

Being Black, Male, and Gifted in Miami: Prevalence and Predictors of Placement in Elementary School Gifted Education Programs

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Abstract Although it is well established that Black male students are underrepresented in gifted educational programs in the United States, due to a scarcity of longitudinal prospective research, little is known about the protective factors at the child, family, and school level that increase the probability of Black male students being identified as gifted during early elementary school. Using data from the Miami School Readiness Project, we followed 6,926 low-income Black males from preschool through 5th grade to describe trajectories for the 453 Black males (6.5 %) who were identified as gifted, and examined child, family, and preschool variables associated with gifted classification. Boys were most commonly identified as gifted in first and second grade, and 15 % of the identified boys did not appear to be receiving gifted courses. Hierarchical multiple logistic regression analyses revealed that being classified as gifted in early elementary school was more likely for Black males who (a) attended public school pre-K programs at age four, (b) had higher cognitive, language, fine motor, behavioral, and emergent literacy school readiness skills before entering kindergarten, (c) spoke a language other than English at home, (d) were older upon entering kindergarten, (e) received higher grades in school, and

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(f) scored higher on standardized tests of math and reading. Predictors of gifted identification in the kindergarten year were different and weaker compared to identification in later years. Implications for early identification and intervention for talented Black males are discussed.

Keywords Gifted · Identification · Black · Male · Elementary school

Introduction

Public education has the responsibility of providing effective educational services for learners of all types, including students with extraordinary talent. Research on gifted children shows that without carefully tailored educational programs, students with high talent often fail to achieve at all, let alone reach their maximum potential (Subotnik et al. 2011). The first crucial step for gifted students to receive services is identification and placement; thus, it is important for research to explore placement processes and predictors of children's placement into programs. Such research is particularly important for Black students, and especially Black males, who are known to be underrepresented in gifted programs (Ford and Whiting 2010). Little is known about protective child, family, and preschool factors that increase the probability of Black males being identified as gifted during early points in school. This paper reports on the timing and extent to which young, low-income, Black males are identified and receive gifted education courses in kindergarten through 5th grade in Miami-Dade County, Florida, and explores child, family, and preschool factors associated with placement of Black males in gifted educational programs.

It is critical to identify, preserve, and nurture high talent among Black male students and create educational programs that work for high-achieving Black males. Gifted and talented programs are a primary way this can be achieved. Black students, and especially Black male students, are not doing very well, as a group, in US schools. Black males have the highest rates of school dropout, perform more poorly on standardized tests, receive lower grades, and are referred for and placed in special education for intellectual, learning, and emotional disabilities more often than other children (Kunjufu 2005; National Center for Education Statistics [NCES] 2011). One contributing factor to the educational struggles experienced by Black males is that they are more likely to reside in very poor neighborhoods and attend the poorest quality schools, where academic and classroom resources are most limited (Wodtke et al. 2011). As Black males proceed through school, they appear to become less academically engaged (Palmer and Maramba 2011), are more affected by peers, school climate, and school policies, and their performance declines relative to Black females (Palmer et al. 2009). Given such strong interest in improving conditions for the lowest-performing Black students, little attention is often given to the high-performing Black students (Ford 2011b).

The federal definition of giftedness is “children and youths who give evidence of higher performance capability in such areas as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who require services or

activities not ordinarily provided by the schools in order to develop such capabilities fully” (Javits Act 1997, pp. 115 STAT. 1959). According to the National Association for Gifted Children (2010), gifted individuals are those who demonstrate outstanding levels of aptitude (ability to reason and learn) or competence (documented achievement in the top 10 % or rarer) in one or more domains. Domains include structured activities with a symbol system (e.g., mathematics, music, and language) and/or sensorimotor skills (e.g., painting, dance, and sports).

Black Males in Gifted Programs

Unfortunately, access to gifted educational programs is not equitable. It is well established that Black students (and other ethnic/racial minority groups except for Asian-Americans) and low-income students are underrepresented in gifted educational programs (Ford 2011a; Sharon 2010) and take fewer advanced placement (AP) courses (College Board 2008). Students from low socioeconomic status (SES) and culturally and linguistically diverse groups are often not identified as gifted, and their talents are left untapped (Ford and Whiting 2010). For example, in 2006, children from ethnic/racial minority groups comprised 32 % of the US school population, yet comprised only 25 % of children in gifted and talented programs (NCES 2011). Further, Black students comprise only 3.6 % of children in gifted programs in 2006 (NCES 2011) despite representing 17 % of the US school population.

There are numerous, complex reasons for reduced participation of Black students in gifted programs. One reason is school systems’ reliance on standardized intelligence tests for admission that privilege certain experiential/cultural/language backgrounds over others (Ford 2004; Myers et al. 2004). Many standardized tests used for gifted identification are inappropriate or suboptimal for use with children from culturally diverse groups, due to cultural/language bias, differential predictive validity for Black students, and stereotype threat and anxiety that are invoked from the tests among Black students (Ford and Whiting 2010; Matthews and Kirsch 2011). Moreover, school teachers often serve as gate-keepers to gifted programs given reliance on teacher recommendations (Ford et al. 2008; McBee 2010). Subjective selection practices are often influenced by teachers’ negative attitudes and expectations toward Black students, and poorer teacher-student relationships with Black males in particular (Henfield et al. 2008b). Teacher expectations and differential treatment based on race directed toward Black males (McBee 2010), negative peer pressure (Ford et al. 2008), and adverse school climate (Mickelson and Greene 2006) have also been shown to impact Black students’ academic achievement. Finally, reduced advocacy, assertiveness, knowledge, access, and/or desire for navigating the procedures necessary for admittance into gifted programs are other factors (Ford 2011a).

Black students are not only less likely to enter gifted programs, but once enrolled, they are also less likely to remain in such programs over time (NCES 2011). School-level discrimination and low expectations toward Black students likely influence retention of Black males in gifted programs (Ford et al. 2008). Increased

suspensions and more punitive disciplinary policies directed toward Black males may also motivate them to adopt increasing oppositionality toward teachers and to withdraw from special academic programs (Henfield et al. 2008b; Williamson 2011; but see also Harris 2006). Ogbu (2004) claims that many Black students perceive schooling as a “subtractive process;” that is, it attempts to erase aspects of cultural/racial identity, and forces assimilation into a White-dominated context while not offering the same rewards available to White students. Black students report that advanced classes belong to the white students (Ford et al. 2008). Black males often wish to avoid labels and are fearful of being teased for ‘acting White’ or not being ‘Black enough’ if they exhibit stereotypical intellectual behavior (Graham and Anderson 2008; Henfield et al. 2008a, but see also Fryer and Torelli 2010). Gaining admittance to a gifted program can, thus, lead to considerable stress for Black males trying to maintain both high academic performance as well as loyalty to peers (Mickelson and Greene 2006; Henfield et al. 2010). Given such stigma and challenges to ethnic/racial identity, talented Black students often stay away from gifted programs, and when they do enroll, they often disengage and are quick to leave such programs (Carpenter and Ramirez 2007; Fisher 2005). Clearly, it is important for research to help identify talented Black males early on and provide supportive, specialized educational environments that will nurture their talents and assist them in pursuit of academic excellence in rigorous courses and programs.

Predictors of High Performance

Research on the characteristics of resilient Black males who do well in school despite the challenges noted above can inform efforts to identify and tailor gifted educational programs for Black males (Hilliard 2003). Numerous attributes among Black students are positively associated with academic success, including internal locus of control (Strayhorn 2010), positive self-concept and applied skill sets (Mueller and Haines 2012; Wang and Su 2013), leadership skills (Ford et al. 2000), supportive peer and teacher nominations (Brighton et al. 2007), creativity (Cramond 2011), verbal skills (Lohman 2005), academic self-efficacy, strong ethnic and racial identity, self-control, and initiative (Whiting 2006, 2009), and interest in reading, engagement, and gross motor skills (Breedlove 2007). Although longitudinal research on predictors of later gifted identification is rare, one longitudinal study by Curby et al. (2008) noted that better task orientation, defined as taking initiative and completing classroom tasks well with distractions at the beginning of kindergarten, was a good predictor of gifted enrollment in later years, over and above children’s cognitive ability. Of note, task orientation was a stronger predictor of gifted classification for low-income children compared to higher-SES groups (Curby et al. 2008).

Preschool Experience and School Readiness

Attending high-quality preschool is widely seen as an effective strategy for improving the school readiness of all children (Li et al. 2011), especially for low-

income, minority children (Burger 2010; Welsh et al. 2010). Although never examined before, to our knowledge, given powerful effects of preschool programs on children's literacy and early school performance, it seems plausible that pre-K programs that boost school readiness could also have a positive effect on eventual gifted placements for Black male students. The present study, therefore, examined whether Black males who attended public school pre-K programs at age four were more likely to be identified as gifted in early elementary school compared to similarly poor Black males who instead attended childcare in the community. Previous work in the study's context, Miami-Dade County, has shown that low-income children of all ethnic/racial groups and genders who attend public school pre-K programs at age four show better school readiness skills upon entry to school, perform better in kindergarten, and are less likely to be retained in kindergarten than similar children who attended community-based childcare (Winsler et al. 2012). We hypothesized that Black males who attended public school pre-K programs (compared to those in childcare programs) would be more likely to be identified later as gifted because of the higher-quality classrooms, better-paid and more-educated teachers, additional resources, and use of developmentally appropriate curricula present in the pre-K programs (Winsler et al. 2008). We reasoned that highly competent Black males in public-school pre-K programs at age four would have another year, and another teacher in the school system, and, thus, another chance to impress a teacher early on who might refer him for the gifted program.

To the extent that children's school readiness skills are associated with positive academic outcomes later in school (Duncan et al. 2007; Gormley et al. 2008), children who arrive to kindergarten with stronger school readiness should be more likely to be identified for gifted educational programs. In the present study, we also examine multiple dimensions of children's school readiness at age four, and at the beginning of kindergarten, as predictors of low-income Black males' placement in gifted educational programs through 5th grade. Because some of the previously mentioned characteristics that are associated with Black children's later academic success (i.e., task orientation, initiative, self-control) are included in our assessments, we have the opportunity to test whether such constructs measured in preschool can help identify young, low-income Black males for gifted programs later on.

Alternative Identification Criteria

Gifted student identification typically relies on the child demonstrating exceptionally high intelligence or cognitive skill on standardized tests (Ford et al. 2008; Subotnik et al. 2011). In efforts to overcome the limitations associated with the use of these tests with Black students, most school districts, including Miami-Dade County, have alternative criteria that can be used to identify underrepresented groups and/or low-income children (Hilliard 1976; Romanik and Blazer 2006). In addition to using 'culture-free' tests that supposedly do not rely as much on verbal intelligence (Naglieri and Ford 2003, but see Lohman 2005 for a critique), some districts, including Miami, use other high-stakes achievement tests administered

district-wide to all children as criteria that can be used to show exceptional ability (Koretz et al. 1991). There has been very little research on the use of such tests for the purpose of identifying underrepresented groups (Breedlove 2007; Madaus and Clarke 2001). In the current study, as a preliminary exploration, we report the proportion of Black males identified as gifted who met the school district's alternative criteria for high performance on such assessments, as well as the proportion of non-identified Black males in general that score above these pre-determined alternative thresholds.

The Current Study

Many studies indicate that Black males are under enrolled in gifted educational programs (Ford et al. 2008; Jess and Worrell 2012). What is lacking, however, are prospective, longitudinal studies that describe when and how identification occurs for Black males, the types of gifted services/courses boys receive in early schooling, and the protective factors associated with Black males being identified as gifted in early elementary school. The purpose of the present study was to fill that gap. Data for this study come from the Miami School Readiness Project (MSRP), a large-scale ($n = 49,155$) university-community partnership in which five county-wide cohorts (2002–2006) of 4-year-old children attending community-based childcare and public school pre-K programs were followed longitudinally through 5th grade (De Feyter and Winsler 2009; Winsler et al. 2008, 2012). Miami-Dade County is home to the fourth largest school district in the country, and is a vibrant, ethnically and linguistically diverse community. As is the case nationally, Black students (who make up 26 % of the student population in the county) are underrepresented in Miami-Dade County's gifted program (Black students comprise 3.5 % of gifted education participants, compared to 14 % for Caucasians and 18 % for Asians); however, the district has initiatives and plans in place intended to reduce the gap (Romanik and Blazer 2006).

In the present study, we examine the academic trajectories of 6,926 Black male students who participated in the MSRP and later attended Miami-Dade County Public Schools. The following research questions are addressed: (a) To what extent, and when, are young, low-income, Black males in Miami identified and enrolled in gifted education programs during early elementary school (kindergarten through 5th grade)?; (b) In a typical school year, how many and what type of gifted courses do gifted Black males receive?; and (c) Which child, family, and preschool factors predict placement of Black males in gifted programs?

Method

Participants

Participants included 6,926 Black males from the MSRP, who, at age four, attended either a public school pre-K program or community-based childcare with the

assistance of subsidies between the academic years of 2002–2003 to 2006–2007, and then went on to attend Miami-Dade County Public Schools (MDCPS). During their pre-K year, 58.2 % of these boys attended a public school pre-K program (95 % at a Title-1 high-poverty school where the program was free, and 5 % at non Title-1 schools for which parents paid a fee), and the other 41.8 % received subsidies to attend center-based or family childcare in the community. Parents identified the ethnicity/race of the children as African American or Black at some point according to preschool or MDCPS records. Included in this sample is a small group of Black males who also identified as Hispanic ($n = 340$, 4.9 %), and another small group who identified at some point as being mixed with respect to race, with Black/African American being one of the categories ($n = 63$, 0.9 %). Also included is a group who reported their parent's birth country to be a Caribbean island ($n = 95$), and a small group who reported that their family spoke Haitian Creole at home ($n = 823$, 11.9 %).

The vast majority of the children lived in poverty or near poverty as indicated by qualification for free or reduced lunch in kindergarten (92.1 %). Furthermore, 16.4 % of the Black males were English Language Learners (ELLs) on the basis of a non-English language reportedly being used at home. For one cohort of children who attended childcare in the community ($n = 915$), the following family background data were available at age four: 95 % reported being a single parent (i.e., single, separated, divorced, widowed); mean annual family income was \$16,473 ($SD = 8072.8$); mean parental education was 11.6 years ($SD = 1.44$); and mean family size was 3.6 persons ($SD = 1.42$).

It is important to note that our sample does *not* represent all Black males in the public school system—it includes only those Black males who either attended public school pre-K or received subsidies for low-income families to attend childcare at age four. Also important to note is that due to the cohort-sequential nature of the longitudinal project (5 academic year cohorts of 4-year-olds followed over time), not all cohorts reached the later grades by the end of data collection. Therefore, the sample sizes in the analyses necessarily vary due to this type of censored missing data as well as the more standard type of missing data present from some children not receiving some of the assessments. To be specific, 89 % of our sample completed the kindergarten year, 91 % finished 1st grade, and at the time data collection ended, 70 % were old enough to have data for 2nd grade, 47 % for 3rd grade, 22 % for 4th grade, and 8 % for 5th grade.

Measures

Gifted Classification in MDCPS

Eligibility for gifted services in MDCPS is determined by criteria established by state rule (Florida State Board Rule 6A-6.03019, F.A.C.). Part A states that the student demonstrates: “1. Need for a special program; 2. A majority of characteristics of gifted students according to a standard scale or checklist; and 3. Superior intellectual development as measured by an intelligence quotient of two (2) standard deviations or more above the mean on an individually administered

standardized test of intelligence.” (p. 8). The identification procedure starts with a parent or teacher referring a child as having a need. Then, the teacher completes a gifted characteristics survey on the child and a multidisciplinary team meeting (parent, teacher, and other relevant school personnel) reviews the child’s performance and if a need is documented, they move forward with child assessments. Intelligence testing (i.e., Wechsler [Wechsler 2003], Stanford-Binet [Roid and Barram 2004], DAS [Elliot 2007], KABC [Kaufman and Kaufman 1983], or more recently, the NNAT [Naglieri 1997]) is conducted by a school psychologist (outside child assessments are also considered). Full-scale IQ scores are to exceed 130 for qualification under part A. Children then receive an Individualized Educational Plan and are enrolled in the gifted program.

Part B of the rule addresses the underrepresentation of minority students for gifted services (National Research Center on the Gifted and Talented 2010; Romanik and Blazer 2006) and includes revised procedures for screening and referral with a focus on multiple areas of ability including leadership, motivation, academic performance, and creativity, and alternate instruments used for student evaluation. MDCPS’s Plan B defines underrepresented students as students who are limited English proficient or students eligible to receive free/reduced-price lunch. The district’s goal is to increase the participation of these students to match the proportion of all gifted students in the district, approximately 11 percent (M-DCPS District Plan to Increase the Participation of Underrepresented Students in the Program for Gifted Students, Appendix C, p 2).

Students can “demonstrate unusual ability” by receiving a standardized test score equal to or above the 89th percentile, a score of Level 4 or 5 out of a possible 5 on the Florida Comprehensive Achievement Test (FCAT), or grades in courses of A or B. Nominations from teachers, staff, parents, and peers of above average creativity, very rapid learning rates, and leadership abilities are also considered. Eligible students showing the above criteria are referred to the School Support Team that develops a profile of each student using the Gifted Characteristics Checklist (Stemke 2010), standardized test scores, and classroom performance indicators. If warranted, further evaluation of the student’s academic achievement is conducted, using a variety of achievement test data, an appropriate test of intelligence (for example, the MAT7 test [Psychological Corporation 1993] or the Aprenda II [Pearson Assessment and Información 1996], and the Williams (1980) Creativity Scale. Students are defined as gifted if they show a minimum IQ of 112 and show a number of the above characteristics (Arcia 2005).

Gifted classification becomes the child’s ‘primary exceptionality,’ coded as such for each school year in the child’s record and this was used in the analyses either in the form of ever-gifted (child received such a classification any time from K to fifth grade; yes = 1, no = 0), or whether such classification was present in kindergarten or in first grade. Once the gifted classification is given to a child, it stays in the child’s school records; however, families can, and do, opt-out of receiving gifted services at any point in a child’s academic career. We do not have data on whether families opted out of gifted services, but we do report information on whether the child was enrolled in a self-contained gifted classroom for one or more particular subject areas (i.e., math).

School Readiness Assessments in Preschool

Children's cognitive, language, and fine and gross motor skills were measured at age three or four with the Learning Accomplishment Profile-Diagnostic (LAP-D; Nehring et al. 1992). Children were typically assessed twice during their 4-year-old pre-kindergarten year; once in the beginning (September/October) of the 4-year-old pre-K year and once at the end (April/May) of the year. In certain years/cohorts, 3-year olds were also assessed in the middle of the school year. For the analyses, we used the child's latest available assessment. For children in childcare at age four, trained, MA-level bilingual assessors administered the LAP-D assessment, and for those in public school pre-K programs, the child's teacher administered the assessment. Internal consistency reliability for the LAPD within the MSRP sample ranged from .92 to .95 (Winsler et al. 2008). Percentile scores were used but Black male national norms were not available.

Children's social skills and behavior were assessed via teacher and parent report on the Devereux Early Childhood Assessment (DECA; LeBuffe and Naglieri 1999) during the same time frames as the LAPD-D. The DECA subscales, initiative, self-control, and attachment, are combined and referred to as total socio-emotional protective factors, for which larger numbers indicate strengths. The DECA behavior concerns scale, with lower numbers indicating fewer problems, was also used. Raters were asked to reflect on the child within the past 4 weeks and rate him on a five-point scale ranging from *never* being 0 to *very frequently* being 4. In the larger MSRP sample, the reliability for teacher-reported total protective factors was .94, and .81 for behavior concerns. For parent-reported protective factors, it was .91 and for behavior concerns .72 (Winsler et al. 2008). Percentile scores were used but separate norms for Black males are not available.

Kindergarten School Readiness Assessments

The school system administered readiness screeners at the beginning of kindergarten. For some cohorts, the Early Screening Inventory-Kindergarten (ESI-K, Meisels et al. 1997) was used. The overall total score, with larger numbers indicating better functioning, was used for the analyses. The state-wide Florida Kindergarten Readiness Screener (FLKRS; Harcourt Assessment Inc. 2006) is used to assess children's overall development related to kindergarten readiness based on the Florida Early Learning and Developmental Standards-for-4-Year-Olds. For some years, as part of FLKRS, seven subscales from the Early Childhood Observation System (ECHOS; Pearson Education 2005) were used for kindergarten teachers' observation of child performance in the classroom. Areas considered include language and literacy, mathematics, social and personal skills, science, social studies, physical development and fitness, and creative arts. Emergent English literacy skills were also assessed during most kindergarten years with two subscales (initial sounds and letter naming) from the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good and Kaminski 2003). The DIBELS is widely used and has been shown to have good psychometric properties for diverse groups of children (Petscher et al. 2011).

Academic Grades

Children's end-of-the-year grades in all subjects were collected and used to examine academic performance. For the kindergarten year, grades of 'Excellent,' 'Satisfactory,' and 'Not Satisfactory' were converted to numbers with an excellent receiving a '3' and satisfactory a '2', and not satisfactory a '1'. Grades were averaged across all 11 academic subjects (e.g., math, social studies, PE). For 1st through 5th grade, the A–F scale was converted into numbers (A = 5, B = 4, etc....) and averaged across all subject areas.

Standardized Math and Reading Tests

In 2–4th grade, all children were given standardized math and reading tests, the Stanford Achievement Test (SAT-10 2011) specifically, which yields math and reading scores. In 3rd through 5th grade, students in Florida take the high-stakes Florida Comprehensive Achievement Test (FCAT; Human Resources Research Organization and Harcourt Assessment 2007). The FCAT has both a reading and math scale and yields a continuous score ranging from 0 to 300. It is a criterion-based exam designed to test for the skills students must achieve at each grade level in order to be promoted. The manual for the FCAT reports internal consistency using Cronbach's alpha reliability coefficients ranging from 0.88 to 0.92. Criterion-related validity was reported using the correlation between FCAT and SAT math $r = 0.79$. For FCAT and SAT verbal, the correlation was 0.71.

The SAT-10 (10th edition; Harcourt Brace 2003) is a standardized measure of reading comprehension. Classroom teachers administered this untimed test in a group format. Students answered a total of 54 multiple-choice items that assessed initial understanding, interpretation, critical analysis, and awareness and use of reading strategies in response to reading literary and informational text passages. Reliability for the SAT-10 on a nationally representative sample of students was .88. Validity was established with other standardized assessments of reading, as well, which provided evidence of content, criterion-related, and construct validity (Harcourt Brace 2003).

Results

Descriptive Analyses

Our first two research questions were descriptive, namely, to determine the extent to which young, low-income, Black males were identified for gifted educational programs in this school system, to describe when they were identified, and which kinds of gifted courses they were receiving in a typical year. Thus, we first give the reader a sense of the academic trajectories and experiences for the Black males who were identified as gifted. Then, we examine correlates and predictors of placement into gifted programs with inferential analyses.

Overall Rates of Gifted Identification

Out of the 6,926 total Black males in our sample who were found in district elementary school records, 453 (6.5 %) were identified as gifted at some point between their kindergarten and fifth grade year. It is important to recall that due to the cohort-sequential longitudinal nature of the dataset and regular participant attrition over time, not all students in the sample made it all the way through 5th grade. This figure is an underestimate not only of the proportion identified as gifted by 5th grade (because only 8 % of our Black males had reached 5th grade at the time), but also of the proportion of those ever identified as gifted throughout all of schooling since we only followed (some of) this sample through 5th grade. No doubt, an additional small number of children in our sample will eventually go on to be identified as gifted sometime in the future or receive gifted services after moving to some other county or to a private school. Nevertheless, as a reference point, it is notable that this 6.5 % rate is considerably lower than both the 11 % district-wide figure reported by MDCPS for the proportion of *all* students identified as gifted, and the 11.5 % rate that we find in our larger MSRP sample of similarly low-income children from all ethnic groups.

Timing of Gifted Identification

Of the 453 Black males identified as gifted, 63 (14 %) were identified in kindergarten, 195 (43 %) were identified in 1st grade, 110 (24 %) in 2nd grade, 42 (9 %) in 3rd grade, 33 (7 %) in 4th grade, and 10 (2 %) in 5th grade. Thus, most boys were identified as being gifted in 1st or 2nd grade, which coincides with the first years of large-scale testing in the county. This timing for when Black males are identified as being gifted is very similar to the pattern seen for the larger MSRP dataset that includes low-income children from both genders and other ethnic groups.

Gifted Courses Received

We do not know exactly which gifted services each child received over time at different schools; however, because the end-of-the-year grades that were reported came with subject names that included ‘gifted,’ we do know, for a given year (2008–2009), which boys were enrolled in full gifted courses/subjects and which subjects they were. Thus, if a boy had a grade for a gifted subject, it means, at a minimum, that he received all of his ‘math,’ or ‘social studies’ in a separate gifted classroom for that subject. For children who had 3–5 such gifted subject grades, it means that they received most of their education in self-contained gifted classrooms.

Table 1 reports the number and percentage of gifted Black males who, in the school year 2008–2009, were and were not receiving various kinds of gifted courses by subject. In the right-most column at the top of Table 1, we see that 64 Black males ($64/420 = 15\%$) who were identified as gifted were not receiving full gifted courses. Receiving gifted courses was least common during first grade (35.5 % of

the first graders were not in gifted classrooms) and most common among second grade (only 7.7 % did not receive such a course) and 5th grade (8.7 %). The remaining 85 % of the 420 students took gifted courses/subjects. The largest group ($n = 130$, 31 %) received gifted courses in three different subject areas and another group ($n = 115$, 27 %) received gifted services in five different subject areas. It is notable that receiving gifted services in all five areas (i.e., math, social studies, science, reading, and language arts) was most common in 2nd and 3rd grades and less common in fourth and fifth grade. The bottom half of Table 1 lists the particular subject areas in which Black males received gifted services. Social studies was the subject area in which the largest proportion of Black males received gifted courses ($N = 259$, 62 %). Language arts and reading were a close second and third, with about 60 % of the students receiving gifted grades for language arts and 56 % receiving gifted grades for reading. About 50 % of the students were in gifted classrooms for math and science.

Method of Identification

We examined standardized test scores in reading and math in the concurrent grade when they were first identified as gifted and/or during a year prior to their classification. These scores were likely used in the identification process since part of the Plan B identification process involved showing high academic achievement, indicated by a standardized test score equal to or above the 89th percentile, or a score of Level 4 or 5 on the FCAT. Thus, these analyses document the proportion of students that were identified as gifted and satisfied these criteria, the proportion of overall Black males in the sample that passed these thresholds, and those who did or did not go on (in that year or sometime in the future) to get identified as gifted (See Table 2).

The first row of Table 2 lists the total number of Black males identified as gifted in G1–G5. Below that (“N with NRT score”) is the number of students who were given either the SAT-10 tests or the FCAT math and reading tests in the different years, along with the proportion tested who met either the 89th percentile or higher criterion on one of the SAT-10 s or the ‘4’ or ‘5’ criterion on one of the FCATs. Of the 195 boys identified as gifted in G1, 60 of them were tested with the SAT-10 that year, and only 6 (10 %) scored at or above the 89th percentile cut off. Similarly, for the 110 boys identified as gifted in G2, only 1 of the 25 who took the SAT-10 a year earlier in 1st grade met the criterion, and only 11 of the 109 who received the test in 2nd grade scored above the 89th percentile. It is also notable that the majority of students never received this test in 1st grade, which is partly due to which year/cohort they were in since MDCPS started administering the SAT in 1st grade in the middle of this study. Thus, it does not appear that SAT-10 standardized reading and math scores in grades 1–2 are being relied upon for gifted identification, since only 4–12 % of those identified as gifted scored above threshold, and most students in 1st grade did not receive the test. Other evidence of exceptionalism must have been used in those early grades. A quarter of the males identified as gifted in grade 3 scored above criterion on the SAT-10 in 3rd grade.

Table 1 Gifted course receipt for gifted Black males in AY 08–09, by number of courses/subjects and by subject area

| | G1 | G2 | G3 | G4 | G5 | Total |
|---|-------------|-------------|-------------|-------------|-------------|--------------|
| <i>Number of gifted classes taken (08–09)</i> | | | | | | |
| None | 27 (35.5 %) | 7 (7.7 %) | 12 (14.1 %) | 11 (12.5 %) | 7 (8.7 %) | 64 (15.2 %) |
| 1 Subject | 12 (15.8 %) | 6 (6.6 %) | 3 (3.5 %) | 5 (5.7 %) | 6 (7.6 %) | 32 (7.7 %) |
| 2 Subjects | 14 (18.4 %) | 15 (16.5 %) | 12 (14.2 %) | 16 (18.2 %) | 18 (22.5 %) | 75 (17.9 %) |
| 3 Subjects | 17 (22.4 %) | 23 (25.3 %) | 22 (25.9 %) | 37 (42 %) | 31 (38.7 %) | 130 (30.9 %) |
| 4 Subjects | 2 (2.6 %) | 1 (1.1 %) | 0 | 1 (1.1 %) | 0 | 4 (0.9 %) |
| 5 subjects | 4 (5.3 %) | 39 (42.8 %) | 36 (42.3 %) | 18 (20.5 %) | 18 (22.5 %) | 115 (27.4 %) |
| Total gifted Black males | 76 | 91 | 85 | 88 | 80 | 420 |
| <i>Gifted classes/subjects taken (08–09)</i> | | | | | | |
| Language arts | 22 (28.9 %) | 71 (78 %) | 65 (76.4 %) | 49 (55.7 %) | 44 (55 %) | 251 (59.8 %) |
| Reading | 20 (26.3 %) | 67 (73.6 %) | 64 (75.3 %) | 45 (51.1 %) | 41 (51.3 %) | 237 (56.4 %) |
| Science | 24 (31.5 %) | 49 (53.8 %) | 42 (49.4 %) | 46 (52.3 %) | 46 (57.5 %) | 208 (49.5 %) |
| Social studies | 36 (47.3 %) | 64 (70.3 %) | 59 (69.4 %) | 55 (62.5 %) | 45 (56.3 %) | 259 (61.7 %) |
| Math | 17 (22.3 %) | 53 (58.2 %) | 44 (51.7 %) | 47 (53.4 %) | 47 (58.8 %) | 208 (49.5 %) |

The story is different for the FCAT scores, as is seen in the next set of rows in Table 2. The vast majority (92–100 %) of the Black males identified as gifted in 3rd grade or later scored at least a 4 out of the 5-point proficiency scale on either the FCAT math or reading test. It is possible that these scores were used in the students' gifted determination, but of course, we do not know for sure. It is notable that there were 1–3 boys each year who did not meet these criteria and, thus, must have qualified as gifted under Plan A with IQ scores or with other evidence of extraordinary talent.

Test Scores for Black Males Not Identified as Gifted

Of the 4,041 Black males not identified as gifted in our sample who had SAT-10 data, only 1.5 % ($n = 60$) of them scored higher than the 89th percentile. Of the 2,474 non-identified Black males with FCAT data, 35.2 % ($n = 870$) had scores at a proficiency level of 4 or 5. Thus, using the 89th percentile cut-off on the SAT-10 only yielded about 1 % of low-income Black males as potentially eligible for the gifted program (according to this one criterion); however, a third of the students met the 4 or above criterion on the FCAT.

Correlates and Predictors of Gifted Identification

Demographics

As seen at the top of Table 3, which provides counts, percentages, means, *SDs*, and effect sizes for all variables for students who were and were not identified as gifted, special education status in kindergarten was significantly related to whether they

Table 2 Proportion of gifted Black males scoring above Plan B thresholds on standardized tests

| Grade gifted | G1 (N = 195) | | G2 (N = 110) | | G3 (N = 42) | | G4 (N = 33) | |
|---------------------|--------------|-----------|--------------|-------------|-------------|-------------|-------------|-------------|
| | G1 | G2 | G1 | G2 | G2 | G3 | G2 | G3 |
| N with NRT score | 60 | 25 | 109 | 39 | 28 | 33 | 30 | 21 |
| N (%) scoring ≥89 % | 6 (10 %) | 1 (4 %) | 11 (10.1 %) | 5 (12.8 %) | 7 (25 %) | 11 (33.3 %) | 0 | 6 (28.6 %) |
| N (%) scoring <89 % | 54 (90 %) | 24 (96 %) | 98 (89.9 %) | 34 (87.2 %) | 21 (75 %) | 22 (66.7 %) | 30 (100 %) | 15 (71.4 %) |
| N not tested | 135 | 85 | 1 | 3 | 14 | 0 | 3 | 12 |
| N with FCAT score | | | | | 42 | 33 | | 33 |
| N (%) scoring ≥4 | | | | | 39 (92.9 %) | 32 (97 %) | | 32 (97 %) |
| N (%) scoring <4 | | | | | 3 (7.1 %) | 1 (3 %) | | 1 (3 %) |
| N not tested | | | | | 0 | 0 | | 0 |

Note that the numbers overlap for the boys who have NRT and FCAT scores

were also identified as gifted, $\chi^2(1, 6926) = 45.48, p < .001$. Specifically, only 1 % of the Black males in special education eventually entered the gifted program compared to 7 % of those without a disability code. ELL status was also found to be associated with giftedness, $\chi^2(1, 6924) = -2.69, p < .01$. Students who did *not* speak English at home were more likely to be classified as gifted than native speakers of English. Those with two married parents in the home had more than twice the odds of becoming gifted compared to those with single parents, $\chi^2(1, 805) = 21.61, p < .001$. Preschool type was associated with gifted status, $\chi^2(2, 5700) = 27.74, p < .001$. Children attending pre-K programs in the public schools at age four were more likely to be identified as gifted compared to those attending childcare in the community. Continuous demographic variables (e.g., income, education, and family size) are also found in Table 3. The groups differed on family income such that students who were later identified gifted had about \$3,000 more in income at age four than those who did not get identified, $t(736) = -2.38, p < .05$. There were no differences as a function of parent education or child age.

School Readiness

The next section of Table 3 lists children's scores on the school readiness assessments. The first group of assessments (LAPD and DECA) were given at age four. The second group of assessments (ESI-R, DIBELS, ECHOS) was given to all kindergarten students. There were large differences in all aspects of school readiness as early as age 4, which favored the students who eventually went on to be identified as gifted, with the largest effect sizes observed for students' cognitive and language skills. T-tests indicated that students who were later identified as gifted had higher scores on all subscales of the LAP-D, and better social skills and behavior at age 4, as reported by both teacher and parent. Similar advantages for students who went on to be identified as gifted were seen in the school readiness assessments given by the district in kindergarten. Black males eventually identified as gifted entered school with higher English literacy skills and showed greater performance on the statewide readiness assessments (ESI-R, ECHOS) than Black males who were not eventually identified as gifted.

Academic Performance

According to teachers' grades, Black males who were identified as gifted had significantly higher grades during every grade in school, with the effect size during kindergarten being smaller than all the other years, and differences between identified and unidentified students being largest in 3rd grade. In addition, boys identified as gifted at some point consistently had higher scores on standardized, high-stakes tests for reading and math in all grades in which the tests were given, with larger effect sizes in math than in reading. It should be noted that, given that the analyses involve the ever-gifted variable, for academic performance outcomes in grades 1 through 4, some students were already identified as gifted before receiving grades or test scores, and others received scores and were later identified as gifted.

Table 3 Bivariate correlates of giftedness among Black males

| Variable (N) | Gifted | Non-gifted | Odds ratio/Cohen's <i>d</i> |
|---|----------------|----------------|-----------------------------|
| Full sample % (6,926) | 6.5 (453) | 93.5 (6,473) | |
| <i>Background variables</i> | | | |
| Special Ed. in K % (N)* | 1.3 % (442) | 98.7 % (5,612) | OR = .16 |
| Not special Ed in K % (N) | 7.3 % (11) | 92.7 % (861) | |
| ELL % (N)* | 8.3 % (95) | 91.7 % (1,043) | OR = 1.38 |
| Non ELL % (N) | 6.2 % (358) | 93.8 % (5,430) | |
| Free/reduced lunch % (N) | 6.5 (413) | 93.5 (5,963) | OR = .87 |
| No reduced lunch % (N) | 7.3 % (40) | 92.7 % (506) | |
| Married % (N)* | 11.4 % (4) | 88.6 % (31) | OR = 2.13 |
| Single/other % (N) | 5.7 % (44) | 94.3 % (726) | |
| Subs. childcare (N) % * | 5.1 % (122) | 94.9 % (2,261) | |
| Title 1 pre-K (N) % * | 8.4 % (265) | 91.6 % (2,893) | |
| Non Title 1 pre-K (N) % * | 11.9 % (19) | 88.1 % (140) | |
| Parent education (years) | | | |
| <i>M (SD)</i> | 11.6 (1.1) | 11.6 (1.5) | |
| <i>N</i> | 48 | 757 | |
| Family income* | | | |
| <i>M (SD)</i> | 19,165 (9,823) | 16,222 (7,921) | <i>d</i> = .37 |
| <i>N</i> | 45 | 693 | |
| Family size at T1 | | | |
| <i>M (SD)</i> | 3.9 (1.4) | 3.7 (1.6) | |
| <i>N</i> | 48 | 757 | |
| Child age (in months) | | | |
| <i>M (SD)</i> | 67.1 (3.33) | 66.28 (16.2) | |
| <i>N</i> | 423 | 5,787 | |
| <i>Age 4 school readiness assessments</i> | | | |
| LAP-D fine motor* | | | |
| <i>M (SD)</i> | 68.2 (25.6) | 36.9 (28.3) | <i>d</i> = 1.06 |
| <i>N</i> | 303 | 3,247 | |
| LAP-D language* | | | |
| <i>M (SD)</i> | 66.9 (29) | 30.8 (26.8) | <i>d</i> = 1.25 |
| <i>N</i> | 309 | 3,227 | |
| LAP-D cognitive* | | | |
| <i>M (SD)</i> | 74.8 (25.3) | 36.9 (28.5) | <i>d</i> = 1.26 |
| <i>N</i> | 313 | 3,265 | |
| LAP-D gross motor* | | | |
| <i>M (SD)</i> | 77.9 (24.8) | 68.8 (31) | <i>d</i> = 0.30 |
| <i>N</i> | 278 | 2,779 | |
| DECA percentiles | | | |
| Teacher protective factors* | | | |
| <i>M (SD)</i> | 61.7 (28.2) | 44.7 (27.9) | <i>d</i> = 0.60 |

Table 3 continued

| Variable (N) | Gifted | Non-gifted | Odds ratio/Cohen's <i>d</i> |
|--|-------------|-------------|-----------------------------|
| <i>N</i> | 390 | 4,399 | |
| Teacher behavioral concerns* | | | |
| <i>M (SD)</i> | 44.8 (28.9) | 57.2 (28.4) | <i>d</i> = -0.43 |
| <i>N</i> | 390 | 4,399 | |
| Parent protective factors* | | | |
| <i>M (SD)</i> | 54.3 (31.6) | 41.7 (31.7) | <i>d</i> = 0.40 |
| <i>N</i> | 354 | 3,706 | |
| Parent behavioral concerns* | | | |
| <i>M (SD)</i> | 62.2 (30.6) | 73.8 (27.1) | <i>d</i> = -0.42 |
| <i>N</i> | 354 | 3,706 | |
| <i>Kindergarten school readiness assessments</i> | | | |
| ESI-K total* | | | |
| <i>M (SD)</i> | 25.0 (2.1) | 22.6 (3.9) | <i>d</i> = 0.61 |
| <i>N</i> | 242 | 3,275 | |
| ECHOS* total | | | |
| <i>M (SD)</i> | 29.9 (6.2) | 24.3 (7.9) | <i>d</i> = 0.70 |
| <i>N</i> | 159 | 2,094 | |
| DIBELS scores | | | |
| Initial sounds* | | | |
| <i>M (SD)</i> | 18.7 (12.2) | 10.1 (9.5) | <i>d</i> = 0.87 |
| <i>N</i> | 223 | 2,833 | |
| Letter naming* | | | |
| <i>M (SD)</i> | 36.9 (15.0) | 19.6 (16.9) | <i>d</i> = 0.99 |
| <i>N</i> | 331 | 4,525 | |
| <i>Mean grades in elementary school</i> | | | |
| Kindergarten* (range 1–3) | | | |
| <i>M (SD)</i> | 2.5 (0.45) | 2.2 (0.38) | <i>d</i> = 0.67 |
| <i>N</i> | 407 | 5,357 | |
| G1* | | | |
| <i>M (SD)</i> | 4.6 (0.36) | 3.9 (0.68) | <i>d</i> = 1.01 |
| <i>N</i> | 433 | 5,176 | |
| G2* | | | |
| <i>M (SD)</i> | 4.4 (0.42) | 3.7 (0.64) | <i>d</i> = 1.06 |
| <i>N</i> | 346 | 3,869 | |
| G3* | | | |
| <i>M (SD)</i> | 4.3 (0.43) | 3.6 (0.62) | <i>d</i> = 1.11 |
| <i>N</i> | 245 | 2,394 | |
| G4* | | | |
| <i>M (SD)</i> | 4.3 (0.45) | 3.7 (0.55) | <i>d</i> = 1.05 |

Table 3 continued

| Variable (N) | Gifted | Non-gifted | Odds ratio/Cohen's <i>d</i> |
|--|-------------|--------------|-----------------------------|
| <i>N</i> | 162 | 1,053 | |
| G5* | | | |
| <i>M</i> (<i>SD</i>) | 4.3 (0.45) | 3.7 (0.55) | <i>d</i> = 1.05 |
| <i>N</i> | 80 | 481 | |
| <i>Standardized test scores in elementary school</i> | | | |
| SAT-10 | | | |
| G1 math* | | | |
| <i>M</i> (<i>SD</i>) | 74 (20.1) | 36 (25.6) | <i>d</i> = 1.49 |
| <i>N</i> | 93 | 1,178 | |
| G1 reading* | | | |
| <i>M</i> (<i>SD</i>) | 77.7 (15.4) | 43.9 (24.6) | <i>d</i> = 1.25 |
| <i>N</i> | 93 | 1,179 | |
| G2 math* | | | |
| <i>M</i> (<i>SD</i>) | 75.2 (19.5) | 37.9 (26.6) | <i>d</i> = 1.41 |
| <i>N</i> | 348 | 3,813 | |
| G2 reading* | | | |
| <i>M</i> (<i>SD</i>) | 71.1 (19.7) | 37 (25.1) | <i>d</i> = 1.22 |
| <i>N</i> | 349 | 3,818 | |
| G3 math* | | | |
| <i>M</i> (<i>SD</i>) | 84.3 (16.6) | 46.8 (27) | <i>d</i> = 1.37 |
| <i>N</i> | 165 | 1,356 | |
| G3 reading* | | | |
| <i>M</i> (<i>SD</i>) | 76.6 (18.9) | 42.8 (26.1) | <i>d</i> = 1.18 |
| <i>N</i> | 165 | 1,358 | |
| G4 math* | | | |
| <i>M</i> (<i>SD</i>) | 84.1 (15.5) | 57 (22.2) | <i>d</i> = 1.16 |
| <i>N</i> | 78 | 468 | |
| G4 reading* | | | |
| <i>M</i> (<i>SD</i>) | 81.6 (16.5) | 55.71 (22.5) | <i>d</i> = 1.10 |
| <i>N</i> | 78 | 467 | |

* $p < .01$

Multivariate Analyses

We used multivariate, hierarchical, logistic regression to examine research question 3 about the unique and combined contributions of child, family, and preschool variables in predicting the dichotomous outcome of gifted placement (1 = yes, 0 = no). First, we report predictors of gifted placement overall at any time in early elementary school. Then, we report the results of similar models examining predictors of placement at two main time points of interest—the very beginning of

elementary school in kindergarten, and the first grade year, when most gifted placements occurred.

Overall Placement

Table 4 shows the results of two-step, hierarchical, logistic regression models predicting black males' ever-gifted status, including odds ratios for each predictor. The first model included the background variables of poverty status (free/reduced lunch) in kindergarten, ELL status, whether the child received special education in kindergarten, age of child upon school entry, as well as the type of preschool attended in their pre-kindergarten year. This model was significant in predicting students' gifted placement, $\chi^2(6) = 93.60, p < .001$. Qualification for free/reduced lunch (within this already low-income sample with 95 % qualifying) did not relate to gifted placement, but the other variables did significantly predict gifted placement. Black males who were ELLs were more likely to be placed than native English speakers. Students with a disability in kindergarten had lower odds of being placed in gifted programs. Students who were older upon kindergarten entry had

Table 4 Hierarchical logistic regression predicting gifted placement (ever—overall) by background variables and preschool type (Step 1), and school readiness assessments at age 4 (Step 2)

| Variables/Step | Step 1 | | Step 2 | |
|-----------------------------------|--------------|-------|--------------|-------|
| | Odds ratio | SE(B) | Odds ratio | SE(B) |
| <i>Background variables</i> | | | | |
| Free-reduced lunch | .864 | .198 | 1.26 | .294 |
| ELL status | 1.35* | .128 | 2.30* | .198 |
| Special Ed. in K | .239* | .341 | .947 | .408 |
| Age in months at start of K | 1.08* | .015 | 1.11* | .023 |
| <i>Preschool type^a</i> | | | | |
| Title 1 pre-K/community CC | 1.71* | .113 | 1.44* | .159 |
| Fee pre-K/community CC | 2.48* | .281 | .837 | .471 |
| Title 1 pre-K/fee pre-K | .690 | .274 | 1.72 | .463 |
| <i>School readiness at age 4</i> | | | | |
| Cognitive | | | 1.03* | .004 |
| Language | | | 1.02* | .003 |
| Fine motor | | | 1.01* | .003 |
| Gross motor | | | .992* | .003 |
| Social skills (teacher TPF) | | | 1.00 | .003 |
| Behavior problems (teacher BC) | | | .997 | .003 |
| Social skills (parent TPF) | | | 1.00 | .003 |
| Behavior problems (parent BC) | | | .989* | .003 |

Statistically significant findings are bolded

* $p < .05$

^a All three contrasts (re-running the model with a different reference group category) are provided here because each is of interest

Table 5 Hierarchical logistic regression predicting gifted placement in kindergarten by background variables and preschool type (Step 1), school readiness assessments at age 4 (Step 2), and performance in kindergarten (Step 3)

| Variables/step | Step 1 | | Step 2 | | Step 3 | |
|-----------------------------------|--------------|-------|--------------|-------|--------------|-------|
| | Odds ratio | SE(B) | Odds ratio | SE(B) | Odds ratio | SE(B) |
| <i>Background variables</i> | | | | | | |
| Free-reduced lunch | 2.07 | .742 | 5.39 | 1.15 | 5.89 | 1.14 |
| ELL status | 1.02 | .353 | .689 | .634 | .823 | .647 |
| Age in months at start of K | 1.18* | .043 | 1.25* | .065 | 1.22* | .068 |
| <i>Preschool type^a</i> | | | | | | |
| Title 1 pre-K/community CC | 3.29* | .351 | 1.11 | .425 | .750 | .435 |
| Fee pre-K/community CC | 1.96 | 1.08 | 1.57 | 1.22 | .885 | 1.21 |
| Title 1 pre-K/fee pre-K | 1.67 | 1.04 | .698 | 1.19 | .847 | 1.19 |
| <i>School readiness at age 4</i> | | | | | | |
| Cognitive | | | 1.05* | .014 | 1.05* | .015 |
| Language | | | 1.01 | .009 | 1.01 | .010 |
| Fine motor | | | 1.00 | .009 | 1.00 | .010 |
| Gross motor | | | .993 | .009 | .996 | .009 |
| Social skills (teacher TPF) | | | .990 | .008 | .989 | .009 |
| Behavior problems (teacher BC) | | | .994 | .009 | .997 | .009 |
| Social skills (parent TPF) | | | .999 | .007 | .998 | .007 |
| Behavior problems (parent BC) | | | .993 | .007 | .996 | .007 |
| <i>Performance in K</i> | | | | | | |
| Grades in K | | | | | 5.74* | .583 |
| DIBELS initial sounds | | | | | 1.02 | .024 |
| DIBELS letter naming | | | | | 1.05* | .014 |
| ESI-K total | | | | | .907 | .116 |
| ECHOS total | | | | | 1.07 | .074 |

Statistically significant findings are bolded

* $p < .05$

^a All three contrasts (re-running the model with a different reference group category) are provided here because each is of interest

greater odds of being placed in gifted programs. For each month older a student was, the odds of him being placed in a gifted program increased by 8 %, such that a kindergartener who was 12 months older upon school entrance was about twice as likely to eventually be placed in a gifted program than a child 12 months younger. Black males who attended public school pre-K programs, as opposed to child care, had greater odds of entering gifted programs with the effect being even stronger for those who paid to attend non Title-1 pre-K programs at age four. There was no difference in the likelihood of gifted placement between those who attended Title-1 versus non-Title-1 schools during pre-K.

In the second step, we added students' school readiness assessment variables at age 4. Performance on the LAP-D subscales was associated with children's gifted

placement, controlling for the background variables already in the model. A 1-percentile-point increase in cognitive, language, and fine motor skills was associated with a 1–3 % increase in the odds of being classified as gifted later. For example, a 50-percentile-point difference on language (say, scoring at the 75th percentile as opposed to the 25th percentile) would double (50 times 2) the odds of being placed in gifted programs later. Interestingly, gross motor skills were negatively associated with later gifted placement. That is, children with greater gross motor skills were less likely to be placed in gifted programs later. Preschool teacher reports of child behavior problems and social skills were not associated with later gifted placement, but parental reports of child behavior problems in the home at age four were associated with decreased odds of gifted placement (multiplicative $OR = .989$). For each percentile point increase in behavior concerns, the odds of being placed in gifted education later decreased by 1 %.

It is important to note the demographic variables that continued to predict later gifted placement after students' school readiness variables at age four were included in step 2. Although ELL status and age were still associated with later gifted placement, special education status in kindergarten was no longer predictive of later gifted placement once students' entering school readiness was considered. Finally, even after controlling for school readiness differences between students in childcare versus those in public school pre-K, low-income students attending Title-I pre-K programs in public schools had a greater chance of being placed in the gifted program than those similarly low-income students who attended childcare programs in the community at age four.

Gifted Placement in Kindergarten

There were 63 Black males placed in the gifted program in kindergarten. To see if the correlates of gifted placement taking place in the very first year of kindergarten were different than those later on in elementary school, when more performance data were available on the child, we examined variables available during the kindergarten year and earlier as they related to students' placement in a gifted program in kindergarten. We ran the same multi-step, logistic regression models as previously reported, but this time, to predict whether or not the Black males did ($n = 63$) or did not ($n = 5,693$) get identified as gifted in kindergarten (Results are reported in Table 5). For this model, which defines *when* the students entered the gifted program, we added a third step to the regression models: students' performance on the district readiness measures during their concurrent kindergarten year in school. Due to the cohort sequential nature of this longitudinal study and the fact that the school district used different readiness assessments in different years/cohorts of kindergarten, the sample sizes for any given assessment in kindergarten vary. Thus, for step 3, we entered each kindergarten readiness assessment (ECHOS, ESI-R) one at a time and report each value all together in one column in the table.

The first column of Table 5 shows that, of the demographic predictors, only child age at school entry and attendance at a Title-I pre-K program (relative to childcare in the community), were significantly related to gifted placement in kindergarten. After age-4 school readiness assessments were added at Step 2, only age continued

to be related to placement, with older students being more likely to be in the gifted program by the end of the year. Cognitive skill on the LAP-D was the only readiness scale that was significant when they were all added. It is important to note that when cognitive and school readiness skills were included in Step 2, preschool type no longer mattered for gifted placement. Thus, the reason pre-K program attendance was associated with gifted placement in Step 1, was that such pre-K programs led to higher school readiness and once those skills are factored in, type of pre-K program doesn't matter anymore.

In Step 3, when we added students' grades in kindergarten and kindergarten readiness assessment scales individually, we see that grades received in kindergarten, as expected, were strongly related to gifted placement in kindergarten. Letter naming as measured by the DIBELS was the only other kindergarten readiness score positively associated with gifted placement in kindergarten. All things considered, the Black males who entered the gifted program in kindergarten were those who were relatively older than their classmates in the same grade, those who had especially high cognitive skills measured a year earlier at age four, and those who received the highest grades from their teachers in their kindergarten year. It is notable that fewer readiness instruments were related to gifted identification in kindergarten, compared to results previously reported for gifted status ever.

Gifted Placement in Grade 1

The largest proportion of gifted Black males was identified in 1st grade (43 %, $n = 195$). Table 6 shows the results of hierarchical logistic regression models that were run to understand the multivariate predictors of being placed in the gifted program in 1st grade. We followed the same model-building procedures as in Table 4. Model 1, including demographic variables, showed that students in special education in kindergarten had lower odds and older students had greater odds of being identified as gifted in 1st grade. Also, Black males attending public school pre-K programs were 2–3 times more likely to be identified as gifted than those in childcare at age 4. After adding the age-four school readiness assessments in Model 2, we see that the pre-K and age effects remained significant and that scores on the cognitive and language portions of the LAP-D and teacher ratings of social skills and parent ratings of behavior problems all contributed to the likelihood that students would become identified as gifted in 1st grade. Of importance is that ELL status from this point forward became significant, indicating that Black males speaking a language other than English at home are about twice as likely to be identified as gifted in 1st grade compared to those speaking English at home.

Model 3 added various kindergarten performance indicators one at a time. Here, we see that end-of-the-year grades received in kindergarten were strongly associated, as expected, with students' gifted classification in the next year. For example, moving from a B average to an A average (1 point increase) increased the odds of being identified by 4.5 times. Also important were students' emergent literacy scores on the DIBELS. It is notable that even with performance in kindergarten included, their cognitive assessment in pre-K and parent report of behavior problems were still associated with the odds of being identified as gifted.

Table 6 Hierarchical logistic regression models predicting gifted placement in first grade by background variables and preschool type (Model 1), school readiness assessments at age 4 (Model 2), and concurrent and prior performance (Models 3,4,5)

| Variables/step | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | |
|-----------------------------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
| | Odds ratio | SE(B) | Odds ratio | SE(B) | Odds ratio | SE(B) | Odds ratio | SE(B) | Odds ratio | SE(B) |
| <i>Background variables</i> | | | | | | | | | | |
| Free-reduced lunch | .838 | .304 | 1.12 | .422 | 1.25 | .470 | 1.54 | .479 | .690 | .542 |
| ELL status | 1.18 | .200 | 1.91* | .283 | 2.23* | .322 | 2.01* | .329 | 2.36* | .399 |
| Special Ed. in K | .364* | .458 | 2.09 | .512 | 2.09 | .535 | 2.11 | .547 | 1.54 | .820 |
| Age in months at start of K | 1.08* | .024 | 1.12* | .035 | 1.11* | .040 | 1.09* | .041 | 1.04 | .052 |
| <i>Preschool type^a</i> | | | | | | | | | | |
| Title 1 pre-K/community CC | 2.09* | .183 | 2.14* | .255 | 2.83* | .324 | 2.59* | .327 | .966 | .388 |
| Fee pre-K/community CC | 3.06* | .409 | 1.87 | .627 | 1.61 | .713 | 1.72 | .714 | 1.15 | .901 |
| Title 1 pre-K/fee pre-K | .681 | .391 | 1.14 | .602 | 1.76 | .665 | 1.51 | .667 | .841 | .869 |
| <i>School readiness at age 4</i> | | | | | | | | | | |
| Cognitive | | | 1.03* | .007 | 1.03* | .007 | 1.03* | .007 | | |
| Language | | | 1.01* | .005 | 1.01 | .006 | 1.01 | .006 | | |
| Fine motor | | | 1.01+ | .005 | 1.01+ | .006 | 1.01 | .006 | | |
| Gross motor | | | .991+ | .005 | .993 | .005 | .994 | .006 | | |
| Social skills (teacher) | | | 1.01* | .005 | 1.01 | .006 | 1.01 | .006 | | |
| Behavior problems (teacher) | | | .997 | .005 | .998 | .006 | 1.00 | .006 | | |
| Social skills (parent) | | | 1.00 | .004 | .997 | .005 | .995 | .005 | | |
| Behavior problems (parent) | | | .991* | .004 | .990* | .005 | .991+ | .005 | | |
| <i>Performance in K</i> | | | | | | | | | | |
| Grades in K | | | | | 4.49* | .348 | 2.59* | .375 | | |
| DIBELS initial sounds | | | | | 1.04* | .015 | 1.04* | .015 | | |
| DIBELS letter naming | | | | | 1.03* | .008 | 1.02* | .009 | | |

Table 6 continued

| Variables/step | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | |
|---------------------------------|------------|-------|------------|-------|------------|-------|--------------|-------|--------------|-------|
| | Odds ratio | SE(B) | Odds ratio | SE(B) | Odds ratio | SE(B) | Odds ratio | SE(B) | Odds ratio | SE(B) |
| ESI-K total | | | 1.06 | .083 | | .085 | 1.03 | | | |
| <i>Performance in 1st grade</i> | | | | | | | | | | |
| Grades in G1 | | | | | | | 4.65* | .387 | 2.91+ | .599 |
| SAT-10 math | | | | | | | | | 1.02* | .009 |
| SAT-10 reading | | | | | | | | | 1.05* | .013 |

Statistically significant findings are bolded

* $p < .05$

^a All three contrasts (re-running the model with a different reference group category) are provided here because each is of interest

Furthermore the effects of ELL status, child age, and pre-K attendance remained significant in this model as well as in the next one when academic performance in 1st grade was included. Model 4, with students' grades in 1st grade added, shows, as expected, that children's performance in the first-grade classroom is strongly associated with being classified as gifted in the same year. After accounting for grades in 1st grade, students' performance in kindergarten and their kindergarten literacy assessments and cognitive score at age four still contributed unique variance in predicting gifted placement in grade one. Model 5 added students' standardized math and reading test scores in 1st grade. Due to the much smaller number of students who had grade 1 standardized test scores (these were only available for one cohort of children), this model was run separately, and children's preschool and kindergarten assessments had to be removed. As expected, given that scores on these tests often contribute to determining whether or not students are identified as gifted, a 1-percentile-point increase in performance on the reading test increased the odds of being classified as gifted that year by 5 %. So, for example, a 10-point increase in performance on the reading test would raise the odds by 50 % and a 20-point increase in performance on the reading test would double the odds of being placed in gifted programs. The same was true for students' math test scores, although the odds ratio was somewhat smaller (a 2 % increase rather than 5 %). When standardized test scores were added, the effect of students' grades in 1st grade was reduced to marginal significance, suggesting that standardized test performance is more critical to predicting who will be identified than academic grades.

Discussion

Black males are underrepresented in gifted and talented educational programs across the US, and once admitted to such programs, they are often underserved, and leave such programs prematurely, compared to other groups (Ford 2011b; Ford and Whiting 2010). Such loss of human resources and potential is saddening and research is clearly needed on the school experiences of gifted Black males to help determine best practices for identification, curriculum, and retention of this vital segment of our population. This study provided data on the prevalence, timing, and predictors of gifted program placement for a large sample of predominantly low-income, Black males in the urban, ethnically diverse, and unique cultural community of Miami-Dade, Florida. About 6.5 % of black males receiving childcare subsidies or attending public-pre-K-programs at age 4 were identified as gifted between kindergarten and fifth grade. District-wide rates of gifted classification are 14 % for Caucasians and 18 % for Asians (Romanik and Blazer 2006). Within our larger MSRP low-income sample including Hispanic and Caucasian students, the rate is 11 %, so it appears that (low-income) Black males are, indeed, under-identified for gifted programs in early elementary school in this community relative to other ethnic groups, as is the case nation-wide (Yoon and Gentry 2009).

It is concerning that during the 2008–2009 school year, 15 % of the Black males identified as gifted did not appear to be receiving full blown gifted educational services in the form of a separate class for gifted students in a particular subject. It is

possible, however, that this group participated in occasional pull-out general enrichment activities; or, quite possibly, they did not have access to a separate gifted curricular program for any major subject area. Perhaps schools find it most difficult to organize and staff separate sections of gifted classrooms for 1st graders, Black males not receiving such services was most common in 1st grade. The majority of the gifted students (60 %), however, were taught 3-5 subject areas in a separate classroom for gifted students. Also of potential concern is that receiving gifted services in all five areas (math, social studies, science, reading, and language arts) became less common in 4th and 5th grade compared to earlier grades. It could be that gifted Black males are voluntarily choosing to take fewer gifted subjects in the later grades, and if so, this would be consistent with the notion of Black males opting out of gifted curriculum over time (NCES 2011).

Most family, preschool, school readiness, and school performance variables were associated individually with being classified as gifted in expected directions, with higher resources and better performance present among those later identified as gifted. The multivariate logistic regression analyses indicated that Black males who started kindergarten with greater readiness in cognitive, language, fine motor, and behavior skills were more likely to be identified as gifted, even controlling for background variables. This finding suggests that developmental and/or school readiness assessments administered to boys as early as age 3 or 4 can be helpful in identifying giftedness later on. Schools wishing to increase Black student representation in gifted education programs might consider paying more attention to assessment results in preschool, if available, as they might be useful for identifying and targeting talented Black males for enrollment consideration.

The more-comprehensive assessments we administered at age four were more strongly related to giftedness than the school district's own readiness screeners administered at the beginning of kindergarten, suggesting that other and earlier readiness assessments may be worth exploring. Also notable is that emergent literacy in kindergarten was often an important and unique predictor of being eventually classified as gifted for young Black males. This suggests that parental and early preschool efforts to increase the English literacy of Black males might help in getting them to be identified as gifted later on. This is also consistent with the notion that language and symbols are key in giftedness assessment among minority students (Lohman 2005). It is well known that school readiness assessments predict later achievement in children generally (Duncan et al. 2007), and others have shown that specific, extraordinary skills in the areas of language and math are sometimes seen in preschool children later classified as gifted (Jackson 2003). To our knowledge, this is the first study to show that general preschool school readiness assessments can be useful for predicting later gifted identification.

Attending public school pre-K programs appeared to increase the chances of young Black males getting classified as gifted. Part of this preschool effect is explained by increased school readiness and kindergarten performance seen among those who went to pre-K programs as opposed to community childcare programs. But even after controlling for school readiness and early school performance, attending pre-K programs in public schools more than doubled the likelihood that a young Black male would eventually be classified as gifted. Parents of Black males

interested in gifted education for their sons, therefore, might consider enrolling their child in pre-K programs operated within public schools. Many of these programs have been found to be of high quality and beneficial for boosting the readiness and early school performance of young children living in poverty (Gormley et al. 2008; Winsler et al. 2008). Additionally, they might give teachers, as potential referral agents, an extra year to find and recruit promising young Black males for gifted education programs.

It is interesting that Black males from homes where a language other than English was spoken were consistently more likely to be identified as gifted, even controlling for early (and sometimes concurrent) performance. This finding reinforces the ideas of Ogbu (1992, 2004) on the importance of distinguishing voluntary from involuntary minorities, and that African-Americans who have experienced generations of oppression and discrimination (involuntary minorities) may have a harder time and lower motivation to achieve than Black males who immigrated from other countries with different cultural histories and identities (voluntary minorities). Many, but not all, such families in the current study originated from Haiti and spoke Creole at home while others were likely immigrants from African countries. This finding also resonates with research finding that immigrant families often perform better than native-born children, in general, in early school (De Feyter and Winsler 2009; Garcia Coll and Marks 2012). Perhaps outreach efforts need to be enhanced specifically for native-born Black families, in this and other communities, about the benefits of gifted educational programs well in advance of students entering any educational environments.

Age upon kindergarten entry consistently emerged as a predictor of later gifted placement, even after other child competence and background variables were included in the models. Students who were older upon kindergarten entry had greater odds of being placed in gifted programs. For each month older a student was, the odds of him being placed in a gifted program increased by 8–22 % depending on the particular model examined. This means that a kindergartener who was 10–12 months older at school entrance relative to classmates was about twice as likely to eventually be placed in a gifted program as a student 10–12 months younger. Although delayed kindergarten entry, or ‘academic red-shirting,’ is a popular idea among middle to upper-class White parents of boys (West et al. 2000; Winsler et al. 2012), there is little research to support the practice of holding back one’s child from kindergarten, and there may be some potential long-term disadvantages (Carlton and Winsler 1999). Delayed school entry among low-income families in this study’s context is known to be rare (Winsler et al. 2012), but for a low-income parent of a Black male intent on getting him into gifted education, it is possible that holding him back a year before kindergarten might help.

In terms of the timing of classification, most Black males were identified as being gifted in either 1st grade (43 %) or 2nd grade (24 %), the years when standardized testing in reading and math first began in the community. This is the same pattern as that observed for the entire county and for our larger MSRP sample, suggesting that the timing of identification of gifted Black males is the same as for other groups. Interestingly, the correlates of being identified as gifted in kindergarten for Black males were different than those identified later. Most readiness assessments in

kindergarten and at age four were either less associated or not associated at all with identification of giftedness in kindergarten. Only kindergarten grades, students' cognitive LAP-D score, and age upon kindergarten entrance were significant predictors of such early identification. This suggests that different processes are at play for gifted identification in kindergarten compared to later years, and that school readiness and early child competence are not as important for classification in kindergarten. Surely, factors unmeasured here, such as parent access, knowledge, motivation, and desire for their child to enter the gifted educational program in their very first year come into play for those who enter gifted education programs as early as kindergarten.

Finally, we also explored the extent to which students' performance on state-wide standardized assessments of math and reading, administered regularly in elementary school, were associated with concurrent and future gifted classification. Such test scores are sometimes used as part of alternative identification gifted criteria for underrepresented groups of children (Hilliard 1976; McClain and Pfeiffer 2012). Less than 10 % of Black males identified as gifted in our sample scored at or above the 89 % on the SAT-10, one of the alternative gifted criteria used in the county. Thus, it does not appear that students' SAT-10 standardized reading and math scores in grades 1–2 are being relied upon for gifted identification. Using just the 89th percentile cut-off on the SAT-10, only 1 % of the non-identified students in our sample could be seen as potentially eligible for the gifted program. On the other hand, the vast majority of the Black males identified as gifted in 3rd grade or later scored at least a 4 out of the 5-point scale on either the FCAT math or reading tests, and for the non-identified students, more than a third *would* meet the 4 or above criterion for potential consideration for the gifted program. These results suggest that the SAT-10 assessment may not be that useful for increasing Black male participation in gifted and talented programs, but that the high-stakes FCAT assessment may indeed be a fruitful criterion measure for identifying young Black males for gifted programs.

Although the strengths of this study include its large sample size and longitudinal nature, there are also limitations of the present work. First, it is unfortunate that we did not have information on whether families were voluntarily opting out of gifted education over time. Also, being limited to school record data, we lacked rich qualitative information about the *experience*—the motivations, desires, and struggles—of being in gifted educational programs for Black males. Future qualitative research would do well to explore such issues in more depth.

In summary, the present paper offered new data on a large sample of predominately low-income Black males identified for gifted programs in Miami-Dade Florida. Results provide information as to early child, family, and preschool variables prospectively associated with eventual gifted placement. The hope is that this information can be used by school districts to enhance recruitment and identification efforts to reduce the lamentable underrepresentation of Black males in gifted programs. Additional longitudinal and qualitative research is needed to understand the experiences of young Black males in gifted programs in elementary school nationwide in order to maximize the academic progress of this vital group of talented citizens.

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