large number of children of color (e.g., Head Start, public preschool, and programs receiving public subsidies that may be incentivized to hire teachers with BAs). Our findings suggest that current ECE program directors should attend to issues of diversity and representation in their hiring processes—perhaps reengaging in Head Start's historic efforts to hire aides from parents sending their children to Head Start. Directors may also want to consider teacher-child racial/ethnic match when building lead and assistant teacher teams and to provide training and professional development opportunities focused on supporting diverse families and building engagement among families who may struggle to connect to teachers from different backgrounds. Our findings suggest that teacher match is important particularly for engaging in classroom-linked activities—volunteering, helping with field trips, preparing food or supplies, and parent-teacher conferences. These sorts of activities honor parents as contributors to their children's growth and development and are important for forming strong home-school connections and supporting children's development; facilitating these relationships by hiring and assigning teachers in part with match in mind may be a relatively easy step program leaders can take to support families of color. However, for forming broader habits about school involvement and particularly feelings of efficacy in interacting

with schools to advocate for their children, the diversity and representativeness of staff more broadly is likely essential (De Gaetano, 2007; Gaitan, 2004; Ishimaru et al., 2016).

Whether or not the benefits associated with a more educated workforce outweigh the potential loss that comes from growing racial/ethnic misalignment between children and their teachers remains an empirical question, and it is not directly addressed in this study. Findings from this study do suggest, however, that an increase in the proportion of White teachers serving children of color engendered by efforts to increase teacher education levels could reduce parental involvement and thereby have negative consequences for children. That said, it is also possible that more highly educated teachers, and particularly teachers with specific education in or experiences of diversity and cultural sensitivity, are able to engage parents through other strategies (López et al., 2001). Thus, the net effects of increasing teacher education are ambiguous and warrant further study (Greenberg et al., 2018). To design workforce policy that can best promote children's development, more research is needed to understand the benefits of increasing the education levels of the ECE workforce—with particular attention to the potential unintended consequences of the broader changes to the workforce that are likely to co-occur. In addition, more research is needed to identify policy solutions that can provide appropriate training and educational experiences to build the competency of early educators supporting diverse populations, to promote the continued diversity of the ECE workforce, and to support the training and education of the non-White ECE teachers who are currently a major portion of the ECE workforce (Greenberg et al., 2018).

Future research should continue to probe why racial/ethnic match is associated with increased parental engagement, and whether other factors—including racial/ethnic congruity between directors or classroom aides and parents, as well as strategic efforts by teachers and centers (De Gaetano, 2007; Gaitan, 2004; Ishimaru et al., 2016; Rueda et al., 2004)—may similarly promote parental involvement. This study's pattern of findings—including the surprising absence of strong associations among Black families and the potential role of language and immigrant status—hint at considerable complexity underlying observed associations and suggest a need for continued exploration. In particular, qualitative research that may further tease out *how* match facilitates parent engagement seems essential. Moreover, given Head Start's particular focus on parental engagement, it is important to understand whether this association between racial/ethnic match and parent engagement is consistent, or larger, in other ECE program types, which tend to serve families with different sociodemographic characteristics.

This study leveraged two cohorts of nationally representative data, a rich set of teacher-, family-, and child-level covariates, and a center fixed effects modeling strategy to provide new evidence on the role of racial/ethnic match on parental involvement in early childhood settings. Although the results

provide strong suggestive evidence that racial/ethnic match is related to parental involvement, there remain threats to drawing causal linkages between racial/ethnic match and parental engagement. Parents who are more engaged with their Head Start centers may sort into classrooms where they have a racial/ethnic match. If this is the case, then our estimates overstate the role of match in promoting parental involvement. Future research should consider a within-parent design that can compare parents' involvement in years where their children do and do not experience racial/ethnic match.

Moreover, parents' involvement in Head Start was both self-reported and retrospective across the child's entire year in Head Start and, thus, may be prone to measurement error. Parents may overestimate their own involvement in their child's Head Start center, which may attenuate associations. It may also be the case that racial/ethnic match is correlated with this measurement error. That is, parents in classrooms with a racial/ethnic match may feel more strongly that they *should* be involved in their child's Head Start center and, thus, overstate their involvement more so than parents in classrooms with a racial/ethnic mismatch. If this is the case, then our estimates again overstate the role of racial/ethnic match and parents' involvement. Future research should use measures of involvement across multiple reporters or using objective measures such as sign-in sheets or attendance logs to address this important limitation.

This study identified a particularly strong relationship between racial/ethnic match and parent engagement among Hispanic families; however, the term *Hispanic* encompasses a wide variety of cultural and national backgrounds, and family experiences, and it is unclear how parents' understanding of match is established. Parents may identify similarities with their child's teacher based on family names, language ability, knowledge of local cultural communities, or appearance. These potential commonalities are conflated in our estimate of the match association in the current manuscript. If the importance of match is strongly tied to cultural or nation-of-origin identities, we may be underestimating the association. Furthermore, both the Black and White groups likely also have important heterogeneity that we were unable to examine with the data available to us in FACES. Future research should gather more nuanced information about teachers and families to further unpack the associations documented in the current manuscript and to identify key considerations in building diverse and supportive communities.

Finally, this study was designed to inform early education policy debates in the United States both in Head Start and across other early educational sectors. Head Start was designed to solve specific problems of educational inequality in the United States, to support parents' engagement with their child's education, and to help parents access important social services. These findings may not be generalizable to countries with different systems of supports for early families. Moreover, the importance of racial/ethnic match in promoting parent engagement in school is certainly dependent on the

extent to which nonmatch may dampen parental engagement; thus, findings will not generalize to social contexts with differing racial dynamics.

Conclusion

Over the past 20 years, the Head Start workforce has become more highly educated, but it has also become Whiter, and this demographic shift in the composition of its workforce has not been mirrored in the children Head Start serves. This study provides preliminary evidence suggesting that this reduction in racial/ethnic parity between the Head Start workforce and the children and families it serves may have deleterious implications for children's Head Start attendance and retention and could reduce parents' engagement with Head Start, ultimately undermining both components of Head Start's two-generation mission. To best understand how to make policy that can both promote high-quality early-childhood settings and engage parents, future research needs to better understand the mechanisms by which racial/ethnic match builds parental engagement and whether teacher behaviors, center policies, or other factors could promote parental involvement. Future research should also consider the broader impacts of policies designed to make large-scale changes to the ECE workforce and endeavor to find strategies that could boost the efficacy of ECE teachers while retaining the features of the workforce that help foster strong connections with families.

Appendix A

Parent Involvement Items

Please indicate how often you have participated in the following activities at child's Head Start center since the beginning of this Head Start year.

1. Volunteered or helped out in child's classroom
2. Observed in child's classroom for at least 30minutes
3. Prepared food or materials for special events such as a holiday celebration or special cultural event
4. Helped with field trips or other special events
5. Attended Head Start social events such as bazaars or fairs for children and families
6. Attended parent education meetings or workshops focusing on topics such as job skills or child rearing
7. Attended parent-teacher conferences
8. Visited with a Head Start staff member in your home
9. Participated in policy council
10. Prepared or distributed newsletters, fliers, or Head Start materials
11. Participated in fund-raising activities

Appendix B

Table B1

Bivariate Relationships Between Racial/Ethnic Match and Parental Engagement by Child Race

	White Sample				Black Sample				Hispanic Sample			
	No match		Match		No Match		Match		No Match		Match	
Overall involvement at HS	170	−0.00	581	0.02	487	−0.09	861	0.03	886	−0.25	856	**0.15**
Child-specific involvement with HS												
Parent visited HS	169	0.96	581	**1.00**	487	0.98	861	**0.96**	882	0.96	854	0.97
Volunteered	170	0.53	581	0.62	487	0.58	861	0.60	884	0.52	856	**0.68**
Observed in the classroom	169	0.66	581	0.68	487	0.71	861	0.73	886	0.68	856	**0.76**
Prepared food or materials	169	0.57	579	**0.44**	487	0.51	860	**0.59**	885	0.47	855	**0.56**
Helped with field trips	170	0.44	580	0.48	487	0.42	861	0.42	885	0.36	855	**0.44**
Attended parent-teacher conference	170	0.84	581	**0.93**	487	0.87	861	**0.82**	884	0.83	855	0.86
HS staff visited child's home	170	0.69	581	**0.84**	487	0.70	861	0.62	884	0.67	855	0.71
Number of absences	164	9.22	563	**7.39**	474	6.03	851	5.72	873	6.49	838	5.92
Chronic absenteeism	164	0.19	563	**0.13**	474	0.09	851	**0.05**	873	0.10	838	**0.07**
Returned to HS in following year	99	0.58	325	**0.78**	309	0.71	611	0.68	484	0.77	477	0.69
General involvement with HS												
Participated in HS policy council	169	0.24	575	0.22	484	0.21	856	0.23	852	0.18	805	0.21
Prepared HS newsletters	169	0.18	581	0.12	487	0.12	861	**0.17**	886	0.07	854	**0.19**
Attended HS fund-raising events	169	0.40	580	**0.26**	487	0.30	861	0.34	885	0.17	855	**0.32**
Engagement with parent supports												
Parent attends HS events, workshop	166	0.71	581	0.74	486	0.71	859	0.75	885	0.72	855	**0.80**
Attended HS social events	168	0.51	581	0.53	487	0.50	859	0.51	886	0.45	856	0.51
Attended HS workshops	169	0.48	581	0.44	486	0.43	861	**0.52**	885	0.50	856	**0.62**
Type of assistance from HS, 2009												
Got some type of help	78	0.45	256	**0.39**	246	0.31	363	**0.26**	445	0.42	426	0.34
Housing	78	0.01	256	0.01	245	0.02	363	0.01	445	0.01	426	0.01
Job training	78	0.01	256	0.02	246	0.02	362	0.01	445	0.00	426	0.01
Job search	78	0.00	256	**0.02**	246	0.03	362	0.03	445	0.03	426	**0.01**
School/college	78	0.05	256	0.02	246	0.06	362	0.03	445	0.07	426	**0.03**
ESL classes	78	0.00	256	0.01	246	0.02	362	**0.00**	445	0.09	426	0.09
Transportation for work/training	78	0.02	256	0.01	246	0.00	362	0.01	445	0.01	426	0.01
Child care	78	0.03	256	0.04	246	0.05	363	0.03	445	0.04	426	0.03
Mental health	78	0.05	256	0.04	246	0.00	363	0.01	445	0.01	426	0.01
Family violence	76	0.00	256	0.01	246	0.00	363	0.01	445	0.02	426	0.01
Dental	77	0.21	256	0.15	246	0.06	363	0.09	445	0.08	426	0.08
Medical	78	0.05	256	0.03	246	0.02	363	0.02	445	0.03	426	0.02

Note. Data are drawn from the 2006 and 2009 waves of FACES data. Mean in the Match column is in boldface if the difference between No Match and Match means is significant within racial/ethnic group at the.10 level. HS = Head Start; ESL = English as a second language; FACES = Family and Child Experiences Surveys.

Table B2

Associations Between Teacher-Child Racial/Ethnic Match and High Levels of Parent Involvement in Head Start

	Full Sample		White Sample		Black Sample		Hispanic Sample	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Child-specific involvement with HS								
Volunteered more than 2×	0.04^{+} (0.02)	0.04 (0.03)	0.16** (0.06)	0.12 (0.14)	0.04 (0.03)	0.06 (0.05)	0.11* (0.05)	0.02 (0.04)
Observed in the classroom more than 2×	0.03 (0.02)	0.02 (0.03)	−0.05 (0.10)	−0.20 (0.12)	0.04 (0.04)	−0.01 (0.05)	0.05 (0.05)	−0.03 (0.03)
Prepared food or materials more than 2×	0.04^{+} (0.02)	0.06* (0.03)	−0.05 (0.13)	0.17 (0.11)	0.07 (0.05)	0.08 (0.06)	0.14** (0.05)	−0.01 (0.04)
Helped with field trips more than 2×	0.05** (0.02)	0.04* (0.02)	0.10* (0.05)	0.15 (0.10)	0.03 (0.04)	0.07 (0.05)	0.11** (0.04)	−0.01 (0.04)
Attended parent-teacher conferences more than 2×	0.03 (0.02)	0.03 (0.03)	0.13 (0.10)	−0.03 (0.15)	−0.02 (0.05)	0.04 (0.06)	0.05 (0.05)	0.07 (0.06)
HS staff visited child's home more than 2×	0.00 (0.02)	−0.01 (0.02)	0.13 (0.08)	−0.01 (0.10)	−0.11* (0.04)	0.00 (0.06)	−0.09* (0.04)	−0.01 (0.05)
General involvement with HS								
Participated in HS policy council more than 2×	0.00 (0.02)	0.00 (0.02)	−0.08 (0.06)	−0.03 (0.09)	0.00 (0.03)	0.04 (0.03)	0.02 (0.02)	0.06* (0.02)
Prepared HS newsletters more than 2×	0.02* (0.01)	0.02 (0.01)	−0.03 (0.04)	−0.10 (0.09)	0.05** (0.02)	0.03 (0.03)	0.04^{+} (0.02)	0.02 (0.02)
Attended HS fund-raising events more than 2×	0.01 (0.02)	0.00 (0.02)	−0.06 (0.04)	−0.03 (0.05)	0.00 (0.03)	−0.01 (0.02)	0.10** (0.03)	0.06** (0.02)
Engagement with parent supports								
Attended HS social events more than 2×	0.01 (0.03)	−0.01 (0.03)	0.07 (0.07)	0.13 (0.11)	0.00 (0.04)	0.09 (0.06)	0.04 (0.03)	0.03 (0.03)
Attended HS workshops more than 2×	0.05* (0.02)	0.03 (0.03)	−0.04 (0.10)	0.06 (0.19)	0.05 (0.04)	0.09 (0.07)	0.13** (0.03)	0.13** (0.05)
Covariates	X	X	X	X	X	X	X	X
Center fixed effects		X		X		X		X

Note. Data are drawn from the 2006 and 2009 waves of FACES data. Sample size is based on the dependent variables and shown in Table 2. Model covariates include teacher education, race, and experience; child age, race, gender, disability status, and behavior problems; family income, family structure, immigrant status, English as a second language, maternal depressive symptoms, and maternal education; full-day Head Start, child cohort (3 or 4 years old), and wave of data. Models are weighted using FACES provided sampling weights. Standard errors are in parentheses. HS = Head Start; FACES = Family and Child Experiences Surveys.
$^{+}p < .10$. *$p < .05$. **$p < .01$. To account for multiple comparisons, we use a Bonferroni correction; symbols for p values reflect this adjustment.

Table B3

Associations Between Teacher-Child Racial/Ethnic Match and Parents' General and Child-Specific Involvement With Head Start in the Hispanic Subsample Compared With Immigrant and ELL Samples

	Hispanic Sample		Immigrant Sample		Nonimmigrant Sample		ELL Sample		Non-ELL Sample	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Overall involvement with HS (standard)	0.32** (0.11)	0.17* (0.07)	0.28* (0.11)	0.17* (0.06)	0.36* (0.15)	0.57* (0.22)	0.31** (0.11)	0.22** (0.07)	0.25^{+} (0.15)	0.41^{+} (0.22)
Child-specific involvement with HS										
Parent visited HS	−0.02^{+} (0.01)	0.01 (0.02)	−0.03* (0.01)	−0.01 (0.01)	0.03 (0.02)	0.14^{+} (0.08)	−0.02 (0.01)	0.01 (0.02)	−0.01 (0.01)	0.04 (0.04)
Volunteered	0.13* (0.06)	0.04 (0.05)	0.11^{+} (0.06)	0.01 (0.05)	0.19* (0.08)	0.18 (0.14)	0.09^{+} (0.06)	0.02 (0.04)	0.16* (0.07)	0.20^{+} (0.12)
Observed in the classroom	0.05 (0.04)	0.03 (0.05)	0.07 (0.05)	0.04 (0.05)	−0.03 (0.06)	−0.04 (0.16)	0.07 (0.05)	0.05 (0.05)	−0.02 (0.06)	0.08 (0.16)
Prepared food or materials	0.12* (0.05)	0.02 (0.04)	0.13* (0.06)	−0.01 (0.04)	0.13 (0.08)	0.13 (0.18)	0.16* (0.06)	0.02 (0.04)	0.04 (0.06)	0.00 (0.12)
Helped with field trips	0.07 (0.04)	−0.09 (0.06)	0.09^{+} (0.05)	−0.05 (0.06)	−0.02 (0.09)	−0.12 (0.14)	0.10* (0.05)	0.00 (0.06)	−0.01 (0.07)	−0.44** (0.12)
Attended parent-teacher conference	0.01 (0.03)	0.11^{+} (0.05)	0.01 (0.03)	0.11* (0.05)	−0.00 (0.05)	0.20* (0.08)	−0.00 (0.04)	0.08^{+} (0.05)	0.02 (0.04)	0.21^{+} (0.12)
HS staff visited child's home	−0.11* (0.06)	0.02 (0.04)	−0.14* (0.06)	0.00 (0.04)	−0.03 (0.08)	−0.15 (0.14)	−0.12* (0.06)	0.03 (0.05)	−0.08 (0.07)	0.12 (0.11)
Number of absences	−1.03* (0.42)	−0.97^{+} (0.49)	−1.22* (0.49)	−1.00 (0.72)	−0.01 (0.70)	1.53 (2.68)	−1.20* (0.55)	−0.94 (0.82)	−0.89 (0.95)	0.15 (1.51)
Chronic absenteeism	−0.04* (0.02)	−0.04 (0.03)	−0.06* (0.03)	−0.04 (0.04)	0.02 (0.04)	0.05 (0.12)	−0.06* (0.03)	−0.04 (0.05)	−0.02 (0.03)	0.02 (0.05)
Returned to HS in following year	−0.06 (0.04)	−0.10^{+} (0.06)	−0.04 (0.04)	−0.07 (0.07)	−0.13 (0.08)	−0.09 (0.20)	−0.01 (0.04)	−0.03 (0.08)	−0.13^{+} (0.07)	−0.10 (0.15)
General parent involvement										
Participated in HS policy council	0.01 (0.02)	0.04 (0.04)	−0.01 (0.02)	0.02 (0.03)	0.10^{+} (0.05)	0.28* (0.11)	0.03 (0.03)	0.02 (0.04)	−0.00 (0.05)	0.19** (0.07)
Prepared HS newsletters	0.12** (0.03)	0.08** (0.02)	0.13** (0.04)	0.06* (0.03)	0.08^{+} (0.05)	0.23^{+} (0.13)	0.13** (0.04)	0.08** (0.03)	0.10* (0.04)	0.14* (0.07)
Attended HS fund-raising events	0.16** (0.05)	0.02 (0.04)	0.13* (0.05)	0.02 (0.04)	0.25** (0.08)	−0.04 (0.11)	0.15* (0.06)	0.06^{+} (0.03)	0.17* (0.07)	−0.08 (0.11)
Covariates	X	X	X	X	X	X	X	X	X	X
Center fixed effects		X		X		X		X		X
N	1737		1369		368		1195		542	

Note. Data are drawn from the 2006 and 2009 waves of FACES data. Sample size is based on the dependent variables and shown in Table 2. Model covariates include teacher education, race, and experience; child age, race, gender, disability status, and behavior problems; family income, family structure, immigrant status, English as a second language, maternal depressive symptoms, and maternal education; full-day Head Start, child cohort (3 or 4 years old), and wave of data. Models are weighted using FACES provided sampling weights. Standard errors are in parentheses. ELL = English language learner; HS = Head Start; FACES = Family and Child Experiences Surveys.

$^{+}p < .10$. *$p < .05$. **$p < .01$. To account for multiple comparisons, we use a Bonferroni correction; symbols for p values reflect this adjustment.

Table B4

Associations Between Teacher-Child Racial/Ethnic Match and Engagement With Head Start Parent Supports in the Hispanic Subsample Compared With Immigrant and ELL Samples

	Hispanic Sample		Immigrant Sample		Nonimmigrant Sample		ELL Sample		Non-ELL Sample	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Engagement with parent supports										
Parent attends HS social events or workshops	0.09** (0.03)	0.09^{+} (0.05)	0.09* (0.03)	0.10* (0.05)	0.05 (0.05)	0.24 (0.15)	0.07* (0.03)	0.05 (0.04)	0.11 (0.07)	0.25^{+} (0.14)
Attended HS social events	0.06 (0.04)	0.06 (0.07)	0.07 (0.05)	0.03 (0.07)	−0.03 (0.07)	0.32* (0.14)	0.07 (0.05)	0.01 (0.08)	0.04 (0.07)	0.32* (0.14)
Attended HS workshops	0.16** (0.04)	0.09^{+} (0.05)	0.13** (0.04)	0.09 (0.05)	0.24** (0.08)	0.25^{+} (0.14)	0.10** (0.04)	0.05 (0.05)	0.25** (0.06)	0.33** (0.10)
Type of assistance from HS, 2009 only										
Got some type of help	−0.03 (0.03)	0.00 (0.05)	−0.15 (0.10)	0.01 (0.13)	0.12 (0.17)	1.06** (0.26)	−0.19^{+} (0.11)	0.08 (0.15)	0.08 (0.13)	0.50^{+} (0.27)
Housing	−0.01 (0.01)	0.01 (0.01)	−0.01 (0.01)	0.01 (0.01)	0.01 (0.00)	−0.04 (0.03)	−0.01 (0.01)	0.01 (0.01)	0.00 (0.02)	−0.05 (0.03)
Job training	0.00 (0.01)	0.01 (0.01)	−0.00 (0.01)	0.02 (0.03)	0.02 (0.02)	−0.07 (0.06)	−0.01 (0.01)	−0.00 (0.01)	0.03 (0.02)	0.03 (0.03)
Job search	−0.01 (0.01)	−0.03 (0.03)	−0.01 (0.02)	−0.02 (0.02)	0.01 (0.01)	−0.05 (0.06)	−0.01 (0.02)	−0.01 (0.02)	−0.01 (0.02)	−0.05 (0.08)
School/college	−0.07* (0.03)	−0.12^{+} (0.06)	−0.09** (0.03)	−0.12^{+} (0.07)	−0.04 (0.04)	−0.19* (0.09)	−0.07* (0.03)	−0.03 (0.04)	−0.06 (0.05)	−0.30* (0.13)
ESL classes	−0.02 (0.04)	0.04 (0.04)	−0.04 (0.05)	0.04 (0.04)	0.02 (0.01)	0.01 (0.02)	−0.06 (0.05)	0.06 (0.05)	0.04^{+} (0.02)	−0.02 (0.02)
Transportation for work/training	0.00 (0.01)	0.00 (0.01)	−0.00 (0.01)	0.01 (0.01)	−0.00 (0.01)	−0.02 (0.02)	−0.01 (0.01)	−0.00 (0.01)	0.02 (0.01)	0.01 (0.01)
Child care	−0.01 (0.02)	−0.02 (0.03)	−0.03 (0.02)	−0.05 (0.03)	0.03 (0.04)	0.12 (0.13)	−0.03 (0.02)	−0.03 (0.03)	−0.01 (0.03)	−0.05 (0.04)
Mental health	−0.01 (0.01)	−0.02 (0.02)	−0.01 (0.01)	−0.03 (0.02)	−0.02 (0.01)	−0.11^{+} (0.06)	−0.01 (0.01)	−0.01 (0.02)	−0.01 (0.01)	−0.05 (0.03)
Family violence	−0.01 (0.01)	−0.02 (0.03)	−0.02 (0.02)	−0.02 (0.03)	0.01 (0.01)	−0.01 (0.02)	−0.01 (0.02)	0.02 (0.03)	−0.01 (0.02)	−0.11 (0.08)
Dental	−0.03 (0.03)	0.02 (0.04)	−0.05 (0.04)	−0.00 (0.05)	0.02 (0.07)	0.28* (0.13)	−0.08^{+} (0.04)	0.01 (0.04)	0.05 (0.05)	0.12 (0.11)
Medical	−0.03^{+} (0.02)	0.01 (0.02)	−0.04^{+} (0.02)	0.01 (0.03)	0.03 (0.03)	0.17^{+} (0.09)	−0.05* (0.02)	0.02 (0.03)	0.00 (0.02)	−0.01 (0.04)
Covariates	X	X	X	X	X	X	X	X	X	X
Center fixed effects		X		X		X		X		X
N	1737		1369		368		1195		542	

Note. Data are drawn from the 2006 and 2009 waves of FACES data. Sample size is based on the dependent variables and shown in Table 2. Model covariates include teacher education, race, and experience; child age, race, gender, disability status, and behavior problems; family income, family structure, immigrant status, English as a second language, maternal depressive symptoms, and maternal education; full-day Head Start, child cohort (3 or 4 years old), and wave of data. Models are weighted using FACES provided sampling weights. Standard errors are in parentheses. ELL = English language learner; HS = Head Start; ESL = English as a second language; FACES = Family and Child Experiences Surveys.

$^{+}p < .10$. $*p < .05$. $**p < .01$. To account for multiple comparisons, we use a Bonferroni correction; symbols for p values reflect this adjustment.

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Notes

[1]FACES recently released a new wave of data collection from 2014. However, FACES changed its sampling frame and surveys considerably. As a result, we are unable to use the 2014 data for this analysis.

[2]For 3.7% of the sample, using parent-teacher racial/ethnic match (rather than teacher-child) resulted in a different match categorization. Analyses using parent-teacher racial/ethnic match as the key independent variable produced very similar results and are available from the authors on request.

[3]Within-classroom variability in racial/ethnic match was insufficient for the use of classroom fixed effects models.

[4]See Angrist and Pischke (2008) on the appropriateness of linear probability models in the case of binary dependent variables. Estimates using logistic regression produced very similar marginal effects.

[5]Findings were not sensitive to the use of additional covariates accounting for the potential difference in parental need by racial/ethnic subgroup, including income to needs ratio, household size, use of public benefits, use of government health insurance, and maternal employment. Results are available on request.

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Manuscript received April 8, 2018
Final revision received December 1, 2019
Accepted December 14, 2019