



Preschool to kindergarten transition patterns for African American boys



Iheoma U. Iruka^{a,*}, Nicole Gardner-Neblett^a, J.S. Matthews^b, Donna-Marie C. Winn^a

^a University of North Carolina at Chapel Hill, United States

^b Montclair State University, United States

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ABSTRACT

This study focused on the transition patterns of African American boys from preschool to kindergarten using the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B) dataset. Analyses were conducted to examine whether socioeconomic status, parenting (i.e., emotional support, intrusiveness), and attendance in a center-based program predicted likelihood of being in a particular transition pattern. Four patterns emerged from the data: (1) Increasing Academically, (2) Early Achiever: Declining Academically & Socially, (3) Low Achiever: Declining Academically, and (4) Consistent Early Achiever. There was heterogeneity in the school transition patterns of African American boys, with many showing stability from preschool to kindergarten. Family income and parenting practices and interactions were associated with an increased probability of being in the group that showed a significant increase in academics, suggesting the importance of parents' provision of enriching opportunities and experiences for African American boys as they transition from preschool to kindergarten.

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1. Introduction

The transition to kindergarten can be challenging for many children due to new academic and behavioral expectations, novel social interactions, and physiological changes (Rimm-Kaufman & Pianta, 2000). Research suggests heterogeneity in children's transitions to kindergarten with many children displaying different growth patterns and fluctuations in academic and social functioning before, during and after the transition to kindergarten (Alexander, Entwisle, Blyth, & McAdoo, 1988; Konold & Pianta, 2005). Such heterogeneity may also be expected for African American boys when examining multiple dimensions of development, namely academic and social skills. However, minimal research exists on the varying patterns of African American boys' school transitions. Such research is particularly important for understanding the trajectories of African American boys whose transition may be even more arduous than other groups of children, given the additional sociocultural challenges that some face when teachers view their behaviors negatively and assume that they are deficient cognitively (Davis, 2003; Davis, Kilburn, & Schultz, 2009; Noguera, 2003; Sbarra & Pianta, 2001; Zimmerman, Houry, Vega, Gil, & Warheit, 1995). Thus, the

current study seeks to address this gap by examining the nature of transitions from preschool to kindergarten for African American boys.

The current study uses a person-centered approach to determine the patterns of academic achievement and social behavior during African American boys' preschool–kindergarten transition. This approach is an alternative to a variable-centered approach which focuses on generalized associations between variables across a sample. Early childhood research on the developmental competencies of ethnic minority children has become overwhelmingly variable-centered, neglecting to fully leverage the value of person-centered analyses, which can illustrate how different child attributes co-vary with one another at the level of the individual (Marsh, Lüdtke, Trautwein, & Morin, 2009), revealing nuances and profiles in how a child develops. As the basis for the person-centered approach, the current study examines patterns of boys' academic and social competence over the course of the transition to kindergarten. Academic and social competence are both relevant to children's successful academic matriculation (Duncan et al., 2007) and taken together, they present a more holistic, complex, integrated picture of a child's development than examining either one in isolation (Daily, Burkhauser, & Halle, 2010). In addition to examining patterns of boys' transitions, the current study examines several factors associated with these transitions, including family and child characteristics and parenting practices.

* Corresponding author. Tel.: +1 919 843 8085.

E-mail address: iruka@unc.edu (I.U. Iruka).

1.1. Theoretical background

The integrative model for the study of developmental competencies in minority children (García Coll et al., 1996) provides a framework for considering heterogeneity in the kindergarten transition patterns of African American boys. This model underscores how African American boys may be impacted by the opportunities and expectations they experience due to their race, gender, and socio-economic status. García Coll et al. (1996) emphasize the interplay between several inter- and intrapersonal characteristics for understanding variability in the development of ethnic minority youth. For the purposes of this paper, we focus on the specific interactions between social position (e.g., ethnicity, social class), social environments (e.g., schools and out-of-home care), and family processes and characteristics (e.g., parenting), and their relation to patterns of academic and social competence for preschool African American boys transitioning into kindergarten. The integrative model posits family processes may serve as protective mechanisms for children. For African American boys transitioning into kindergarten, family processes (i.e., sensitive parent–child interactions) may buffer the negative effects of low teacher expectations (Garibaldi, 1992; Graham & Robinson, 2004; Pigott & Cowen, 2000) or the general challenges associated with the transition (Rimm-Kaufman & Pianta, 2000). Similarly, social position, such as SES, can serve as protective factors during school transition by providing boys with enriching resources and opportunities that prepare them for formal schooling.

1.2. African American Boys' kindergarten transition patterns

There is a plethora of research that emphasizes the shortcomings of African American boys, resulting in a dearth of literature that focuses on these boys' strengths. Nevertheless, there is evidence that many African American boys transition into kindergarten prepared to learn and excel (Aud, Fox, & KewalRamani, 2010). For instance, over 50% of African American preschool-age boys were proficient at number and shape recognition (Aud et al., 2010). African American children in the early years, including boys, produce narratives of higher quality and have greater narrative comprehension compared to White children (Gardner-Neblett, Pungello, & Iruka, 2012). A recent report from the National Center for Children in Poverty showed that once socioeconomic status was controlled, African American boys had better reading and math outcomes in preschool and kindergarten compared to White boys (Aratani, Wight, & Cooper, 2011).

While research confirms the existence of heterogeneity in African American boys' learning, it does not provide clarity about changes in boys' skills across school transitions. A few studies have examined transition patterns (Chung, Elias, & Schneider, 1998; Konold & Pianta, 2005), though not specifically for African American boys. Konold and Pianta (2005) examined patterns of children's school transition (11% of the sample was African American) based on their pre-kindergarten skills and found that the profiles of children's cognitive ability and behavior problems predicted academic skills in first grade. Thus, while the literature suggests heterogeneity in school transition patterns among predominantly White samples of children, no studies have specifically focused on African American boys academic and social changes as they transition from preschool to kindergarten.

The focus on boys' academic and social competence is warranted given evidence showing that these early skills predict positive transitions and later school outcomes. Early competence in the area of expressive language as well as reading and math has been associated with positive school transitions and later school performance (Craig, Connor, & Washington, 2003; Griffin, Hemphill, Camp, & Wolf, 2004; Tabors, Roach, & Snow, 2001; Zohar & Dori, 2003). That

is, the ability to communicate prepares children to be able to convey their thoughts and emotions. Early reading skills support children's acquisition of new knowledge in all academic areas, while early math skills promote higher-order and critical thinking (e.g., synthesizing and analyzing). Similarly early social competence, such as the ability to follow instruction, behave appropriately, communicate, and interact with peers and adults, has been associated with adaptive school transitions and is often viewed by kindergarten teachers as critical to children's adjustment and learning (Hains, Fowler, Schwartz, Kottwitz, & Rosenkoetter, 1989; Ladd & Price, 1987; Taylor, 1991).

1.3. Predictors of transition patterns for African American boys

There are a number of important factors to consider for African American boys as they transition from preschool to kindergarten including family background, parent–child relationship, and early educational experiences. African American boys are more likely to live in and experience more challenging environments than their peers (Davis, 2003). National data shows that during the first five years of life African American boys were more likely to experience poverty, reside in one-parent households, have mothers with less than a high school education, have more mothers exhibiting depressive symptomatology, and were less likely to be read to daily when compared to White boys (Aratani et al., 2011; Najarian, Snow, Lennon, & Kinsey, 2010). In spite of the obstacles they face, numerous African-American boys excel academically and are socially competent (Noguera, 2003).

García Coll et al. (1996) note that children's environments and family processes play key roles in minority children's development. Therefore, it is expected that the most proximal settings (e.g., home, preschool) will directly impact young African American boys' learning and behavior and subsequently, how they transition into school. Thus, family and preschool environments are likely to promote or inhibit an adaptive transition into school. In this study, we focus on socioeconomic status, home literacy practices, parent–child interactions, and attendance in center-based care to predict African American boys' preschool to kindergarten transition patterns.

Family socioeconomic status (SES) has been linked to children's adjustment to formal schooling (Conger et al., 1992; Entwisle & Alexander, 1993; Entwisle, Alexander, & Olson, 2007; McLoyd, 1998; Slaughter-Defoe, Nakagawa, Ruby, & Johnson, 1990). Specifically, research has indicated that high-SES families have greater resources to provide access to materials and experiences that prepare children to meet the academic and social expectations of schools.

The proximal processes of parenting, which includes sensitive parent–child interactions and cognitively stimulating opportunities, have been linked to African American children's school readiness and optimal school transition (Iruka, Burchinal, & Cai, 2010; Reynolds, Weissberg, & Kaspro, 1992). Researchers found the more sensitive mothers were with their children, the less anxious or inhibited children were during the transition to kindergarten (Early et al., 2002). Parents and caregivers who are authoritative and emotionally available and supportive are likely to provide environments for children that engage them in contingent verbal and nonverbal exchanges and higher-order thinking, as well as encourage appropriate behaviors. As the behavioral and academic expectations for children increase in kindergarten, these parenting practices prepare children to deal with "formalized instruction" and the demands of formal schooling (Gullo & Burton, 1993; Reynolds et al., 1992; Rimm-Kaufman, Pianta, & Cox, 2000).

In addition to family resources and parenting practices, attendance in preschool center-based environments is also thought to be associated with children's school transition by preparing them for the structure, processes, expectations, and interactions (i.e.,

adult-child, peer-peer) that school brings (Gullo & Burton, 1993; Iruka et al., 2010; Ladd & Price, 1987). The positive association between attendance in center-based care and child outcomes before and after school transition has been supported by numerous studies (e.g., Barnett, 1995; Belsky & MacKinnon, 1994; Ladd & Price, 1987; Melhuish et al., 2008). The few exceptions to this positive association are studies that report increased externalizing problems due to attendance in center-based programs (Crosby, Dowsett, Gennetian, & Huston, 2010; Magnuson, Ruhm, & Waldfogel, 2007).

In sum, African American who have culturally responsive parents and experience enriching early education programs are likely to have strong social and emotional functioning (McAdoo, 1985; Spencer, 1983) and good academic outcomes (Oliver, 1989; Thomas, Coard, Stevenson, Bentley, & Zamel, 2009). Thus, the environments and interactions experienced by African American boys may lead some to successful school transition (e.g., growth in academics and social competence) and others to a troubled school entry and disengagement from school (Noguera, 2003; Taylor & Graham, 2007).

1.4. Current study

The current study seeks to explore the transition profiles of African American boys from preschool through kindergarten based on assessment of their academic skills and teacher ratings of their social behaviors. Given the importance of family socio-demographics, parenting, and attendance in center-based preschool programs, it is critical to examine these variables as predictors of membership in a particular school transition profile. The questions guiding this study are: (a) what are the academic and social skill patterns of African American boys as they transition from preschool through kindergarten, and (b) do SES, parenting, and preschool attendance predict the likelihood of being in a particular transition pattern? Limited research on African American boys' school transition patterns restricts our ability to postulate. However, based on earlier-cited research with diverse samples, we expected positive parenting practices and high SES to predict the likelihood of membership in the high achiever or socially competent groups (Early et al., 2002; Rimm-Kaufman et al., 2000), with uncertainty about the role of attendance in center-based care due to mixed findings (Belsky & MacKinnon, 1994; Magnuson et al., 2007).

2. Method

2.1. Participants

The children and families in this study were participants in the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B), a nationally representative study aimed at understanding children's early experiences between birth and entry into formal schooling. The study sampled approximately 14,000 children born in the U.S. in 2001, from birth until they entered kindergarten (due to the restrictive nature of this dataset, exact numbers cannot be provided). Children were mostly sampled through registered births from the National Center for Health Statistics vital statistics. All children were sampled, except children born to mothers less than 15 years of age, children who died before the 9-month assessment, or children who were adopted prior to the 9-month assessment. To select a nationally representative probability sample of children born in 2001, births were sampled within a set of primary sampling units (PSUs), including race/ethnicity, metropolitan area status, region, and income (Bethel, Green, Nord, & Kalton, 2005). Children's experiences and development were assessed during the 9-month, 24-month, preschool, and kindergarten waves.

The present study uses data from the preschool and kindergarten waves of the data when children were four and five years old, respectively, to explore how family background, early child care experiences, and parental practices are associated with the academic and social transition patterns of a subsample of boys who were identified by parents as African American/Black ($N = 700$). The average age of the boys during the preschool wave was 53.14 months ($SD = 4.36$) and a majority of them were enrolled in center-based care (64%). About half of mothers (47%) had completed at least a high school degree. The average income-to-needs ratio for the sample was 1.64 ($SD = 1.76$), with over 45% living below the poverty threshold.

Forty-seven percent of African American boys' preschool teachers and over 98% of kindergarten teachers in this study had a baccalaureate degree or higher. Their preschool teachers on average had 13.5 years ($SD = 9.5$) of teaching experience. Their kindergarten teachers had on average 14 years ($SD = 9.8$) of teaching experience.

2.2. Procedure

At each time point, data were collected during visits to children's homes. Children's cognitive and socio-emotional development were measured through direct assessments and parents provided information through computer-assisted personal interviews and self-administered questionnaires. Childcare providers and teachers completed self-administered questionnaires about children's socio-emotional development at preschool and kindergarten, respectively.

2.3. Analytic approach

A person-centered analytic approach was used to identify multidimensional patterns of children's academic and social competence during transition from preschool to kindergarten based on children's performance on direct assessments of academic achievement and social-emotional functioning. Person-centered approaches empirically identify discrete groups or typologies that share similar patterns based on correlations among multiple indicators (Hagenaars & McCutcheon, 2002). This approach is distinct from variable-centered analysis, which is primarily focused on explaining relationships among variables that vary among individuals. The use of the person-centered approaches, specifically latent profile analysis (LPA), has been used in various sectors and is an emerging analytical method in the social sciences (e.g., parenting (Cook, Roggman, & D'zatko, 2012), early education (McWayne, Fantuzzo, & McDermott, 2004), and learning disability (Konold, Glutting, & McDermott, 1997)). The benefit of using a person-centered rather than a variable-centered approach for the current study is the ability to identify patterns of African American boys' academic and social competence during the early years, unlike a variable-centered approach that separately examines each academic and social variable. Person-centered approaches view the child as "whole," simultaneously determining their strengths and weaknesses in various domains.

Profiles were created using LPA, which is a person-centered latent variable analytic technique that uses continuous variables to group cases into subgroups based on similar patterns of multiple indicators (Bauer & Curran, 2004; Lubke & Muthén, 2007, for further details). Similar in concept to cluster analysis, LPA is used to identify groups of individuals according to underlying similarities. LPA differs from cluster analysis because it uses a model-based method rather than a hierarchical clustering algorithm to identify groups of individuals who are similar with respect to latent variables. Unlike cluster analysis, LPA accounts for measurement error in the

estimates of within-class residual variance (DiStefano & Kamphaus, 2006).

For the current study, LPA was used to demonstrate the heterogeneity in preschool to kindergarten academic and social competence patterns for a sample of African American boys. A set of 14 indicators of children's functioning in prekindergarten (7 indicators) and kindergarten (7 indicators) was used simultaneously to create the profiles. LPA models were estimated using MPlus® (Muthén & Muthén, 2007), which uses full information maximum likelihood estimation by using all available data, allowing for the use of missing data on the measured variables. Background characteristics and parenting measures were then used to predict profile membership. Given that the scaling of variables can influence their contribution to the final solution, all measures were standardized to the same metric ($M=0$, $SD=1$). The following section describes the measures used as indicators and predictors of the profiles.

2.4. Measures

2.4.1. Profile indicators

Expressive language. Children's expressive language was based on the Let's Tell Stories subtest of the PreLAS® (Duncan & DeAvilla, 1998) assessed during the preschool data collection wave. Two short stories were read to the child. After each story, the child was asked to retell the story, making reference to a set of pictures provided as prompts. Children's responses were audio recorded and scored on a scale from 0 (no response, which included "I don't know," or no response in English) to 5 (articulate, detailed sentences, vivid vocabulary, and complex constructions). Scores for the subsample used in the current study ranged from 0 to 5, and the average score was 2.13 in preschool ($SD=.95$) and 3.30 ($SD=.75$) in kindergarten. The Cronbach's alpha, measure of internal consistency and reliability, was .83 in preschool and .72 in kindergarten (based on the ECLS-B manual as items are not publically available).

Early reading assessment. Children's reading skills were assessed as part of a battery of cognitive assessments compiled from various sources specifically for use in the ECLS-B and gathered during the preschool and kindergarten waves. The early reading component of the battery included assessment of children's emergent literacy skills. Basic skills such as letter knowledge, letter sounds, early reading (recognition of simple words), phonological awareness, print conventions, and word recognition were assessed. In addition, children's receptive vocabulary based on items from the Peabody Picture Vocabulary Test (PPVT; Dunn & Dunn, 1997), their understanding and interpretation of a reading passage, as well as critical thinking were also assessed. Language and literacy items were pooled to create a unidimensional early reading score for both the preschool and kindergarten waves. Children's reading scores were assessed in two stages, with an initial core set of questions, followed by supplemental items depending on children's performance on the initial questions. Item Response Theory (IRT) was used to score the responses, which allows one to accurately estimate children's ability based on the difficulty of items children answer correctly or incorrectly. Average scores were 21.18 ($SD=8.32$) in preschool and 40.35 ($SD=14.41$) in kindergarten. Cronbach's alpha was .81 in preschool and .92 in kindergarten (based on the ECLS-B manual as items are not publically available).

Mathematical assessment. The cognitive battery assessments designed for the ECLS-B also included an assessment of children's mathematical skills, and gathered during the preschool and kindergarten waves. Similar to the reading assessment, children were assessed in two stages that included a single common set of items and supplemental items administered based on children's performance on the core items. The 45-item preschool assessment measured children's understanding of shapes, number sense, properties, counting, and operations. IRT scoring was also used based on

the pattern of correct and incorrect responses. The average math score was 24.68 ($SD=8.69$) in preschool. The reliability (Cronbach's alpha) for the overall math score was .88 (based on the ECLS-B manual as items are not publically available).

Kindergarten skills assessed included number sense, properties, operations, measurement, geometry, data analysis, statistics and probability, patterns, and algebra and functions based on 58 items. The average score was 39.65 ($SD=10.05$) and reliability (Cronbach's alpha) was .92 (based on the ECLS-B manual as items are not publically available).

Socioemotional skills and behaviors. Children's socioemotional skills and behaviors were measured based on reports from children's teachers or child care providers during the preschool and kindergarten waves (items were the same at both time points). The constructs assessed with this measure include children's prosocial skills, approaches toward learning, problem behaviors and emotions, emotion knowledge, temperament, and friendships. Twenty-two items were selected from the Preschool and Kindergarten Behavior Scales—Second Edition (PKBS-2; Merrell, 2003) and the Social Skills Rating System (SSRS; Gresham & Elliott, 1990) to assess the frequency of children's behaviors in the past three months, ranging from never (1) to very often (5). Exploratory factor analysis was conducted with promax rotation with the preschool wave items and it indicated four factors accounting for 61% of the variance with eigenvalues greater than 1. The four factors were interpersonal, approaches to learning, aggression, and anxiety. Interpersonal behaviors included children's ability to make friends, share toys, and be accepted by others (7 items; $\alpha=.87$). Average scores were 3.22 ($SD=.84$) in preschool and 3.53 ($SD=.71$) in kindergarten. Approaches to learning behaviors included children's ability to be eager, pay attention, and work independently (4 items; $\alpha=.89$). Average scores were 3.51 ($SD=.82$) in preschool and 3.58 ($SD=.85$) in kindergarten. Aggressive behaviors included physical aggression, disrupting others, exhibiting temper tantrums, and acting impulsively (8 items; $\alpha=.93$). Average scores were 2.39 ($SD=.90$) in preschool and 2.43 ($SD=.93$) in kindergarten. Anxiety behaviors included being unhappy and being worried (3 items; $\alpha=.64$). Average scores were 1.82 ($SD=.60$) in preschool and 2.16 ($SD=.77$) in kindergarten.

2.4.2. Profile predictors

Income-to-needs ratio. An income-to-needs ratio was created by dividing the family's income by the federal poverty guideline for the family's size, using information provided during the parent interview. An income-to-needs ratio (INR) of less than one indicates a family is below the poverty threshold and an INR of two signifies that a family is two times or more above the poverty threshold.

Maternal education. Mothers were asked their highest grade or year of school that they have completed, which was coded in the following way (percent for the sample provided for each category): 1 = less than high school (16%), 2 = high school diploma or equivalent (37%), 3 = some college (32%), 4 = B.A./B.S. degree (9%), and 5 = M.A./Ph.D./professional degree (6%). For ease of interpretation, this variable was then dichotomized such that 0 = high-school education/GED or lower (53% of sample) or 1 = more than a high-school education/GED (47% of sample).

Parent-child literacy activity. A composite of children's literacy experiences at home was created for the current study based on parental report during the preschool wave of data collection, of the frequency with which parents read books, told stories, or sang songs with their child. Responses ranged from never (0) to every day (4) (3 items, $\alpha=.62$).

Parent-child activities. During the 24-month wave of data collection, parents were asked about how often they engaged in a set of activities with their child. Parents reported on nine activities such as talking to the child about TV, playing games, and running errands

Table 1
Bivariate correlations between key variables.

	2	3	4	5	6	7	8	9	10	11	12	
1. Income-to-needs ratio	.40**	.11**	.15**	.09*	.26**	.20**	-.04	-.06	-.11**	.18**	.37**	
2. Maternal education (1 = ≥high school)	-	.11**	.18**	.19**	.24**	.22**	-.06	-.07	-.13**	.12**	.27**	
3. Attendance in center-based preschool	-	-	-.03	.02	.03	.02	-.03	-.03	-.02	.04	.18**	
4. Parent-child literacy			-	.42**	.24**	.17**	.01	-.10*	-.13**	.01	.19**	
5. Parent-child activities				-	.16**	.17**	.04	.01	-.03	.06	.12**	
6. Parental emotional support					-	.61**	-.22**	-.38**	-.48**	.06	.14**	
7. Parental cognitive stimulation						-	-.14	-.27**	-.42**	.11	.18**	
8. Parental intrusiveness							-	.46**	.31**	-.12**	-.04	
9. Parental negative regard								-	.34**	-.05	-.12**	
10. Parental detachment									-	-.04	-.05	
11. PK Expressive Language										-	.31**	
12. PK Reading											-	
13. PK Math												
14. PK Aggression												
15. PK Interpersonal												
16. PK ATL												
17. PK Anxiety												
18. K Expressive Language												
19. K Reading												
20. K Math												
21. K Interpersonal												
22. K ATL												
23. K Aggression												
24. K Anxiety												
	13	14	15	16	17	18	19	20	21	22	23	24
1. Income-to-needs ratio	.29**	-.16**	.10*	.10*	-.06	.14**	.29**	.26**	.09	.07	-.05	-.08
2. Maternal education (1 = ≥high school)	.25**	-.13**	.09*	.16**	-.07	.10*	.29**	.25**	-.04	.004	.03	-.01
3. Attendance in center-based preschool	.20**	-.01	-.13**	-.08	.06	-.08	.12**	.07	-.04	-.06	.14**	-.06
4. Parent-child literacy	.13**	-.03	.08	.02	-.08	.10*	.18**	.15**	.09	.06	-.07	.02
5. Parent-child activities	.11**	-.05	.03	.05	-.02	.06	.16**	.12**	.13**	.13**	-.09	-.03
6. Parental emotional support	.11**	-.15**	.08	.09	-.04	.05	.17**	.12**	-.02	.02	.001	.05
7. Parental cognitive stimulation	.16**	-.16**	.10*	.12	-.02	.09	.20**	.19**	.11	.16**	-.15**	.01
8. Parental intrusiveness	-.07	.01	-.13**	-.06	-.03	-.11*	-.03	-.06	-.06	-.08	.11	.04
9. Parental negative regard	-.10*	.07	-.001	-.04	-.07	-.06	-.11*	-.07	.01	-.08	.07	-.04
10. Parental detachment	-.05	.06	-.07	-.04	.03	-.05	-.10*	-.10*	-.04	-.08	.12*	-.02
11. PK Expressive Language	.33**	-.18**	.22**	.24**	-.06	.38**	.24**	.31**	.16**	.21**	-.02	-.11*
12. PK Reading	.75**	-.21**	.17**	.29**	.04	.19**	.46**	.47**	.12*	.20**	-.12*	-.03
13. PK Math	-	-.19**	.20**	.34**	.004	.23**	.47**	.51**	.18**	.22**	-.14*	-.10
14. PK Aggression		-	-.34**	-.61**	.38**	-.10	-.26**	-.29**	-.28**	-.31**	.49**	.08
15. PK Interpersonal			-	.61**	-.39**	.25**	.14**	.21**	.30**	.27**	-.23**	-.06
16. PK ATL				-	-.42**	.16**	.32**	.36**	.34**	.45**	-.41**	-.09
17. PK Anxiety					-	-.08	-.13*	-.15**	-.28**	-.28**	.27**	.10
18. K Expressive Language						-	.34**	.41**	.26**	.31**	-.16**	-.17**
19. K Reading							-	.79**	.27**	.37**	-.23**	-.11*
20. K Math								-	.34**	.47**	-.24**	-.18**
21. K Interpersonal									-	.72**	-.51**	-.33**
22. K ATL										-	-.58**	-.29**
23. K Aggression											-	.19**
24. K Anxiety												-

Note. N = 700. PK = preschool; K = kindergarten; ATL = approaches to learning.

** p < .01.

* p < .05.

with the child on a scale from never/rarely (1) to always/daily (4). The Cronbach's alpha for the nine items for the current sample was .63.

Observed parenting behaviors. Parenting behaviors were measured based on observations of parent-child interactions during the Two Bags tasks during the preschool wave. In this task, parents and children were given two different bags and told to play with the contents of the bags for 10 min. In the preschool wave of data collection, the first bag contained the book Corduroy and the second bag contained Play-Doh, a rolling pin and cookie cutters. The interactions were video recorded and later coded by trained and certified coders using the system from the Early Head Start Research and Evaluation study (Fauth, Brady-Smith, & Brooks-Gunn, 2003). The following parenting constructs were coded: (a) emotional support – parents' emotional availability and physical and affective presence, (b) cognitive stimulation – parents' effortful teaching to enhance

perceptual, cognitive, and language development, (c) intrusiveness – parental control of the child and not respecting child's perspective, (d) negative regard – the parents' expression of discontent with, anger toward, disapproval of, or rejection of the child, and (e) detachment – parent's awareness of, attention to, and engagement with the child. The constructs were coded on a scale from very low (1) to very high (7). Videotape coders attended a 3-day training session and were required to code five videotapes reliability to criterion of 85% agreement on each scale. To be certified, each coder was required to achieve an average of 80% agreement (within 1 point) or higher with the established scores across all scales and cases, based on five certification cases. The average percent agreement was 90.8–96.9 (see Snow et al., 2007, for additional information).

Center-based out-of-home care. To assess whether or not children spent time in center-based care, information was gathered from

Table 2
Comparison of model fit for models with varying classes.

	One class	Two class	Three class	Four class	Five class
AIC	18754.95	17659.99	17223.38	17022.36	16866.07
BIC	18881.07	17853.68	17484.63	17351.17	17262.44
Adj. BIC	18792.16	17717.15	17300.48	17119.39	16983.04
LMR <i>p</i> value	–	.0218	.1601	.1701	.3979
Entropy	–	.802	.766	.795	.743
% Class 1	100	60	29	.51	.04
% Class 2		40	47	.11	.18
% Class 3			24	.19	.42
% Class 4				.20	.25
% Class 5					.11

Note. *N* = 700.

parental report on child care arrangements during the preschool wave of data collection. Responses were re-coded for the present study as 0 = parental, relative, or home-based care (36% of sample) and 1 = center-based care (64% of sample).

3. Results

3.1. Preliminary analyses

Bivariate correlations are provided for the key variables in Table 1. Family income and maternal education were related to parenting processes and children's academic and social skills with the exception of kindergarten social skills. Parenting practices (e.g., literacy practices) and interactions (e.g., cognitive stimulation) were positively associated with many child outcomes. Attendance in center-based programs was positively associated with many aspects of children's academic and social skills.

3.2. Profiles of academic and social adjustment

Variables are first standardized prior to inclusion in the LPA. Then the next task in LPA is to identify the number of patterns within the sample. This is done by comparing the efficacy of models with one through *k* subgroups (patterns). We compared models by evaluating a combination of fit statistics, including class proportions, entropy values, and likelihood ratio tests to determine the most effective model (Nylund, Asparouhov, & Muthén, 2007). Smaller values of the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and Sample Size Adjusted Bayesian Information Criterion (AdjBIC) indicate better fit (Byrne, 2001), while entropy values approaching one indicate better fit. The Lo, Mendell, and Rubin (2001) statistic was also used to test whether a model with *k* subgroups fit the data better than a model with *k*–1 subgroups (e.g., 2 groups vs. 3 groups). The Lo, Mendell, Rubin (LMR) test *p*-values lower than .05 indicate that a model *k* groups fits the data better than a *k*–1 model, and *p*-values greater than .05 indicate that there is no evidence that a model with *k* subgroups fits the data better than one with *k*–1 subgroups. Specifically, we are characterizing patterns based on scores during the preschool and kindergarten time period rather than examining profile change from the preschool to kindergarten time point (i.e., latent transition analysis) (Collins & Lanza, 2010; Lanza & Collins, 2006).

Results from comparative modeling are presented in Table 2. Each model was run as an unconditional latent class model with continuous indicators in Mplus Version 5.21 using the type = mixture analysis procedure and specifying 50 random starts and 10 optimizations and a solution that accounts for data assumed missing at random. The default specification for this analysis in Mplus allows the means of latent classes to vary across class, holds constant across classes the variances of latent variables, and covariances among indicators fixed to zero (Muthén & Muthén, 2007).

Information criterion statistics, entropy values, LMR tests, and pattern distribution indicated that the best fitting model was one with four subgroups. In the four-group model, probabilities for latent class membership were greater than .86 for all four groups, providing additional evidence that this group classification was the best fitting model. The four different patterns were: (1) Increasing Academically, (2) Early Achiever: Declining Academically & Socially, (3) Low Achiever: Declining Academically, and (4) Consistent Early Achiever (see Fig. 1).

3.3. School transition patterns

Pattern 1 – Increasing Academically. About half of the sample (51%) comprised the first profile, “Increasing Academically.” In prekindergarten, this group had expressive language scores around the mean and reading and math scores slightly below the mean. Their social competence in prekindergarten along with aggression, anxiety, interpersonal skills, and approaches to learning were also around the mean of the sample. Once in kindergarten, this group's expressive language, reading, and math scores significantly improved by one-fifth to one-third of a standard deviation compared to their prekindergarten scores ($\Delta SD_{(\text{expressive language})} = .20$, $p < .05$; $\Delta SD_{(\text{reading})} = .37$, $p < .01$; $\Delta SD_{(\text{math})} = .29$, $p < .01$). There were no significant changes in their social competence between prekindergarten and kindergarten, which were still around the mean. In general, this group's academic outcomes improved to around the mean and social competence remained stable between prekindergarten and kindergarten, which was also around the mean.

Pattern 2 – Early Achiever: Declining Academically & Socially. Comprising 11% of the sample, this pattern accounted for the smallest proportion of the sample. This group of boys, who we have coined, “Early Achiever: Declining Academically & Socially,” scored the highest of the four groups in academic achievement. Their prekindergarten scores were nearly two standard deviations above the mean in reading and 1.5 standard deviations above the mean in math. Their achievement continued to be above the mean in kindergarten, but their levels of reading and math achievement significantly decreased to about one standard deviation above the mean ($\Delta SD_{(\text{reading})} = -.95$, $p < .01$, $\Delta SD_{(\text{math})} = -.49$, $p < .01$). There was no change in their expressive language. This group of boys was rated as slightly below the mean on aggression, and slightly above the mean on interpersonal and approaches to learning skills, as well as anxiety by preschool teachers. However, by kindergarten, they showed a significant increase in aggression above the mean ($\Delta SD = .41$, $p < .05$) and decrease in interpersonal skills to below the mean ($\Delta SD = -.66$, $p < .05$). Overall, in the transition from prekindergarten to kindergarten, this group experienced a decrease (though still well above average) in academic achievement, and a moderate increase in aggressive behavior.

Pattern 3 – Low Achiever: Declining Academically. The third profile included 19% of the sample. We call this profile, “Low Achiever: Declining Academically.” This group of boys scored at least ½ standard deviation below the mean in reading and math, as well as in expressive language in prekindergarten. In kindergarten, their scores for reading and math decreased significantly to one standard deviation below the mean ($\Delta SD_{(\text{reading})} = -.48$, $p < .01$; $\Delta SD_{(\text{math})} = -.47$, $p < .01$). These boys were rated by their preschool teachers as being above the mean on aggression and anxiety, and below the mean on interpersonal skills and approaches to learning skills. With the exception of anxiety which significantly decreased to around the mean ($\Delta SD = -.75$, $p < .01$), in kindergarten, there were no significant changes in boys' aggression, interpersonal skills, or approaches to learning. Overall, boys in this group were below the mean and showed a decrease in their academics and stability in their behavior with the exception of decrease in their anxiety.

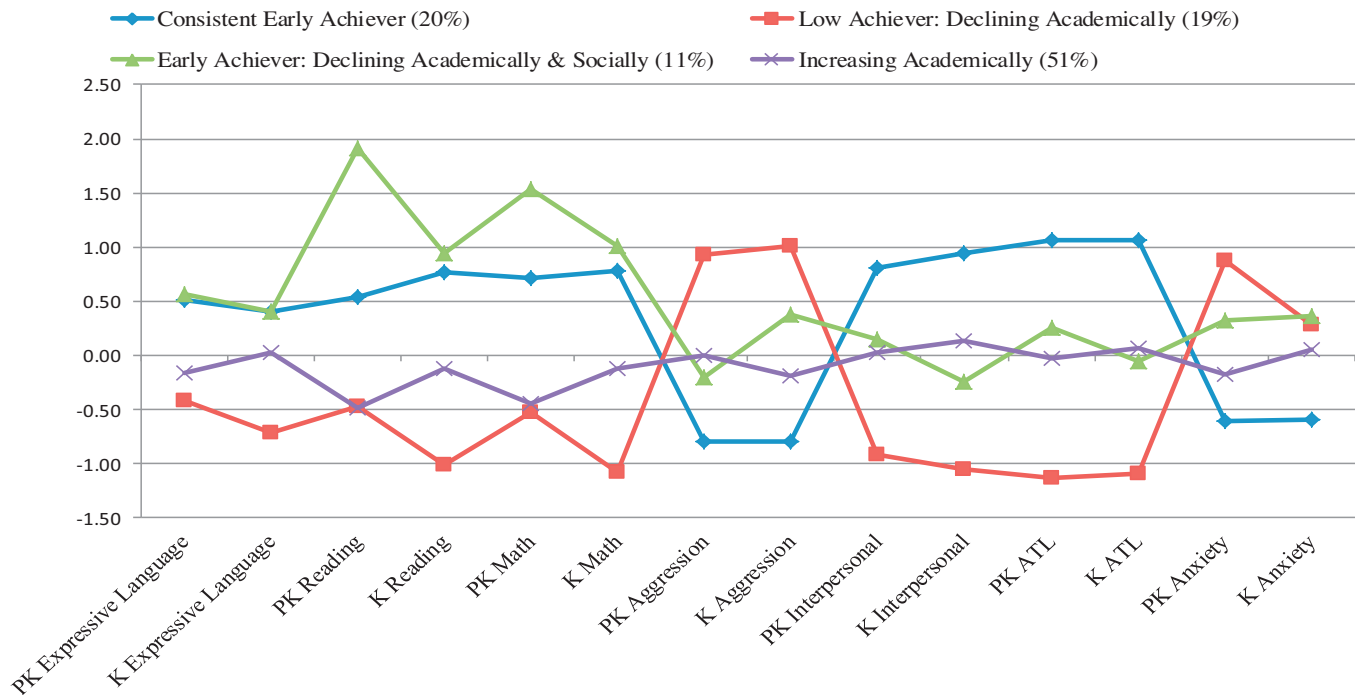


Fig. 1. Patterns of African American Boys'.

Pattern 4 – Consistent Early Achiever. A fifth of the sample (20%) was grouped into this last pattern. We call this profile, “Consistent Early Achiever.” This group scored above average in expressive language, reading, and math in prekindergarten and continued to score above average in these areas in kindergarten, though they had a significant increase in reading to $\frac{3}{4}$ standard deviation above the mean ($\Delta SD = .24, p < .05$). They also were rated by teachers as well above the mean in their interpersonal skills in prekindergarten and kindergarten, as well as below the mean on their anxiety during this same period. Thus, this group of boys displayed stability in their high achievement and prosocial competence in the transition from prekindergarten to kindergarten.

3.4. Descriptives of profile membership

Multivariate analyses of variances with Tukey post hoc analyses were conducted to determine whether there were differences in boys' profile membership by their background characteristics, parent-child interactions, and attendance in center-based programs (see Table 3). Boys with the profiles of the highest academic achievers (Early Achiever: Declining Academically & Socially and Consistent Early Achiever) were more likely to have mothers with more than a high school degree and to live in families with higher incomes compared to the other patterns. The highest levels of parental cognitive stimulation were found in the Early Achiever and Consistent Achiever groups. Also, the Early Achiever: Declining Academically & Socially group had the highest levels of parent-child literacy activities and the highest rates of attendance at child care centers of the four groups, while the Consistent Early Achiever group had the lowest level of parental detachment. There were no differences in parental emotional support, intrusiveness, or negative regard.

3.5. Predictors of profile membership

Examining the predictors of profile membership provides information on how children's experiences may be associated with the likelihood of being in a particular transition pattern. Multinomial

logistic regression was conducted using indicators of children's home experiences and attendance in center-based programs, as well as background characteristics. The Increasing Academically pattern served as the reference group for the analyses as they were the biggest group and their scores were generally close to the average line on all indicators. Results are shown in Table 4. Odds ratios (ORs) are provided to indicate the probability of how one unit change in a predictor changes the likelihood of being in a particular group compared to being in a reference group. Based on Tukey post hoc analyses, additional information is provided for comparisons between other profile groups (e.g., Consistent Early Achiever vs. Low Achiever: Declining Academically).

Background characteristics of family income-to-needs ratio, maternal education, and attendance for center-based care were predictive of membership in some profile groups, but not others. The higher the income-to-needs ratio, the more likely boys were in the Consistent Early Achiever and Early Achiever: Declining Academically & Socially groups compared to the Increasing Academically ($OR = 1.33$ and 1.44 , respectively) and Low Achiever: Declining Academically ($OR = .76$ and $.71$, respectively) groups.

Maternal education was significantly associated with the likelihood of being in the Consistent Early Achiever ($OR = .43$) and Early Achiever: Declining Academically & Socially ($OR = .39$) groups compared to the Low Achiever: Declining Academically group.

Attending a child care center increased the likelihood that boys were in the Early Achiever: Declining Academically & Socially ($OR = 3.90$) and the Low Achiever: Declining Academically ($OR = 2.08$) groups compared to the Increasing Academically group. Additionally, attending a child care center increased the likelihood that boys were in the Consistent Early Achiever group compared to the Early Achiever: Declining Academically & Socially group ($OR = 2.66$).

Results from the logistic regression show that measures of the home environment were associated with profile membership. Parent-child literacy activities predicted membership in the Early Achiever: Declining Academically & Socially ($OR = 1.67$) compared to the Increasing Academically group, such that the more literacy activities parents engaged in with their son, the increased

Table 3
Final multivariate analyses of variance results examining differences between transition patterns.

Key variables	Total sample	Increasing Academically (51%)	Consistent Early Achiever (20%)	Low Achiever: Declining Academically (19%)	Early Achiever: Declining Academically & Socially (11%)	<i>F</i> / χ^2
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	
Income-to-needs	1.7 (1.75)	1.3 (1.22) ^{ab}	2.3 (2.12) ^c	1.3 (1.22) ^b	3.0 (2.77) ^d	20.81 ^{**}
% Mothers graduated HS	47%	40% ^{ab}	61% ^c	36% ^b	73% ^{dc}	42.86 ^{**}
% Attend center-based care	64%	56% ^{ad}	68% ^{dc}	70% ^c	85% ^c	26.41 ^{**}
Parent–child literacy	2.8 (0.67)	2.8 (0.67)	2.8 (0.60)	2.7 (0.70)	3.1 (0.69)	.00
Parent–child activities	3.0 (0.45)	3.0 (0.48) ^{acd}	3.2 (0.37) ^{bd}	3.0 (0.46) ^{cad}	3.1 (0.43) ^d	10.51 ^{**}
Parental emotional support	4.1 (0.95)	4.0 (0.95) ^{ab}	4.3 (0.90) ^c	4.1 (0.90) ^b	4.4 (1.0) ^{cb}	6.74 ^{**}
Parental cognitive stimulation	3.9 (0.95)	3.8 (0.91) ^{ab}	4.3 (0.91) ^c	3.8 (0.91) ^b	4.2 (1.09) ^c	11.09 ^{**}
Parental intrusiveness	1.8 (1.06)	1.9 (1.07)	1.7 (1.05)	1.9 (0.97)	1.8 (1.21)	1.26
Parental negative regard	1.4 (0.77)	1.5 (0.79)	1.3 (0.67)	1.5 (0.80)	1.3 (0.73)	1.64
Parental detachment	1.5 (0.85)	1.5 (0.89)	1.3 (0.57)	1.6 (0.93)	1.5 (0.89)	2.34
PK Expressive Language	.0 (1.00)	-.2 (.95) ^{ab}	.5 (.86) ^c	-.4 (1.02) ^b	.6 (.84) ^c	18.42 ^{**}
PK Reading	.0 (1.00)	-.5 (.47) ^{ab}	.5 (.72) ^c	-.5 (.55) ^b	1.9 (.85) ^d	72.65 ^{**}
PK Math	.0 (1.00)	-.4 (.66) ^{ab}	.7 (.68) ^c	-.5 (.72) ^b	1.5 (.79) ^d	88.67 ^{**}
PK Aggression	.0 (1.00)	-.001 (.79) ^{ab}	-.8 (.63) ^c	.9 (1.10) ^d	-.2 (.88) ^b	4.79 [*]
PK Interpersonal	.0 (1.00)	.02 (.79) ^{ab}	.8 (.89) ^c	-.9 (.95) ^d	.1 (.83) ^b	4.30 [*]
PK ATL	.0 (1.00)	-.03 (.72) ^{ab}	1.1 (.61) ^c	-.1 (.81) ^d	.3 (.80) ^b	11.79 ^{**}
PK Anxiety	.0 (1.00)	-.2 (.80)	-.6 (.70)	.9 (1.11)	.3 (.95)	.19
K Expressive language	.0 (1.00)	.03 (.88)	.4 (.68)	-.7 (1.30)	.4 (.65)	.07
K Reading	.0 (1.00)	-.1 (.76) ^a	.8 (.74) ^c	-.1.0 (.69) ^b	.9 (.84) ^c	10.87 ^{**}
K Math	.0 (1.00)	-.1 (.71) ^a	.8 (.68) ^c	-.1.1 (.83) ^b	1.0 (.65) ^c	9.92 ^{**}
K Interpersonal	.0 (1.00)	.1 (.75)	.9 (.67)	-.1.1 (.73)	-.2 (1.02)	1.69
K ATL	.0 (1.00)	.1 (.75) ^{ab}	1.1 (.53) ^c	-.1.1 (.69) ^d	-.1 (.95) ^b	5.73 [*]
K Aggression	.0 (1.00)	-.2 (.79)	-.8 (.62)	1.0 (.83)	.4 (1.00)	.02
K Anxiety	.0 (1.00)	.05 (.92) ^{abc}	-.6 (.83) ^d	.3 (1.03) ^{bc}	.4 (1.12) ^c	10.00 ^{**}

Note. *N* = 700. Unstandardized estimates are shown. Estimates with different superscripts are statistically different from each other. PK = preschool; K = kindergarten; ATL = approaches to learning.

** *p* < .01.

* *p* < .05.

likelihood that boys were in the early achiever group. Parent–child literacy activities was associated with the likelihood of being in the Early Achiever: Declining Academically & Socially group compared to the Consistent Early Achiever (*OR* = 2.35) and Low Achiever: Declining Academically (*OR* = 1.84) groups, indicating literacy activities was associated with being in a group that remained significantly above average in academics.

The degree of parent–child activities, such as playing games and talking about TV shows, was predictive of membership for the Consistent Early Achiever group compared to the Increasing Academically (*OR* = 2.72), Low Achiever: Declining Academically (*OR* = .39), and Early Achiever: Declining Academically & Socially (*OR* = .21) groups.

The quality of parent–child interactions was also predictive of profile membership. Parent emotional support was associated with the likelihood of being in the Low Achiever: Declining Academically

group (*OR* = 1.55) compared to the Consistent Early Achiever group.

The extent of cognitive stimulation parents provided in their interactions with their sons was predictive of group membership. Specifically, the more cognitive stimulation, the increased likelihood boys were in the Consistent Early Achiever group compared to the Increasing Academically (*OR* = 1.54) and the Low Achiever: Declining Academically (*OR* = 1.77) groups.

Parental detachment predicted membership in the Early Achiever: Declining Academically & Socially group compared to the Increasing Academically (*OR* = 1.65) and Consistent Early Achiever (*OR* = 1.94) groups, such that boys whose parents were observed as being detached were more likely to be in the group where boys showed a significant decrease in their academics and social competence (though they remained above average in academics) compared to those who were stable or increased in their academics.

Table 4
Logistic regression results (reference group = Increasing Academically).

	Consistent Early Achiever (20%)		Low Achiever: Declining Academically (19%)		Early Achiever: Declining Academically & Socially (11%)	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Intercept	-4.85 ^{**}	1.24	-2.27 [*]	1.09	-5.44	1.51
Income-to-needs ratio	.29 ^{**}	.08	.02	.11	.37 ^{**}	.09
Maternal education (1 = ≥high school)	.48	.26	-.37	.27	.57	.34
Attendance in center-based preschool	.38	.25	.73 ^{**}	.25	1.36 ^{**}	.38
Parent–child literacy	-.35	.21	-.10	.20	.51 [*]	.26
Parent–child activities	1.00 ^{**}	.33	.06	.30	-.57	.41
Parental emotional support	-.14	.17	.30	.17	.11	.21
Parental cognitive stimulation	.43 ^{**}	.16	-.14	.17	.34	.20
Parental intrusiveness	-.07	.14	-.01	.13	.001	.16
Parental negative regard	-.07	.20	.07	.18	-.26	.25
Parental detachment	-.16	.21	.12	.16	.50 ^{**}	.20

Note. *N* = 700. Unstandardized estimates are shown. Reference group = Increasing Academically.

** *p* < .01.

* *p* < .05.

There were no profile differences based on parental negative regard or intrusiveness.

4. Discussion

The aim of this study was to examine patterns that emerge for African American boys transitioning into kindergarten based on their language, academic, and social skills collected in preschool and kindergarten. The secondary aim was to examine the extent to which family socio-demographics, parenting, and attendance in a center-based preschool program was associated with the probability of membership in a particular subgroup. The four patterns that emerged were: (1) Increasing Academically, (2) Early Achiever: Declining Academically & Socially, (3) Low Achiever: Declining Academically, and (4) Consistent Early Achiever. Family income, parenting, and attendance in center-based care were significant predictors in boys' school transition patterns.

The integrative model of minority child development (García Coll et al., 1996) provides a framework for understanding the four patterns that emerged. Variability was found in boys' transition patterns with their social positioning and experiences associated with the likelihood of being in a particular transition pattern. Despite occupying a position in society that is often seen from a deficit perspective (Noguera, 2003) and characterized by reports of low achievement and social competence (Aud et al., 2010), African American boys differ in how successfully they transition from preschool to kindergarten, as evident from the four patterns that emerged. Given this diversity, it is likely that children are also experiencing differences in the extent to which their environments are promoting or inhibiting their development. Using this framework, we highlight the factors that may be operating to bring about the differences in transition patterns.

4.1. Transition patterns

The results indicate that many African American males are showing academic progress in their transition patterns from prekindergarten to kindergarten as indicated by the Increasing Academically group. Boys in this profile showed significant increases in their language, reading, and math, as well as stability and in some cases growth in their socio-emotional skills. However, the results from this study also suggest some boys experience challenges in their academics and social skills as they transition to kindergarten.

Over 10% of African American boys (Early Achiever: Declining Academically & Socially group) showed early achievement in their reading and math skills in prekindergarten; however, this academic prowess declined from prekindergarten to kindergarten, though they remained well above average. Though these boys' approaches to learning and anxiety remained stable from prekindergarten to kindergarten, there was a significant increase in their aggression and decrease in their interpersonal skills. Data from the U.S. Department of Education, Office of Civil Rights shows that though African American children make up approximately 17% of the K-12 classroom population, they represent only 6.6% of the gifted and talented programs (Gandara, 2005), suggesting that African American boys who may show early signs of high achievement may not be selected into these programs. Further, scholars (Ford, 1994; Fordham & Ogbu, 1986) find that African American youth, primarily males who are academically gifted begin to show a decline in their achievement. The decline in achievement may be connected with the decline seen in this group's social skills. This change in boys' behavior may be an indication of maladjustment in kindergarten due to lack of an engaging curriculum with national studies showing that African American boys were three times more likely to be suspended or expelled from school than their peers (Aud et al.,

2010; Tsoi-A-Fatt, 2010). The increase in aggressive behavior may also suggest that African American boys' behaviors may be viewed differently than White boys' behavior, resulting in more severe punishment for minor offenses (Noguera, 2003; Pigott & Cowen, 2000).

Another pattern that emerged was the group of boys who were above average in academics and remained above average during the transition from preschool to kindergarten – the Consistent Early Achiever. These boys represent one-fifth of the sample and were slightly above the mean academically in their transition to kindergarten. These boys also show a significant increase in their reading skills. They also showed stability in their behaviors. This indicates that there is a group of early achievers who are not having any maladjustment from preschool to kindergarten and based on their increase in reading are showing academic promise.

The final pattern – the Low Achiever: Declining Academically group – with approximately 19% of the sample, consisted of boys who remained low in their language skills, academic achievement, and interpersonal skills from prekindergarten to kindergarten, and in particular showed a significantly decline in their reading and math and improvement in their anxiety from preschool to kindergarten. Studies note that children with minimal pre-academic school readiness skills in preschool and kindergarten are at risk for school failure as these early skills and behaviors set the foundation for children's future learning and achievement (Duncan et al., 2007; McClelland, Morrison, & Holmes, 2000). This group of boys may warrant and benefit from targeted early intervention and attention during transition into kindergarten and beyond.

4.2. Predictors of transition patterns

Findings indicate that family SES, parenting and the home environment, and attendance in center-based programs were associated with the probability of being in a particular pattern. Socioeconomic status as denoted by family income-needs ratio and maternal education was predictive of boys' likelihood of being in the early achiever groups (Consistent Early Achiever and Early Achiever: Declining Academically & Socially), suggesting that higher SES families were provided stimulating activities and experiences that promoted boys' language and academic skills through school entry, resulting in above average scores in reading and math for both groups. This is consistent with prior research indicating the positive impact of family income and maternal education (Bradley & Corwyn, 2002; Mistry, Biesanz, Taylor, Burchinal, & Cox, 2004; Yeung, Linver, & Brooks-Gunn, 2002). The decline in academic and social behaviors for one of the patterns may be an indication of other factors influencing boys learning and behavior, such as parent detachment, which is discussed further below.

Parenting behaviors and interactions were associated with the likelihood of being in a particular group. Specifically, boys in homes where mothers engaged in frequent literacy-rich activities and other types of activities, such as playing games and taking the child on errands, and intentional teaching (i.e., cognitively stimulation) during interactions were likely to be in the high achieving groups compared to the low or average groups. This finding provides additional confirmation of the importance of literacy and language activities for young children's development (Sénéchal & LeFevre, 2002; Sénéchal, LeFevre, Thomas, & Daley, 1998), as well as providing stimulating and enriching interactions and activities inside and outside the home.

Surprisingly, parental detachment was associated with being in the higher achiever group (Early Achiever: Declining Academically & Socially) compared to the average group. As parent-child interaction is often viewed through a middle-class, Eurocentric lens, parental detachment may not have the same valence for African American children, specifically for boys as it may have for

White children. This is similar to literature that has shown parent intrusiveness to not have the same meaning across cultural groups, especially African Americans (Baldwin, Baldwin, & Cole, 1990; Pungello, Iruka, Dotterer, Mills-Koonce, & Reznick, 2009). Thus, there is need for additional studies using culturally relevant tools to examine how African American parents may respond and engage with their sons showing early achievement. However, it is important to note that this group of boys also showed significantly decline in their academics as well as increase in their aggression during the preschool to kindergarten transition. This increase in aggressive behavior (and decrease in academics) may be an indication of inattentive parents.

Attendance in center-based programs showed inconsistent patterns. Attendance in center-based programs was associated with the likelihood of being in transition patterns that showed a decline in academic and prosocial skills, such as interpersonal skills (Early Achiever: Declining Academically & Socially), but also a decrease in anxiety (Low Achiever: Declining Academically). This finding suggests that in some instances, attendance in center-based programs may promote boys' social skills, especially those with low academic skills, but it may also inhibit achievement and self-regulation for early achievers. These mixed findings are consistent with findings that have found attendance in center-based programs associated with better prosocial and learning-related behaviors (e.g., self-control) for some children (Melhuish et al., 2008; Vandell, Belsky, Burchinal, Steinberg, & Vandergrift, 2010), but poorer outcomes for other children (Belsky et al., 2007). However, many of these studies did not specifically examine African American boys. What remains unknown is how the quality of children's preschool or kindergarten classrooms may have played a role in their transition patterns. Given that the quality of classrooms was only collected for a subset of children, caution should be taken in generalizing these findings. Future research in this area may add to our understanding of how African American boys transition from preschool to kindergarten by examining how differences in classroom quality, in preschool and kindergarten, is associated with boys' transition experiences.

Therefore, socio-demographic factors, such as family income and maternal education, and enriching parenting and home environment which were found to be associated with higher achieving and stable patterns are aligned with Garcia Coll and colleagues' framework that social position and promoting environments are critical for minority children's optimal development, including successful school transition. Our lack of data regarding other inhibiting environments and interactions, namely schools and teachers, precludes us from examining how teacher–child relationship and expectations and stability and quality of the classroom environment may be associated with boys' likelihood of being in a particular transition profile, especially patterns where declines in academic and social skills were found.

4.3. Limitations

As is often common with secondary data, this study is limited by rudimentary measures, such as home-literacy practices. In addition, though a measure of the quality of the preschool out-of-home environment was collected, it was for a very small sample, which would have drastically reduced our sample. Further, there was no observation of the kindergarten classroom environment or assessment of the student–teacher relationship, with limited information about classroom and school characteristics. Future studies are needed that also examine how preschool and school processes may support or hinder African American boys' optimal school transition, such as providers'/teachers' relationship with boys and their parents, and transition activities between the preschool program and elementary schools. The analytical method used in this study only confirms the probability of being in a particular group and

no way indicates causality. Though there is great value in examining intragroup variability, comparative studies are also needed that can comprehensively examine how certain factors, such as teacher expectations, discrimination, classroom environment, and teaching approaches may be associated with probability of being in a particular transition pattern for diverse group of boys and girls. Longitudinal data are needed to determine whether the decline seen in boys' achievement and behavior is accurate or due to the overall increase in achievement for other boys.

4.4. Conclusion

This study shows the heterogeneity in African American boys' transition patterns from preschool through kindergarten. Though vast numbers of studies on African American boys portray them as homogeneous and deficient in their development and behavior during the early years, this study shows heterogeneity in their learning and school transitions. While, over 50% of African American boys in this study were either stable or showed marked improvements during their transition into kindergarten, there were almost 50% who showed challenges in their academic or social skills. Over 30% of boys showed early promise, meaning they were above average in their academics, but their achievement or behavior declined in kindergarten (though they remained above average), suggesting a need for academic and social support (i.e., Early Achiever: Declining Academically & Socially). This would require that families and teachers work together to minimize the downward slide of gifted African American males and/or males who are showing improvement in their learning. The “one-size-fits all” approach is likely not appropriate for all children, especially young African American boys (Rashid, 2009). In contrast, almost 20% of boys were struggling in their academics (Low Achiever: Declining Academically). These boys would likely benefit from targeted early intervention and attention during the early years to ensure they are not left behind. Though these boys had low academic scores during the preschool to kindergarten years, they were generally viewed by teachers as attentive and engaged. Thus, more attention can be paid to boys' prosocial and learning behaviors, which can further support their academic learning. This does not indicate that the boys in the other groups may not also require or benefit from targeted support for their academic and social skills as they traverse through school, considering the achievement gap and high dropout rate of African American males compared to their peers (Aud et al., 2010).

As found in previous studies of young children's development (Mistry, Benner, Biesanz, Clark, & Howes, 2010), the results from this study confirm the importance of responsive parenting that is enriching and cognitively stimulating. It also highlights the potential role of attendance in center-based programs for academic and social skills for specific group of children. Programs such as Head Start have found the largest impact for African American children (U.S. Department of Health and Human Services, 2010), which may be due to Head Start's focus on parenting processes and quality early care and education programming for children in the early years. Thus, family support and early education programs can have a benefit in supporting the early development and transition of African American boys, who are often at risk of special education placement, grade retention, school dropout, and incarceration (i.e., the cradle-to-prison pipeline).

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