UNIVERSITY OF CALIFORNIA,
IRVINE

The Family Socialization and Stage-Environment Fit of African-American Adolescents' Academic and Recreational Talent Development

DISSERTATION

submitted in partial satisfaction of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in Education

by

Nestor Tulagan, Jr.

Dissertation Committee Members:
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2020

DEDICATION

To

Mama Jojo, *Nanay* Umen, and *Nanay* Loling,

who've each instilled within me their individual ideas

of love, resilience, and strength.

My education is for us.

"If you're walking down the right path and you're willing to keep walking,

eventually you'll make progress."

Barack Obama

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My family has been a great source of encouragement and inspiration that helped me thrive in my doctoral studies and overall education. From as early as I can remember, my grandparents and my parents encouraged me to find the relevance of what I learn in school to everyday life and instilled in me the importance of knowledge and hard work, as well as the great opportunities a quality education may afford. My family is the inspiration and driver for my research. I stand today a learned *and* learning individual because of their guidance.

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RESEARCH FOCI AND KEYWORDS

Family socialization, parental involvement, achievement motivation, talent/skill development, risk minimization, racial-ethnic socialization and identity, socioemotional and character development, expectancy-value theory, stage-environment fit, family management, ethnic-minority populations, within-group heterogeneity

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Simpkins, S. D., **Tulagan, N.,** Lee, G., Ma, T., Vandell, D. L., & Zarrett, N. (*revise and resubmit*). Youth's developing work habits from middle childhood to early adolescence: Cascading effects for academic outcomes in adolescence and early adulthood. *Developmental Psychology.* Submission # DEV-2019-3006R1

Puente, K., Gülseven, Z., **Tulagan, N.**, Simpkins, S., Vandell, D., & Zarrett, N. (*in preparation).* Developmental trajectories of children's self-control and emotion regulation: Insights from mothers and teachers.

Tulagan, N. & Eccles, J.S. (*in preparation*). African-American mothers' socialization of adolescent talents: Which strategies matter, for which domain, and for whom?

Tulagan, N. & Eccles, J.S. (*in preparation*). Letting go when the kids are alright: African-American mothers' academic involvement and perceptions of adolescent talent.

Tulagan, N. & Eccles, J.S. (*in preparation*) Academic, racial-coping, and cultural socialization among African-American adolescents beyond the pre-encounter stage: Longitudinal links to academic achievement and racial-ethnic identity.

Tillman, K. A., **Tulagan, N.**, Fukuda, E., & Barner, D. (2018). The mental timeline is constructed gradually in childhood. *Developmental Science*, *21*, 1 – 12. https://doi.org/10.1111/desc.12679

PEER-REVIEWED PRESENTATION (ORGANIZED BY TOPIC)

Family Academic Socialization

Tulagan, N. & Eccles, J. S. (April, 2020). *Letting go when youths are alright: African-American mothers' academic involvement and perceptions of academic talent*. Paper accepted at the American Educational Research Association annual meeting, San Francisco, CA. https://www.aera20.net/ (Conference canceled)[1]

Tulagan, N. & Eccles, J. S. (March, 2020). *African-American mothers' socialization of adolescent talents: Which strategies matter, for which domains, and for whom?* Paper accepted at the Society for Research on Adolescence, San Diego CA. https://www.biennialmeeting.s-r-a.org/ (Conference canceled)[1]

Tulagan, N. & Eccles, J. S. (March, 2020). *Profiles of African-American mothers' academic socialization strategies: Associations with family contexts and adolescent gender.* Poster accepted at the Society for Research on Adolescence, San Diego CA. https://www.biennialmeeting.s-r-a.org/ (Conference canceled)[1]

Soto-Lara, S., **Tulagan, N.**, & Simpkins, S. (March, 2019). *Examining relations of Mexican-descent adolescents' science achievement on mothers' use of navigational capital.* Poster presented at the Society for Research on Child Development biennial meeting, Baltimore, MD.

Racial-Ethnic Discrimination and Identity / Multiple Socialization Processes

Tulagan, N. & Eccles, J. S. (December, 2020). *The roles of multiple socialization processes for African-American adolescents experiencing racial/ethnic discrimination.* Poster accepted at the Society for Research on Child Development Special Topic Meeting: Constructing the "Other", Rio Grande, PR.

Tulagan, N. & Eccles, J. S. (February, 2020). *Patterns of academic, cultural, and racial socialization among African-American adolescents: Links to positive parent-child*

relationship. Poster accepted at the Society for Personality and Social Psychology Pre-conference on Parenting and Family Dynamics, New Orleans, LA.

Tulagan, N. & Eccles, J. S. (April, 2018). *Development of Black adolescents' racial-ethnic identity: The interactive roles of early experiences of racial/ethnic discrimination and socialization.* Poster presented at the Society for Research on Adolescence (SRA) biennial meeting, Minneapolis, MN.

Family Management / Purposeful Talent and Risk Socialization

Tulagan, N. & Eccles, J. S. (August, 2019). *Contextualizing the purposeful nature of parental socialization within socio-demographically diverse African-American families.* Poster presented at the American Psychological Association annual convention, Chicago, IL.

Tulagan, N. & Eccles, J. S. (March, 2019). *Contextualizing parent socialization: Examining African-American parents' strategies for talent development and risk minimization.* Poster presented at the Society for Research on Child Development biennial meeting, Baltimore, MD.

Tulagan, N. & Eccles, J. S. (February, 2019). *Addressing adolescent-related academic expectations and risk concerns: Contextualizing African-American mothers' socializations strategies to developmental aims.* Poster presented at the Society for Personality and Social Psychology Pre-conference on Parenting and Family Dynamics, Portland, OR.

Tulagan, N. & Eccles, J. S. (April, 2018). *Parenting with Purpose: Influences of Promotion and Prevention Strategies on Black Adolescents' Developmental Outcomes.* Poster presented at the Society for Research on Adolescence biennial meeting, Minneapolis, MN.

Tulagan, N. & Eccles, J. S. (April, 2017). *Promoting academic expectations and preventing worries: Family management among African-American parents across socioeconomic and gender lines.* Paper presented at the American Educational Research Association annual meeting, San Antonio, TX.

Tulagan, N. & Eccles, J. S. (April, 2017). *Promoting goals and preventing worries: Family management among Black parents across gender and socioeconomic lines.* Poster presented at the Society for Research on Child Development biennial meeting, Austin, TX.

Socioemotional Learning / Character Development

Simpkins, S., **Tulagan, N.**, Lee, G., Ma, T-L., Zarrett, N., & Vandell, D. (March, 2020). *Changes in Youth's Work Habits and their Implications for Academic Outcomes in Adolescence and Young Adulthood*. Paper accepted at the Society for Research on Adolescence, San Diego CA. https://www.biennialmeeting.s-r-a.org/ (Conference canceled)[1]

Zarrett, N., **Tulagan, N.**, Liu, Y., Simpkins, S., Vandell, D. L., & Eccles, J. S. (October, 2019). *After School Programming and the Development of Work Habits: Dynamic Relations from Childhood through Early Adolescence*. Poster presented at SRCD Character Development Special Topic Conference, Philadelphia, PA.

Puente, K., **Tulagan, N.**, Simpkins, S. D., Vandell, D. L., & Zarrett, N. (March, 2019). *Developmental trajectories of youth emotion regulation and self-control: Insights from mothers and teachers.* Poster presented at the Society for Research on Child Development biennial meeting, Baltimore, MD.

Early Childhood Language Development

Sullivan, J., **Tulagan, N.**, Gruberg, N., Ferreira, V., & Barner, D. (May, 2015). *Preschoolers spontaneously track the structure of discourse.* Poster presented at the Association for Psychological Science 27th annual convention, New York City, NY.

Tillman, K. A., Cheung, P., **Tulagan, N.**, & Barner, D. (October, 2015). *Do some languages tell time better than others?: Acquisition of time words in English- and Chinese-speaking children.* Poster presented at the Cognitive Development Society annual meeting, Columbus, OH.

Tillman, K., **Tulagan, N.**, & Barner, D. (July, 2015). *Building the mental timeline: Spatial representation of time in preschoolers.* Paper presented at CogSci 2015: The Annual Meeting for the Cognitive Science Society, Pasadena, CA.

Sullivan, J., **Tulagan, N.**, Gruberg, N., Ferreira, V., & Barner, D. (March, 2015). *Preschoolers spontaneously encode discourse structure.* Poster presented at Society for Research in Children's Development biennial meeting, Philadelphia, PA.

TEACHING

Winter, 2020	**Guest Lecturer**, "Parental Academic Socialization and Stage-Environment Fit", lecture for *Adolescent Development in Education* (undergraduate course), University of California, Irvine, Professor Osman Umarji
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Summer, 2019	**Teaching Assistant,** *Learning and Childhood Development* (graduate course), University of California, Irvine, Professor Lindsey Richland
Summer, 2016	**Teaching Assistant,** *Advanced Theories of Cognition and Learning* (graduate course), University of California, Irvine, Professor Jessica Tunney
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RESEARCH FELLOWSHIPS

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2017-2018	Associated Graduate Students Travel Award ($400/year) University of California, Irvine
2015-2019	Provost Ph.D. Fellowship ($20,000) University of California, Irvine
2015-2019	Eugene Cota-Robles Diversity Fellowship ($70,000) University of California, Irvine

ACADEMIC & SERVICE AWARDS

2019	Equity and Diversity Graduate Student Award University of California, Irvine
2019	Associated Doctoral Students in Education Service Award University of California, Irvine

RESEARCH AFFILIATIONS

Motivation and Identity Research Lab (with Dr. Jacquelynne S. Eccles)
Maryland Development in Context Study

Project REACH Research Group (with Dr. Sandra Simpkins)
Templeton Foundation Grant on the National Institute for Child Health and Human Development's Study on Early Child Care and Youth Development

Language and Development Lab (with Dr. David Barner)

Center for Research on Cognition and Learning (with Dr. Michael Martinez)

SERVICE

Journal review (under advisement)	*Journal for Research on Adolescence*; *Journal of Youth and Adolescence*; *Journal of Applied Developmental Psychology* (advised by Sandra Simpkins)
Research workshops, symposia, and sessions	**Symposium Chair/Organizer**, *Content and Covariates of Mexican- and African-American Parental Involvement in Adolescents' Academic and Developmental Wellbeing*, paper symposium for the 2020 Society for Research on Adolescence Biennial Meeting (Conference canceled)[1]

	Director/Coordinator, Cross-Cohort Conversations (a Ph.D. Milestone workshop series; UCI School of Education)
	Organizer, 2017-2018 UCI School of Education Recruitment Weekend Poster Session
Invited Speaker	**Panelist**, NSF Graduate Research Fellowship Program Workshop - UCI Graduate Resource Center and UCI Graduate Division
	Speaker, *First-year Review and Research Milestone Information Session*, UC Irvine School of Education
	Speaker, *Core Theories of Academic Motivation*, collaborative lecture at Boys and Girls Club of Santa Ana, California
Mentorship	**Writing mentor**, UC Irvine Summer Research program and Competitive EDGE predoctoral program
	Graduate mentor, UCI DECADE Plus Mentorship Program for Chancellor's Excellence scholars
	Peer mentor, UCI School of Education DECADE mentorship program for first-year Ph.D. students
Graduate student councils	**Public Relations Co-chair**, 2017-2018 UC Irvine DECADE Executive Student Council

RESEARCH TOOLS

Structural equation modeling	Latent class/profile analyses, latent growth curve models, growth mixture modeling, latent measurement modeling (factor analysis, measurement invariance), latent structural modeling (latent variable SEM, random-intercept cross-lagged panel modeling)
Regression analyses	Sequential regression analyses, planned comparisons using orthogonal contrasts, fixed-effects models
Qualitative research	Participant observation, interviews, 1st- and 2nd round coding and theming protocols, intercoder reliability
Analytic packages	Mplus, Stata, R, SPSS, RopStat, Dedoose
Visualization	Adobe Illustrator, Adobe Photoshop, Inkscape, Microsoft Excel, Microsoft PowerPoint

[1] Due to COVID-19 pandemic.

ABSTRACT OF THE DISSERTATION

The Family Socialization and Stage-Environment Fit of African-American Adolescents' Academic and Recreational Talent Development

By

Nestor Tulagan, Jr.

Doctor of Philosophy in Education

University of California, Irvine, 2020

Distinguished Professor Jacquelynne S. Eccles, Chair

African-American families are powerful sources in supporting adolescents' developing academic and recreational talents. Such an endeavor can be tricky, however, as the nature of parent-child relationships shifts in adolescence. African-American parents face the task of helping their children develop talents and skills while also responding to adolescents' growing needs for autonomy, competence, and relatedness outside of the family. This dissertation integrated the family socialization model of Eccles' Expectancy-Value Theory and Eccles and Midgley's Stage-Environment Fit Theory to investigate the heterogeneity in African-American mothers' talent socialization behaviors and the extent to which the links between mothers' socialization strategies and adolescents' talent-related outcomes are contingent upon the individual developmental needs of adolescents. In Chapter 2, using exhaustive, open-response data, I examined the content of African-American mothers' socialization strategies for specific domain talents their adolescents possessed. I uncovered socialization strategies encompassing close parent-child interactions, use of resources, and regulation that mothers used to help adolescents develop academic and recreational talents. I also found gender and SES differences that highlight the ways in which these talents and strategies are driven by prevailing gender

stereotypes and economic constraints across families. In Chapter 3, using a pattern-centered approach, I examined patterns of African-American mothers' talent socialization within different talent domains. I found that most mothers engaged in only a few key socialization strategies frequently. Only a small proportion of mothers engaged in socialization strategies at uniform levels (i.e., high overall), challenging assumptions by studies using holistic, variable-centered approaches. I also found that moderate and specialized profiles were better or just as good at predicting higher achievement and engagement of talented adolescents. In Chapter 4, I examined African-American mothers' educational involvement behaviors and their differential links to adolescents' academic motivational beliefs and achievement based on adolescents' academic talent. Patterns of moderately low involvement and higher use of material provisions were linked to higher academic motivation and grades, especially among adolescents identified to be academically talented. In Chapter 5, I discuss the key implications of the dissertation for research, calling for future studies to probe a more complete set of African-American parental strategies, to attain more concrete, holistic ideas of family socialization within these households, and to deeply consider the developmental needs of adolescents when hypothesizing the degree and types of socialization that are most optimal for positive talent development.

Keywords: African-American families, family socialization, stage-environment fit, talent development, academic achievement

CHAPTER 1

INTRODUCTION

African-American families are an "absorbing, adaptive, and amazingly resilient mechanism for the socialization of its children" (Billingsley, 1968). Their organization is partly influenced by the cultural traditions of West Africa emphasizing communitarian values (Karenga & Karenga, 2007) and by adaptive reactions to societal marginalization throughout American history (Frazier, 1939). Children's successful development are at the center of African-American family functioning, and researchers have long been interested in the social-contextual factors underlying this development. Hence, decades of research have established that the socialization processes for youth development within these families are unique and multifaceted.

One overarching question drives this dissertation: How do African-American mothers help their adolescent children develop in talents like academics, sports, arts, and music? I sought to address this question using developmental frameworks that get at the heart of family and parenting processes informing adolescent motivation, choice, and achievement. First, a family socialization model from the Expectancy-Value Theory of Achievement Motivation (EEVT; Eccles et al., 1983; Eccles, 1993; Simpkins, Fredricks, & Eccles, 2015) posits straightforward pathways through which parents' child- and domain-specific beliefs inform their socialization strategies, which in turn predicts children's own domain-specific beliefs and behaviors. This explanatory model of family socialization provides the fundamental analytic framework underlying the present dissertation. Here, I charted the relations between the talents that African-American mothers perceive their children possess and the socialization strategies they use to help adolescents develop these talents, as well as the relations between these strategies and adolescents' talent-related outcomes.

Second, Stage-Environment Fit Theory (Eccles & Midgley, 1989; Eccles, Midgley et al., 1993) suggests under which conditions African-American mothers' family socialization may be optimally linked with adolescents' positive talent-related outcomes. Adolescence is a distinct developmental period when parents and their children face recurring renegotiations between parental control over children's lives and adolescents' needs for autonomy, competence, and relatedness (Eccles, Midgley et al., 1993). As such, parents are tasked with implementing the appropriate levels of socialization to help adolescence become independent, productive members of society in adulthood. These changing parent-child dynamics largely differ from earlier periods of childhood, wherein parents primarily drive and facilitate the everyday lives of young children. Hence, this balance between parental control and adolescent self-determination adds a layer of complexity to the family socialization of adolescent talent development. These theoretical considerations exemplify the complexity of family processes in adolescence, and the integration of these frameworks guided the primary hypotheses in this dissertation.

I also sought to address a few empirical issues involving family socialization processes within African-American families in this dissertation. First, research on these families has largely focused on youths' academic and psychological development, limiting what is known about how the family plays a role in adolescents' development in nonacademic domains such as sports, arts, and music. Further, most studies on African-American families have used socio-demographically limited samples of families and probed only a small set of parental beliefs and behaviors (e.g., Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999; Jarrett, Bahar, & Taylor 2011). These limitations likely obscure the diversity of family socialization and underestimate the many ways in which African-American families foster adolescents' talent development.

I addressed these limitations in my first study, in which I used exhaustive, open-response data gathered from a socio-demographically diverse sample of African-American mothers. I coded and themed mothers' perceptions of their adolescent children's talents and the socialization strategies they implemented to help adolescents improve in these talents. I also examined the extent to which mothers' talent beliefs and socialization strategies varied by adolescent gender and family socioeconomic status (SES). Finally, I examined the links between mothers' talent beliefs and socialization strategies. In doing so, I aimed to detail a more comprehensive, purposeful conceptualization of African-American family talent socialization.

Second, prior studies on family socialization and parental involvement have largely relied on variable-centered analyses using composite parenting scales that implicitly assume that uniformly higher scores across survey items are linearly linked to youth outcomes (Hill & Tyson, 2009; Jeynes, 2016). These approaches may obscure possible multiple pathways through which African-American parents' socialization strategies may shape youth talent development. In contrast, pattern-centered approaches identify typologies based on various configurations of responses across a heterogeneous set of indicators (Bergman et al., 2003). Such approaches allow for a more holistic and integrative understanding of the content of family socialization, as well as the multiple ways in which they may operate to shape youth functioning (Smalls, 2010; Varner et al., 2018). As such, I used pattern-centered approaches in my second and third studies in order to conceptualize African-American family socialization of adolescent talent as the varying patterns or combinations of mothers' socialization and involvement behaviors.

The general approach to research that I applied in this dissertation was also informed by a strengths-based research tradition that responded to a history of dehumanization of African-American families within the social science fields and American society at large. For interested

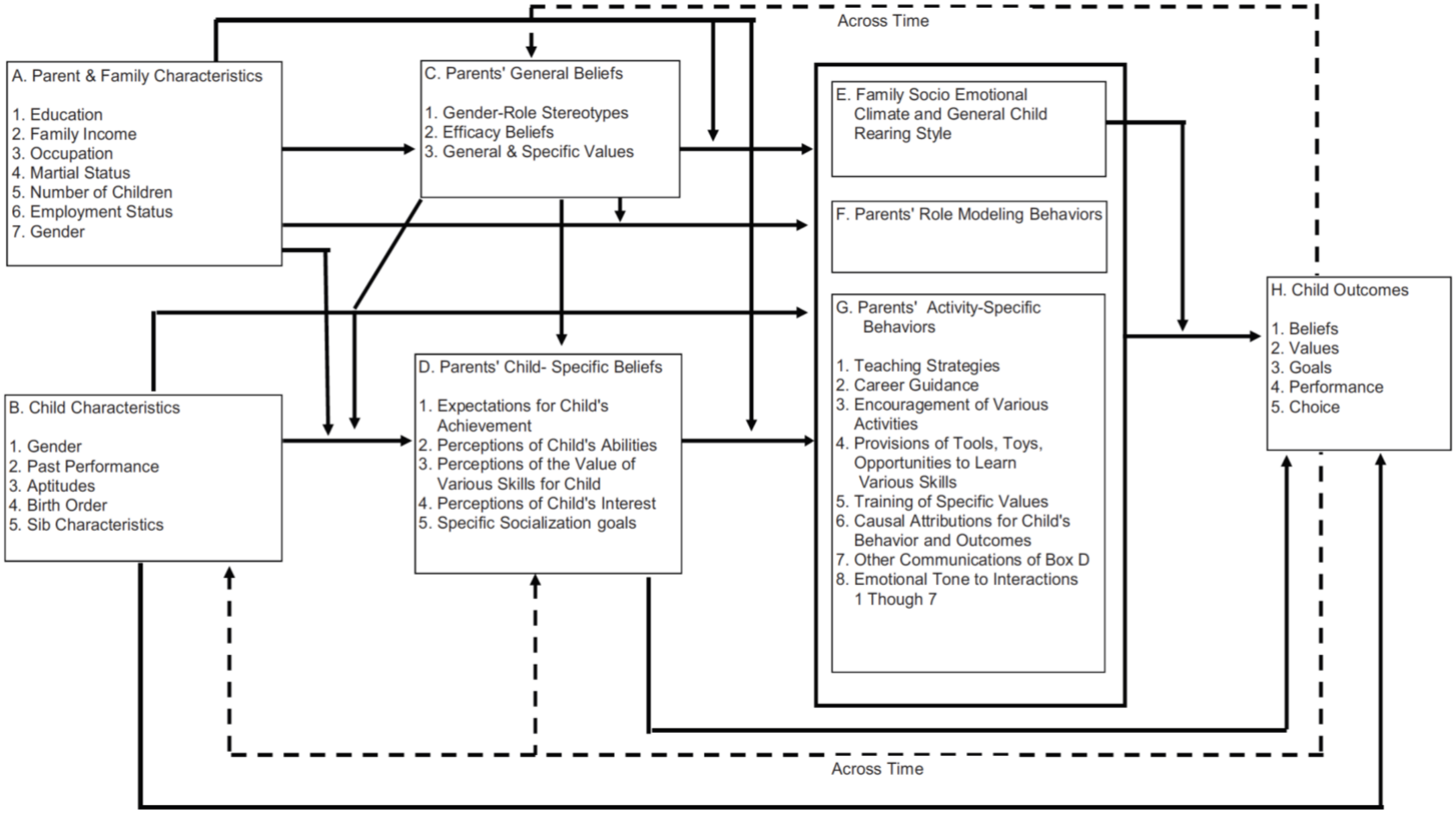
readers, I detail an important historical perspective on African-American families and social science research that contextualize this research approach in Appendix A. To this end, I endeavored to frame African-American families as purposeful, expert facilitators of their children's development and to examine the heterogeneity in their socialization processes. Ultimately, this dissertation aimed to detail a more comprehensive, nuanced, and empowering examination of African-American family socialization of adolescent talent development. To contextualize the conceptual underpinnings of this dissertation, however, I begin with a review of the theoretical frameworks informing this dissertation, followed by a discussion of the context and the general method of the dissertation.

Theoretical Frameworks

This dissertation was informed by an integration of theoretical frameworks that focus on important dimensions of family socialization processes within African-American families. I first elaborate on the family socialization model of the Eccles' Expectancy-Value Theory of Achievement Motivation (EEVT; Eccles [Parsons] et al., 1983; Eccles, 1993; see Figure 1.1) that focuses on the ways in which parents' adolescent-specific beliefs inform their domain-specific socialization behaviors, which in turn shape adolescents' skill and talent development. Then, I expand upon this socialization model by considering Eccles and Midgley's Stage-Environment Fit Theory (Eccles & Midgley, 1989; Eccles, Midgley et al., 1993). This perspective posits that positive youth outcomes are more likely when features of their social environment are responsive to their developmental needs at a given period. This stage-environment fit is particularly salient in adolescence where youths' social contexts change concurrently with biological and psychological changes that occur in puberty. I used these frameworks jointly to posit that

Figure 1.1.

Eccles' Family Socialization Model of Parents' Influence on Children's Achievement-related Beliefs and Behaviors



African-American mothers' socialization of their children's academic and nonacademic talents must differentially respond to adolescents' increasing needs for self-determination.

Expectancy-Value Theory of Achievement Motivation

EEVT posits that individuals' motivational beliefs directly inform and predict their achievement-related choices, performance, and persistence (Eccles [Parsons] et al., 1983). These beliefs consist of two core constructs that address two qualitatively separate but interrelated questions. The first is one's expectancy for success, which involves an individual's belief of one's ability to successfully complete a given activity and is generally gauged by the question, "Can I do this task?" (Eccles [Parsons] et al., 1983; Eccles, Wigfield, & Schiefele, 1998). The second belief is one's subjective task values, involving the perceived desire to engage in a task based on one's identity and interests, as well as the relative usefulness and cost of the task for one's future circumstance (Eccles [Parsons] et al., 1983). To gauge one's subjective task values, an individual may ask oneself, "Do I want to do this task and why?". Taken together, expectancies and task values constitute an individual's motivational systems and inform the extent to which an individual undertakes, engages, persists through, and ultimately achieves in a given domain (see Wigfield et al. [2015] for the most recent discussion on EEVT and its family socialization model).

Empirical evidence has shown that expectancy-value beliefs predict not only the choices children make in domains such as academics, athletics, and music/art (Simpkins et al., 2015; Simpkins, Davis-Kean, & Eccles, 2006) but also children's domain-specific performance (Meece, Wigfield, & Eccles, 1990) and college enrollment and majors (Eccles, Vida, & Barber, 2004; Musu-Gilette, Wigfield, Harring, & Eccles, 2015). Nevertheless, a general consensus among motivational and developmental theorists posits that these motivational beliefs do not just

develop in a vacuum; the social contexts and processes from which children's domain-specific beliefs and behaviors are borne must be considered as well (Bronfenbrenner, 1989; Eccles, 1993; Simpkins et al., 2015). Here, I focus on the role of parents.

Family Socialization Model

According to the family socialization model within EEVT, parents—as children's primary socializers—influence children's developmental outcomes (Eccles, 1993; Eccles [Parsons] et al., 1983). Specifically, parents' child-specific beliefs and expectations shape the strategies they employ to promote domain-specific development, which are in turn predictive of students' motivational beliefs and behaviors (see Figure 1.1; Eccles, 1993; Simpkins et al., 2015). Such a model is useful as it provides a strengths-based orientation that positions families as facilitators and experts of children's development. Specifically, it clearly describes the psychological processes through which parental beliefs translate to parental behaviors and have individual influences on adolescent beliefs, participation, and performance in specific domains. Longitudinal intervention studies have supported these pathways: a utility-value parent intervention on science, technology, engineering, and math (STEM) domains had indirect effects on high school students' STEM-related value and course-taking via parents' heightened STEM valuing and parent-child STEM conversations (Harackiewicz, Rozek, Hulleman, & Hyde, 2012).

Although EEVT's family socialization model is a comprehensive tool in explaining the family-level mechanisms underlying adolescents' development, previous research has typically focused on predominantly European-American populations (Eccles, 1993; Simpkins et al., 2015). However, recent work has extended to family processes within Latinx-American populations (e.g., Simpkins, Estrella, Gaskin, & Kloberdanz, 2018; Simpkins, Price, Garcia, 2015). Nevertheless, other research of family processes with African-American samples typically do not

delineate specific pathways from parents' beliefs to children's behaviors and are often limited to lower-SES communities, thereby limiting generalizability (Clark, 1983; Furstenberg et al., 1999). Hence, there is limited knowledge regarding the specific pathways from parental beliefs and strategies to adolescent's motivational, psychological, and behavioral functioning in diverse samples of African-American families.

As such, in this dissertation, I used EEVT's family socialization model to systematically chart the processes from African-American mothers' adolescent-specific talent beliefs to their socialization strategies, and from these strategies to adolescents' talent-related beliefs and behaviors. In Study 1, I examined the variety in mothers' talent-specific beliefs and socialization strategies, as well as the linkages between these beliefs and strategies. In turn, I examined the extent to which mothers' talent-related strategies predicted African-American adolescents' talent-related outcomes like performance, engagement, and motivational beliefs in Studies 2 and 3. Additionally, these investigations into the associations between African-American mothers' socialization strategies and adolescents' beliefs and behaviors were also informed by Stage-Environment Fit Theory.

Stage-Environment Fit Theory

Eccles & Midgley (1989; Eccles, Midgley et al., 1993) developed Stage-Environment Fit Theory to explain the socio-contextual factors underlying psychological and behavioral declines adolescents may experience as they transition from elementary to middle school. Drawing on Person-Environment Fit and Self-Determination theories (Deci & Ryan, 1985; Hunt, 1975), Stage-Environment Fit Theory hypothesizes that youths' positive development depends partly on the responsiveness of the social environment to adolescents' developmental needs. Adolescence is marked by recurrent shifts in youths' emotional, cognitive, and social needs and personal goals

alongside biological changes brought on by puberty. Adolescents increasingly desire to exercise their autonomy and competence over their lives and gain relatedness outside of the family unit in order to establish their place in the world (Deci & Ryan, 1985; Eccles & Midgley, 1989). Given these changes, adolescents' educational environments, like schools and the home, need to change in developmentally appropriate ways in order to successfully support youths' learning and mastery, psychological well-being, and positive behavioral choices.

Key to Stage-Environment Fit Theory's arguments is that the adolescent transition itself is not the root cause of adolescent maladjustment; instead, it is the mismatch between educational contexts and adolescents' developmental needs that plays a role (Eccles & Midgley, 1989; Eccles & Roeser, 2009). For example, Eccles & Midgley (1989) argued that the elementary-to-middle school transition involves an abrupt shift in the educational contexts that do not adequately respond to adolescents' developmental needs. Compared to elementary schools, middle schools tend to be larger in size, serve a larger student population, have more departmentalized instructional structure, and emphasize public student evaluations and between-classroom ability grouping (Eccles & Roeser, 2009; Simmons & Blyth, 1987).

These features can often lead to student-teacher interactions that a) depend on teacher control and discipline (vs. autonomy support), b) emphasize comparative grading and performance (vs. content mastery), and c) are less personal and warm (Anderman & Midgley, 1997; Barber & Olsen, 2004; Crosnoe, Johnson, & Elder, 2004; Eccles, Midgley et al., 1993; Madjar & Cohen-Malayev, 2016). Although not true of all middle schools, such an unforgiving academic landscape can create stage-environment mismatches that may explain why students' grades and motivational beliefs often decline in adolescence (Eccles & Roeser, 2009; Simmons & Blyth, 1987). Indeed, when teachers support their students' developmental needs, adolescents

have more positive school identification, higher mastery-oriented motivation, higher classroom engagement, and achievement (Jang, Reeve, & Deci, 2010; Holas & Huston, 2012; Ruzek, Hafen, Allen, Gregory, Mikami, & Pianta, 2016; Wang & Holcombe, 2010). Thus, the consideration for the fit between adolescents' needs and features in their environment makes Stage-Environment Fit Theory a particularly powerful lens to study family socialization and talent development in adolescence.

Stage-Environment Fit within the Family

Eccles, Midgley, and their colleagues (1993) expanded on Stage-Environment Fit Theory to elaborate on the ways parents and their children may experience frequent renegotiations of authority and position in adolescence. Parent-child relationships are naturally asymmetrical in childhood, with parents having primary control over their children's development (Lareau, 2011; Parke et al., 2003). In adolescence, however, youths begin to desire and exercise their own autonomy as they become more competent in navigating the world (Laursen & Collins, 2009; Smetana, Campione-Barr, & Daddis, 2004). Further, adolescents also initiate friendships with similar-aged peers at their own accord, relationships that are more symmetrical than and are less facilitated by parents (Brechwald & Prinstein, 2011; Laursen & Collins, 2009). Hence, adolescents increasingly assert themselves as independent, capable individuals whose worlds are expanding beyond just the family. At this developmental period, then, tensions between parents and their children are likely, as adolescents may begin to question the legitimacy of their parents' authority (Smetana et al., 2004).

To be responsive to these developmental changes, Eccles, Midgley, and their colleagues (1993) posited that parents must use an appropriate level of control over their children's lives in order to provide adolescents the opportunities to satisfy their developmental needs. Prior studies

focusing on stage-environment fit within the family have largely examined general parenting processes. For instance, Gutman, Eccles, and their colleagues (2007; Gutman, Eccles, Peck & Malanchuk, 2011) operationalized stage-environment fit as the extent to which parents provide decision-making opportunities for adolescents, as well as the level of parent-child conflict and positive identification that adolescents perceive. African- and European-American adolescents with higher levels of decision-making opportunities and positive parent-child identification had higher self-esteem and less depressive symptoms across early to late adolescence (Gutman & Eccles, 2007). Additionally, adolescents experiencing lower family conflict had lower depressive symptoms and delinquent behaviors and higher self-esteem than those with higher conflict (Gutman & Eccles, 2007). Furthermore, Wang, Dishion, Stormshak and Willett (2011) conceptualized stage-environment fit as the interactions between parental behavioral control strategies (i.e., rule-making and parental knowledge) and parental warmth. They found that parents' control strategies are more strongly predictive of lower antisocial behavior and substance use among youths as parental warmth increases. These findings align with conceptions of authoritative parenting, a style largely viewed as most optimal for children's development (Baumrind, 1989; Darling & Steinberg, 1993; Maccoby & Martin, 1983).

Beyond general parenting, little work exists that integrates Stage-Environment Fit Theory with specific dimensions of family involvement, such as family socialization of specific skill domains (Epstein, 1995; Eccles, 1993). In this dissertation, I used Stage-Environment Fit Theory to add a layer of complexity to the pathways posited by EEVT's family socialization model. Specifically, I posed that the hypothesis of a positive, linear association between parents' child- and domain-specific socialization behaviors and adolescents' motivational beliefs and behaviors may be less true in adolescence. As Stage-Environment Fit Theory suggests, high levels of

socialization may be perceived as over-controlling and undermine adolescents' need for self-determination, whereas low levels may be insufficient to effectively guide adolescence towards achievement (Eccles, Midgley, et al., 1993). Optimal modulation of parental control and adolescent self-determination may instead entail moderate levels of family socialization. As such, one of my primary hypotheses in Studies 2 and 3 was that when African-American mothers use moderate levels of socialization strategies, adolescents would have higher domain-specific outcomes, specifically when youths demonstrate talent in those domains. Ultimately, integrating a family socialization model and the Stage-Environment Fit Theory provides a developmental framework to hypothesize which socialization strategies are most optimal for adolescents.

Context of the Dissertation

The present dissertation used multi-wave, multi-reporter data collected from the Maryland Development in Context Study (MADICS), a large-scale, longitudinal project beginning in 1991 as part of the larger Study of Adolescents in Multiple Contexts (SAMC; Cook et al., 2002). Although the two longitudinal studies slightly differed in foci and methods, the collaborative data collection efforts between the two research projects led to a comprehensive set of information from adolescents and their families in Prince George's County, Maryland. Prince George's County is notable for its unique demographic characteristics. It was selected because the distributions of family income and parental education in the county were as similar as possible in the United States between the African- and European-American sub-populations, and both were normally distributed around a middle-class mean (Cook et al., 2002). In addition, at the beginning of the study, approximately 51% of the families in the county were African American. In the African-American sample in MADICS, the median household income was $41,265 compared to a median of $18,676 for African-American families and $46,822 for

European-American families nationwide in 1992 (U.S. Census Bureau, 1994).

Of the approximately 5,000 participants from one of the SAMC cohorts, 1,482 families also participated in MADICS, which included a sample of 879 total African-American families at the study's inception. Consisting of families with students attending 23 of the 25 schools in the county, the participants were identified and selected using a stratified, purposive sampling procedure designed to achieve a sample of families with a wider range of SES characteristics than prior studies (see Cook et al., 2002 for sampling details). As a result, the sample ranged from poor and working-class families living in urban neighborhoods to middle- and upper middle-class families living in moderately affluent suburban communities. Thus, the sample uniquely afforded the study of socio-demographic diversity within African-American families.

Procedures

Using school records, interviewers initially contacted families by telephone in Wave 1 to identify the target adolescents' primary caregiver. Specifically, interviewers asked the name of the person in the household who has the most responsibility for and knows most about the target adolescent. Mothers were almost exclusively identified as the primary caregiver, with few others being fathers, grandparents, and other relatives.

Data collection largely took place via in-home interviews in 7th and 11th grades. In each wave, mothers and target adolescents were interviewed face-to-face and filled out a self-administered questionnaire. Interviewers were recruited locally, were mostly women, and were ethnically/racially matched to participant families. The MADICS team conducted a three-day training workshop to ensure protocol compliance and were paid on a per-interview basis. For quality assurance and accuracy of the interviews, the MADICS team randomly contacted 15% of the families to verify participation in each interview and found no problems with procedures.

In each wave of data collection, parent-adolescent dyads completed the face-to-face interview and the self-administered questionnaire alternately. First, adolescents completed a self-administered booklet in a quiet and private place while the parental figure completed the face-to-face interview in a separate area. Then, the parental figure completed the self-administered questionnaire privately while the adolescent completed the face-to-face interview. In the face-to-face interview, interviewers presented response option cards to aid participants' responses when probing close-ended questions. Interviewers wrote down open-ended responses in words and short phrases. Interviewers adhered to strict protocols to follow question items verbatim and to avoid providing their own interpretation of the questions or responses. Each interview lasted for approximately one hour, and the self-administered survey lasted for approximately thirty minutes. Parents and adolescents each received $20 via mail in every wave of participation.

Participants

In the present dissertation, I used data collected during the beginning of adolescents' 7th grade year (Wave 1; 1991) and 11th grade (Wave 4; 1995) years. In each of the studies in this dissertation, I used varying subsamples of African-American parent-child dyads (i.e., mothers and target adolescents), depending upon the objective of and data availability in each study. In the inaugural wave, 879 African-American parents of adolescents entering their 7th grade year (M = 12.3 years, SD = .58; 47% female) participated in MADICS. The median number of years of parental education was 14 years, equating to an associate degree (M = 14.1 years; SD = 2.6), and the median family income was between $40,000 to $44,999 ($M$ = 9.5; SD = 4.3). About 58% of families were from two-parent households, compared to about 42% from one-parent households.

The parents who participated in MADICS were largely mothers (90%), with a smaller

percentage representing father figures (6%), grandparents (3%), and other extended relatives (1%). Among the mothers, about 97% were biological mothers and approximately 3% were either step-, adoptive, or foster mothers. Because of this imbalanced representation of parents in the data and prior studies finding differential links between parental socialization and youth outcomes across parents (e.g., McHale et al., 2006; Simpkins et al., 2015), I examined family talent socialization exclusively among mother-adolescent dyads (N = 786). In each of the studies hereafter, I describe the details of the specific sample and measures used and the plans for analyzing the substantive objectives of the dissertation.

CHAPTER 2

Study 1. Toward a Comprehensive Understanding of African-American Mothers' Talent Socialization: Linking Mothers' Talent Beliefs and Socialization Strategies

Current understanding of African-American parents as key socializers in adolescent development requires a recognition of the heterogeneity in their family socialization processes (Garcia-Coll et al., 1996; McLoyd, 1990). As African-American adolescents develop new skills and improve on existing talents, the ways in which parents support them can differ widely (Eccles, 1993; Hill & Tyson, 2009; Jeynes, 2016). The variation in the strategies that parents use to support adolescents' talent and skill development depend upon a confluence of individual and contextual factors, including parents' beliefs about their children and specific domains, the adolescents' gender, and the family's socioeconomic backgrounds (Eccles, 1993; Simpkins, Fredricks & Eccles, 2015).

Very few studies, however, have examined the comprehensive and varied ways in which African-American parents help their adolescent children develop in certain talent domains (Furstenberg et al., 1999). What talents do African-American parents, specifically mothers, believe their adolescent children possess? What socialization strategies do they implement to help adolescents become more skilled in these identified talents? To what extent do these talent beliefs and socialization strategies vary according to adolescent gender and family socioeconomic status? Finally, to what extent are specific socialization strategies mothers use uniquely linked to particular talents? I address these questions by examining family socialization of adolescent talents within socio-demographically diverse African-American mothers of 7th grade adolescents.

African-American Mothers' Beliefs of Adolescent Talents

According to the Eccles' Expectancy-Value Theory's family socialization model (EEVT; Eccles, 1993; Simpkins et al., 2015), the influence of parental beliefs involves conveying general and specific beliefs to children. General beliefs can encompass those regarding the value of achievement as well as stereotypes regarding sociodemographic characteristics like gender and social class (Eccles, 1993; Eccles [Parsons] et al., 1983). Parents' beliefs, however, can also be specific to the child and domains, and child-specific beliefs drive the strategies parents use to positively influence development (Eccles, 1993). Parents' specific beliefs about their children's competencies are conveyed both explicitly and implicitly via multiple mechanisms, such as causal attributions about children's success, expectations for children's performance, and the value of specific domains (Eccles, 1993). Of particular interests in the present study are parents' perceptions of youths' abilities. Specifically, I examined the ways in which parental figures identified specific talent domains their adolescent children possessed and reported specific socialization strategies to help adolescents develop these talents and skills.

What talents and skills may African-American mothers perceive their adolescent children possess? Arguably the most well-studied developmental domain is academics (Hill & Tyson, 2009; Jeynes, 2016). After all, adolescents spend a significant amount of their daily lives in educational endeavors by virtue of the compulsory nature of schooling in childhood and adolescence. As a result, youths are regularly immersed in academic skill development, and parents can frequently gauge such development via recurrent progress reports or contacts from school personnel. Furthermore, education plays an important role within African-American families. African-American parents view academic successes as important steps toward successes in adulthood (Clark, 1983; Corley, Reeves, & Odera, 2019; Hill & Wang, 2015; Shin, 2011) and as resources to help African-American youths empower themselves against and

overcome racial barriers in a predominantly European-American society (Billingsley, 1968; McAdoo, 1981; Tatum, 2004). In fact, African- and Latinx-American mothers show higher educational expectations and perceive more positive academic attitudes of their children than their European-American counterparts (Stevenson, Chen, & Uttal, 1990). Given this salience of education in African-American families, mothers may hence be particularly cognizant of whether their children possess academic talents.

Adolescents' talents and skills can also develop in nonacademic, recreational domains like sports, arts, and music. When youths participate in high quality organized activities in these domains, they experience high intrinsic motivation, flow, concentration, and positive affect (Csikszentmihalyi & Larson, 1984; Larson & Kleiber, 1993), which can reinforce skill development and continued engagement in these domains. Among African-American youths, recreational domains may take on a particularly significant meaning due to exposures to socializing agents that promote these domains. For example, many African-American youth may see nonacademic domains as avenues for successes in adulthood given the obstacles they encounter in their schooling (Ogbu, 1980). These perceptions can be reinforced by social figures and media messages emphasizing the value of sports, arts, and music (Beamon & Bell, 2006; Ogbu, 1980). Parents, in particular, convey messages of the salience of sports and music to young children and adolescents, along with socialization messages about academics (Beamon and Bell, 2006; Simpkins et al., 2015). As such, along with academics, parents may identify nonacademic, recreational talents as particularly important domains for socialization as well.

African-American Mothers' Socialization Strategies

What behaviors do African-American mothers engage in to support adolescents' talent development? Generally, parents engage in a variety of behaviors to manage their children's

daily lives (Brooks-Gunn & Markman, 2005; Burton & Jarrett, 2000; Eccles et al., 1983, Eccles, 1993; Furstenberg et al., 1999; Gutman & McLoyd, 2000; Jarrett, 1998; Manns, 2007; Simpkins et al., 2015). These include parent-adolescent discussions that encourage engagement in valued activities (Furstenberg et al., 1999; Gutman & McLoyd, 2000). Parents also instill educational values and aspirations (Burton & Jarrett, 2000; Furstenberg et al., 1999; Hill & Tyson, 2009; Manns, 2007) and link academic successes to an African-American identity via positive discussions (e.g. racial/ethnic socialization; Cooper & McLoyd, 2011; Hughes & Chen, 1997; Hughes & Johnson, 2001; Tang, McLoyd, & Hallman, 2016). Further, parents can go beyond discussions and directly work and be co-active with adolescents in activities that reinforce learning and skill development (Burton & Jarrett, 2000; Furstenberg et al., 1999; Hill & Tyson, 2009; Hill et al., 2018; Wang, Hill, & Hofkens, 2014).

Along with these close parent-child interactions is the use of various resources that help promote positive development (Eccles, 1993; Furstenberg et al., 1999; Simpkins et al., 2015). One use of African-American parents' resources involves provisions of opportunities for youths' involvement in extracurricular activities (e.g. sports, performance arts, and religious activities; Francois, Overstreet, & Cunningham, 2013; Furstenberg et al., 1999; Gutman & McLoyd, 2000; Jarrett, 1995; Lareau, 2011; Manns, 2007). Parents may also provide youths with materials and external services to scaffold learning (e.g. study books and tutoring; Assari, Mistry, Caldwell, & Zimmerman, 2018; Simpkins et al., 2015). Moreover, kin and friendship networks are salient in African-American families, as parents' social and community networks may provide material, financial, and emotional supports in socializing youths (Brody et al., 2001; Burton & Jarrett, 2000; Ceballo & McLoyd, 1990; Jarrett, 1995; Jarrett, Bahar, & Taylor, 2011; McAdoo, 1981, 1982; Spencer, 1990).

Lastly, African-American parents' monitoring and regulatory strategies play a large role in daily family life, especially for youths living in high-risk neighborhoods (Burton & Jarrett, 2000; Furstenberg et al., 1999; Gutman, Friedel, & Hitt, 2003; Jarrett & Jefferson, 2003; O'Donnell, Richards, Pearce, & Romero, 2012). Along with kin networks assisting in monitoring adolescents outside of the home (Brody et al., 2001; Gonzalez, Jones, & Parent, 2014; Jarrett et al., 2011), African-American parents regulate the activities of youths both inside and outside of the home as well (Lowe & Dotterer, 2013; O'Donnell et al., 2012; Richmond & Pittman, 2016; Varner & Mandara, 2013; Wang, Hill, & Hofkens, 2014). Lastly, African-American parents also use restrictive and disciplinary strategies, such as establishing physical and symbolic boundaries and using punishment to regulate youth's experiences (Jarrett et al., 2011; Gutman et al., 2003; Richmond & Pittman, 2016; Smetana & Chuang, 2001; Tamis-LeMonda et al., 2008).

However, prior studies have typically focused on only a small number of African-American parents' socialization strategies, leaving gaps in our knowledge of the comprehensive ways parents are promoting adolescents' talent development at a given period (e.g., Cleveland, Turrisi, Gibbons, Gerrard, & Marzell, 2018; Gutman & McLoyd, 2000; Hill et al., 2018; Mandara et al., 2010; Jarrett et al., 2011). Guided by EEVT's family socialization model, research focusing on a wide range of socialization strategies for talent development have predominantly examined European-American families with younger children (e.g., Simpkins et al., 2015). Hence, the variety of parenting strategies that are salient specifically within African-American families is an important empirical question to explore. Hence, the first aim of this study is to comprehensively capture African-American mothers' adolescent-specific talent beliefs and socialization strategies to help their children's talent development.

Diversity in African-American Mothers' Beliefs and Strategies

Another limitation in existing studies is that few studies account for the socio-demographic diversity across African-American families, typically focusing on specific segments of African-American populations at a time (e.g., Furstenberg et al., 1999; Gutman et al., 2003; Jarrett & Jefferson, 2003; Jarrett et al., 2011). In this study, I focused on two specific socio-demographic characteristics—adolescent gender and family SES—that inform parents' child-specific and talent-related beliefs and their socialization strategies in turn (Eccles, 1993; Simpkins et al., 2015).

Adolescent Gender

According to EEVT, persistent gender stereotypes and norms can shape the extent to which individuals view different domains as male- and/or female-oriented (Eccles et al., 1983). As such, there is evidence to expect that African-American families' socialization processes may vary according to adolescents' gender. With regards to parental perceptions' youth talents, separate studies on African- and European-American families have found that parents perceive higher academic skills and educational expectations for daughters than for sons (Eccles, 1993; Simpkins et al., 2015; Varner & Mandara, 2014). African-American parents' (and teachers') expectations for youths' academic achievement have been found to fully mediate the relation between youths' gender and own expectations (Wood, Kaplan, & McLoyd, 2007). These differential perceptions can be expected as academics tend to be a female-stereotyped domain, and African-American girls are more likely to fare better in academics than boys (Gutman et al., 2002; Wang et al., 2014).

Gender differences may also be apparent in parental perceptions of youths' athletic talents. Prior studies have found African-American boys perceive a large emphasis from their parents, as well as from the larger community, on their athletic development than other talents

and skills (Beamon, 2010; Harris, 1994). Such socialization also extends in the larger cultural milieu, with sports being perceived as a male-stereotyped domain and the prevalence of media images of African-American male athletes serving as salient role models for boys, amongst others (Harris, 1994). As such, African-American adolescent boys are more likely to endorse life goals involving sports than girls (Honora, 2002; Hubbard, 1999).

Similar gendered patterns are also observed among young children's after-school activities, specifically with African-American boys participating more in organized athletics and girls participating more in academic and other extracurricular activities (Posner & Vandell, 1999). Insofar as African-American parents are aware of these differential beliefs and behaviors, one could hypothesize that they would more likely perceive sports talents for boys than for girls. Less is known regarding possible gender differences in parental perceptions of artistic or musical for African-American adolescents. However, prior family socialization studies have found that parents perceive girls as having more musical talents than boys (Simpkins et al., 2015). Such a finding's generalizability to African-American families remains an empirical question.

Scholars on African-American families have posed differential child-rearing socialization patterns for sons and daughters, with some espousing a common adage in African-American communities that "mothers love their sons and raise their daughters" (Mandara, Varner, & Richman, 2010; McLoyd, 1990). Indeed, prior studies have found gender differences in specific parenting practices. For example, African-American sons—specifically younger siblings—experience less maternal demandingness and responsibility than older and younger daughters (Mandara et al., 2010). Boys' parents also engage in more home-based involvement (i.e., homework help) and communications with school personnel than girls' parents (Bhargava & Witherspoon, 2015). Further, African-American daughters experience more monitoring than sons

(Cunningham & Swanson, 2010; Smetana & Daddis, 2002; Varner & Mandara, 2014), whereas sons experience more support and validation than daughters during interactions with both parents (Mandara et al., 2010; Smetana, Abernethy, & Harris, 2000). Middle-school girls' parents also volunteer in school activities more often than boys' parents (Bhargava & Witherspoon, 2015).

However, some studies have found that African-American boys overall are disciplined more harshly than girls (Cogburn, Chavous, & Griffin, 2011). Additionally, other studies have found no gender differences in initial levels and growth of parental strategies such as discussions, scaffolding independence, and providing structure in academics and sports (Bhargava & Witherspoon, 2015; Shakib & Veliz, 2012; Wang et al., 2014). Furthermore, we know little about the extent to which gender differences exist in other African-American parental strategies—such as provision, teaching, and use of social resources. Hence, the extent to which gendered socialization processes exist within African-American families may be true only for some parenting behaviors.

Family SES

There is also substantial evidence to hypothesize that family SES may play a role in divergent socialization processes within African-American families. Prior works have found that having higher SES (measured by family income, parental education, and occupational status; Davis-Kean, 2005; Hill & Sprague, 1999; McLoyd, 1990), as well as being in two-parent households (a construct correlated with SES; Gutman & Eccles, 1999), positively predict parents' perceptions of youths' academic abilities. Larger scale studies among low-income European- and African-American families point to a variety of talents and skills that parents perceive their children possess, including sports, music, and arts (Furstenberg et al., 1999). However, findings from ethnographic work on middle-class parents' provision of structured

extracurricular activities across various domains, such as sports and music, suggest that they value and perceive youths' talents in these domains as well (Lareau, 2011). As such, SES differences may not be found with regards to parental perceptions of nonacademic talents.

Additionally, there is evidence that SES differences exists in African-American parents' specific socialization strategies. For example, in her seminal qualitative study of cultural capital transmission within poor, working-class, and middle-class European- and African-American families, Lareau's (2011) examined social class differences in family processes. On one hand, she found that middle-class families provided youths with structured extracurricular activities that helped them develop in talents, such as sports and music, deemed important by the family (Lareau, 2011). These provisions along with strategies, like the use of reasoning and supports for autonomy in children's interactions with institutions, constitute a distinct child-rearing repertoire of *concerted cultivation*. On the other hand, she found that poor and working-class families structure youths' lives open-endedly, favoring unstructured play and activities among family members. Along with strategies such as the use of directives and modeling a sense of constraint and deference to institutional actors, Lareau (2011) identified a parenting repertoire of *natural growth* among poor and working-class families. Other studies have lent support to these rather sharp class distinctions. Quantitative studies with African-American families have found positive links between family SES and patterns of high-quality practices, such as child-centered parenting, school involvement, positive communication, and provisions of experiences (Bluestone & Tamis-LeMonda, 1999; Elder, Eccles, Ardelt, & Lord, 1995; Fredricks & Eccles, 2006; Smetana, Crean, & Daddis, 2002; Kohl, Lengua, & McMahon, 2000; Weininger, Lareau, & Conley, 2015).

Challenging these social class differences, other studies have found that low-SES families

also allow or facilitate their youths' participation in a variety of organized activities—both as a way to help youths develop skills and to protect them from dangers (Burton & Jarett, 2000; Furstenberg et al., 1999; Jarrett et al., 2011). In fact, Furstenberg et al. (1999) found that at least 60% of the low-SES adolescents in their sample participated in organized activities, though the quality of such activities was not clear. Among low-SES families, parents also largely use teaching and discussions as primary strategies for the promotion of talent development and for discipline (Bradley, 1998; Furstenberg et al., 1999). As such, there seem to be inconsistent findings regarding SES differences in African-American parents' socialization strategies.

Overall, extant literature has separately found gender and SES differences in a number of African-American parents' beliefs and socialization strategies. However, prior studies have either used mixed samples of European- and African-American families or largely low-SES samples of African-American families, which may have contributed to mixed findings. Such samples have often led researchers to ignore or obscure the heterogeneous socialization processes in African-American populations. Hence, this study's second aim was to examine the extent to which adolescent gender and family SES predict African-American mothers' talent beliefs and their socialization strategies.

Links between Mothers' Talent Beliefs and Socialization Strategies

Few quantitative studies have also examined the links between parents' adolescent-specific perceptions and socialization behaviors (e.g., Jodl et al., 2001; Simpkins et al., 2012, 2015). In perhaps the most comprehensive study on family socialization across multiple talent domains, Simpkins et al. (2015) found that the hypothesized associations from European-American parents' child-and domain-specific beliefs and socialization behaviors were mixed, showing positive associations only within the sports domain. To explain the mixed findings, the

researchers posited that "parents might respond to an assessment of their children's low ability with increased efforts to help remediate a perceived deficit in a very important skill domain" (Simpkins et al., 2015, p. 95). Therefore, higher and lower perceptions of children's abilities may both lead to higher frequencies of socialization behaviors, suggesting that the association between parents' domain-specific beliefs and behaviors may not be linear.

Such an explanation also suggests that parents have divergent rationales for their behaviors, namely, either to promote continued competence development or to prevent possible under-performance of youths. In their Family Management Study, Furstenberg and his colleagues (1999) explicitly conceptualized socialization behaviors along dimensions of skill development and risk minimization. Although this dissertation focuses only on adolescent talent development, such conceptualization has methodological utility in that it couches parental behaviors to specific rationales for their use, a consideration that is often underdeveloped in other quantitative studies. Prior quantitative studies often only probe the *frequency*, *content*, and *object* of parental socialization behaviors. That is, studies typically examine how often in a given time span (i.e., *frequency*) parents engage in a specific behavior (i.e., *content*) for a specific domain (i.e., *object*). According to a family management perspective, however, a crucial piece to consider is the *function* of, or rationale behind, socialization strategies. However, such a consideration is often missed in existing studies.

Couching parents' strategies to specific aims is useful as it may better reduce measurement error by providing a more contextualized measure to examine associations between socializations strategies and other constructs. For example, parents may differ in the socialization strategies they use when adolescents demonstrate competence in a talent domain and when adolescents have not yet done so. Furthermore, the links between socialization strategies and

adolescent domain-specific development may vary across adolescents who demonstrate domain talents and those who do not. As such, specifying the purpose and rationale behind strategies (i.e., promoting ongoing talents in a specific domain) may better ensure that associations between two constructs are closely correspondent.

Furthermore, it is an empirical question whether African-American parents vary in the strategies they implement to help adolescents develop in specific talent domains. In their Philadelphia Family Management study, for example, Furstenberg and his colleagues (1999) comprehensively described urban, low-income parents' management strategies as a response to specific aims to improve youths' positive talents and skills, as well as negative challenges and risks. However, they did not formally examine the associations between parents' beliefs of adolescents' talents and risks and parents' strategies to address each of them. Such a limitation is also true of other quantitative studies examining parental behaviors and parents' specific beliefs (Bradley, 1998; Gutman et al., 2003). For example, although Gutman and her colleagues (2003) examined parents' strategies to prevent their adolescent-related worries, they did not examine the types of challenges to which parents are responding.

Studies that do well in examining parents' strategies as responses to specific aims have largely come from rich qualitative research focused on adolescents' exposure to negative experiences(e.g., neighborhood danger), not talent socialization. These studies are also few, focus on low-SES families, and lack the generalizability to a larger population of African-American families (Jarrett & Jefferson, 2003; McAdoo, 1981, 1982). Furstenberg and his colleagues' (1999) study likewise focused on low-SES families living in urban sectors of Philadelphia, making it unclear whether their findings are generalizable across socioeconomic lines. Hence, the extent to which African-American mothers implement specific strategies in

order help youths develop in specific talent domains is still unclear.

Furthermore, owing much to the limitations in prior studies to couch parenting strategies to specific aims, we know little about the ways in which parents may address different talent domains variably across socio-demographic characteristics like adolescent gender and family SES. Some studies have found gender and SES differences in parent-child discussions and specific developmental issues, namely youths' sexuality (DiIorio, Pluhar, & Belcher, 2003; Nolin & Petersen, 1992). Still, the research base has a limited understanding of the ways in which adolescent gender and family SES interact with parents' talent beliefs to predict other socialization strategies. As such, the final aim of this study is to examine the links between mothers' adolescent-related talent beliefs and their socialization strategies aimed to help adolescents improve upon these talents. I also exploratorily studied the extent to which adolescent gender and family SES moderate these relations.

The Current Study

In this study, I addressed three goals. To extend understanding of African-American family socialization from studies using socio-demographically limited samples, my first aim was to describe the talent beliefs and socialization strategies of socio-demographically diverse African-American mothers. I predicted that mothers' reports of adolescent talents would primarily involve skills relating to academics, sports, arts, and music. Further, I predicted that mothers' reports of specific socialization strategies would broadly involve close, one-to-one interactions, provisions of opportunities, and regulatory strategies. One-to-one interactions might involve encouragement and praise, deep discussions, coactivity/working with adolescents, and direct instruction. Provisions of opportunities might involve the use of economic resources to provide youth with necessary materials, professional interventions, and experiences beyond the

family. It could also involve parents' use of the social and community figures, spanning school personnel, community figures, and extended families and friends. Finally, regulatory strategies might involve monitoring strategies, structure and rule regulation, as well as more restrictive and punitive strategies such as creating symbolic and physical boundaries for their children, keeping children away from certain activities or contexts, verbal reprimands, and threats of punishment.

My second aim was to examine the extent to which socio-demographically diverse African-American mothers' talent perceptions and socialization strategies varied across adolescent gender and family SES. I expected that mothers' reports of adolescent talents would vary by gender, such that reports of athletic talents would be higher among mothers of boys than those of girls while reports of academic, musical, and artistic talents would be higher among mothers of girls than those of boys. However, I expected that only a few SES variations would be found with regards to adolescent talents, specifically a positive relation between family SES and reports of academic talent.

With regards to African-American mothers' talent socialization strategies, I predicted few variations across gender. I predicted that mothers of boys would generally use more praise and discussions than those of girls, whereas I predicted the reverse would be true when it comes to monitoring and regulatory strategies. I had no predictions regarding SES variations in parents' socialization strategies, given that some strategies found to be indicative of the middle-class, such as encouragement, discussions, provision of activities (Lareau, 2011), may also be common among low-SES families (Bradley, 1998; Furstenberg et al., 1999).

Finally, the third goal of the present dissertation was to examine the associations between African-American mothers' adolescent- and talent-related beliefs and the socialization strategies they implement in response. Given that limited studies examine the ways in which specific

strategies are tied to specific aims for talent development, I tested these associations exploratorily. Further, the extent to which relations between mothers' talent beliefs and socialization strategies in response are also largely unexplored. Hence, I also examined the moderating roles of adolescent gender and family SES in these associations.

Method

Participants

The participants in this study were part of the first wave of MADICS during adolescents' 7th grade year (M_{age} = 12.27 years; SD = 0.54). Of the 879 African American families in the original MADICS sample, I excluded 188 (21%) families due to one of the following causes: a) the parental figure was not a mother, b) the mother did not report their child as having talents; and c) the mother did not report a specific socialization strategy. Hence, a total of 691 African-American mothers comprised the analytic sample for this study. Approximately 47% of adolescents in this analytic sample identified as girls and about 53% identified as boys. On average, mothers' educational level was an associate degree but ranged from less than a high school diploma to advanced degrees. Further, families' family income averaged between $40,000 to $45,000, and families' occupational status averaged semi-professional or skilled work, but ranged from unskilled workers to professions requiring advanced degrees. Additionally, approximately 61% of families are in two-parent households whereas about 39% were in one-parent households. Comparatively, the analytic sample had higher parental education (t [877] = 2.85, $p < 0.01$; Cohen's $d = 0.23$) annual family income (t [810] = 2.97, $p < 0.01$; Cohen's d = 0.25) and occupational status (t [877] = 2.03, $p < 0.05$; Cohen's $d = 0.17$) than the attrition sample. Further, the analytic sample was more likely to come from two-parent households than

the attrition sample, χ_2 (1) = 14.45, $p < 0.001$, Cramér's $V = 0.13$. No gender differences were found between the analytic and attrition samples, χ_2 (1) = 0.60, $p < 0.439$, Cramér's $V = 0.03$.

Measures

To attain information on African-American mothers' talent beliefs and strategies, I used open-response data from parent interviews to gain a fuller description of these constructs. Open-response data can provide more exhaustive reports of African-American parents' beliefs and strategies, especially via the use of probing techniques. They can also better ensure that responses are not constrained by limited answer choices in close-ended questionnaires, as responses are self-generated.

Mothers' Talent Beliefs

In 7th grade, mothers were asked whether they perceived the target adolescent as possessing any talents: *"Does (CHILD) have any special talents, skills, or interests such as music, reading, arts, athletics, drama, schoolwork, or some other ability?".* In these responses, almost all mothers answered *Yes* to this question (96%). Then, they were asked what these talents are: *"What are these talents or interests?"*. Participants were probed for responses until they gave no additional responses. The number of distinct responses ranged from a minimum of one to a maximum of four responses. Approximately 35% (n = 244) of the mothers reported only one distinct talent, and another 58% (n = 402) reported two talents.

Mother's Talent Socialization Strategies

This question was followed with, *"What have you done to help (CHILD) get better at these talents?"*, to probe what strategies parents have used for adolescents' talent development. Like mothers' reports of adolescent talents, participants were probed for responses until they gave no additional responses. The number of distinct responses ranged from a minimum of one

to a maximum of six responses. Approximately 40% (n = 276) of the mother reported only one distinct strategy, and another 47% (n = 324) reported two distinct strategies.

Socio-demographic Indicators

In 7th grade, adolescents reported on whether they identified as female or male. At this time, parents also reported on the highest level of education they had attained. Values ranged from 1-12 for grade school years; thereafter, values were based on the normative years of degree completion (e.g. 16 = BA/BS, 21 = Ph.D./MD/JD). Parents also reported on their family's annual income with values presented in increments of $5,000 (e.g., $40,000-$44,999). Further, parents reported on the occupations of each caregiver in their households, which were then scored based on occupational status using Nam and Powers (1983) occupational prestige scoring system. The highest score in each household was used as the sole indicator of occupational status for each family. Finally, parents reported on whether they were in a one-parent (never married, separated, or divorced) or a two-parent (married, remarried, cohabitating) household.

Analysis Plan

Coding Procedures

At the time of data collection, interviewers recorded responses in short phrases, which were then coded during initial data entry by trained graduate and undergraduate students using process and *in-vivo* coding (Saldaña, 2009). As a result, there was a substantial number of initial, first-round codes (range = 10 to 50 codes) in each of the response sets. Subsequent coding procedures to aggregate the first-round codes into more general categories were conducted by three researchers: the first author and two independent, doctoral-level researchers who were trained in the coding protocol and the constructs under investigation.

First, each coder classified first-round codes into tentative subcategories using pattern

coding within each response set (Saldaña, 2009). Coding decisions were made based on thematic similarities between codes. Then, coders each used a combination of inductive and deductive approaches—guided both by the frequencies of specific responses in the data and prior literature to establish categories for grade expectations, perceptions of negative experiences, and the two sets of strategies. Inductively, we first identified and grouped the five most frequently reported subcategories in each response set based on underlying themes.

We complemented our coding with a deductive approach, basing some classifications on prior findings from the original family management study (Furstenberg et al., 1999) and other frameworks (Simpkins et al., 2015) to classify subcategories into broad categories. For example, subcategories involving providing opportunities for *Activity Participation*, *Materials*, and *Services* (e.g. tutoring) were classified under *Provision of Experiences* (Eccles, 1993; Simpkins et al., 2015). Throughout the coding process, we used a constant comparative method to ensure consistency of classifications and to establish new categories when needed (Saldaña, 2009).

To ensure the reliability of the coding scheme, I implemented inter-coder reliability tests across the three coders. The first round of reliability tests resulted in moderate to substantial agreement between coders (Landis & Koch, 1977; Krippendorff's α = .61-.83). Then, the coders held a meeting to clarify any ambiguity in the coding scheme and reconcile disagreements between coders, which resulted in a refinement of the coding scheme and a second round of coding. Subsequent reclassifications had high agreement across coders (Krippendorff's α = 0.91-1.00). Given the high inter-coder reliability resulting from the refinement of codes, the coding team made the decision to make no further changes to the coding scheme (see Tables 2.1 and 2.2 for categories, definitions, and sample subcategories and codes).

Data Preparation

To prepare the data for analyses, I first created a mean-composite variable of family SES by calculating a mean-composite scale composed of the standardized values for parents' highest education, family annual income and parents' occupational prestige. I then created dichotomous variables for adolescent gender (1 = female, 0 = male) and family structure (1 = one parent, 0 = two parents). Finally, for both of the open-ended response sets, I created dichotomous variables for each category of talent beliefs and socialization strategies to indicate whether participants reported a specific category at least once in any of their responses to allow for the inclusion of all possible responses by each participant. For example, I dichotomized a variable for a talent belief category, *Academics* (1 = reported in responses, 0 = not reported).

Statistical Analyses

To address my first aim of describing African-American mothers' talent beliefs and socialization strategies, I conducted frequency analyses to enumerate and define the categories found in the coding. Then, I conducted a number of logistic regression analyses, with each of the constructs under investigation as a dependent variable. For these analyses, I estimated robust standard errors, adjusting for clustering of adolescents within 23 middle schools (Hedeker, Gibbons, & Flay, 1994). Given the known associations of family structure with family SES and parent behaviors (McLoyd, 1990; Cunningham & Swanson, 2010), I also used family structure (1 = one-parent household) as a covariate in the analyses.

To examine socio-demographic variation across mothers' talent beliefs, I estimated four sets of logistic regression analyses for each category of talent beliefs as a dependent variable. For each dependent variable, I estimated a regression model that included adolescent gender, family SES, and family structure as predictors. Then, I examined the ways in which mothers' talent beliefs and socio-demographic characteristics were associated with mothers' socialization

strategies. I estimated six sets of logistic regression models, with each of the strategy categories as an outcome variable. In the models, I examined the unique associations of each talent belief, adolescent gender, and family SES on each socialization strategy.

Results

Descriptions of African-American Mothers' Talent Beliefs and Socialization Strategies

My first research aim was to uncover the variety of talents African-American mothers believe their adolescent children possessed and to describe a comprehensive set of socialization strategies they implemented to promote adolescents' talent development. I predicted that mothers' talent beliefs would primarily involve those in academics, sports, arts, and music. I also predicted that mothers' socialization strategies would broadly involve one-to-one interactions, use of resources, and regulatory strategies.

African-American Mothers' Talent Beliefs

I present my findings from the open-response interviews for mothers' talent beliefs in Table 2.1. As predicted, African-American mothers' reports of adolescent talents largely revolved around academics (n = 254; 37% of reports), sports (n = 260; 38%), arts (n = 300; 44%), and music (n = 313; 45%). About 56 (9%) of reports included talents that the coding team did not deem fit in any of these primary categories, such as video games or outdoor skills.

First, among mothers who reported adolescents as academically talented (n = 254), English was the most frequently reported domain (n = 143; 56%), followed by mathematics (n = 53; 21%) and science (n = 28; 11%). A substantially smaller proportion of reports included domains like social studies, computers, and foreign languages (n = 21; 8%). Finally, a small proportion of mothers reported general academics skills that adolescents possessed (e.g., reasoning, analytic skills; n = 39; 15%).

Table 2.1

Descriptions of African-American Mothers' Talent Beliefs

Category	Definition	Sample subcategories	Sample first-round codes	Count	%
Academics	Talents regarding school-work, general academics, and specific subjects in school. Includes elective classes.	General Math English Science	Schoolwork Geometry Reading Biology	254	37%
Sport	Talents regarding athletics, including individual and team as well as competitive and non-competitive sports.	General Individual Team	Individual non-competitive Individual competitive Team (female-type) Team (male-type)	260	38%
Art	Talents regarding artistic ability, including dance and fine arts.	Dance Fine arts	Ballet Tap Painting Photography	300	44%
Music	Talents regarding musical ability with regards to vocal and instrumental talents	General Voice Instrument	Music, general Sing/rap/choir Play piano/keyboard	313	45%

Second, among mothers who reported their adolescent children as athletically talented (*n* = 260), a majority of mothers reported competitive team-based sports (e.g., baseball, basketball, football, volleyball; *n* = 159; 61%). A smaller number reported sports domains that are less team-based in nature (e.g., bowling, gymnastics, martial arts, track and field; *n* = 71; 27%) or sports talents without specifying a domain (*n* = 75; 29%).

Third, the majority of mothers who reported adolescent talents in arts (*n* = 300) reported their adolescents' skills in the fine arts (*n* = 196; 65%), which included painting, drawing, sculpting, crafting, designing, and woodworking. Further, a smaller percentage of mothers reported talents in the performing arts, such as dance (*n* = 72; 24%) and acting (*n* = 59; 20%). A small but notable number of mothers also reported their children's talent in the writing medium (e.g., poetry, prose; *n* = 25; 8%).

Finally, among mothers who reported their children as being musically talented (*n* = 313), a majority of mothers reported general musical talents without specifying a subtype within music (n = 155; 50%). A smaller but sizeable proportion of mothers reported specific musical talents of adolescents, such as the use of either voice (e.g., singing, rapping, choir; *n* = 113; 36%) or instruments (e.g., piano/keyboard and woodwind or brass instruments; *n* = 113; 36%).

African-American Mothers' Socialization Strategies

I present results from coding procedures for African-American mothers' socialization strategies in Table 2.2. Six distinct socialization strategies emerged in the analyses of mothers' open-response interview data. As expected, these strategies broadly revolved around one-to-one interactions, the use of resources, and regulatory strategies like monitoring, and punitive and negative reactions.

First, among the most frequently reported strategies were those that involved close,

Table 2.2

Descriptions of African-American Mothers' Talent Socialization Strategies

Category	Definition	Sample subcategories	Sample first-round codes	Count	%
Positive discussion	Conversations between parent and adolescent	Guide towards positive results Express positive emotions	Encouragement Praised child Explain consequences	344	50%
Working with adolescent	Working with adolescent and teaching skills; more specific and goal-oriented than discussions	Teaching skills Coactivity	Coached child in activity Attend events with child	271	39%
Provision of experience	Providing experiential/material goods; includes paid services	*Provision of*: Activities Materials	Enroll child in activities in other neighborhoods Got tutor Purchased equipment	475	69%
Seeking others' help	Use of resources in one's social & community networks	*Communication with:* School/Teachers Church Kin/Relatives	Spoke to teachers Spoke to other parents Have relative help child	35	5%
Monitoring and regulation	Keeping aware of adolescents' activities; setting rules and restrictions for adolescent	Supervise child at home Monitor schoolwork	Made child study/practice Made child read Enforce rules Monitor homework	44	6%
Negative reaction	Inflicting or threatening to inflict penalties and/or reacting with non-positive emotions	Punishment Restrictions Verbal reprimand	Threatened to punish Grounded child Lectured child	9	1%

parent-adolescent interactions, specifically positive discussions and working closely with their adolescent. Among the mothers who reported using positive discussions (n = 344; 50%), almost all reported using encouragement to support their adolescent's talent development (n = 321). Other forms of positive discussions like praise and explanations for the positive consequences of improving one's skills (n = 16) were infrequent.

There were more variety in mothers' reports of working with their adolescent (n = 271; 39%). Mothers who classified as using this strategy frequently reported doing activities with their adolescent or helping their adolescent practice skills (n = 172). To a lesser but still sizeable degree, these mothers also reported attending or watching their adolescent's talent-related events (n = 71) and directly coaching or teaching their adolescent talent-related skills (n = 30).

Second, mothers also reported leveraging the resources available to them, including provisions of experiences and seeking help from other individuals in their social and community networks. By far the most frequently reported strategy overall was the provisions of experiences, which approximately 475 (69%) of the mothers reported using. Among mothers who reported this strategy, most described purchasing necessary materials and equipment to help their adolescent develop skills (n = 235); enrolling their adolescent in talent-related activities and programs (n = 144); and providing regular transportation for their adolescent to engage in these activities (n = 112). Only 35 (5%) mothers reported seeking other individuals' help to promote their adolescent's talent development. These mothers described leveraging the help of their church communities (n = 24), as well as seeking the help of their children's schools (n = 8) and other relatives and kin (n = 4).

Finally, a small proportion of mothers used regulatory strategies like monitoring and punitive and negative reactions. Among the mothers who reported monitoring and regulatory

behaviors (n = 44; 6%), most reportedly used them to monitor and check their adolescent's schoolwork (n = 35), suggesting that this strategy is largely specific to academic talents. However, a small percentage of mothers also reported using monitoring and regulation as a way to supervise and structure their adolescent's life, and by extension, to ensure their adolescent is developing in talent-related skills (n = 7). The small number of mothers who reported using punitive, negative reactions (n = 9; 1%) reported using verbal reprimands (n = 6) and restrictions to adolescents' other activities (n = 3) as a way to help their children get better at their talents.

Mean-level Gender and SES Differences

My second aim was to examine the extent to which African-American mothers' talent beliefs and socialization strategies varied across sociodemographic characteristics like adolescent gender and family SES. I present logistic regression results for mothers' talent beliefs in Table 2.3 and for mothers' socialization strategies in Table 2.4.

Adolescent Gender

Regarding adolescent gender and mothers' talent beliefs, I predicted that girls' mothers would report academic, artistic, and musical talents more frequently than boys' mothers, and boys' mothers would report athletic talents more frequently than girls' mothers. In line with predictions, girls' mothers had significantly higher odds of reporting their children as talented in academics (OR = 1.89, B = 0.64, SE = 0.14, $p < 0.001$) and in music (OR = 1.64, B = 0.50, SE = 0.17, $p < 0.01$) than boys' mothers, controlling for family SES and family structure. Compared to boys' mothers and as predicted, girls' mothers also had significantly lower odds of reporting their child as athletically talented (OR = 0.19, B = -1.67, SE = 0.23, $p < 0.001$). Contrary to prediction, mothers of boys and girls did not differ in the odds of reporting artistic talents.

With regards to adolescent gender and mothers' socialization strategies, I predicted that

Table 2.3

Associations between Demographic Characteristics and African-American Mothers' Talent Beliefs

	Academics		Sports		Art		Music	
Predictors	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR
Adolescent is female	0.64***	1.89	-1.67***	0.19	0.30	1.35	0.50**	1.64
	(0.14)		(0.23)		(0.17)		(0.17)	
Family SES	0.18*	1.20	0.13	1.14	0.09	1.09	-0.08	0.92
	(0.09)		(0.13)		(0.08)		(0.07)	
Two-parent household	-0.20	0.82	-0.27	0.76	-0.23	0.80	0.35	1.41
	(0.17)		(0.17)		(0.18)		(0.18)	
Constant	-0.73***		0.35*		-0.27		-0.62***	
	(0.16)		(0.15)		(0.19)		(0.15)	
Observations	685		685		685		685	

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

boys' mothers would be more likely to use praise and positive discussions than girls' mothers and that girls' mothers would be more likely to use monitoring and regulatory strategies than boys' mothers. These predictions were not confirmed, as mothers of girls and boys did not vary in their reports of positive discussions or monitoring and regulation, controlling for family SES, family structure, and mothers' talent beliefs. However, I found gender differences in mothers' reports of working with adolescents and provision of experiences. Compared to boys' mothers, girls' mothers had significantly lower odds of working with their adolescent (OR = 0.68, B = -0.39, SE = 0.15, $p < 0.01$) but had significantly higher odds of using provision of experiences (OR = 1.45, B = 0.37, SE = 0.16, $p < 0.05$).

Family SES

In terms of family SES and mothers' talent beliefs, I specifically predicted that family SES would be positively related to reports of academic talents. In line with this prediction, mothers from higher SES families had higher odds of reporting their adolescent as academically talented than lower SES mothers (OR = 1.45, B = 0.37, SE = 0.16, $p < 0.05$), controlling for adolescent gender and family structure. I found no SES differences in mothers' reports of adolescents' talents in sports, arts, and music. Given contrasting evidence across researchers regarding differences in the use of positive discussions and provisions of experiences across family SES (Furstenberg et al., 1999; Lareau, 2011), I did not predict SES differences in these strategies. I found no differences across families' reports of positive discussions but found that higher SES families had higher odds of reporting provisions of experiences than lower SES families (OR = 1.66, B = 0.51, SE = 0.12, $p < 0.001$).

Table 2.4

Associations between African-American Mothers' Talent Beliefs and Socialization Strategies

	Positive discussion		Working with adolescents		Provision of experiences		Seeking others' help		Monitoring and regulation		Negative reaction	
Predictors	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR
Talent Beliefs												
Academic	0.25	1.29	0.13	1.14	0.44*	1.55	-0.21	0.81	1.56***	4.74	0.85	2.35
	(0.18)		(0.19)		(0.22)		(0.32)		(0.26)		(1.14)	
Sports	0.36*	1.44	-0.09	0.91	0.29	1.34	-0.90*	0.41	0.27	1.31	-0.82	0.44
	(0.15)		(0.17)		(0.16)		(0.46)		(0.52)		(0.87)	
Art	0.62***	1.85	0.13	1.14	-0.38	0.68	-0.44	0.64	-0.16	0.85	-0.16	0.85
	(0.17)	higher	(0.17)		(0.20)		(0.42)		(0.46)		(0.56)	
Music	0.27	1.31	-0.06	0.94	0.23	1.25	0.97*	2.63	0.02	1.02	-1.12	0.33
	(0.15)		(0.21)		(0.19)		(0.45)		(0.31)		(0.70)	
Adolescent is female	-0.14	0.87	-0.39**	0.68	0.37*	1.45	-0.34	0.71	0.12	1.13	0.10	1.1
	(0.17)		(0.15)		(0.16)		(0.45)		(0.37)		(0.84)	
Family SES	-0.09	0.91	-0.24	0.79	0.51***	1.66	-0.17	0.85	-0.32	0.73	-0.08	0.92
	(0.10)		(0.13)		(0.12)		(0.22)		(0.28)		(0.35)	
Two-parent household	-0.12	0.89	0.35*	1.42	-0.03	0.98	0.47	1.6	-0.46	0.63	-0.16	0.85
	(0.20)		(0.17)		(0.17)		(0.41)		(0.40)		(0.52)	
Constant	-0.49*		-0.52*		0.50*		-3.15***		-3.40***		-4.03**	
	(0.24)		(0.26)		(0.23)		(0.72)		(0.74)		(1.28)	
Observations	685											

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

Associations between Mothers' Talent Beliefs and Socialization Strategies

My third aim was to examine the extent to which African-American mothers used different socialization strategies for specific talents they perceived their children possess. I present the results of these analyses in Table 2.4. I examined these associations exploratorily, given sparse research on these relations. Specific reports of adolescent talents were linked uniquely to a few socialization strategies. First, mothers who reported that their adolescent was academically talented had higher odds of reporting provision of experiences (OR = 1.55, B = 0.44, SE = 0.22, $p < 0.05$) and monitoring and regulations (OR = 4.74, B = 1.56, SE = 0.26, $p < 0.001$) than mothers who did not report adolescents as academically talented. Second, mothers who reported that their child was talented in sports had higher odds of using positive discussions (OR = 1.44, B = 0.36, SE = 0.15, $p < 0.05$) but lower odds of seeking other individuals' help (OR = 0.41, B = -0.90, SE = 0.46, $p < 0.05$) than those who did not report athletic talents. Third, similar to sports, mothers who reported their adolescent as having artistic talents had higher odds of using positive discussions (OR = 1.82, B = 0.62, SE = 0.17, $p < 0.001$) than those who did not report talents in arts. Finally, mothers who reported their adolescent as musically talented had higher odds of seeking help from individuals in their social and community networks (OR = 2.63, B = 0.97, SE = 0.45, $p < 0.05$) than mothers who did not report musical talents.

Tests for the moderating roles of adolescent gender and family SES in the association between mothers' talent beliefs and socialization strategies are presented in Appendices 2.1 and 2.2. I found largely non-significant cross-products between categories of talents and adolescent gender, as well as between categories of talents and family SES, in predicting specific socialization strategies. The one exception was the interaction term for reports of artistic talent and family SES and its association with the use of negative reactions. However, given the rare

cases of significant interaction effects overall and the low frequency of reports of negative reactions, I considered this association as a chance finding.

Discussion

Following theoretical frameworks on family socialization processes (Eccles et al., 1993; Furstenberg et al., 1999), the primary goal of this study was to examine the comprehensive ways in which African-American mothers implemented socialization strategies for adolescents' talent development. Overall, I found that mothers perceived both academic and nonacademic talents that adolescents possessed and reported a diverse range of strategies to help their child get better at identified talents. I also found that mothers' specific talent beliefs and socialization strategies varied according to adolescents' gender and family SES. Lastly, I found that mothers engaged in certain socialization strategies for each identified talent. Aligning with integrative models of child development (Garcia-Coll et al., 1996), these findings expand on the field's understanding of the heterogeneous socialization processes within African-American families.

The current study contributes to the literature base on the family socialization of nonacademic domains within African-American families. Specifically, I found that African-American mothers perceived their adolescents to be talented in academics and in recreational domains like sports, arts, and music at comparable frequencies. These results align with past studies finding that although education is highly salient within African-American families (Clark, 1983; Corley et al., 2019; Hill & Wang, 2015; Shin, 2011), the emphasis on education coincides with parents' valuing of other domains like sports and arts (Beamon and Bell, 2006). Within African-American families, academic achievement not only paves the way for adolescents' future success, it can also serve as a resource to cope with and empower themselves against racial barriers (Billingsley, 1968; McAdoo, 1981; Tatum, 2004). However, work by

Ogbu (1980) describes the ways in which nonacademic domains may also serve as pathways towards successes in adulthood especially when African-American adolescents encounter racialized schooling experiences. The draw towards nonacademic domains are further bolstered by messages from media and social figures like parents (Beamon & Bell, 2006; Ogbu, 1980). As such, although academics has a distinctive meaning for the future success of African-American adolescents, their parents also likely view the utility of recreational domains as viable alternative paths toward success.

This study also extends past works that have examined a limited number of socialization strategies that African-American parents implement in their homes. Disparate works have largely focused on a small, limited set of parenting behaviors within African-American families, limiting the field's knowledge of the varied ways in which parents in these families support adolescents' development. In this study, I found that mothers primarily used resources to provide services and materials, encouraged, and worked with their children to promote adolescents' talent development. These findings align well with previous work regarding parents' primary role in adolescent development. Hill and Tyson's (2009) meta-analysis, for example, found that middle-schoolers' parents use home-based involvement strategies like providing educational materials and helping with homework, as well as parent-child discussions that instill the importance of education. These trends indicate that African-American parents largely position themselves as direct facilitators of adolescents' development in academic and recreational domains.

Given the primacy of mothers' use of provision strategies, discussions, and working with adolescents, past research have found that these strategies have differential associations with adolescent outcomes. Meta-analytic works have found that strategies like material provisions and educational discussions are consistently associated with adolescents' positive academic

outcomes (Hill & Tyson, 2009; Jeynes, 2016). However, past research has also found that highly involved strategies like homework help, direct instruction, and coaching have mixed to negative associations with youths' academic and nonacademic wellbeing (Hill & Tyson, 2009; Patall, Cooper, Robinson, 2008; Wilder, 2014). From the perspective of Stage-Environment Fit Theory, these differential links may be due to the degree of mismatch between adolescents' developmental needs and their educational contexts (Eccles, Midgley et al., 1993). That is, among domain-talented adolescents, highly involved socialization strategies—such as instructional support, wherein mothers facilitate the learning process—may undermine adolescents' developing needs for autonomy and competence. Hence, future work should consider Stage-Environment Fit Theory to examine links between African-American mothers' socialization strategies and adolescents' talent-related achievement.

Variations in African-American Mothers' Talent Beliefs and Socialization Strategies

Another aim of this study was to account for variations in mothers' talent beliefs and socialization strategies across adolescent gender and family SES. Past studies documenting parents' beliefs and behaviors within African-American families have typically focused on specific segments of the population (e.g., Furstenberg et al., 1999). Hence, my examination of socio-demographically diverse African-American mothers contributes to the field's limited knowledge of the variation in family socialization across African-American families.

Adolescent Gender

With regards to variations across adolescent gender, I found that mothers' beliefs of adolescent talents largely aligned with prevailing gender discrepancies across talent domains. Specifically, girls' mothers reported that their adolescent was talented in academics and music but less so in sports compared to boys' mothers. These results corroborated gender differences

consistently found in existing research with African- and European-American families (e.g., Beamon, 2010; Simpkins et al., 2015; Varner & Mandara, 2014; Wang et al., 2014). According to EEVT's family socialization model (Eccles, 1993), the links between adolescents' gender and parents' beliefs of their children's domain-specific abilities may be explained via parent's gender stereotypes. As such, African-American mothers in this study may have likely drawn from predominant gender stereotypes when reporting adolescents' talents.

I hypothesized that gender differences regarding African-American mothers' socialization strategies tested conceptualizations of gendered socialization processes within African-American families. For example, scholars have tested differential patterns of child-rearing for boys and daughters based on a widely accepted adage within African-American communities that African-American mothers "*love their sons and raise their daughters*" (Mandara et al., 2010; McLoyd, 1990). In line with this notion, studies have found that African-American girls experience more demandingness and monitoring from mothers whereas boys experience more warmth and validation (Cunningham & Swanson, 2010; Mandara et al., 2010).

However, my expectations for girls' mothers to use more monitoring and regulatory strategies and less positive discussions than boys' mothers were not confirmed; I found nonsignificant variation across gender in these strategies. Through exploratory analyses, however, I found that girls' mothers engaged in working with adolescents less and provision of experiences more than boys' mothers. The higher likelihood for boys' mothers to work with their children may indicate closer, more loving affective relationships with sons than daughters, whereas the higher likelihood for girls' mothers to provide opportunities may indicate mothers' more hands-off but still involved approach to socialize daughters. However, these conclusions were not predicted a priori, and future studies need to confirm such suppositions with more

formal hypothesis testing. Still, these findings contribute to a limited research base regarding gender differences in African-American mothers' efforts to work with their children and to provide experiences for adolescents' talent development.

Family SES

With regards to differences across family SES, I made few predictions given contrasting evidence of the variations across African-American parents' talent beliefs and socialization strategies. I confirmed my hypothesis stating that higher SES mothers would perceive their children as more academically talented than lower SES mothers, which is in line with past studies (e.g., Davis-Kean, 2005; Hill & Sprague, 1999). This finding is not surprising, given that mothers' educational level was itself an indicator of family SES and that the other indicators (i.e., family income and occupational) were highly correlated with parental education. Further, this finding also aligns with EEVT's family socialization model (Eccles, 1993) and the concept of cultural capital transmission (Lareau, 2011), which suggest that SES characteristics would predict parents' child- and domain-specific beliefs via general beliefs about educational values. That is, highly educated parents are more likely to expect that their children will be academically talented because their educational expectations, values, and *habitus* are explicitly and implicitly transmitted to children. Such relations seem to be specific to academics, however, as I found no SES differences in mothers' reports of recreational domains.

There is a large body of research that has found SES differences in parenting practices like positive communication and provisions of experiences (Bluestone & Tamis-LeMonda, 1999; Fredricks & Eccles, 2006; Lareau, 2011; Smetana et al., 2002). However, because of contrasting evidence that have found that lower SES African-American families also engage in these strategies at high levels (Bradley, 1998 Furstenberg et al., 1999), I made no predictions regarding

SES differences in African-American mothers' socialization strategies. Aligning with mixed findings in past research, I found no differences across mothers' reports of positive discussions.

However, higher SES mothers were more likely to use provision of experiences than lower SES, which aligned more with notions of differential parenting practices across SES lines posited by Lareau (2011). More pronounced SES differences in mothers' provisions of experiences are likely due to the financial resources that are required to provide adolescents' quality materials, services, and activities to develop talents in academic and nonacademic domains. Hence, as higher SES mothers are less likely to be in economic strain than lower SES mothers, they are hence more likely to leverage their financial resources to foster youths' talent development. Overall, however, the largely nonsignificant associations between family SES and socialization strategies suggest that lower and higher SES families do not differ that extremely in family socialization of talents, qualifying findings of differential socialization posited by Lareau (2011) and cultural capital transmission models.

African-American Mothers' Socialization Strategies for Specific Talents

This study also contributes to the field's understanding of the socialization strategies African-American mothers use to help adolescents develop in specific talent domains. EEVT's family socialization model and past studies have delineated the pathways through which parents' child- and domain-specific beliefs predict parents' overall socialization behaviors (e.g., Eccles, 1993; Simpkins et al., 2015). However, there is limited knowledge to what we know about what specific strategies mothers use for specific talents within African-American families. Overall, findings from this study indicated that African-American mothers use different socialization strategies for different adolescent talents.

Mothers who identified adolescents as academically talented were more likely to provide experiences and monitor their children more than mothers who identified adolescents as talented in other domains. These findings align well with prior studies that have found that parents provide educational materials and tutoring services to help their children in educational endeavors (Assari et al., 2018). Further, mothers' reports of monitoring strategies largely revolved around checking adolescents' homework completion, which is considered to be a distinct home-based involvement strategy along with provisions of experiences (Hill & Tyson, 2009). As such, African-American mothers distinctly use direct, home-based involvement strategies that leverage the families' financial resources and keep track of adolescents' progress to foster adolescents' academic talent development.

In contrast, the strategies that were linked to nonacademic, recreational talents largely involved those that were arguably less hands-on and facilitative than those that were linked to academic talents. For example, mothers who reported their children as athletically or artistically talented were only more likely to report positive discussions than mothers who did not report such talents. These discussions primarily involved encouraging adolescents to pursue athletic and artistic endeavors. Likewise, mothers who reported their children as musically talented were only more likely to seek help from their social and community networks, specifically their church communities, than mothers who reported other talents.

Why would African-American mothers more likely report less hands-on, facilitative strategies for nonacademic talent domains? Perhaps African-American mothers have less knowledge in the strategies that facilitate the skill development of talented adolescents in recreational domains. The compulsory nature of academics from K-12 may make it a more familiar domain for mothers, and so they may perceive themselves as more capable of effecting

positive talent development in academics than other domains. Furthermore, although past research has found that African-American parents generally provide adolescents equipment and activities for recreational domains (e.g., Francois et al., 2013, Gutman & McLoyd, 2000; Lareau, 2011) and use monitoring strategies to regulate youths' activities (e.g., Lowe & Dotterer, 2013; O'Donnell et al., 2012), studies do not typically examine these strategies exclusively within talented adolescents. As such, it may the case that African-American mothers may not implement these strategies for the purpose of recreational talent development specifically.

Nevertheless, the strategies that African-American mothers reportedly use to foster adolescents' talents in sports, arts, and music do not necessarily indicate that they are disengaged in their children's talent development. To the contrary, parents' encouragement behaviors are consistently predictive of African-American adolescents' achievement in recreational domains (Bloom, 1985; Omli & Wiese-Bjornstal, 2011; Sosniak, 1990; Zdinski, 1996). Furthermore, African-American mothers' use of their church resources to help adolescents' music talents via congregational opportunities like choir and band activities is particularly emblematic of the religious and communitarian values that are important to African-American daily life (Hope, Taylor, Nguyen, & Chatters, 2019). Ultimately, though varying to a certain degree, the socialization strategies that African-American mothers use for academic and nonacademic talent domains have been shown to foster adolescents' talent development in prior works.

Limitations and Future Directions

The current study addresses empirical issues in existing research on African-American mothers' socialization strategies for their adolescent children's talent development. However, a number of limitations still remains that future studies ought to address. First, the current study only included mothers' reports as they made up 93% of the respondents. Hence, findings can

only speak to mothers' socialization of adolescents. As prior studies have found differential patterns and links to youth outcomes between mothers and fathers' socialization (McHale et al., 2006; Simpkins et al., 2015), future work should include the unique contributions of fathers and other socializers in the constructs in focus.

Second, the ways by which MADICS researchers probed mothers' strategies to foster adolescents' talents do not provide a one-to-one match between talents and strategies. I addressed this limitation by estimating the unique effect of each talent domain controlling for other domains. Still, future work should examine the strategies mothers employ to address one specific talent at a time. Third, findings can only speak to whether mothers report specific beliefs and strategies, not to their magnitude. Underreporting may have also occurred due to possible difficulties in recall. As such, future work should also focus on the development of new, close-ended surveys probing the frequency of mothers' strategies.

Finally, the variable-centered approach in the current study does not provide any insight into how mothers' socialization strategies for adolescent talents co-occur within households. As such, there is limited information as to the ways in which African-American mothers vary in the combinations of strategies they use to foster adolescent talent development. Hence, future studies may benefit by using pattern-centered techniques that examine distinct combinations of socialization strategies existing within African-American families (Bergman, Magnusson, & El-Khouri, 2003). Moving forward, uncovering these patterns will be important to more fully understand the ways in which family socialization processes are associated with adolescents' talent-related achievement beliefs and behaviors.

Conclusion

Developmental perspectives (Furstenberg et al., 1999; Garcia-Coll et al., 1996; McLoyd, 1990) postulate that African-American families have diverse experiences in child-rearing and in promoting the positive development of children and adolescence. Still, there is a limited knowledge base regarding the many ways in which African-American families foster adolescents' development in different talent domains. Guided by EEVT's family socialization model and related works (Eccles, 1993; Simpkins et al., 2015), this study uncovered a more comprehensive set of strategies that socio-demographically diverse African-American mothers use to help adolescents develop in talent domains like academic, sports, arts, and music. Further, mother's talent beliefs and, to a lesser extent, socialization strategies varied according to adolescents' gender and family SES. Finally, mothers varied accordingly in the ways in which they fostered talent development for specific domains. Ultimately, these findings contribute to a limited knowledge base on the varied ways in which African-American families support adolescents' academic and nonacademic talent development, providing theoretical implications for understanding the family's role in African-American adolescents' talent-related achievement.

Appendix 2.1

Analyses of Gender Moderation in the Associations between African-American Mothers' Talent Beliefs and Socialization Strategies

	Positive discussion		Working w/ adolescents		Provision of experiences	
Predictors	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Talent beliefs						
Academics	0.25	0.14	0.18	0.48	0.43*	0.47
	(0.18)	(0.28)	(0.19)	(0.27)	(0.21)	(0.28)
Sport	0.37*	0.42	-0.01	-0.05	0.28	0.36
	(0.15)	(0.23)	(0.16)	(0.20)	(0.15)	(0.23)
Art	0.62***	0.81***	0.20	0.13	-0.40*	-0.33
	(0.18)	(0.23)	(0.17)	(0.24)	(0.18)	(0.26)
Music	0.27	0.13	-0.00	0.13	0.22	0.13
	(0.15)	(0.17)	(0.22)	(0.30)	(0.19)	(0.27)
Adolescent is female	-0.14	-0.13	-0.38*	-0.12	0.37*	0.46
	(0.17)	(0.40)	(0.15)	(0.38)	(0.16)	(0.49)
Family SES	-0.09	-0.10	-0.25*	-0.24	0.51***	0.51***
	(0.10)	(0.10)	(0.13)	(0.13)	(0.12)	(0.12)
Two-parent household	-0.12	-0.12	0.34*	0.34*	-0.02	-0.03
	(0.20)	(0.20)	(0.17)	(0.17)	(0.17)	(0.17)
Cross-products						
Academics x female		0.20		-0.60		-0.09
		(0.28)		(0.33)		(0.43)
Sports x female		-0.14		0.19		-0.27
		(0.36)		(0.38)		(0.44)
Art x female		-0.38		0.09		-0.14
		(0.33)		(0.37)		(0.49)
Music x female		0.28		-0.27		0.19
		(0.28)		(0.35)		(0.31)
Constant	-0.49*	-0.50	-0.67*	-0.77*	0.53**	0.48
	(0.25)	(0.29)	(0.27)	(0.33)	(0.20)	(0.30)
Observations				685		

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

Appendix 2.1 (cont'd)

Analyses of Gender Moderation in the Associations between African-American Mothers' Talent Beliefs and Socialization Strategies

	Seeking others' help		Monitoring and regulation		Negative reaction	
Predictors	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Talent beliefs						
Academics	-0.14	0.31	1.55***	1.34**	0.71	1.62
	(0.33)	(0.48)	(0.27)	(0.49)	(1.18)	(1.01)
Sport	-0.80	-0.86	0.27	-0.20	-1.05	-1.15
	(0.47)	(0.61)	(0.53)	(0.61)	(0.94)	(1.56)
Art	-0.35	-0.12	-0.16	-0.42	-0.36	0.09
	(0.45)	(0.66)	(0.45)	(0.68)	(0.59)	(1.39)
Music	1.08*	1.06	0.02	-0.05	-1.29	-0.56
	(0.46)	(0.63)	(0.32)	(0.45)	(0.71)	(1.32)
Adolescent is female	-0.34	0.03	0.12	-0.70	0.02	1.80
	(0.45)	(0.85)	(0.36)	(0.62)	(0.89)	(2.46)
Family SES	-0.17	-0.16	-0.32	-0.33	-0.06	-0.04
	(0.22)	(0.21)	(0.28)	(0.28)	(0.36)	(0.36)
Two-parent household	0.44	0.44	-0.46	-0.46	-0.15	-0.15
	(0.40)	(0.41)	(0.40)	(0.40)	(0.51)	(0.52)
Cross-products						
Academics x female		-0.93		0.40		-1.72
		(0.67)		(0.83)		(1.20)
Sports x female		0.42		0.99		0.58
		(1.05)		(0.80)		(3.03)
Art x female		-0.56		0.43		-1.01
		(0.79)		(0.66)		(2.30)
Music x female		0.09		0.13		-1.30
		(0.86)		(0.47)		(1.29)
Constant	-3.36***	-3.53***	-3.39***	-2.92***	-3.60**	-4.55***
	(0.77)	(0.92)	(0.78)	(0.76)	(1.34)	(1.32)
Observations				685		

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

Appendix 2.2

Analyses of Family SES Moderation in the Associations between African-American Mothers' Talent Beliefs and Socialization Strategies

	Positive discussion		Working w/ adolescents		Provision of experiences	
Predictors	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Talent beliefs						
Academics	0.25	0.25	0.18	0.19	0.43*	0.42*
	(0.18)	(0.18)	(0.19)	(0.18)	(0.21)	(0.21)
Sport	0.37*	0.36*	-0.01	-0.01	0.28	0.33*
	(0.15)	(0.14)	(0.16)	(0.16)	(0.15)	(0.13)
Art	0.62***	0.62***	0.20	0.18	-0.40*	-0.38*
	(0.18)	(0.18)	(0.17)	(0.18)	(0.18)	(0.19)
Music	0.27	0.27	-0.00	-0.00	0.22	0.22
	(0.15)	(0.15)	(0.22)	(0.22)	(0.19)	(0.19)
Adolescent is female	-0.14	-0.14	-0.38*	-0.38*	0.37*	0.37*
	(0.17)	(0.17)	(0.15)	(0.15)	(0.16)	(0.16)
Family SES (mean-centered)	-0.09	-0.15	-0.25*	0.23	0.51***	0.38
	(0.10)	(0.32)	(0.13)	(0.26)	(0.12)	(0.21)
Two-parent household	-0.12	-0.14	0.34*	0.35	-0.02	-0.02
	(0.20)	(0.20)	(0.17)	(0.18)	(0.17)	(0.17)
Cross-products						
Academics x SES		0.32		-0.31		-0.14
		(0.30)		(0.19)		(0.21)
Sports x SES		-0.17		-0.34		0.34
		(0.24)		(0.23)		(0.24)
Art x SES		0.05		-0.26		0.18
		(0.22)		(0.27)		(0.17)
Music x SES		-0.01		-0.28		-0.06
		(0.21)		(0.19)		(0.20)
Constant	-0.49	-0.48*	-0.67*	-0.67*	0.53**	0.50*
	(0.25)	(0.24)	(0.27)	(0.27)	(0.20)	(0.20)
Observations	685					

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

Appendix 2.2 (cont'd)

Analyses of Family SES Moderation in the Associations between African-American Mothers' Talent Beliefs and Socialization Strategies

	Seeking others' help		Monitoring and regulation		Negative reaction	
Predictors	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Talent beliefs						
Academic	-0.14	-0.13	1.55***	1.81***	0.71	0.68
	(0.33)	(0.33)	(0.27)	(0.33)	(1.18)	(1.14)
Sports	-0.80	-0.79	0.27	0.27	-1.05	-1.18
	(0.47)	(0.46)	(0.53)	(0.54)	(0.94)	(0.94)
Artistic	-0.35	-0.36	-0.16	-0.14	-0.36	-0.55
	(0.45)	(0.45)	(0.45)	(0.48)	(0.59)	(0.48)
Musical	1.08*	1.11*	0.02	-0.15	-1.29	-1.49***
	(0.46)	(0.46)	(0.32)	(0.39)	(0.71)	(0.44)
Adolescent is female	-0.34	-0.33	0.12	0.13	0.02	-0.01
	(0.45)	(0.45)	(0.36)	(0.36)	(0.89)	(0.91)
Family SES	-0.17	-0.22	-0.32	-0.69	-0.06	0.90
	(0.22)	(0.54)	(0.28)	(0.67)	(0.36)	(0.92)
Two-parent household	0.44	0.46	-0.46	-0.54	-0.15	-0.16
	(0.40)	(0.39)	(0.40)	(0.41)	(0.51)	(0.53)
Cross-products						
Academics x SES		-0.28		0.73		-0.45
		(0.40)		(0.40)		(0.78)
Sports x SES		0.16		0.19		-0.88
		(0.41)		(0.61)		(0.51)
Art x SES		0.32		0.14		-1.36*
		(0.54)		(0.50)		(0.62)
Music x SES		-0.00		-0.52		0.36
		(0.37)		(0.47)		(1.71)
Constant	-3.36***	-3.40***	-3.39***	-3.55***	-3.60**	-3.54**
	(0.77)	(0.78)	(0.78)	(0.80)	(1.34)	(1.32)
Observations				685		

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

CHAPTER 3

Study 2. Patterns of African-American Mothers' Talent Socialization and Adolescent Talent Behaviors: Which Strategies Matter, For Which Domains, and For Whom?

Adolescence is a distinct period of development within which parents must respond to their children's changing needs while ensuring youths continue to develop skills that prepare them for adulthood. Along with physical and biological changes, adolescents increasingly desire autonomy and a sense of competence over their lives in order to establish their identity and place in the world. As a result, adolescents and their parents experience recurrent renegotiations to obtain optimal balance between parents' desire to control and manage children's lives and adolescents' developmental needs for autonomy, competence, and relatedness beyond the family (Deci & Ryan, 1985; Eccles & Midgley, 1989; Eccles, Midgley et al., 1993). These conditions mark a significant shift from early and middle childhood during which parents have the primary responsibility in facilitating and structuring the daily lives of young children (Eccles, 1993; Lareau, 2011; Parke et al., 2003). Still, although parents' role in youths' lives changes in adolescence, parents are still some of the key socializers shaping adolescents' developmental trajectories (Eccles 1993; Bronfenbrenner & Morris, 2006).

Parents engage in various socialization behaviors that help their children develop domain-specific skills (Furstenberg et al., 1999). However, socialization studies typically do not parse out the ways in which parents specifically socialize the skill development of adolescents with particular talents (i.e., academics, sports). Moreover, prior studies have largely relied on variable-centered analyses utilizing composite parenting scales that implicitly assume that uniformly higher scores across socialization items linearly predict youth outcomes (Hill & Tyson, 2009; Jeynes, 2016). These approaches may obscure possible multiple pathways through

which parents' socialization strategies may shape youth talent development. Conceptualizations of parents as responsive to adolescents' characteristics (Eccles, Midgley et al., 1993; Furstenberg et al., 1999) suggest that parents may individually differ in the ways in which they use socialization strategies, depending upon their children's characteristics and developmental needs.

Hence, the focus of this study is to examine the associations between African-American mothers' socialization strategies and adolescents' talent-related behaviors, specifically academic achievement and nonacademic talent engagement. Much of the literature on African-American parenting and family socialization and its relations to youth outcomes have focused on youths' academic functioning and less on other talent domains like sports, arts, and music. As such, some of the review on nonacademic talents focuses on interrogating the generalizability of prior studies examining largely non-African-American families.

Links Between Parental Socialization Strategies and Talent Development

Parent-Adolescent Discussions

One way that African-American parents may shape adolescent development is via close, one-to-one interactions such as parent-adolescent discussions and directly teaching and co-working with their children to address specific developmental issues. Discussions may involve encouragement and praise strategies, which are predictive of children's motivational beliefs and engagement in academic and athletic domains (Neuman, 1986; Turner, Steward, & Lapan, 2004; Fredricks & Eccles, 2005; Howe & Sloboda, 1991; Pugliese & Tinsley, 2007). Indeed, many athletes, musicians, and artists attribute their successes partly due to parents' encouragement, as well as other supports, in childhood (Bloom, 1985; Sosniak, 1990).

Furthermore, during adolescence, parental discussions may increasingly focus on actively instilling the importance and value of education, promote educational preparation, and encourage

educational aspirations of adolescence (i.e., academic socialization; Hill & Tyson, 2009). Studies with multi-ethnic samples found that these types of discussions are strong predictors of academic achievement compared to other strategies like home- and school-based involvement (Hill & Tyson, 2009; Wang & Sheik-Khalil, 2014; Wang, Hill, & Hofkens, 2014). Moreover, discussions within African-American families predict reduced declines in multiple indicators of school engagement, such as positive school identification and subjective valuing of learning, across adolescence (Wang & Eccles, 2012). Along with praise and positive behaviors during athletic competitions, youth athletes also feel supported and encouraged when parents provide them constructive advice to improve their skills (Omli & Wiese-Bjornstal, 2011). Among musical youths, discussions regarding the musical genre and youths' progress are also positively correlated with youths' cognitive abilities in music (Zdinski, 1996).

Working with Adolescents

With regards to parents actively working with their children, prior studies have found that parents' coactivity behaviors are related to young children's motivational beliefs (e.g., self-concept, interest) in academic, sports, and music domains, which are predictive of their domain-specific behaviors (see Simpkins et al., 2015). However, in adolescence, specific home-based involvement like direct teaching, helping with schoolwork, and coactivity in learning activities seems to have mixed associations with academic outcomes for African-American adolescents (Froiland, Peterson, & Davison, 2012; Halle, Kurtz-Costes, & Mahoney, 1997; Hill & Craft, 2003; Hill & Tyson, 2009; Jodl et al., 1999; Patall, Cooper, Robinson, 2008; Wilder, 2014). Aligned with Stage-Environment Fit Theory, these results may be due to some adolescents perceiving these strategies as being too involved or controlling, thereby leading to mixed associations. By contrast, positive discussions largely involving praise, advice-giving, and

instilling values and encouragement and so may be perceived by adolescents as less controlling and as striking an appropriate balance between parental control and adolescent self-determination that are linked to achievement.

It may also be that as the learning environment in middle school becomes more challenging (compared to elementary school), parents find themselves lacking in the skills to more closely teach and engage in learning activities with their children. As such, adolescents may benefit more from strategies that allow for parents to be involved in youths' schooling without fully facilitating the learning process, such as discussions about educational progress. Alternatively, it may be that parents' help with homework is based on need, with parents helping only if youths are having difficulty and less so if they are doing well in school. If so, then one would not get the expected positive association between helping and performance.

Although parents' coactivity in athletics may be positive, the competitive nature of and the emotional investments parents have for youth sports may often alienate many adolescents from athletic participation. Youth often find parents' demanding "coaching from the sidelines" and negative emotional outbursts during sports competitions distracting and disruptive (Omli & Wiese-Bjornstal, 2011). Parents' negative spectator behaviors during sports may put excessive stress and pressures on youth such that it may lead to increased anxiety and decreased enjoyment (Brustad, 1988; Brustad, Babkes, & Smith, 2001; Hellstedt, 1988). Instead , youths prefer for parents to at the very least attend athletic events silently and at most to provide constructive feedback (Omli & Wiese-Bjornstal, 2011), which aligns with the Stage-Environment Fit Theory calling for the need to modulate parental control in adolescence (Eccles, Midgley, et al., 1993).

Adolescents' music beliefs and performance are positively correlated with parents' various coactivity and within-home strategies, but closely assisting with youths' musical practice

are negatively correlated with youths' musical cognitive abilities and performance (Zdinski, 1996). Again, close, one-to-one interactions to promote youths' talent development may be most beneficial if such interactions are less directly involved and demanding. Such a supposition aligns with Stage-Environment Fit researchers positing that parental strategies do not need to be highly involved in adolescence. Instead, they may need to strike a balance between parental control and adolescents' exercise of their own autonomy (Eccles, Midgley et al., 1993).

Provision of Resources

Parents' use of their economic and practical resources may also benefit youth. As middle school curricula become more difficult, parents may provide materials and experiences to promote academic development. These provisions can often afford adolescents some level of autonomy, specifically when they engage in materials and experiences outside of their parents' coactive involvement (Eccles, Midgley et al., 1993). Among African- and European-American families, provisions such as providing educational books and materials at home predict higher achievement scores (Davis-Kean, 2005; Epstein, 1995; Hill & Tyson, 2009). Cognitive stimulation in the home environment is also predictive of academic abilities in early adolescence (Davis-Kean, 2005; Froiland et al., 2012; Hardaway, Sterrett-Hong, De Genna, & Cornelius, 2019; Tang & Davis-Kean, 2015). Further, purchasing musical materials, taking youths to concerts, and providing transportation for music lessons are positively correlated with music beliefs and abilities (Zdinski, 1996), as well as participation (McPherson, 2009; McPherson & Davidson, 2006). Provisions of athletic equipment and transportation are also associated with higher sports motivational beliefs and participation (see Simpkins et al., 2015). Other provision strategies can involve facilitating youths' participation in organized activities and programs. Organized activities that afford youths' engagement in schoolwork and other learning activities

are positively associated with better academic, psychological, and social adjustment for both poor and middle-class African-American youths (Gutman et al., 2003; Dotterer, McHale, & Crouter, 2007; Fredricks & Eccles, 2006, 2010).

Moreover, participation in athletic activities among African-American adolescents are also associated with a higher sense of athletic self-efficacy (Trost, Pate, Ward, Saunder, & Riner, 1999). Sports activity participation, along with other activities, is also predictive of higher academic achievement and expectations for success, as well as lower levels of problem behaviors among African-American and other youths (Simpkins, Ripke, Huston & Eccles, 2005). Among educationally vulnerable youths, those who participated in sports activities along with at least one other activity were twice as likely to graduate from high school and enroll in higher education (Peck, Roeser, Zarrett, & Eccles, 2008; Roeser & Peck, 2003). Moreover, youths' participation in music/performing arts education programs is also predictive of their continued participation in arts as they enter adulthood, though it is not uniquely predictive of long-term academic outcomes (Foster & Jenkins, 2017). Finally, parents' provision of musical lessons is also correlated with youths' musical ability (Davidson, Howe, Moore, Sloboda, 1996). Overall, many provision strategies serve to provide youths the necessary contexts wherein they can develop specific talents and skills and discover developmental opportunities beyond the family.

Monitoring and Regulation

African-American parents may also utilize monitoring and regulatory strategies. Monitoring is associated with grades, educational aspiration, and school engagement among African- and European-American youth (Clark, 1983; Hill & Wang, 2015; Kalil, Rosenblum, Eccles, & Sameroff, 1998). Regulatory strategies, such as providing family routines and structure, are also positively related to youths' academic achievement among low-income

African-American families (Clark, 1983; Furstenberg et al., 1999; Taylor & Lopez, 2005). Studies have found that family routines have direct and indirect relations with academic achievement, as well as internalizing and externalizing behaviors, via youths' self-regulation (Brody & Flor, 1997). Further, regulatory strategies for music development may involve ensuring youths' consistent practice to improve upon their musical abilities, which is associated with youths' higher music competence (Davidson et al., 1996).

Regulatory strategies may also take the forms of restrictive and punitive strategies that impose parental control over youth. Parents' restrictive strategies, however, are negatively associated with academic achievement and positively related to feelings of anger and depression, as well as conduct problems, among African-American and other adolescents (Barber, 1996; Simons et al., 2002; Gutman et al., 2003). Punitive strategies within African-American families are also positively associated with underachievement (Tang & Davis-Kean, 2015) and cognitive distress among children of single mothers experiencing occupational interruptions (McLoyd, Jayaratne, Ceballo, & Borquez, 1994). Aligning with Stage-Environment Fit Theory, these negative associations suggest that parents' use of regulatory strategies need to be used in ways that do not impose too much control or demands over adolescents, especially when it is punitive in nature (Eccles, Midgley et al., 1993).

Multiple Strategies Combined

Prior studies on parenting and family socialization have largely examined one or few socialization strategies and their unique effects on youths' functioning. Increasingly, however, family socialization research has examined the combined effects of multiple strategies. Qualitative and descriptive studies have led the way in understanding family socialization processes in such holistic, integrated ways. In studies within poor African-American families,

researchers have found that parents of high-achieving youth in academics were involved in more varied and specific strategies than those of low-achieving youth (Clark, 1983; Gutman & McLoyd, 2000). Furthermore, highly successful music learners are socialized by parents who were involved in music and their development using a variety of strategies (Davidson et al., 1996; Davidson, Sloboda, & Howe, 1995). Finally, Furstenberg et al. (1999) and Lareau (2011) have described many strategies that parents implement to manage the daily lives of their children, such as community involvement, working with children, and monitoring and regulatory strategies. Such an integrative approach to studying socialization strategies provide insight into the ways in which parents implement multiple strategies they believe are important for their children's development.

Quantitative approaches examining the associations between multiple socialization strategies together and youths' outcomes typically involve merging multiple items into an overall parenting scale via composite scoring or latent variable methods. Meta-analytic studies have found positive associations between overall scales of parent involvement and youths' academic motivation and achievement (Fan & Chen, 1999; Jeynes, 2016). Individual studies on youths' academic functioning, however, have found mixed results. In research on middle-class European-American families, for example, links between a latent parent involvement variable and youths' academic motivation was found almost exclusively among fathers but not among mothers (Simpkins et al., 2012, 2015).

Furthermore, studies using African-American samples have found inconsistent results. Research examining overall indicators that mix concrete behaviors with positive family climate indicators have found positive predictions to academic outcomes (Brody, Flor, & Gibson, 1999). However, researchers using exclusively concrete behaviors have found significant positive

associations between an overall parenting scale (i.e., school involvement, monitoring homework, and educational discussions) and academic achievement (i.e., grades) only in contexts where youths perceive high teacher support and school belonging as well (Gutman & Midgley, 2000). Others, however, have found non-significant associations between an overall socialization scale and outcomes like academic self-efficacy, grades, and enrollment in higher education (Ardelt & Eccles, 2001; Crosnoe et al., 2002). Finally, in some studies, a composite measure of parent involvement strategies actually yielded negative associations with youths' educational expectations, and such effects were stronger among males and youths who perceive less supportive school contexts (Trask-Tate & Cunningham, 2010).

Prior works have also described the variety of behaviors parent use in the socialization of nonacademic domains (Côté, 1999; Furstenberg et al., 1999; Lareau, 2011; McPherson, 2009; Omli & Wiese-Bjornstal, 2011; Wheeler, 2011). Overall scales of parenting behaviors have found modest and positive associations with youth competence beliefs and participation in sports and physical activity (Beets, Vogel, Forlaw, Pitetti, & Cardinal, 2006; Davison, Cutting, & Birchl, 2003; Dowda, Dishman, Pfeiffer, & Pate, 2007; Pugliese & Tinsley, 2007). More recent and comprehensive investigations have found that parents' sports and music socialization predicted children's competence and value beliefs in each domain (Simpkins et al., 2012, 2015; Simpkins, Vest, Dawes, & Neuman, 2010).

Developmental researchers have also conceptualized family socialization as the number of distinct, high-frequency strategies parents use within given domains. In this conceptualization, the focus is less on the mean or total levels of socialization strategies across a given set of items, but on the number of responses falling above a meaningful threshold (e.g., equal or above a high

frequency).[1] These summative scales are associated with increases in expectancy-value beliefs and participation across academic, athletic, and musical domains (Fredricks & Eccles, 2005; Fredricks, Simpkins, & Eccles, 2005; Simpkins, Fredricks, Davis-Kean, & Eccles, 2006).

Socialization researchers on African-American populations have also examined the joint influences of parents' racial/ethnic socialization and academic socialization strategies on youths' academic adjustment by examining their interactive effects. These studies, however, have found mixed results. A study on 5th grade African-American youths found a significant interaction between parents' strategies to expose youth to diverse cultures and their school involvement, such that high scores on both of these dimensions were associated with higher scores on only *some* measures of reading ability (Banerjee, Harrell, & Johnson, 2011). Furthermore, studies on African-American adolescents have found that moderate levels of both academic socialization and socialization regarding youths' minority status were linked to better academic adjustment (Cooper & Smalls, 2010). By contrast, higher levels of both strategies are jointly associated with lower adjustment.

Overall, approaches to understand the combined effects of socialization strategies provide some understanding of the extent to which multiple parenting strategies can influence youth functioning across different domains. These approaches, however, have mixed results, especially in academic domains among African-American youths. One explanation points to the variable associations of different socialization strategies to adolescent outcomes, which is often obscured when researchers use overall parenting scales. Hence, one approach to remedy this analytic weakness is to examine distinct combinations, or patterns, of parent behaviors across families.

Pattern-Centered Approaches to Studying Family Socialization Holistically

[1]These approaches are inspired by risk and resilience research that examine multiple salient risk factors in youths' lives (Gutman et al., 2002; Rutter 1988).

By nature of regression techniques, much of the researchers studying family socialization processes have made assumptions of linear, additive, and unique associations—that higher scores on *all* predictor indicators are linearly related with outcomes under investigation. Although this statistical assumption is acceptable and common in quantitative research, it nevertheless obscures possible complexities in family socialization processes in favor of simplistic linear, additive functions. Beyond conceptualizing strategies as an overall magnitude (i.e., high vs. low), pattern-centered approaches identify typologies or profiles based on specific configurations of responses across a heterogeneous set of items, providing nuances to developmental processes (Bergman, Magnusson, & El-Khouri, 2003).[2] For example, in a study on organized activities among educationally vulnerable youths, researchers found four youth activity profiles associated with higher rates of high school graduation and enrollment in college (Peck et al., 2008). These profiles included not only youths who participated in many different activities—thereby supporting a positive, linear model—but also youths who participated in combinations of only *some* activities (e.g., school clubs and organized sports; Peck et al., 2008). These findings point to the possibility that higher scores on only *some* specific indicators may be similarly beneficial as higher scores on *all* indicators.

Studies on parenting have traditionally utilized a typological approach to understand the family's influence on youth development. Seminal works on parenting styles, for example, posit distinct patterns of parenting along dimensions of parental warmth and control (Baumrind, 1971; Maccoby & Martin, 1983). Specifically, African-American families have traditionally been viewed as more authoritarian (i.e., low warmth, high control) than European-American families,

[2]While examining curvilinear relations (i.e., using quadratic terms) is a step above linear relations, it is limited in that it only examines the extent to which different levels of an overall scale have differential effects on outcomes. Pattern-centered analyses, however, can provide more nuanced information by eschewing overall scales and examining the extent to which specific combinations of a set of items are linked to variations in outcome variables.

who are viewed as more authoritative (i.e., high warmth, high control; Baumrind, 1972, 1997). Still, authoritarian parenting among African Americans can be as adaptive as those that are authoritative, especially among low-SES parents who desire to reduce youths' exposures to immediate, contextual dangers (Baumrind, 1997; Brody & Flor, 1998). Again, such findings suggest that different patterns of parenting may be similarly beneficial for different youths. Even more importantly, in most studies, designation of control as evidencing authoritarian versus authoritative parenting is based on population means rather than the amount of control necessary for safety in the specific context in which each family lives. Consequently, parenting behaviors that would be judged authoritarian in a safe middle- or upper-class neighborhood might be seen as inadequate in high risk neighborhoods.

Recent studies using contemporary pattern-centered analytic techniques have found partial support for the four original parenting typologies among African-American families, finding the hypothesized benefits of authoritative (versus permissive or disengaged) parenting on externalizing behavior, social competence, and academic adjustment among African-American children and adolescents (Anton, Jones & Youngstrom, 2015; McGroder, 2000; Smalls, 2010). Interestingly, these studies did not find a distinct profile describing an authoritarian style. Other pattern-centered studies have also more recently included a mix of indicators of parenting styles and specific socialization behaviors, like cognitive stimulation and racial/ethnic socialization strategies (McGroder, 2000; Smalls, 2010). Specific configurations of these constructs predict substantial variation in youth outcomes. For example, a low child-centered, but average racial/ethnic socialization profile is as similarly related to lower academic engagement as an overall low socialization profile (Smalls, 2010).

Less work has been done on patterns of a larger set of concrete socialization strategies

within African-American families and with regards to different parenting aims. Differential patterns within African-American families may exist given that these parents report different types of strategies that they use (Furstenberg et al., 1999). Indeed, diverse configurations of parental behaviors like cognitive stimulation, school-community involvement, and rule regulation were found among African- and European-American families (Simpkins et al., 2009). African-American parents over-represented clusters involving high community involvement and rule regulation, and youths whose parents belong in this cluster had lower academic and social adjustment (Simpkins et al., 2009). Although prior studies provide initial ideas of the specific clusters groups to be found (e.g., high, medium low; specialization in some strategies), there is little empirical knowledge about whether clusters of socialization strategies are similar across different domains of talent development. For example, parental figures increasingly engage in educational discussion while decreasing homework help and school-based involvement when it comes to academic domains (Bhargava & Witherspoon, 2015). The extent to which these patterns are also true for recreational domains like sports, arts, and music is less clear.

Moreover, as previously discussed, individual strategies have yielded differential associations to youth outcomes. Aligned with Stage-Environment Fit Theory, strategies that are less involved like praise, discussions, and provisions consistently predict more positive youth functioning. Strategies that are more involved, such as homework help and restrictive/punitive strategies, have yielded inconsistent and sometimes negative results among African-American adolescents. These trends suggest that not all socialization strategies are associated with outcomes similarly, and analytic techniques that combine heterogeneous parenting strategies into a composite or latent variable may risk underestimating the true associations between family socialization and adolescents' talented-related outcomes. Instead, understanding patterns of

African-American parents' socialization strategies may get a more accurate, holistic picture of the combinations of strategies they implement to promote adolescents' talent development. As such, two major goals in this study include examining what patterns of socialization strategies for talent development exist among African-American mothers and to what extent do these patterns differentially predict adolescents' talent-related behaviors.

The Role of Adolescent Gender

According to EEVT, persisting gender stereotypes shape African-American parents' differential perceptions of girls and boys in different domains (Eccles, 1993; Eccles et al., 1983). As such, African-American parents tend to view girls as being more talented in female-stereotyped domains like academics and music than boys and boys as being more talented boys in male-stereotyped domains like sports than girls (Beamon, 2010; Eccles, 1993; Varner & Mandara, 2014; Wang et al., 2014; Wood et al., 2007; also see Study 1). Scholars have also theorized and found gender differences in African-American parents' general practices and socialization strategies, with some exceptions. Aligning with the notion that "African-American mothers love their sons and raise their daughters", separate studies on general parenting practices have found that boys' parents provide more support and validation and assign less responsibility for adolescents compared to girls' parents (Mandara et al., 2010; Smetana, Abernethy, & Harris, 2000). Girls' parents also implement more monitoring strategies than boys' parents (Cunningham & Swanson, 2010; Smetana & Daddis, 2002; Varner & Mandara, 2014).

Aligning with these findings on general parenting practices are studies that have examined socialization strategies for specific domains. In Study 1, I found that African-American girls' mothers reported providing materials and experiences for talent development more than mothers of boys, but boys' mothers reported working with their children more than

mothers of girls. Similarly, one study using the same dataset as this dissertation, but testing different measures, found that parents engage in more home-based involvement (e.g., schoolwork help) and school communications for boys than for girls in academics (Bhargava & Witherspoon, 2015). The researchers also found that girls' parents use more school volunteerism than parents of boys.

Despite these gender differences in African-American parenting and family socialization, other studies have documented opposing gender patterns or no gender differences in other socialization strategies. In direct contrast to study findings aligning with common adage, "African-American mothers love their sons and raise their daughters," some studies have actually found that parents of boys implement more harsh disciplinary strategies than parents of girls (Cogburn, Chavous, & Griffin, 2011). Other studies have also found that parents of girl and boys do not differ significantly in one-on-one strategies like praise or educational discussion (Bhargava & Witherspoon, 2015; Shakib & Veliz, 2012; Wang et al., 2014) and regulatory strategies like scaffolding independence and providing structure (Wang et al., 2014).

The previous studies examining mean-level gender differences in parents' practices provide important insights into the gendered nature of family socialization. However, what is still less known are the ways in which gender may moderate the links between parents' behaviors and youth outcomes. That is, few studies have examined the extent to which the associations between African-American parents' socialization strategies and adolescents' talent-related beliefs and behaviors vary for girls and boys, and the few studies that exist have often found no gender variation in these relations. Findings from studies focusing on family socialization processes within non-African-American families suggest that parental supports predict youths' academic motivational beliefs and achievement similarly across girls and boys (Lazarides &

Ittel, 2012; Simpkins et al., 2015; Simpkins, Estrella, Gaskin, & Kloberdanz, 2015). Further, in a study by Lowe and Dotterer (2013) on African- and Latino-American and multiracial adolescents, girls and boys did not vary in the associations between parental warmth and monitoring and adolescents' academic self-esteem and intrinsic motivation.

However, as an exception, one study found gender moderation in the links between parental behaviors and youth outcomes. Li, Allen, and Casillas' (2017) study of ethnically diverse adolescents living in high poverty found parents' provision of intellectual materials at home and school-based involvement predicted adolescents' grades concurrently (i.e., at first semester of 6th grade) only for girls. Moreover, although they also found these associations longitudinally (i.e., at second semester of 7th grade) for both girls and boys, the effect sizes were larger for girls (Li et al., 2017). These findings run counter to a large body of research that has found that the associations between parenting behaviors and youth outcomes operate similarly across adolescence. Overall, the mixed findings from these prior studies make it difficult to generate specific hypotheses regarding the moderating role of gender on the links between African-American mothers' socialization strategies and adolescents' talent beliefs and behaviors.

The Current Study

In this study, I first examined what distinct patterns of talent-related socialization strategies African-American mothers implemented to help 7th grader adolescents develop in specific talents, such as academics, sports, arts, and music. I predicted that, along with patterns indicating uniform levels of socialization (i.e., low, moderate, high), patterns indicating higher engagement in only some strategies (e.g., discussion-focused socialization) might exist.

Second, I used planned comparisons to examine the extent to which patterns of socialization strategies differentially related to adolescents' talent-related behaviors, such as

academic achievement (i.e., grade point average [GPA]) and sports, arts, and music participation. Prior to any analyses, I hypothesized that adolescents in a low socialization profile would have lower levels of talent-related behaviors than adolescents in comparatively more involved profiles. Further, I tested two competing interpretations of the modulation of parental socialization in adolescence posed by Stage-Environment Fit Theory (Eccles, Midgley et al. 1993). On one hand, modulation of parental socialization may indicate that moderate levels of socialization are more appropriate than high levels of socialization, thereby positively predicting higher talent-related behaviors (i.e., Moderation Overall hypothesis). On the other hand, it may also be that moderate and high levels of socialization do not vary in their associations with adolescents' talent-related behaviors, as mothers might already know the appropriate levels of socialization for their specific children's talent development. Hence, adolescents may display similarly high levels of talent-related behaviors across profiles indicating at least moderate levels of socialization (i.e. Multiple Pathways hypothesis).

Finally, I examined the extent to which adolescent gender moderated the associations between socialization patterns and adolescents' talent-related behaviors. Because prior studies have found, at best, mixed associations between parental socialization and adolescent outcomes, I took an exploratory approach to examine gender moderation.

Method

Participants

Of the original 879 African American families in the original MADICS sample, 139 (16%) were excluded due to one of the following causes: a) the parental figure was not a mother, b) the mother did not report their child as having talents; and c) the mothers' first reported talent were too general or too infrequent and distinct from the main categories found. As a result, a

total of 740 African-American families were included in the analytic sample, consisting of 740 mothers and target 7th grade adolescents (48% female; M_{age} = 12.28 years old, SD = 0.56) who 23 middle schools in the county.

Approximately 60% of the mothers were married, 36% had no more than a high school diploma, and 49% had an annual family income above the national mean in 1990. Participating mothers had a mean educational level equating to an associate degree (M = 14.14, SD = 2.52) and a mean family income between $40,000 - $44,999 ($M$ = 9.62, SD = 4.29). In the beginning of the target adolescents' 7th grade year, mothers and youth completed face-to-face interviews and self-administered questionnaires. Comparatively, the analytic sample were more likely to have higher SES than the attrition sample (t [877] = 2.65, $p < 0.01$; Cohen's d = 0.24). Further analyses examining each SES indicator indicated that the analytic sample had significantly higher annual family income (t [810] = 1.99, $p < 0.05$; Cohen's d = 0.19) and occupational status (t [877] = 2.53, $p < 0.05$; Cohen's d = 0.23) than the attrition sample. Moreover, adolescents in the analytic sample had significantly higher music engagement than those in the attrition sample (t [874] = 2.53, $p < 0.05$; Cohen's d = 0.23).

Measures

Demographic characteristics

Adolescents reported on whether they identified as female or male. Mothers reported on the highest level of education of either primary caregiver in the household. Values ranged from 1-12 for grade school years; thereafter, values were based on the normative years of degree completion (e.g. 16 = BA/BS, 21 = Ph.D./MD/JD). Mothers also reported on their family's annual income with values presented in increments of $5,000 (e.g., $40,000-$44,999; 1 - 16), as well as the highest occupational status of either primary caregiver (0 - 99, with doctor with being

the highest code; Nam & Powers 1983). I created a mean-composite indicator of family socioeconomic status (SES) using the standardized scores (from the full sample) of parental education, family income, and occupational status. Finally, mothers reported on whether they were in a one-parent (never married, separated, or divorced) or a two-parent (married, remarried, cohabitating) household.

Mothers' Perceptions of Adolescent Talent

Mothers were asked whether they perceive the target adolescent as possessing any talents: *"Does (CHILD) have any special talents, skills, or interests such as music, reading, arts, athletics, drama, schoolwork, or some other ability?".* This question was followed with, *"What are these talents or interests?"*. Interviewers exhaustively recorded responses in short phrases, which were then coded during initial data entry by trained MADICS researchers. Subsequent coding procedures conducted by the first author and two graduate-level researchers resulted in high agreement among coders (Krippendorff's $\alpha = 0.91$) and four main talent groups for analyses: Academics ($n = 154$, 21%), Sports, ($n = 163$, 22%), Arts ($n = 189$, 26%), and Music ($n = 234$, 32%).

Mothers' Socialization Strategies

Mothers reported on the frequency in which they had engaged in seven socialization strategies in the past six months to help their child get better at the first talent they reported. These socialization strategies ranged from a) instilling the importance of adolescents' talent, b) praising, c) teaching or coaching, d) coactivity, or engaging in the activity with adolescents, e) provision of activities, f) ensuring adolescents practice skills at home, and g) watching the adolescent engage in talent-related activities (see Appendix 3.1 for a list of survey items). These items showed high reliability (Cronbach's $\alpha = .79$; 1 = *Never*, 2 = *Almost Never*, 3 =

Occasionally, 4 = *Sometimes*, 5 = *Very often*) and reflected many socialization strategies found to be linked to youths' domain-specific achievement (Hill & Tyson, 2009; Simpkins et al. 2015).

Adolescents' Talent Behaviors

I used school records of adolescents' end-of-7th-grade GPA across five subjects (i.e., math, English, science, social studies, and health; 0 = *F*, 4 = *A*), as well as their 5th grade standardized achievement test scores (Wong, Eccles, and Sameroff, 2004). Adolescents also reported on the frequency to which they participated or engaged in activities in nonacademic domains such as sports, arts, and music (see Appendix 3.1 for survey items). One item was available for each nonacademic domain (1 = *Never*, 6 = *Daily, more than one hour*).

Missing Data Analysis

Within the analytic sample, 500 (67.6%) participating families had complete data across all study variables, whereas 240 (32.4%) participating families had at least one missing data point. Families with complete data were significantly different from families with missing data in several ways. Families with complete data had higher SES than families with missing data (t [738] = 3.51, $p < 0.001$; Cohen's $d = 0.28$) Further analyses indicated that families with complete data had higher family income (t [681] = 3.78, $p < 0.001$; Cohen's $d = 0.33$) and occupational status (t [738] = 2.91, $p < 0.01$; Cohen's $d = 0.23$) than those with missing data. Families with complete data were also more likely to be in two-parent households than families with missing data (χ_2 [1] = 4.77, $p < 0.05$, Cramér's $V = 0.08$). Further, adolescents in families with complete data had higher grades than those in families with missing data (t [692] = 2.66, $p < 0.01$; Cohen's $d = 0.22$). Finally, adolescents in families with complete data also had higher music participation than those in families with missing data (t [735] = 2.35, $p < 0.05$; Cohen's $d = 0.19$). To help account for the missing data, I used full information maximum likelihood in the inferential

analyses and included demographic characteristics that demonstrated significant differences as covariates (Enders, 2010).

Plan of Analysis

My first research aim focused on examining patterns of mothers' talent socialization strategies. To address this aim, I conducted latent profile analyses (LPAs) in Mplus 8.3 (L.K. Muthén and Muthén 1998-2017) to identify distinct talent socialization profiles among mothers. For parsimony and consistency of analyses, I conducted the LPAs using the full analytic sample and examined the representation of each talent groups across a chosen profile solution. I estimated one- to eight-profile solutions and determined the most fitting solution using established diagnostic criteria for model fit. These included: a) the lowest estimates of the goodness of fit statistics for model selection (e.g., Bayesian Information Criterion [BIC]); b) high (≥.80) entropy levels, indicating clear discrimination between latent profiles; and c) statistically significant likelihood ratio tests (e.g., bootstrap likelihood ratio test), indicating that a given *k* class model has better fit than a previous *k*-1 model (Masyn, 2013). I also examined sample proportions within a given profile solution, with proportions greater than 5% indicating a substantial number of members within one profile. After determining the most optimal profile solution, I described the latent profiles based on unstandardized means of the indicators in order to retain the meaningfulness of the original scales. That is, I considered means scores between 4 (*Sometimes*) and 5 (*Very Often*) as highly frequent behaviors and mean scores between 1 (Never) and 2 (*Almost Never*) as less frequent behaviors.

My second research aim was to examine the extent to which profiles of socialization strategies are associated with adolescents' talent-related behaviors, such as academic achievement and non-academic talent engagement, within each talent group. Relatedly, my third

research aim is to examine the extent to which the associations between socialization profiles and talent-specific behaviors are moderated by adolescents' gender. To address these aims, I conducted planned comparisons between specific profiles using orthogonal contrast coding in order to make more specific comparisons across profiles yielded from the LPAs. Generally, I first examined relations between the contrasts and a specific talent behavior, controlling for adolescent gender and demographic covariates (i.e., 5th grade achievement, SES, and family structure [1 = *two parents*, 0 = *one parent*). Then, I included cross-products between adolescent gender (1 = *female*, 0 = *male*) and each contrast in the second step. In each analysis, I clustered the standard errors around the 23 middle schools the adolescents attended.

Results

Preliminary Analyses

Table 3.1 shows descriptive statistics of the study variables for the analytic sample overall and for each talent group. Girls were overrepresented in the academic and music groups and underrepresented in the sports group compared to boys. Mothers in the academic group more frequently instilled importance, taught skills, engaged in coactivity, and ensured practice than mothers in the sports and arts groups. Further, mothers in the academic group more frequently instilled importance and engaged in coactivity than those in the music group, and mothers in the arts group more frequently instilled importance than those in the sports group. Moreover, adolescents in the academic and music groups attained higher 7th grade GPAs than those in the sports group. For sports, arts and music, adolescents in a specific talent group reported higher engagement in the specific talent than those in other groups. For example, adolescents in the sports group had significantly higher levels of sports engagement than those in the academic,

Table 3.1

Means, Counts, Standard Deviations, and Percentages of Study Variables for Analytic Sample and Talent Subgroups

	Analytic sample n = 740		Academics n = 154		Sport n = 163		Art n = 189		Music n = 234			
Variable	M / *n*	SD / %	M / *n*	SD / %	M / *n*	SD / %	M / *n*	SD / %	M / *n*	SD / %	*F* / χ^2	η^2 / Cramér's *V*
Demographic characteristics												
Adolescent is female	353	48%	$98_{(+)}$	64%	$30_{(-)}$	18%	92	49%	$133_{(+)}$	57%	79.65***	0.33
5th grade achievement	0.01	0.98	0.23_{a}	0.89	-0.33_{b}	0.96	-0.01_{a}	1.02	0.09_{a}	0.96	7.60***	0.04
SES	0.03	0.81	0.14	0.81	-0.02	0.81	0.02	0.77	-0.02	0.82	1.51	0.01
Parental education	14.15	2.52	14.47	2.69	14.07	2.63	14.02	2.45	14.09	2.37	1.08	0.00
Family income	9.62	4.29	0.00	4.39	9.35	4.18	9.63	4.31	9.47	4.30	0.93	0.00
Occupational status	66.59	25.05	69.04	24.24	65.63	24.76	67.54	23.20	64.87	27.13	1.03	0.00
Mother is married	444	60%	103	67%	$85_{(-)}$	52%	107	57%	149	64%	9.30*	0.11
Socialization strategies												
Instill importance	4.01	1.26	4.52_{a}	0.84	3.65_{b}	1.37	4.05_{c}	1.24	3.90_{bc}	1.33	14.08***	0.05
Praise	4.72	0.72	4.82	0.52	4.69	0.80	4.76	0.65	4.63	0.81	2.44	0.01
Teach for improvement	4.12	1.10	4.38_{a}	0.82	3.97_{b}	1.21	4.00_{b}	1.18	4.17_{ab}	1.07	4.82**	0.02
Coactivity	3.17	1.45	3.75_{a}	1.15	2.75_{b}	1.50	3.13_{b}	1.42	3.13_{b}	1.49	13.40***	0.05
Provision of activities	2.91	1.62	2.97	1.54	3.04	1.65	2.66	1.62	3.00	1.64	2.15	0.01
Ensure practice	3.86	1.32	4.28_{a}	1.01	3.61_{b}	1.47	3.66_{b}	1.34	3.93_{ab}	1.32	9.02***	0.04
Watch engagement	4.18	0.97	4.16	0.88	4.17	1.08	4.17	0.97	4.21	0.96	0.11	0.00
Adolescent talent behaviors												
GPA	2.45	0.86	2.63_{a}	0.88	2.24_{b}	0.84	2.47_{ab}	0.81	2.48_{a}	0.88	5.36**	0.02
Sport engagement	3.17	1.69	2.81_{a}	1.68	3.90_{b}	1.59	3.10_{a}	1.63	2.96_{a}	1.66	14.31***	0.06
Art engagement	2.43	1.46	2.11_{a}	1.28	2.23_{a}	1.44	2.97_{b}	1.60	2.35_{a}	1.36	12.73***	0.05
Music engagement	1.97	1.50	1.77_{a}	1.30	1.77_{a}	1.38	1.66_{a}	1.30	2.50_{b}	1.70	15.20***	0.06

Notes. F/χ^2 represent the ANOVA F-statistic and Chi-squared estimate comparing the means/counts of each variable across talent subgroups, respectively. η^2 / Cramér's *V* represent the effect sizes of ANOVAs and chi-squared tests, respectively. η^2: 0.01 = Small, 0.06 = Moderate, 0.14 = Large. Cramér's *V*: 0.1 = Small, 0.3 = Moderate, 0.5 = Large. (+) represent observed frequencies significantly higher than expected (i.e., adjusted residual higher than +2.0) in chi-squared tests; (-) represent observed frequencies significantly lower than expected (i.e., adjusted residual lower than -2.0). Means sharing the same alphabetical superscript within each row are not significantly different from each other.
*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

Table 3.2

Bivariate Correlations between Study Variables by Adolescent Gender

	1	2	3	4	5	6	7	8	9	10	11	12	13
Socialization strategies													
1. Instill importance		.36***	.50***	.36***	.23***	.40***	.23***	.09	.04	.12*	.11*	.09	.01
2. Praise	.38***		.41***	.26***	.19***	.26***	.38***	.10	.04	.03	.02	.09	.01
3. Teach	.53***	.37***		.43***	.34***	.51***	.26***	.01	.09	.00	.07	.08	.02
4. Coactivity	.32***	.23***	.38***		.21***	.41***	.42***	-.05	.06	-.03	.11*	.02	.01
5. Provide	.40***	.18**	.34***	.27***		.35***	.28***	.07	.07	-.16**	.06	.02	.10
6. Practice	.49***	.32***	.45***	.40***	.44***		.31***	.09	.07	.01	.23***	.13*	.06
7. Watch	.27***	.26***	.29***	.35***	.33***	.29***		.00	.03	.00	.05	.05	.07
Adolescent outcomes													
8. GPA	.08	.18**	.11*	.04	.10	.19**	.04		-.07	-.04	.10	.47***	.35***
9. Sport engagement	-.01	-.02	.10	.04	.10	-.03	-.02	-.05		.10	.02	-.11	-.09
10. Art engagement	.04	-.06	.04	.08	.04	.01	.06	.02	.23***		.07	.02	-.05
11. Music engagement	.09	-.04	.08	-.02	.21***	.16**	.08	.19***	.02	.11*		.21**	.09
Demographic variables													
12. 5th grade test scores	.06	.18**	.03	.02	.08	.12*	.06	.45***	-.13*	-.03	.23***		.33***
13. SES	.16**	.18**	.06	.08	.15**	.15**	.11*	.29***	-.12*	-.04	.24***	.39***	

Notes. N = 740. Correlations below the diagonal are estimates for girls while correlations above the diagonal are estimates for boys. Cells highlighted in gray are statistically significant: lightest gray = small correlation (r = .10 to <.30), moderately light gray = moderate correlation (r = .30 to < .50), dark gray = large correlation ($r \geq .50$).
*p < 0.05. **p < 0.01. ***p < 0.001.

arts, and music group. Table 3.2 shows the bivariate correlations between study variables across adolescent gender. I found small, positive correlations between 7th grade GPA and praising, teaching, and ensuring practice among girls. By contrast, I found that arts engagement correlated positively with instilling importance but negatively with provisions of activities among boys. Among girls, music engagement also correlated positively with provision of activities and ensuring practice. For boys, music engagement correlated positively with instilling importance, engaging in coactivity, and ensuring practice.

Profiles of Mothers' Talent Socialization Strategies

For my first research aim, I examined the extent to which varying profiles of talent socialization strategies existed within families. I conducted LPAs on the full sample, as well as within each talent group in order to test whether profiles would replicate within each group. According to the model comparisons from the full sample LPA, a five-profile solution evidenced the most parsimonious and optimal model fit (see Appendix 3.2 for model comparisons and Appendix 3.3 for descriptive statistics of the five profiles). However, the LPAs conducted within each talent group had different profile solutions and profiles that do not overlap with the LPAs for the overall sample (Tables 3.3 and 3.4). For example, within the academic group (N = 154), only a two-profile solution evidenced the best fit to the data, and one of the profiles (Discussion-focused) was not found in the five profiles found in the LPAs for the overall sample but was a profile that was theoretically aligned with seminal studies on parental involvement and academic socialization (Hill & Tyson, 2009; Bhargava & Witherspoon, 2015). These discrepancies across LPAs suggested that socialization strategies entail some level of specificity within each talent group. Therefore, I made the decision to focus on LPAs conducted within each talent group.

Table 3.3

Results from Latent Profile Analyses for each Talent Group

Academic group (N = 154)							
Fit Statistics	One	Two*	Three	Four	Five	Six	Seven
Loglikelihood	-992.83	-903.23	-891.10	-878.10	-858.97	-849.90	-801.26
AIC	2003.66	1840.47	1832.20	1822.20	1799.93	1797.79	1716.52
BIC	2030.99	1892.10	1908.13	1922.42	1924.45	1946.60	1889.63
aBIC	2002.51	1838.29	1828.10	1817.97	1794.67	1791.51	1709.22
Entropy	-	0.82	0.81	0.83	0.91	0.92	0.98
VLMR *p*-value	-	0.000	0.159	0.210	0.321	0.284	0.351
LMR *p*-value	-	0.000	0.168	0.220	0.328	0.290	0.350
BLRT *p*-value	-	0.000	0.013	0.000	0.000	0.207	1.000
Sport group (N = 163)							
Fit Statistics	One	Two	Three	Four	Five*	Six	Seven
Loglikelihood	-1118.81	-1039.64	-1007.75	-981.40	-960.23	-932.61	-915.73
AIC	2255.62	2113.28	2065.51	2028.79	2002.46	1963.21	1945.45
BIC	2283.46	2165.874	2142.85	2130.88	2129.30	2114.81	2121.80
aBIC	2254.97	2112.05	2063.70	2026.41	1999.50	1959.68	1941.34
Entropy	-	0.87	0.89	0.85	0.96	0.94	0.95
VLMR *p*-value	-	0.000	0.001	0.345	0.037	0.177	0.838
LMR *p*-value	-	0.000	0.011	0.353	0.041	0.184	0.838
BLRT *p*-value	-	0.000	0.000	0.000	0.000	0.000	0.333
Art group (N = 189)							
Fit Statistic	One	Two	Three*	Four	Five	Six	Seven
Loglikelihood	-1284.71	-1177.33	-1123.57	-1044.89	-1032.42	-1009.53	-981.52
AIC	2587.42	2388.65	2297.14	2155.78	2146.84	2117.06	2077.03
BIC	2616.59	2443.76	2378.18	2262.76	2279.75	2275.90	2261.81
aBIC	2588.09	2389.91	2298.99	2158.23	2149.88	2120.69	2081.26
Entropy	-	0.92	0.97	.997	0.98	0.96	0.95
VLMR *p*-value	-	0.000	0.000	0.337	0.007	0.254	0.194
LMR *p*-value	-	0.000	0.000	0.343	0.008	0.254	0.198
BLRT *p*-value	-	0.000	0.000	0.000	0.095	0.429	0.000
Music group (N = 234)							
Fit Statistic	One	Two	Three	Four	Five*	Six	Seven
Loglikelihood	-1633.32	-1516.29	-1484.09	-1455.36	-1404.12	-1380.37	-1381.71
AIC	3284.64	3066.57	3018.19	2976.72	2890.25	2858.74	2877.41
BIC	3315.74	3125.31	3104.57	3090.75	3031.92	3028.05	3074.37
aBIC	3287.21	3071.43	3025.33	2986.15	2901.97	2872.75	2893.70
Entropy	-	0.75	0.87	0.82	0.97	0.98	0.93
VLMR *p*-value	-	0.000	0.077	0.286	0.002	0.416	0.434
LMR *p*-value	-	0.000	0.081	0.292	0.002	0.415	0.432
BLRT *p*-value	-	0.000	0.000	0.000	0.000	1.000	1.000

Note. Enumerated columns represent profile solutions tested. AIC = Akaike Information Criteria. BIC = Bayesian Information Criteria. aBIC = Sample size adjusted Bayesian Information Criteria. VLMR = Vuong-Lo-Mendell-Rubin likelihood ratio test. LMR = Lo-Mendell-Rubin likelihood ration test. BLRT = Bayesian Likelihood Ratio Test. *indicates chosen profile solution.

Table 3.3 shows the model fit comparisons across one- to eight profile solutions from the LPAs for each talent group. Within families in the academic group, a two-profile solution evidenced the most parsimonious and optimal model fit, given its substantial drops in all information criteria, high entropy, and consistently significant likelihood ratio tests. After the two-profile solution, there were increases in the BIC from the three- to six-profile solutions. Furthermore, at least two likelihood ratio tests were nonsignificant for higher profile solutions. This indicates that two profiles of socialization strategies were sufficient to explain the data within the academic group; profile solutions more than two did not contribute significantly to understanding existing patterns in the data. The academic socialization profiles consisted of a High and Diverse profile and a Discussion-focused profile (Table 3.4). Mothers in the High and Diverse profile (n = 94; 61%) engaged in almost all socialization strategies at high levels (i.e., scores above 4 = *Sometimes*). The one exception is their provision of activity score, which did not reach the set criterion for high frequency behaviors. Nevertheless, this score is still relatively higher than mothers in the Discussion-focused profile (n = 60, 39%), who reported high engagement in instilling importance and praising.

Within families in the sports group, I chose a five-profile solution, as it evidenced the lowest information criteria whose likelihood ratio tests were all statistically significant (Table 3.3). First, like the academic group, one profile in the sports group included a High and Diverse profile (n =26, 16%) whose mothers engaged in relatively high frequencies in almost all socialization strategies (Table 3.4). However, unlike the High & Diverse profile in the academic group, this profile in the sports group reported higher engagement in provision but lower engagement in coactivity. Second, a plurality of mothers in the sports group comprised a Low, Praise Only profile (n = 67, 41%), wherein mothers reported higher engagement in praising but

Table 3.4

Means of Talent Socialization Profiles across Items from Latent Profile Analyses

Academics group (N = 154)								
Profile	Talk	Praise	Teach	Coactivity	Provide	Practice	Watch	n
1. High & Diverse	4.75$_{a}$	4.94$_{a}$	4.77$_{a}$	4.40$_{a}$	3.42$_{a}$	4.81$_{a}$	4.51$_{a}$	94
2. Discussion-focused	4.15$_{a}$	4.63$_{a}$	3.77$_{a}$	2.72$_{a}$	2.27$_{a}$	3.45$_{a}$	3.63$_{a}$	60
f	21.06***	13.60***	86.02***	163.74***	23.42***	117.54***	46.91***	
R_2	0.12	0.08	0.36	0.52	0.13	0.44	0.24	

Sport group (N = 163)								
Profile	Talk	Praise	Teach	Coactivity	Provide	Practice	Watch	n
1. High & Diverse	4.92$_{abcd}$	5.00	5.00$_{abd}$	3.73$_{abc}$	5.00$_{abc}$	4.73$_{ab}$	4.73$_{a}$	26
2. Moderate & Diverse	3.92$_{c}$	4.73	4.50$_{ce}$	3.19$_{d}$	4.00$_{adef}$	3.72	4.46	26
3. Praise-Provide-Watch	3.14$_{d}$	4.77	3.64$_{de}$	2.09$_{cd}$	5.00$_{dgh}$	3.45$_{b}$	4.23	22
4. Praise-Teach-Watch	3.95$_{a}$	4.95	4.14$_{a}$	2.55$_{a}$	3.00$_{begi}$	3.81	4.27	22
5. Low, Praise Only	3.12$_{b}$	4.43	3.42$_{bc}$	2.49$_{b}$	1.20$_{cfhi}$	3.09$_{a}$	3.79$_{a}$	67
f	11.94***	3.63**	12.77***	5.54***	1587.25***	6.88***	4.75**	
R_2	0.23	0.08	0.24	0.12	0.98	0.15	0.11	

Art group (N = 189)								
Profile	Talk	Praise	Teach	Coactivity	Provide	Practice	Watch	n
1. High & Diverse	4.60$_{a}$	4.94$_{a}$	4.55$_{a}$	3.63$_{a}$	4.54$_{ab}$	4.37$_{a}$	4.53$_{a}$	68
2. High, Low Provision	4.24$_{b}$	4.79	4.35$_{b}$	3.59$_{b}$	2.94$_{ac}$	4.00$_{b}$	4.21	34
3. Low, Praise Only	3.55$_{ab}$	4.60$_{a}$	3.45$_{ab}$	2.55$_{ab}$	1.06$_{bc}$	2.98$_{ab}$	3.89$_{a}$	87
f	16.61***	5.44**	22.1***	15.25***	1832.52***	28.35***	9.16***	
R_2	0.15	0.06	0.19	0.14	0.95	0.23	0.09	

Music group (N = 234)								
Profile	Talk	Praise	Teach	Coactivity	Provide	Practice	Watch	n
1. High & Diverse	4.98$_{acef}$	5.00$_{ab}$	4.80$_{ab}$	3.80$_{a}$	5.00$_{abc}$	4.78$_{bcf}$	4.78$_{abc}$	46
2. Moderate & Diverse	4.21$_{dfg}$	4.61	4.32	3.13	4.00$_{adef}$	4.58$_{e}$	4.39	38
3. Praise-Provide-Watch	3.21$_{beg}$	4.47$_{b}$	3.89$_{b}$	3.16	5.00$_{dgh}$	3.89$_{df}$	4.16$_{c}$	19
4. Praise-Teach-Watch	3.95$_{ab}$	4.67	4.20	3.20	2.68$_{begi}$	3.91$_{ab}$	4.11$_{a}$	55
5. Low, Praise Only	3.22$_{cd}$	4.43$_{a}$	3.75$_{a}$	2.67$_{a}$	1.00$_{cfhi}$	3.12$_{acde}$	3.87$_{b}$	76
f	18.76***	3.88**	8.36***	4.32**	2985.38***	18.50***	7.81***	
R_2	0.25	0.06	0.13	0.07	0.98	0.25	0.12	

Note. Within each talent group and column of parental socialization strategy, cells sharing identical superscripts are significantly different from each other at $p < 0.05$.

not in other strategies (Table 3.4). Finally, three profiles in the sports group composed of what I considered as “specialization" profiles, wherein mothers reported high engagement in only a few specific strategies. These profiles consisted of varying combinations of praising, teaching, provision, and watching: Moderate (*n* = 26, 16%), Praise-Coach-Watch (*n* = 22, 14%), and Praise-Provide-Watch (*n* = 22, 14%) profiles (Table 3.4).

Among families in the arts group, a three-profile solution evidenced the most parsimonious and optimal model fit. Whereas profile solutions higher than three classes evidenced lower information criteria and high entropy, these solutions had at least one nonsignificant likelihood ratio test (Table 3.3). Two profiles in the arts group were similar to those in the sports group: High & Diverse (*n* =68, 36%) and Low, Praise Only (*n* = 87, *n* = 46%) profiles (Table 3.4). The third profile consisted of a High, non-Provision profile (*n* = 34, 18%), marked by a similar pattern as the High & Diverse profile except that mothers in this profile reported lower provision of activities (Table 3.4).

Within families in the music group, a five-profile solution evidenced the lowest levels of the information criteria that also had high entropy and consistently significant likelihood ratio tests (Table 3.3). Of the five profiles in the music group, four showed similar patterns as those in the sports group: High & Diverse (*n* = 45, 20%), Low, Praise Only (*n* =76, 32%), Praise-Teach-Watch (*n* = 55, 24%), and Praise-Provide-Watch (*n* = 18, 8%) profiles (Table 2.4). Notably, the High & Diverse profiles in the music group exhibited means close to the upper threshold of the item scales. The last profile in the music group consisted of a Moderate profile (*n* = 38, 16%), marked by a pattern of moderately high engagement across socialization items(Table 3.4).

Comparisons of Profiles across Adolescents' Talent Behaviors

For my second research aim, I tested planned comparisons using orthogonal contrast codes across the profiles found in the LPAs for each talent group. I first hypothesized that low socialization profiles indicating mothers' non-engagement in talent-related socialization be associated with lower levels of adolescents' talent-related behaviors than profiles that are more involved. I then tested two competing hypotheses based on the Stage-Environment Fit Theory (Eccles, Midgley et al., 1993). On one hand, a Moderation Overall hypothesis posits that

moderate levels of socialization will be associated with higher talent-related behaviors than high levels of socialization overall. On the other hand, a Multiple Pathways hypothesis posits that moderate and high levels of socialization may both similarly predict higher talent-related behaviors among adolescents. Contrast codes for each talent group are presented in Appendix 3.4. Per my third research aim, I then exploratorily examined the extent to which links between socialization profiles and talent-related beliefs and behaviors varied across adolescent gender.

Table 3.5

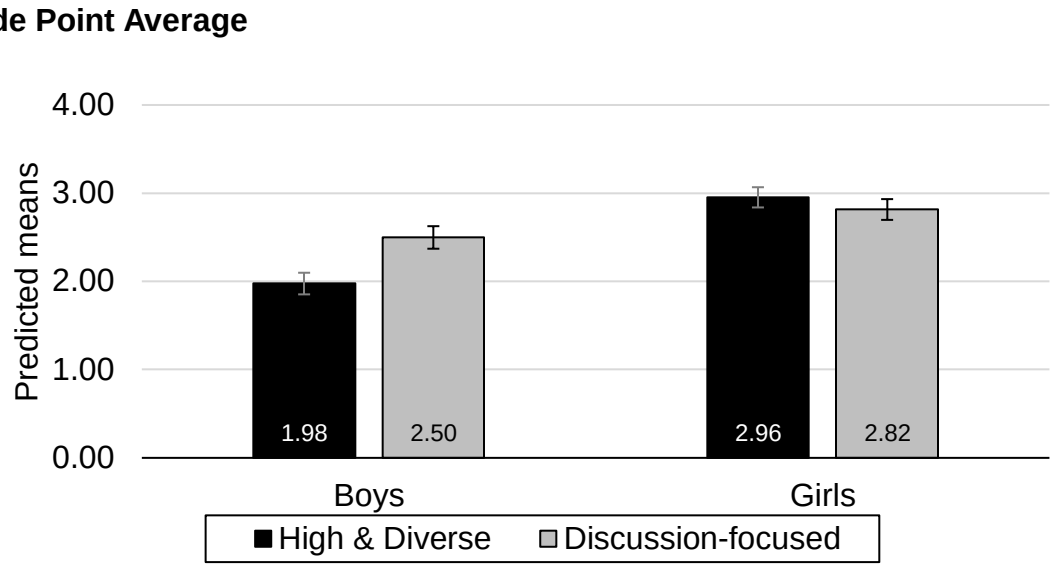
Unstandardized Results for the Associations between Academic Socialization Profiles and Academic Achievement

	GPA	
	Full	Interaction
Predictors	B (SE)	B (SE)
Contrast		
C1. High vs. Discussion	-0.05	-0.46*
	(0.12)	(0.20)
Adolescent is female	0.58***	0.17
	(0.11)	(0.20)
Cross-product		
C1 x female		0.64*
		(0.29)
Covariates		
5th grade achievement	0.25***	0.26***
	(0.07)	(0.06)
SES	0.26*	0.27**
	(0.11)	(0.10)
Two-parent household	0.20	0.14
	(0.14)	(0.13)
Constant	2.05***	2.37***
	(0.13)	(0.16)
N	154	154

Note. Results presented for the academic talent group (N = 154). SE = Robust standard errors based on 23 schools. *$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

Figure 3.1

Significant Interaction between Adolescent Gender and Socialization Profile Contrast within Academic Group



Note. Error bars indicate standard errors.

Academic Group

Given that only two socialization profiles were found within the academic group, I conducted basic dummy-variable comparisons to examine variations in adolescents' 7th grade academic performance between the High and Diverse and Discussion-focused profiles. I present results from these comparisons in Table 3.5. Girls had higher overall GPAs than boys (B = 0.58, SE = 0.11, p < 0.001), controlling for covariates. Further, although there were no significant main effects of the contrast between the High & Diverse and the Discussion-focused profiles on 7th grade GPA, there was a significant interaction between this contrast and adolescent gender in the next step (B = 0.64, SE = 0.64, $p = < 0.05$). I present a graphic representation of this interaction in Figure 3.1. In line with a Moderation Overall hypothesis, boys in the Discussion-focused profile (M = 2.50, SE = 0.13) had higher 7th grade GPAs on average than boys in the

High and Diverse profile (M = 1.98, SE = 0.12). However, there were no significant differences between girls belonging in the High and Diverse (M = 2.96, SE = 0.11) and the Discussion-focused profiles (M = 2.82, SE = 0.12).

Sports Group

Given five socialization profiles found in the sports group, I tested four contrasts within the sports group (see Appendix 3.4). First, for a given dependent variable, I compared the mean of the Low, Praise Only profile to the combined means of the other four profiles that I deemed as relatively more involved. Second, I compared the mean of High & Diverse profile to the combined means of the Moderate and the two specialized profiles (i.e., Praise-Provide-Watch and Praise-Coach-Watch). Third, I compared the mean of the Moderate profiles to the combined means of the two specialized profiles. Finally, I compared the mean of the Praise-Provide-Watch profile to that of the Praise-Coach-Watch profile.

Results from these comparisons are presented in Table 3.6. Girls engaged in sports activities less than boys overall (B = 1.09, SE = 0.37, p <0.01) but there were no significant differences in any of the contrasts overall. However, in the next step, there was a significant interaction between adolescent gender and the contrast between the High & Diverse profile and the Moderate and specialized profiles combined (B = -0.49, SE = 0.21, p < 0.05). Aligning with Moderate Overall hypothesis, this significant interaction indicated that girls in the High & Diverse profile (M = 1.47, SE = 0.57) engaged in sports at lower rates than girls in the Moderate and specialized profiles combined (M = 3.42, SE = 0.37; see Figure 3.2C). There were no differences between these profiles among boys.

Table 3.6

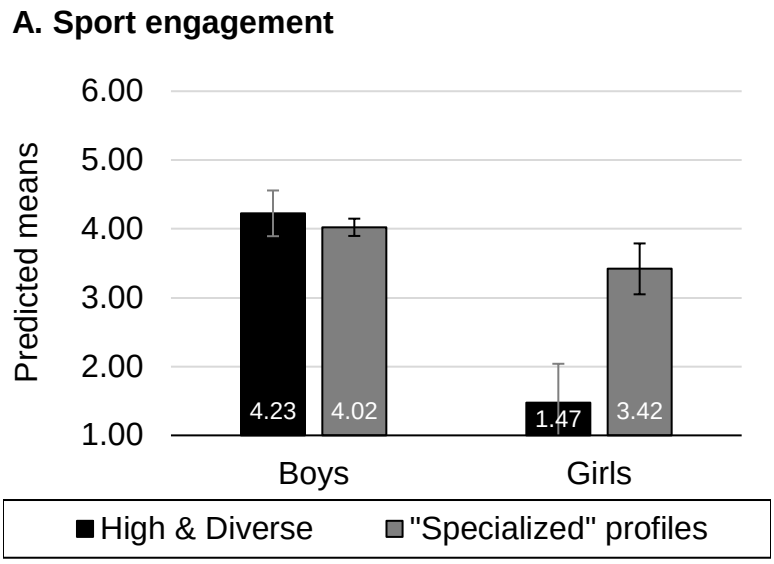
Unstandardized Results for the Associations between Sports Socialization Profiles and Sports Engagement

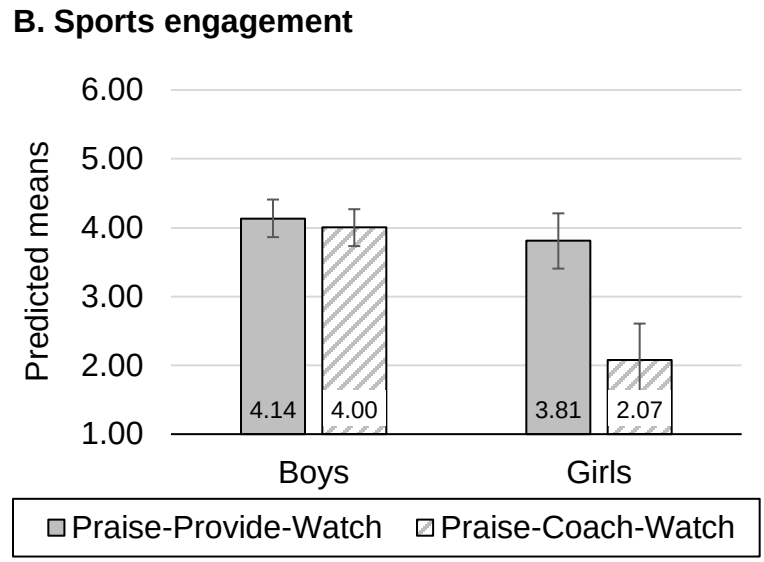
	Sport engagement	
	Full	Interaction
Predictors	B (SE)	B (SE)
Contrast		
C1. "Involved" vs. Low, Praise only	0.03	0.02
	(0.05)	(0.05)
C2. High vs. "Moderate/Specialized"	-0.04	0.04
	(0.08)	(0.10)
C3. Moderate vs. Praise-Provide-Watch & Praise-Coach-Watch	-0.15	-0.14
	(0.11)	(0.13)
C4. Praise-Provide-Watch vs. Praise-Coach-Watch	0.23	0.06
	(0.22)	(0.24)
Adolescent is female	-1.09**	-0.89**
	(0.37)	(0.28)
Cross-product		
C1 x female		0.10
		(0.10)
C2 x female		-0.49*
		(0.21)
C3 x female		-0.06
		(0.23)
C4 x female		1.10**
		(0.37)
Covariates		
5th grade achievement	-0.20	-0.17
	(0.18)	(0.18)
SES	-0.17	-0.17
	(0.14)	(0.14)
Two-parent household	0.20	0.13
	(0.26)	(0.24)
Constant	3.95***	3.99***
	(0.21)	(0.20)
N	162	162

Note. "Involved" indicate socialization profiles going beyond praise. "Specialized" indicate profiles with high frequency behaviors in only *some* strategies. SE = Robust standard errors based on 23 schools.
* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Figure 3.2

Significant Interaction between Adolescent Gender and the Contrasts within Sports Group





Note. Error bars indicate standard errors.

There was a significant interaction between adolescent gender and the contrast between the Praise-Provide-Watch profile and the Praise-Coach-Watch profile (B = 1.10, SE = 0.37, $p < 0.01$; see Figure 3.2B) in predicting 7th grade sports engagement. This interaction indicated that girls in the Praise-Provide-Watch profile (M = 3.81, SE = 0.40) engaged in sports at higher rates

than girls in the Praise-Coach-Watch profile (M = 2.07, SE = 0.53). Among boys, however, there were no differences in sports engagement among those in the Praise-Provide-Watch-profile (M = 4.14, SE = 0.27) and the Praise-Coach-Watch profile (M = 4.00, SE = 0.27). There were also no gender differences in sports engagement within the Praise-Provide-Watch profile, but boys in the Provide-Coach-Watch profile had higher sports engagement than girls in the same profile.

Table 3.7

Unstandardized Results for the Associations between arts Socialization Profiles and Arts Engagement

	Art engagement	
	Full	Interaction
Predictors	B (SE)	B (SE)
Contrast		
C1. "Involved" vs Low, Praise Only	0.08	-0.10
	(0.07)	(0.10)
C2. High vs. High, Non-Provision	-0.15	-0.22
	(0.21)	(0.25)
Adolescent is female	-0.32	-0.16
	(0.18)	(0.19)
Cross-product		
C1 x female		0.39**
		(0.13)
C2 x female		0.00
		(0.32)
Covariates		
5th grade achievement	-0.11	-0.09
	(0.16)	(0.16)
SES	-0.21	-0.21
	(0.21)	(0.20)
Two-parent household	0.11	0.06
	(0.33)	(0.33)
Constant	3.13***	3.07***
	(0.20)	(0.21)
N	187	187

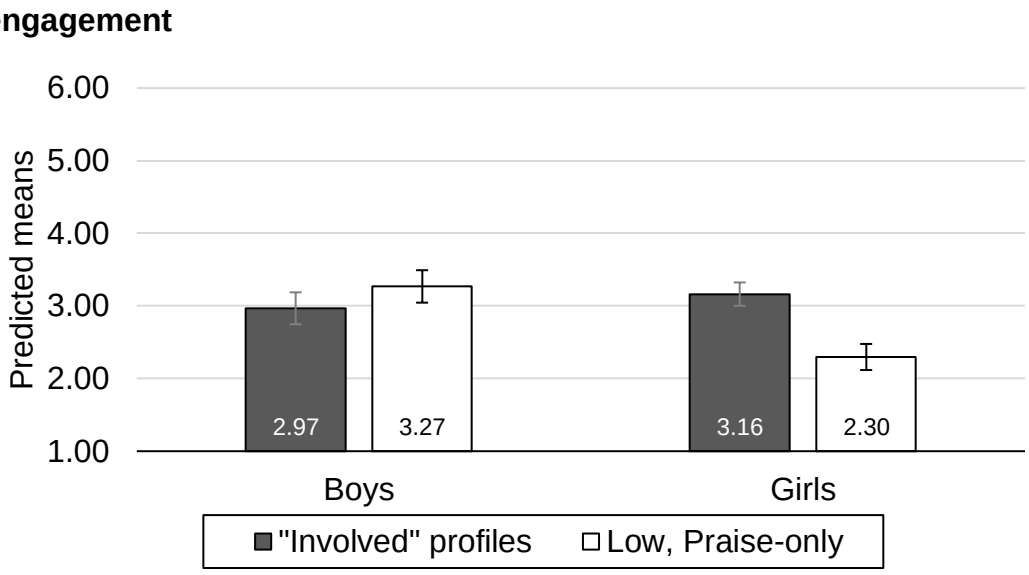
Note. C#'s are orthogonal contrasts of socialization profiles within each talent group. "Involved" indicate socialization profiles going beyond praise. SE = Robust standard errors based on 23 schools.
* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Arts Group

I tested two contrasts based on the three socialization profiles found in the arts group (see Appendix 3.4). For a given dependent variable, I first compared the mean of the Low, Praise Only profile to the combined means of the High & Diverse profile and the High, Non-Provision profile (i.e., "Involved" profiles). Then, I compared the mean of the High & Diverse profiles to the mean of the High, Non-Provision profile. I present the results from these planned comparisons in Table 3.7. There were nonsignificant differences across adolescent gender and either of the contrasts tested, controlling for covariates.

Figure 3.3

Significant Interaction between Adolescent Gender and the Contrasts within Arts Group



Note. Error bars indicate standard errors.

However, I found a significant interaction between gender and the contrast comparing the "Involved" profiles and the Low, Praise-Only profile (B = 0.39, SE = 0.13, $p < 0.01$). As predicted, this interaction indicated that girls in the "Involved" profiles (M = 3.16, SD = 0.16)

engaged in arts activities at higher rates in 7th grade than girls in the Low, Praise-Only profile (M = 2.30, SD = 0.18; see Figure 3.3). Couple this association with the nonsignificant differences between the High & Diverse and the High, Non-Provision profiles (Table 3.7), these findings aligned with a Multiple Pathways hypothesis for girls, which stated similar outcomes among adolescents whose families were at least moderately engaged in their talent development. Nevertheless, there were nonsignificant differences in adolescents' 7th grade arts engagement between the "Involved" profiles (M = 2.97, SD = 0.22) and the Low, Praise Only profile (M = 3.27, SD = 0.22) specifically among boys.

Music Group

As with the sports group, I tested four contrasts across the five socialization profiles found within the music group (see Appendix 3.4): 1) a contrast between the Low, Praise-Only profile and the four other "Involved" profiles combined; b) a contrast between the High and Diverse profile and the Moderate and specialized profiles combined; c) a contrast between the Moderate & Diverse profile and the specialized profiles combined; and d) a contrast between the Praise-Provide-Watch profile and the Praise-Teach-Watch profile.

I present the results of these contrasts in Table 3.8. First, adolescents in the "Involved" profiles combined engaged in music activities more than those in the Low, Praise Only profile overall (B = 0.12, SE = 0.05, $p < 0.01$), confirming my first hypothesis. Second, adolescents in the High and Diverse profile and in moderate specialized profiles combined were not significantly different from each other in terms of their music engagement, aligning with a Multiple Pathways hypothesis. Third, and unexpectedly, adolescents in the Moderate and Diverse profile engaged in music activities less than the specialized profiles (i.e., Praise-Provide-Watch and Praise-Teach-Watch profiles; B = -0.29, SE = 0.13, $p < 0.05$). Relatedly, adolescents

in the Praise-Provide-Watch profile engaged in music activities more than those in the Praise-Teach-Watch profile (B = 0.49, SE = 0.24, $p < 0.05$).

Table 3.8

Unstandardized Results for the Associations between Music Socialization Profiles and Music Engagement

	Music engagement	
	Full	Interaction
Predictors	B (SE)	B (SE)
Contrast		
C1. "Involved" vs. Low, Praise only	0.12**	0.11
	(0.05)	(0.09)
C2. High vs. "Moderate/Specialized"	0.04	-0.00
	(0.07)	(0.10)
C3. Moderate vs. Praise-Provide-Watch & Praise-Teach-Watch	-0.29*	-0.19
	(0.13)	(0.22)
C4. Praise-Provide-Watch vs. Praise-Teach-Watch	0.49*	0.11
	(0.24)	(0.38)
Adolescent is female	-0.46*	-0.35
	(0.23)	(0.24)
Cross-product		
C1 x female		0.01
		(0.11)
C2 x female		0.08
		(0.11)
C3 x female		-0.16
		(0.25)
C4 x female		0.62
Covariates		
5th grade achievement	0.18	0.14
	(0.16)	(0.17)
SES	0.44*	0.46**
	(0.17)	(0.17)
Two-parent household	0.05	0.09
	(0.16)	(0.16)
Constant	2.88***	2.77***
	(0.15)	(0.16)
N	234	234

Note. "Involved" indicates socialization profiles beyond praise. "Specialized" indicates profiles with high frequency behaviors in only *some* strategies combined. SE = Robust standard errors based on 23 schools.
* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Given the unexpected findings with regards to the Praise-Provide-Watch profile, I conducted follow-up tests to individual profiles to the Praise-Provide-Watch profile (see Appendix 3.5). Adolescents in the Praise-Teach-Watch profile engaged in music activities more than those in the other profiles except the High & Diverse profile, wherein adolescents engaged in music activities at similar rates. Hence, aligned with a Multiple Pathways hypothesis, adolescents in the Praise-Provide-Watch and High & Diverse profiles had similarly higher music engagement overall compared to those in the other profiles. I found no gender interaction in any of the associations.

Discussion

Based on EEVT's family socialization model and Stage-Environment Fit Theory, the current study examined relations between African-American mothers' socialization strategies and 7th grade adolescents' achievement behaviors in specific talent domains. Overall, I found distinct constellations of talent socialization strategies occurring within households, which varied across talent domains. I also found different associations between socialization patterns and talent-related behaviors for each talent group in the sample (see Table 3.9 for a summary of findings from the planned contrasts). Finally, in most talent groups, I found predictive pathways between socialization strategies and talent-related behaviors that were contingent upon adolescents' gender. These findings highlight the importance of considering the ways in which socialization strategies distinctly matter for specific domains and different groups of adolescents.

The Utility of Pattern-Centered Approaches in Examining Family Socialization

The current study expands upon the field's understanding of the content of African-American family socialization strategies by uncovering patterns in these strategies across households. Currently, we know a lot about the wide variety of socialization strategies that

parents may implement to foster adolescents' skills and talent development (Epstein, 1995; Furstenberg et al., 1999; Simpkins et al., 2015; see Study 1) but less so of the diverse ways in which parents use these strategies in combination. Past studies using variable-centered approaches often examine the unique and isolated effects of individual parental behaviors (e.g., Davis-Kean, 2005; Hill & Tyson, 2009; Wang et al., 2014; Wilder, 2014). However, this approach fails to account for the ways in which multiple behaviors operate *conjointly* to explain variation in adolescent development. As a result, studies have also examined the combined contributions of parents' behaviors on adolescent outcomes via composite scales or latent variables (e.g., Gutman & Midgley, 2000; Simpkins et al., 2012, 2015; Trask-Tate & Cunningham, 2010). However, this approach implicitly assumes that parents use a heterogenous set of parenting items at uniform magnitudes (i.e., low, moderate, high levels). That is, the use of overall scales of parent behaviors obscures the likely possibility that parents use different strategies to varying degrees. Ultimately, these variable-centered approaches cannot make claims about the varying combinations of socialization strategies that parents actually use for their children's talent development.

As expected, patterns of socialization emerged that evidenced uniform levels across the socialization strategies under investigation. Specifically, I found a High and Diverse profile across each talent group, wherein mothers reportedly engaged in all socialization strategies under investigation at relatively high frequencies. Further, within the sports and music groups, I also found Moderate and Diverse profiles wherein mothers engaged in all socialization strategies frequently but to a lesser degree than the High & Diverse profiles. However, also as expected, I found different subgroups of mothers who engaged and specialized in only *a few* strategies (e.g., Praise-Provide-Watch). Further, within the recreational talent groups, a profile indicating lower

socialization emerged but did not reflect a uniform pattern of socialization. Instead, mothers in the Low, Praise Only profiles frequently engaged in praising strategies to help adolescents in their talent development. Overall, these varied constellations of socialization strategies across talent groups challenge assumptions of uniformity in past variable-centered research.

Furthermore, within the academic group, there was a subgroup of mothers who represented a Discussion-focused profile, wherein they engaged in strategies like instilling importance and praise more frequently but in other strategies less frequently. This subgroup aligns well with parental involvement behaviors that Hill & Tyson (2009) deemed as academic socialization, which is found to be the strongest predictor of academic achievement in adolescence compared to other types of parental involvement. Further, the emergence of this profile within the academic group aligns with past studies that have found that academic socialization increases across adolescence whereas home-based and school-based involvement strategies decreases (Bhargava & Witherspoon, 2015).

Overall, these diverse profiles provide a more concrete and specific understanding of the heterogeneous ways in which African-American mothers use socialization strategies. Unfortunately, the nuances shown by these profiles would likely be obscured when using approaches that combine a set of related yet diverse strategies into a composite or latent variable scale. Hence, future studies examining family socialization strategies in holistic ways should be cognizant of the assumptions of variable-centered approaches, as uniform combinations of socialization strategies may not largely reflect the socialization that occurs within households.

Stage-Environment Fit in Family Socialization of Adolescents' Talents

Stage-Environment Fit Theory postulates that parents must modulate their control over their children's development during adolescence, as youths increasingly desire self-

determination over their own lives. Such a claim is bolstered by prior studies that have found that highly involved strategies like teaching and coactivity have inconsistent, sometimes negative, links to adolescents' domain achievement (Froiland et al., 2012; Hill & Tyson, 2009; Patall et al., 2008; Wilder, 2014). Following these bases, I tested two interpretations of the need for parental modulation of control (Eccles, Midgley et al., 1993). A Moderation Overall hypothesis posited that adolescents would have higher talent achievement and engagement if mothers engaged in more moderate levels of socialization than in low or high levels of socialization. However, a Multiple Pathways Hypothesis posited that many mothers may already be aware of and responsive to the level of socialization their adolescents need. Hence, adolescents would have similarly high talent-related achievement and engagement as long as their mothers are at least moderately engaged.

Overall, I found distinct patterns of associations between mothers' socialization profiles and adolescents' talent-related behaviors across talent groups. Within the academic group, I found support for the Moderation Overall hypothesis among boys, with those in the Discussion-focused profiles having higher GPAs at the end of 7th grade than those in the High and Diverse profiles. However, I found that girls across these two academic socialization profiles did not differ in GPAs, supporting the Multiple Pathways hypothesis. Framed within Stage-Environment Fit Theory (Eccles, Midgley et al., 1993), these findings indicate that commonly accepted gendered socialization processes within African-American families may have some application for the academic development of girls and boys.

Specifically, prior studies have examined gendered socialization processes within African-American families, wherein "African-American mothers raise their daughters but love their sons" (Mandara et al., 2010; McLoyd, 1990). That African-American mother "raise their

daughters" suggests that mothers are more highly involved in their daughters' lives (Mandara et al., 2010; McLoyd, 1990). Indeed, findings suggest that all of the mothers in the academic group are at least moderately involved in adolescents' academic development. That girls in this group had relatively higher academic achievement in 7th grade than boys and did not differ across profiles suggest that individual differences in mothers' socialization patterns are indicative of mothers' responsiveness to girls' developmental needs in academics.

By contrast, that African-American mothers' "love their sons" suggest that mothers use more warmth when engaging with boys than girls. Indeed, boys had higher GPAs when mothers primarily praise and positively converse with their sons about the value of education than when mothers are highly involved in many other strategies. Beyond discussion strategies, boys may perceive mothers to be overly involved in their academic development, undermining their needs for self-determination in academics (Eccles, Midgley et al. 1993). These patterns also align with past studies finding that strategies like educational discussions (i.e., academic socialization) are the strongest predictor of academic achievement than other home-based and school-based strategies (Hill & Tyson, 2009). Hence, findings suggest that African-American mothers' warmth and "love" for their sons may be sufficient and developmentally appropriate to help boys in their academic development. Overall, findings indicated that two competing hypotheses based on the modulation of parental control suggested by Stage-Environment Fit Theory aligned with existing gendered socialization processes within African-American families.

Table 3.9

Summary of Study 2 Findings

Contrasts	Findings	Conclusions
Academic group: (DV: GPA)		
C1. High vs. Discussion-focused	Boys: High < Discussion-focused Girls: High = Discussion-focused	Moderation Hypothesis for Boys Multiple Pathways for Girls
Sports group (DV: sports engagement)		
C1. "Involved" vs. Low, Praise Only	Overall: Null	Hypothesis 1 not confirmed
C2. High vs. "Moderate/Specialized"	Girls: High < "Moderate/Specialized" Boys: Null	Moderation Hypothesis for Girls Null for Boys
C3. Moderate vs. Praise-Provide-Watch and Praise-Coach-Watch	Overall: Null	Null
C4. Praise-Provide-Watch vs. Praise-Coach-Watch	Girls: Praise-Provide-Watch > Praise-Coach-Watch Boys: Null	Moderation Hypothesis for Girls Null for Boys
Arts group (DV: arts engagement)		
C1. "Involved" vs. Low, Praise Only	Girls: "Involved" > Low, Praise Only Boys: Null	Hypothesis 1 confirmed for Girls Hypothesis 1 not confirmed for Boys
C2. High vs. High, Non-Provision	Overall: Null	Multiple Pathways for Girls Null for Boys
Music group (DV: music engagement)		
C1. "Involved" vs. Low, Praise Only	Overall: "Involved" > Low, Praise Only	Hypothesis 1 confirmed
C2. High vs. "Moderate/Specialized"	Overall: Null	Multiple Pathways, specifically High and Praise-Provide-Watch profiles
C3. Moderate vs. Praise-Provide-Watch and Praise-Teach-Watch	Overall: Moderate < Praise-Provide-Watch and Praise-Teach-Watch	
C4. Praise-Provide-Watch vs. Praise-Teach-Watch	Overall: Praise-Provide-Watch > Praise-Teach-Watch	

Within the sports group, I found partial support for the Moderation analyses, namely for girls. Specifically, the patterns of associations found within athletic girls suggested that girls whose mothers primarily praised, provided activities, and watched their children engage in sports had higher sports participation than girls in other profiles. These findings support prior qualitative studies that have found that youths often find parents' demandingness and "coaching from the sidelines" as problematic to their athletic participation (Omli & Wiese-Bjornstal, 2011). Studies on sports socialization have found that these negative parental behaviors put excessive pressures on youths that can increase anxiety and decrease enjoyment in sports (Brustad et al., 2001). Further, African-American mothers who engaged primarily in praising, providing activities, and watching adolescents' sports engagement reflected the parenting behaviors that youths most prefer (Omli & Wiese-Bjornstal, 2011). From a Stage-Environment Fit lens, then, this pattern of behaviors may be developmentally responsive to the needs of athletic girls.

Like the nonsignificant relations among academic girls, there were no associations between socialization profiles and sports engagement among athletic boys. Past studies have found that girls are generally expected to achieve better in academics than boys (Varner & Mandara, 2014; Wang et al., 2014), and boys are generally socialized with a higher emphasis in athletic endeavors than girls (e.g., Beamon, 2010). As gendered socialization processes often begin in early childhood (see Leaper & Friedman, 2007), socialization of academics for girls and of sports for boys likely have already occurred before adolescence. As such, it would be less likely to find any added contributions of mothers' socialization strategies at 7th grade for girls' academic achievement and boys' sports engagement. Further, support for the Moderation Hypothesis for academic boys and athletic girls indicates the importance of affording youths the autonomy to exercise their own competence in domains where their gender does not align with

prevailing gender stereotypes. Overall, gender differences in the links between mothers' socialization and adolescents' talent-related behaviors suggest the need to account for the needs of youths in adolescence as well as the gendered nature of domains like academics and sports.

Musically talented adolescents in the High and Diverse profile and the Praise-Provide-Watch profile had similarly higher music engagement than their counterparts in other profiles. Likewise, artistically talented girls in the High and Diverse and the High, Non-Provision profiles had similarly higher arts engagement than their counterparts in the Low, Praise Only profile; no significant relations were found, however, among artistically talented boys. Overall, these findings aligned with a Multiple Pathways hypothesis based on a specific interpretation of Stage-Environment Fit Theory's (Eccles, Midgley et al., 1993). That is, that mothers may know what their adolescents' individual needs, and so, individual differences in these needs entail multiple pathways toward talent development, so long as mothers are at least moderately involved Furthermore, these findings are in line with integrative models of minority child development (Garcia-Coll et al., 1993) and family management perspectives (Furstenberg et al., 1999) positing that family socialization processes are heterogeneous and adaptively responsive to their children's contexts and developing talents and skills. As such, the best socialization paths for girls' art engagement and adolescents' music engagement were not exclusive to just one specific pattern of family socialization. Many patterns linked to adolescents' talent engagement involved mothers' frequent use of only some, not all, socialization strategies.

Limitations and Future Directions

The current study provides evidence for the utility in integrating Stage-Environment Fit Theory and EEVT's family socialization models in understanding the ways in which parents may support youths' talent development in adolescence. Still, there are important limitations to this

study that future research must address. First, the small sample sizes within talent groups must be considered with caution, as some of the links found in the analyses may be underpowered and therefore increases the likelihood of a type I error (i.e., false positive results). Limitations in the ways in which the surveys were collected, like probing mothers' socialization strategies for only one specific adolescent talent, contributed to lower sample sizes per talent group. However, the present study provides at least initial insights into the ways in which African-American mothers socialize the domain skills of talented adolescents, a contribution that should not be so easily discounted. Nevertheless, future work examining associations between patterns of talent socialization strategies and adolescents' talent-related outcomes must include larger sample sizes across talent domains and adolescent gender to verify the associations found in the current study.

Second, prior studies have found that different socializers' (e.g., fathers) strategies have different associations with youths' domain-specific development than those of mothers' strategies (e.g., McHale et al., 2006; Simpkins et al., 2015). Mothers almost exclusively made up the primary caregivers in the MADICS data (approximately 90% of the sample). Hence, I eliminated other socializers from the analytic sample in order to avoid muddying specific associations between socializer's behaviors and adolescents' outcomes. To this end, associations found in the current study may likely only apply to African-American mothers' socialization. Nevertheless, future studies should expand examination of family socialization processes from the perspective of different socializers within the family unit, as a family systems perspective highlights the joint contributions of the family unit as a whole on youths' development.

Third, though guided by theoretical frameworks positing specific directions of influences, the current study largely examined cross-sectional associations and therefore can neither make claims for temporal precedence nor directionality of influences. Given that much of the foci of

this study has been largely understudied, future work on these topics that relies on longitudinal data is needed to further confirm or disconfirm the present study's findings. Fourth, it is also likely that youths possess talents in more than one domain (see Study 1), but limitations in the survey data made it impossible to examine the ways in which African-American mothers support youths with multiple talents. As such, future work should examine the extent to which family socialization occurs across multiple domains and are linked to multiple outcomes. Further, according to EEVT's family socialization model, parents' child-specific beliefs and behaviors are linked to adolescents' domain-specific achievement via adolescents' motivational beliefs. Hence, future work should examine the links between the patterns of mothers' socialization for specific talents and adolescents' domain-specific expectancies for success and importance value.

Finally, the current study focused on the socialization of talents that mothers perceived their adolescent children possessed. Although such an examination was theoretically informed by EEVT's family socialization model, we cannot make any claims on family socialization of youths who may not demonstrate talent for a given domain. One domain of interest is academics, wherein adolescents are generally socialized given its more compulsory nature compared to other domains. A small research base has found differential associations between parental behaviors and adolescents' academic outcomes depending upon adolescents' prior academic achievement (Benner, Boyle, & Sadler, 2016). Future research, therefore, may contribute to the growing knowledge in these processes by testing the extent to which these moderated associations exist using a pattern-centered approach and specifically within African-American families.

Conclusion

Guided by an integration of EEVT's family socialization model and Stage-Environment Fit Theory, the present study contributes important, though preliminary, insights into the ways

African-American mothers socialize the talents of adolescent girls and boys. Overall, African-American mothers use diverse patterns of strategies to help adolescents' talent development, and these patterns seem to be domain-specific. In order to promote adolescents' talent-related behaviors, parental modulation of control over adolescents' lives entails using patterns of strategies that allow talented youths the autonomy to exercise their talent-related competence.

Appendix 3.1

List of Survey Items in Study 2

Mother-reported Open-ended Talent-related Perceptions

• Does (CHILD) have any special talents, skills, or interests such as music, reading, arts, athletics, drama, schoolwork, or some other ability?
  o What are these talents or interests?
  ▪ Any other talents?

Mother-reported Close-ended Talent Development Strategies (7 items)
• In the past six months, how often have you done the following things to help (CHILD) get better at (FIRST TALENT/INTEREST MENTIONED)?
1 = *Never* 2= *Almost never* 3 = *Occasionally* 4 = *Sometimes* 5 = *Very often*
o Told (CHILD) this is a very important talent to have because it will help (him/her) in the future? o Praised (CHILD) when (he/she) did well in the activity? o Told (CHILD) how to get better at the skill? o Signed (CHILD) up for classes or programs to help (him/her) get better at the skill? o Made sure (CHILD) practices the skill at home? o Done the activity with (CHILD)? o Watched (CHILD) do the activity?
Youth-reported Talent Engagement (3 items)
• How often do you…
1 = *Never* 2 = *Once or twice* 3 = *At least once a week* 4 = *Several times a week* 5 = *Daily, less than one hour* 6 = *Daily, more than one hour*
o Play sports? o Do arts, drawing, or drama? o Play a musical instrument?

Appendix 3.2

Model Fit Comparisons from Latent Profile Analyses

	Information Criteria				*Likelihood Ratio Tests*		
Profiles	AIC	BIC	aBIC	Entropy	VLMR *p*-value	LMR *p*-value	BLRT *p*-value
1	10433.63	10475.28	10446.70	-	-	-	-
2	9738.56	9817.24	9763.25	0.73	0.000	0.000	0.000
3	9592.64	9708.34	9628.96	0.85	0.202	0.207	0.000
4	9418.01	9570.74	9465.95	0.79	0.000	0.000	0.000
5*	9194.99	9384.74	9254.55	0.85	0.028	0.030	0.000
6	9151.77	9378.55	9222.95	0.88	0.555	0.556	1.000
7	9032.91	9296.71	9115.00	0.94	0.202	0.207	0.000
8	9007.04	9378.61	9101.46	0.88	0.860	0.858	1.000

Notes. AIC = Akaike Information Criteria. BIC = Bayesian Information Criteria. aBIC = Sample size adjusted Bayesian Information Criteria. VLMR = Vuong-Lo-Mendell-Rubin likelihood ratio test. LMR = Lo-Mendell-Rubin likelihood ratio test. BLRT = Bayesian Likelihood Ratio Test. *indicates the chosen profile solution.

Appendix 3.3

Descriptive Statistics of Latent Profiles of Talent Development Strategies across Full Sample

	Profile	*Instilling importance* M (SD)	*Praising* M (SD)	*Teaching to improve* M (SD)	*Coactivity* M (SD)	*Provision of activities* M (SD)	*Ensuring practice* M (SD)	*Watching engagement* M (SD)	Count
1.	High & Diverse	**4.97$_{a}$ (0.23)**	**4.99$_{a}$ (0.07)**	**4.87$_{a}$ (0.38)**	**4.09$_{a}$ (1.13)**	**4.71$_{a}$ 0(.45)**	**4.77$_{a}$ (0.56)**	**4.67$_{a}$ (0.56)**	181
2.	High, Non-Provision	**4.36$_{b}$ (1.14)**	**4.94$_{a}$ (0.24)**	**4.51$_{b}$ (0.87)**	*3.90$_{a}$ (1.16)*	1.24$_{b}$ (0.43)	**4.34$_{b}$ (1.11)**	**4.46$_{ab}$ (0.81)**	117
3.	Discussion-Monitoring	**4.13$_{b}$ (1.08)**	**4.78$_{ab}$ (0.53)**	**4.34$_{b}$ (0.85)**	3.35$_{b}$ (1.29)	2.98$_{c}$ (0.13)	*3.98$_{bc}$ (1.02)*	**4.20$_{b}$ (0.92)**	128
4.	Praise-Provision-Watching	3.62$_{c}$ (1.11)	**4.61$_{b}$ (0.76)**	*3.96$_{c}$ (0.98)*	2.71$_{c}$ (1.39)	**4.48$_{d}$ (0.50)**	3.89$_{c}$ (1.15)	**4.27$_{b}$ (0.84)**	131
5.	Low, Praise Only	3.13$_{d}$ (1.37)	**4.36$_{c}$ (1.05)**	3.20$_{d}$ (1.18)	2.14$_{d}$ (1.20)	1.14$_{b}$ (0.35)	2.68$_{d}$ (1.35)	3.54$_{c}$ (1.10)	199
	$F_{(4, 734)}$	79.95***	25.95***	89.47***	78.28***	2870.51***	95.63***	44.10***	
	R^2	0.30	0.12	0.33	0.30	0.94	0.35	0.19	

Notes. Means above "high frequency" threshold (4.00 "Sometimes) in bold. Means 0.10 points below threshold in italics. Means within columns sharing the same superscripts are not significantly different from each other.
***$p < 0.001$.

Appendix 3.4

Orthogonal Contrast Coding for Study 2 Inferential Analyses

Academic group					
Contrast	Discussion-focused	High & Diverse			
C1. High vs. Discussion	0	1			
Sports group					
Contrast	Low, Praise Only	Praise-Provide-Watch	Praise-Coach-Watch	Moderate & Diverse	High & Diverse
C1. "Involved" vs. Praise only	-4	1	1	1	1
C2. High vs. "Specialized"	0	-1	-1	-1	3
C3. Moderate vs. Provide-Watch & Coach-Watch	0	-1	-1	2	0
C4. Provide-Watch vs. Coach-Watch	0	1	-1	0	0
Arts group					
Contrast	Low, Praise Only	High, Low-Provision	High & Diverse		
C1. "Involved" vs Praise	-4	1	1		
C2. High vs. High, Non-Provision	0	-1	1		
Music group					
Contrast	Low, Praise Only	Praise-Provide-Watch	Praise-Teach-Watch	Moderate & Diverse	High & Diverse
C1. "Involved" vs. Low	-4	1	1	1	1
C2. High vs. "Specialized"	0	-1	-1	-1	3
C3. Moderate vs. Provide-Watch & Teach-Watch	0	-1	-1	2	0
C4. Provide-Watch vs. Teach-Watch	0	1	-1	0	0

Appendix 3.5

Unstandardized Results from Comparisons of Profiles within Music Group using Dummy Codes

	Music engagement
Predictors	B (SE)
Reference group: Praise-Provide-Watch profile	
High & Diverse	-0.60
	(0.42)
Moderate & Diverse	-1.35*
	(0.54)
Praise-Teach-Watch	-0.97*
	(0.48)
Low, Praise Only	-1.33**
	(0.47)
Covariates	
Adolescent is female	-0.46*
	(0.23)
5th grade achievement	0.18
	(0.16)
Family SES	0.44*
	(0.17)
Mother is married	0.05
	(0.16)
Constant	3.73***
	(0.40)
N	234

Note. Results presented for music talent group (N = 234). SE = Robust standard errors based on 23 schools.
** $p < 0.01$. *** $p < 0.001$.

CHAPTER 4

Study 3. Letting Go When the Kids are Alright: African-American Mothers' Educational Involvement and Adolescents' Academic Achievement

Academics is a distinctive developmental domain in adolescents' lives. Children and adolescents spend most of their time devoted to scholastic activities than other endeavors, and youths' academic achievement is a gateway toward becoming well-functioning, informed citizens in adulthood. Among African-American adolescents, academic achievement is also a motivator to overcome racialized experiences within a predominantly European-American society (McAdoo, 1981; Tatum, 2004). Given the importance of academics in African-American adolescents' lives, we must examine the different pathways that can enhance African-American students' academic motivational beliefs and achievement.

In recent decades, researchers and educational stakeholders alike have focused on the importance of parental educational involvement in promoting adolescents' academic achievement (Epstein, 1995; Hoover-Dempsey & Sandler, 1995; Hill, Witherspoon, and Bartz, 2018; Horsford & Holmes-Sutton, 2012). Part of this work includes a consideration for the heterogeneity of experiences within historically minoritized populations like African-American families (Garcia-Coll et al., 1996; McLoyd, 1990). African-American mothers, for example, diverge greatly in the strategies they may use to foster adolescents' performance and engagement in specific domain talents. However, little is still known regarding the ways in which mothers use a combination of strategies to promote their adolescents' domain-specific motivational beliefs and achievement. As such, uncovering patterns of parental involvement that exist within African-American families can provide further insight into the diversity within this population.

The field's understanding of parental educational involvement must also account for the changes in parent-child relationships typically observed during distinct developmental periods like adolescence (Eccles, Midgley et al., 1993). Specifically, parents must respond to adolescents' needs for self-determination by providing adolescents more opportunities to satisfy their needs for autonomy and competence (Eccles, Midgley et al., 1993). However, adolescents' developmental needs in relation to academics may differ based on the level of academic competence that adolescents already demonstrate. Hence, the extent to which African-American parents' educational involvement predicts adolescents' academic motivation and achievement may depend on whether parents' involvement is needed based on youths' demonstrated academic talent. In this study, I examined the links between African-American mothers' educational involvement and adolescents' 7th and 11th grade motivational beliefs and achievement, as well as the moderating role of mothers' beliefs of adolescents' academic talents.

Parental Educational Involvement

Parental educational involvement is defined as parents' efforts to work with schools and their children to foster academic achievement and positive educational outcomes (Hill et al., 2004). Although similar to EEVT's conceptualization of family socialization (Eccles, 1993; Simpkins et al., 2015), parental involvement comes from a distinctly separate research tradition. Whereas EEVT's family socialization model is a developmental map charting processes in which parents' beliefs and behaviors shape children's motivational beliefs and behaviors, the concept of parental involvement comes from conceptual frameworks delineating the educational partnerships between the home, school, and community at large that foster academic success. Inspired by Bronfenbrenner's (1989) Ecological Systems Theory, Epstein's (1987) model of overlapping spheres of influence details the ways in which children's proximate contexts, like

the home and the school, can shape students' learning and academic success in collaborative ways. As such, parental education involvement encompasses those that occur at home and at school (Epstein, 1987, Grolnick & Slowiaczek, 1994; Hoover-Dempsey & Sandler, 1995).

School-based involvement involves parents interacting and working with their children's schools, including school volunteering, communication with teachers and other school personnel, and attendance to school-related events (Epstein 1995; Hill & Tyson, 2009). These parent-school collaborations can help emphasize the importance of schooling and provide opportunities for parents to stay abreast on specific educational expectations and school policies that affect their children. As such, school-based involvement is an important dimension of parental involvement precisely because it leverages a specific mesosystem (i.e., home-school interactions) that may conjointly promote children's academic success (Bronfenbrenner, 1979).

In contrast, home-based involvement includes parents' behaviors to reinforce children's learning in school and socialize their children toward higher academic motivation and achievement within their households (Epstein, 1995; Hill & Tyson, 2009; Hoover-Dempsey & Sandler, 1995). These behaviors vary widely, encompassing the behaviors examined in the previous two chapters, like helping with homework, engaging in activities together, direct teaching skills, providing experiences, monitoring activities and progress, and providing structure and regulation in youths' lives (Eccles, 1993; Epstein, 1995; see also Studies 1 and 2). Overall, home-based involvement involves parents' direct facilitation of and interactions with children in educational activities.

Finally, Hill & Tyson's (2009) seminal meta-analysis posited a distinct form of home-based involvement called academic socialization. This type of involvement refers to parent-child educational discussions that communicate parents' educational expectations, instill the value of

education, link children's schoolwork to current events, foster educational aspirations, and prepare and plan for children's attainment of future goals (Hill & Tyson, 2009; Taylor, Clayton, & Rowley, 2004)). Academic socialization is distinctive as it allows parents to foster their children's self-determination in adolescence by supporting youths' developing decision-making skills in their educational endeavors via these educational discussions. Qualitative, quantitative, and meta-analytic studies have corroborated the existence of these types of parental involvement generally and specifically within African-American families (Hill, Witherspoon, & Bartz, 2018; Ispa, Su-Russell, & Im, 2019; Jeynes, 2016; Park and Holloway, 2013; Taylor et al., 2004).

Associations between Parental Educational Involvement and Academic Outcomes

Most research on parental educational involvement has examined the individual or unique associations of each type of involvement with academic achievement. First, quantitative studies focused on school-based involvement have found consistently positive associations with increases in adolescents' grades, cognitive and social competence, and college attainment (Benner, Boyle, & Sadler, 2016; Brody & Flor, 1998; Gutman & Eccles, 1999; James, Rudy, & Dotterer, 2019; Wang, Hill, & Hofkens, 2014). Further, school-based involvement predicts adolescents' achievement directly and indirectly via youths' self-regulatory and general academic skills (Brody & Flor, 1998; Hill & Craft, 2003). School-based involvement also predicts adolescents' high school educational aspirations via their earlier academic achievement (Hill et al., 2004). Finally, meta-analytic studies on African-American families have also consistently found positive associations between school-based involvement and adolescent GPA in middle and secondary school (Hill & Tyson, 2009; Jeynes, 2016; Wilder, 2014).

Second, parents' overall home-based involvement consistently longitudinally predicts grades among African-American and other adolescents (James et al., 2019; Wang & Sheik-

Khalil, 2019). However, across different types of home-based involvement, studies have found opposing associations with youths' academic achievement. On one hand, parents' provisions of educational materials and activities positively predicts African-American adolescents' academic achievement in middle school (Davis-Kean, 2005; Froiland, Peterson, & Davison, 2012; Hardaway, Sterrett-Hong, De Genna, & Cornelius, 2019; Hill & Tyson, 2009; Tang & Davis-Kean, 2015). On the other hand, however, parental behaviors like homework help, direct instruction, and checking homework are related to lower academic achievement among middle schoolers (Hill & Tyson, 2009; Patall et al., 2008; Froiland et al., 2012).

Because of the more difficult coursework in middle school, parents may lack the skills to effectively help adolescents' in schoolwork. Hence, parents' provision of materials can provide effective tools for adolescents' learning. Aligning with Stage-Environment Fit Theory (Eccles, Midgley et al., 1993), parents' direct help, instruction, and monitoring of homework may also be considered as overly involved or controlling during adolescence when youths increasingly desire to exercise their own autonomy and competence. By contrast, parents' provision of materials allows adolescents to learn from educational tools without direct intervention from their parents, thereby providing them some autonomy to develop their competence.

Third, parents' academic socialization via educational discussions has been found to be the strongest and most consistent predictor of African-American adolescents' academic achievement compared to school- and home-based involvement (Hill & Tyson, 2009; Wang et al., 2014). Among African-American adolescents, parents' academic socialization strategies like educational discussions and scaffolding independence also predict reductions in the declines of grades, positive school identification, and academic subjective values during adolescence (Wang & Eccles, 2012; Wang et al., 2014). Studies have also found that parents' academic socialization

predicts to African-American students' academic achievement and college adjustment directly and indirectly via their academic self-efficacy and behaviors and cognitive engagement in adolescence (Suizzo, Pahlke, Chapman-Hilliard, & Harvey, 2016; Wang & Sheik-Khalil, 2014). Interventions have confirmed these associations, wherein increases in mothers' science utility value predicted to adolescents' own science utility value after high school directly and via mother-child conversations about science (Harackiewicz, Rozek, Hulleman, & Hyde 2012). In sum, studies examining specific dimensions of parental educational involvement provide understanding of the individual and unique associations of each dimension at a time. However, these studies provide little understanding of the ways in which these dimensions operate holistically to predict adolescents' academic motivational beliefs and achievement.

Meta-analytic studies have found positive associations between overall parental educational involvement and adolescents' academic motivation and achievement (Fan & Chen, 1999; Jeynes, 2016). However, individual studies have found largely mixed results. Some studies have found that higher parental educational involvement predicted higher school bonding, higher school self-esteem, and lower school problems, which were then related to higher academic achievement in turn (Dotterer & Wehrspann, 2015). Other works, however, have found that the links between adolescents' grades and overall parental involvement (i.e., school involvement, monitoring homework, and educational discussions) are true only among adolescents who perceive higher teacher support and school belonging (Gutman & Midgley, 2000).

Further, some studies have found nonsignificant associations between parental education and adolescent academic motivational beliefs, grades and educational attainment (Ardelt & Eccles, 2001; Crosnoe, Mistry, & Elder, 2002). Worse yet, other empirical findings indicate that a composite measure of parental involvement negatively predicted adolescents' educational

functioning, especially among boys and those who do not perceive their schools as supportive contexts (Trask-Tate & Cunningham, 2010). One possible reason for these mixed findings is that these scales implicitly assume that uniform scores across a set of involvement strategies linearly predict to variations in adolescent outcomes. This is troubling, given that some strategies, like homework help and direct instructions, are negatively predictive of African-American youths' academic functioning. As such, additive, composite-scaling approaches likely obscure complexities in the associations between parent involvement and academic outcomes.

Patterns of Parental Educational Involvement

There are a number of ways to examine the associations between parental involvement and adolescents' academic outcomes holistically. In their study, Day & Dotterer (2018) examined the interactive effects of parental involvement dimensions on adolescent academic grades and later educational attainment. These researchers found that parents' academic socialization positively predicted African-American adolescents' grades when parents also engaged in more school-based involvement, and that parents' academic socialization predicted adolescents' educational attainment when parents also engaged in more home-based involvement (Day & Dotterer, 2018). One other approach to understand the ways parental educational involvement conjointly influence academic outcomes is to use a pattern-centered approach that identify distinct patterns, or combinations, of parental involvement based on various configurations of responses across a heterogeneous set of items (Bergman, Magnusson, & El-Khouri, 2003). This approach has several important utilities for the purpose of the present study. First, pattern-centered approaches examine varying typologies for a given higher-order construct that exist within a given population using a set of related but heterogeneous indicators. These patterns can provide insight into the diversity of parental educational involvement strategies used

in combination within African-American families, beyond conceptualizations of parental involvement as an overall linear scale (i.e., high, medium, and low) like those in Day and Dotterer's (2018) and other variable-centered studies.

Second, pattern-centered approaches provide insight into which patterns of parental educational involvement are similarly predictive of adolescent outcomes. Prior studies using pattern-centered approaches have yielded multiple patterns that are similarly beneficial for youths' positive development. For example, Peck et al., (2008) found that different patterns of youth organized activity participation were similarly associated to higher rates of high school graduate and college enrollment. More germane to this study, studies examining patterns of African-American parenting using a mix of parenting styles, cognitive stimulation, and racial ethnic/socialization have found that a low child-centered, but average racial/ethnic socialization profile is as similarly related to lower academic engagement as an overall low socialization profile (Smalls, 2010). However, less work has been done that directly examines patterns of parental educational involvement that exist within African-American families and the extent to which these patterns are linked to adolescents' academic motivational beliefs and achievement. Still, prior studies show the utility of pattern-centered approaches in examining these relations.

The Role of Adolescents' Academic Talent

According to EEVT's family socialization model (Eccles, 1993; Simpkins et al., 2015), parents' adolescent- and domain-specific beliefs predicts adolescents' domain-specific motivational beliefs and achievement directly and indirectly via parents' socialization behaviors. Adding a layer of complexity to these socialization processes, stage-environment fit and family management perspectives (Eccles, Midgley et al., 1993; Furstenberg et al., 1999) view the need for parental involvement to be responsive to youths' developmental needs. In adolescence, youth

and parents experience recurrent negotiations to obtain a balance between parents' desire to manage youths' lives and adolescents' needs for autonomy and competency (Eccles, Midgley et al., 1993). As such, home-based and school-based involvement decline, whereas strategies like academic socialization that allow for youths to exercise their decision-making skills about their education consistently increase (Bhargava & Witherspoon, 2015; Wang et al., 2014).

Likewise, parents may be responsive to adolescents' academic needs such that when they become aware of youth's growing academic autonomy and competence, what is beneficial for youth is for parents to become less involved overall or use less of involved, facilitative strategies like home-based and school-based involvement. However, when parents see that their children are academically struggling, what may be appropriate is for them to intervene and become highly involved. Indeed, within a multi-ethnic sample of families, parents' academic socialization strategies longitudinally predicted youths' grades and educational attainment and this relation was stronger for adolescence who were academically achieving than those who were not (Benner et al., 2016) By contrast, school-based involvement was a significantly stronger predictor of later grades and educational attainment for youth who were less academically achieving than those who were. Such trends are promising, but it is less clear whether they are applicable exclusively within African-American families and when considering pattern-centered approaches.

The Present Study

In the present study, I examined whether different profiles of parental educational involvement existed among African-American mothers and the extent to which these profiles predicted to adolescents' academic motivational beliefs (i.e., self-concept, importance value) and GPAs concurrently in 7th grade and longitudinally in 11th grade. First, based on the conceptual likelihood that parental educational involvement behaviors may be used in varying frequencies

beyond uniform levels (i.e., high, medium, low levels), I expected that involvement profiles high only on some strategies (e.g., home-based only; academic socialization only) might also exist along with profiles with uniform frequencies among African-American mothers and adolescents.

Second, guided by EEVT's family socialization model and the Stage-Environment Fit Theory, I hypothesized that among African-American mothers who perceived their children as academically talented, profiles indicating *lower* parental involvement would predict higher motivational beliefs and GPAs than profiles indicating higher involvement. This suggests that higher overall levels of involvement or use of more involved behaviors (i.e., home-based and school-based involvement) would not be appropriate and might instead undermine youths' sense of autonomy and competency. By contrast, among mothers who did not perceive their children to be academically talented, profiles indicating *higher* parental involvement would predict higher motivational beliefs and grades than profiles indicating higher involvement. These differential association would indicate a warranted need for mothers' intervention in adolescents' academic development. Following EEVT's family socialization model, I used mothers' perceptions of adolescents' academic talent as an indicator of youths' academic ability, as these perceptions are hypothesized to more directly predict parents' behaviors and youths' academic outcomes than objective measures of prior achievement.

Method

Participants

In this study, I used data from 786 African-American mother-adolescent dyads from the Maryland Development in Context Study (MADICS) for whom data were available on mothers' 7th grade educational involvement and adolescents' 7th and 11th grade academic motivational beliefs and grades. Of the original 879 families in MADICS, 92 (10%) were excluded from the

study because the primary caregiver did not identify as the adolescent's mother. In 7th grade, adolescents in the analytic sample were 12.29 years old (SD = 0.56) on average, were generally well-represented across gender (48% girls), and attended 23 middle schools in Prince George's County Maryland. Mothers in the analytic sample had a mean education level of an associate degree (M = 14.11, SD = 2.57). Further, families had a mean annual income between $40,000 - $44,999 ($M$ = 9.54, SD = 4.31), and a mean occupational status of semi-professional or skilled work (M = 66.17, SD = 25.79). Approximately 465 (59%) of the families were from two-parent households, whereas 319 (41%) were from single-parent households. There were generally no demographic differences between the analytic and attrition samples, except that mothers in the analytic sample were more likely to come from two-parent households than primary caregivers in the attrition sample, $\chi_2(1) = 8.13$, $p < 0.01$, Cramér's $V = 0.10$.

Measures

Demographic Characteristics

Adolescents reported on whether they identified as female or male. Mothers reported on the highest level of education of either primary caregiver in the household. Values ranged from 1-12 for grade school years; thereafter, values were based on the normative years of degree completion (e.g. 16 = BA/BS, 21 = Ph.D./MD/JD). Mothers also reported on their family's annual income with values presented in increments of $5,000 (e.g., $40,000-$44,999; 1 - 16), as well as the highest occupational status of either primary caregiver (0 - 99, with doctor with being the highest code; Nam & Powers, 1983). I created a mean-composite indicator of family socioeconomic status (SES) using the standardized scores (from the full sample) of parental education, family income, and occupational status. Finally, mothers reported on whether they

were in a one-parent (never married, separated, or divorced) or a two-parent (married, remarried, cohabitating) household.

Mothers' Perceptions of Adolescent Talent

Mothers responded to an open-ended question that probed whether they perceived the target adolescents as possessing any talents: *"Does (CHILD) have any special talents, skills, or interests such as music, reading, arts, athletics, drama, schoolwork, or some other ability?".* This question was followed with, *"What are these talents or interests?"*. Interviewers exhaustively recorded responses in short phrases, which were then coded during initial data entry by trained MADICS researchers (see Study 1). Subsequent coding procedures conducted by the first author and two graduate-level researchers resulted in high agreement among coders (Krippendorff's $\alpha = 0.91$; see Study 1). Overall, approximately 267 mothers (35%) reported their adolescent children as academically talented.

Mothers' Educational Involvement

Following a rich literature base on parental educational involvement (e.g., Epstein, 1995; Hill & Tyson, 2009), I used five indicators of African-American mothers' educational involvement behaviors in 7th grade that have been used in prior studies using the MADICS dataset (Bhargava & Witherspoon, 2015; see Appendix 4.1 for the survey items in the study). First, I used two measures of school-based involvement. *School communication* was a six-item scale probing how often mothers communicated with children's teachers via in-person parent-teacher conferences and written or telephone messages in the 7th grade. Items included: "How many times did you (or your spouse/partner) receive notes or phone calls from the school about (Child)" and "How many times did (Child's) teachers tell you (or your spouse/partner) what skills (they) needed to learn during the year or what the learning goals were for the year?" (1 =

Zero, 6 = *Five or more times*; α = 0.65). *School volunteering* was a six-item scale probing how often mothers volunteered in their children's classroom, parent-teacher associations, open houses, and special events and programs in the 7th grade. Items included: "How many times did you (or your spouse/partner) help the teacher in the classroom, or help somewhere else in the school?" and "How many times did you go to an "open house" or school programs?" (1 = *Zero*, 6 = *Five or more*; α = 0.76).

Second, I used two measures of home-based involvement. *Homework help* was a two-item scale that probed parents' homework-related involvement. As mothers were not asked these items, I used adolescents' responses to two questions in 7th grade: "How often do your parents help with schoolwork?" and "How often do your parents check your homework?" (1 = *Almost never*, 6 = *Almost every day*; α = 0.76). Mothers reported their *provisions of educational materials* via Yes or No questions probing the number of educational materials that were available at home in 7th grade. Items included dictionaries, encyclopedia, books designed to help children acquire skills, fiction books catered for 7th graders, educational books and magazines, newspapers, and a computer. I created a count variable indicating the number of educational materials mothers and primary caregivers provided their children (1 = *None*, 6 = *Five or more*).

Finally, mothers reported their *academic socialization* behaviors via a six-item scale that probed mothers' educational discussions with adolescents. Items included whether 7th graders and mothers "talk about his/her plans for the future", "talk about future jobs he/she might have" "talk about what courses he/she should take in school and how these courses will prepare him/her for future jobs" (1 = *Almost never*, 6 = *Almost every day*; α = 0.82).

Adolescents' Motivational Beliefs

Following Expectancy-Value Theory of achievement motivation (Eccles et al., 1983), I used two measures of adolescents' motivational beliefs in adolescents' 7th and 11th grade years (see Appendix 4.1). First, adolescents' *academic self-concept* was a four-item Likert scale that probed adolescents' perceptions of competence in math and other subjects in school. This scale was adapted from the Michigan Study of Adolescent Life Transitions (MSALT; Eccles, Midgley et al., 1993). Items included: "How good are you in math?" (1 = *Not at all good*, 7 = *Very good*) and "Compared to other kids, how well do you do in other school subjects?" (1 = *Much worse*, 7 = *Much better;* Gutman, Peck, Malanchuk, Sameroff, & Eccles, 2017). A mean-composite scale of the four items demonstrated high reliability in 7th grade ($\alpha = 0.77$) and 11th grade ($\alpha = 0.76$). This scale has evidenced excellent psychometric qualities in past studies (Diemer, Marchand, McKellar, & Malanchuk, 2016; Gutman et al., 2017; Wong, Eccles, & Sameroff, 2004).

Second, adolescents reported their *academic importance value* with a two-item Likert scale adapted from MSALT that probed the extent to which they perceived math and other school subjects to be important to their lives compared to other adolescents (Eccles, Midgley et al., 1993). The two items were probed math specifically and other school subjects more broadly (1 = *Much less important*, 7 = *Much more important*). A mean-composite scale of these items evidenced high reliability in 7th grade ($\alpha = 0.78$) and 11th grade ($\alpha = 0.78$), aligning with prior studies (Diemer et al., 2016; Gutman et al., 2017; Wong et al., 2004).

Adolescents' Academic Achievement

I used school records of adolescents' GPAs at the end of 7th and 11th grade across five subjects (i.e., math, English, science, social studies, and health; 0 = *F*, 4 = *A*), as well as their 5th grade standardized test scores (Diemer et al., 2016; Wong et al., 2004).

Missing Data Analysis

Within the analytic sample, I observed four groups that differed in terms of missing data. First, 327 (43%) families had complete data in the focal study variables in both 7th and 11th grades. Second, about 112 families (15%) had missing data in the study variables in both 7th and 11th grades. Third, 216 families (29%) had missing data in 11th grade but not in 7th grade. Finally, 102 families (13%) had missing data in 7th grade but not in 11th grade.

There were several socio-demographic differences between these four groups. Families with missing data in both 7th and 11th grades had lower parental education ($F_{3,753} = 5.98$ $p < 0.001$, $\eta^2 = 0.02$), lower family income ($F_{3,696} = 4.64$ $p < 0.01$, $\eta^2 = 0.02$), and lower overall family SES ($F_{3,753} = 7.26$ $p < 0.001$, $\eta^2 = 0.03$) than families with complete data in both waves and families with missing data only in 11th grade. Families with missing data in both 7th and 11th grade also had lower occupational status ($F_{3,753} = 3.93$ $p < 0.01$, $\eta^2 = 0.02$) than families with complete data in both waves. Families with missing data in both waves and mothers in families with missing data only in 7th grade were less likely to be married, whereas mothers in families with complete data in both waves were more like to be married, $\chi_2(3) = 23.07$, $p < 0.001$, Cramér's $V = 0.17$. There were marginally significant differences across adolescent gender and mothers' reports of adolescents' academic talent. Families with missing data in both waves were more likely to have sons than daughters, $\chi_2(3) = 6.71$, $p < 0.10$, Cramér's $V = 0.09$, and families with complete data in both grades tended to include mothers who reported academic talents than mothers who reported other domains talents, $\chi_2(3) = 6.29$, $p < 0.10$, Cramér's $V = 0.09$. To account for missing data, I used full information maximum likelihood and included demographic characteristics demonstrating significant differences as covariates in my analyses (Enders, 2010).

Analytic Plan

My first research aim focused on examining patterns of mothers' educational involvement strategies. To address this aim, I conducted latent profile analyses (LPAs) in Mplus 8.3 (L.K. Muthén and Muthén 1998-2017) to identify distinct talent socialization profiles among mothers. I estimated one- to eight-profile solutions and determined the most fitting solution using established diagnostic criteria for model fit. These included: a) the lowest estimates of the goodness of fit statistics for model selection (e.g., Bayesian Information Criterion [BIC]); b) high (≥.80) entropy levels, indicating clear discrimination between latent profiles; and c) statistically significant likelihood ratio tests (e.g., bootstrap likelihood ratio test), indicating that a given *k* class model has better fit than a previous *k*-1 model (Masyn, 2013). I also examined sample proportions within a given profile solution, with proportions greater than 5% indicating an acceptable number of members within one profile. After determining the most optimal profile solution, I described the latent profiles based on unstandardized means of the indicators in order to retain the meaningfulness of the original scales.

My second research aim was to examine the extent to which profiles of mothers' educational involvement were associated with adolescents' motivational beliefs and academic achievement concurrently in 7th grade and longitudinally in 11th grade. Relatedly, I also examined the extent to which the associations between socialization profiles and talent-specific behaviors were moderated by mothers' reports of adolescents' academic talents. To address these aims, I conducted planned comparisons between specific profiles using orthogonal contrast coding in order to make more specific comparisons across profiles yielded from the LPAs.

I first estimated a model examining the base relations between the contrasts and a given dependent variable. In the second step, I estimated a model adding mothers' report of academic talent and cross-products between the contrasts and mothers' report of academic talent. In the

third step, I estimated a model omitting these cross-products and added socio-demographic covariates adolescent gender and demographic covariates (i.e., 5th grade achievement, SES, and family structure [1 = *two parents*, 0 = *one parent*]) as predictors. In the final step, I estimated a model that re-included the cross-products along with the contrasts, mothers' report of academic talent, and the socio-demographic covariates as predictors. For 11th grade motivational beliefs, I included corresponding 7th grade measures as baseline variables to estimate the change in the outcomes from 7th to 11th grade. For 11th grade GPA, I did not include 7th grade GPA as a baseline measure given that 7th grade GPA was collected at the end of the academic year, after data collection of parents' involvement strategies. For each analysis, I clustered the standard errors around the 23 middle schools that adolescents attended.

Results

Preliminary Analyses

Descriptive and correlational statistics for the overall analytic sample and across groups based on mothers' reports of adolescents' academic talents are presented in Tables 4.1 and 4.2, respectively. There were several mean-level differences in the study constructs between adolescents identified as academically talented by mothers and adolescents who were identified as talented in other domains. Adolescents who were reported by mothers as academically talented were more likely to be female than adolescents identified as talented in other domains. Mothers who reported adolescents as academically talented also had higher educational levels and overall SES than mothers who reported other talents. With regards to African-American mothers' educational involvement, mothers who reported adolescents as academically talented engaged in more school volunteering and provisions of materials than mothers who did not. By

Table 4.1

Descriptive Statistics of Study 3 Variables

Variable	*Analytic sample* N = 757 Mean / N	SD / %	*Talent reported* N = 267 Mean / N	SD / %	*Talent not reported* N = 490 Mean / N	SD / %	t / χ^2	Cohen's d / Cramér's V
Parental educational involvement								
School communication	3.02	0.95	2.90	0.87	3.11	0.99	-2.65**	-0.23
School volunteering	2.19	0.91	2.31	0.92	2.13	0.91	2.30*	0.20
Homework help	4.38	1.56	4.29	1.56	4.43	1.56	-1.21	-0.09
Material provision	4.48	1.35	4.68	1.19	4.40	1.39	2.75**	0.21
Academic socialization	3.73	1.00	3.80	0.99	3.70	1.00	1.31	0.10
Academic self-concept								
7th grade	5.31	1.10	5.49	1.03	5.23	1.11	3.22**	0.25
11th grade	5.00	1.05	5.18	1.00	4.90	1.06	2.98**	0.27
Academic importance value								
7th grade	5.55	1.29	5.63	1.19	5.51	1.34	1.19	0.09
11th grade	5.07	1.31	5.08	1.29	5.06	1.34	0.20	0.02
GPA								
7th grade	3.45	0.87	3.63	0.87	3.35	0.84	4.16***	0.33
11th grade	2.82	0.70	2.92	0.65	2.79	0.71	1.85*	0.18
Socio-demographic characteristics								
5th grade achievement	479.88	47.05	493.17	46.46	472.42	45.63	5.22***	0.45
Adolescent is female	360	48%	151	57%	209	0.43	13.39***	0.13
Two-parent household	454	60%	164	61%	290	0.59	0.32	0.02
Parental education	14.11	2.57	14.44	2.55	13.99	2.49	2.35**	0.18
Family income	9.54	4.31	9.83	4.28	9.47	4.33	1.05	0.08
Occupational status	66.17	25.79	68.23	24.77	65.54	25.61	1.40	0.11
SES (std.)	0.01	0.83	0.10	0.79	-0.02	0.83	2.01*	0.15

Table 4.2

Correlational Statistics of Continuous Study Variables by Mothers' Reports of Adolescents' Academic Talents

Variables	1	2	3	4	5	6	7	8	9	10	11
1. School communication		.24***	.12*	.11*	.18***	-.33***	-.23***	-.05	-.02	-.12*	-.11
2. School volunteering	.29***		.17***	.39***	.21***	.20***	.06	.09	.07	-.06	.09
3. Homework help	.17*	.11		.06	.14**	-.06	-.03	.06	.03	.04	.03
4. Material provision	.10	.31***	-.04		.17***	.19***	.09	.04	.03	-.02	.12
5. Academic socialization	.09	.23***	.30***	.16**		.09	.01	.04	.04	.00	.04
6. GPA (7th grade)	-.36***	.22***	-.23***	.14*	-.04		.44***	.39***	.24***	.19***	.22***
7. GPA (11th grade)	-.29***	.09	-.19*	-.01	-.07	.44***		.19**	.36***	.08	.24***
8. SC (7th grade)	-.16*	.16*	-.03	-.05	-.08	.39***	.18*		.34***	.50***	.24***
9. SC (11th grade)	-.03	.06	-.19**	-.13	.00	.23**	.45***	.22**		.09	.57***
10. IV (7th grade)	-.17*	.04	.08	-.11	-.08	.08	.15	.43***	.06		.21***
11. IV (11th grade)	-.07	.03	-.10	-.13	-.05	.09	.32**	.02	.52***	.09	

Notes. Correlations below the diagonal are estimates for families whose mothers reported adolescents as academically talented and correlated above the diagonal are estimates for families whose mothers reported talents other than academics. Cells highlighted in gray are statistically significant: lightest gray = small correlation ($r < .30$), moderately light gray = moderate correlation ($r \geq .30$ to $< .50$), dark gray = large correlation ($r \geq .50$). GPA = grade point average, SC = academic self-concept, IV = academic importance value.

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$

contrast, mother reported adolescents as talented in other domains engaged in more school communication than mothers who reported adolescents as academically talented.

With regards to youths' academic motivational beliefs, adolescents whose mothers reported them as academically talented consistently had significantly higher academic self-concept in both 7th and 11th grades than adolescents who were not (Table 4.1). However, no significant differences in academic importance value were found across these groups in either grades. Relatedly, adolescents who were reported as academically talented had higher GPAs in 7th and 11th grades, as well as higher 5th grade academic achievement, than adolescents who were not reported as academically talented (Table 4.1). Overall, these patterns largely indicate a high level of accuracy in African-American mothers' reports of adolescents' academic talents.

Profiles of African-American Mothers' Educational Involvement

Per my first research aim, I hypothesized that along with profiles that exhibit uniformly similar scores across indicators of parental educational involvement, I would also find profiles that exhibited high engagement in only some strategies. I present model comparisons from the LPAs in Table 4.3. There were substantial drops in the information criteria (i.e., AIC, BIC, and aBIC) as the number of profiles increased, although these drops were less pronounced after the five-profile solution. Further, according to two of the likelihood ratio tests (i.e., VLMR and LMR), the six-profile solution did not significantly differ from the five-profile solution, indicating that five profiles explained the data just as well as six profiles. LPA models specifying more than six profiles also had nonsignificant likelihood ratio estimates. In comparing models specifying four versus five profiles, statistically significant estimates from the likelihood ratio tests indicated that four profiles do not adequately explain subgroups within the data just as well as five profiles. Moreover, a five profile solution had high entropy (Entropy = 0.80; Masyn,

2013) indicating good discrimination between profiles, whereas a four-profile solution had an entropy level falling below criterion (Entropy = 0.78). Hence, I determined that there were five distinct profiles of African-American mothers' educational involvement in the analytic sample.

Table 4.3

Model Fit Comparisons of Class Solutions from Latent Profile Analysis in Study 3

# of Profiles	*Information Criteria*			Entropy	*Likelihood Ratio Tests*		
	AIC	BIC	aBIC		VLMR *p*-value	LMR *p*-value	BLRT *p*-value
1	11154.13	11200.80	11169.04	-	-	-	-
2	10887.56	10962.23	10911.42	0.85	0.000	0.000	0.000
3	10759.41	10862.09	10792.22	0.82	0.000	0.000	0.000
4	10664.90	10795.57	10706.66	0.78	0.048	0.051	0.000
5*	10585.05	10743.73	10635.76	0.80	0.000	0.001	0.000
6	10543.85	10730.53	10603.51	0.81	0.090	0.096	0.000
7	10509.18	10723.86	10577.78	0.76	0.051	0.055	0.000
8	10469.75	10712.43	10547.30	0.82	0.273	0.280	0.000

Notes. AIC = Akaike Information Criteria. BIC = Bayesian Information Criteria. ABIC = Adjusted Bayesian Information Criteria. VLMR = Vuong-Lo-Mendell-Rubin likelihood ratio test. LMR = Lo-Mendell-Rubin likelihood ratio test. BLRT = Bootstrap likelihood ratio test. *Indicates chosen profile solution.

I present descriptive statistics of the five profiles across indicators of parental educational involvement in Table 4.4. Aligning with predictions, I found two profiles wherein mothers engaged in behaviors at similar rates across indicators of educational involvement (see Figure 4.1). First, 61 mothers (8% of the analytic sample) fit into a Less Involved profile, wherein mothers engaged relatively less frequently in all involvement behaviors compared to the other profiles. Still, mothers in this profile engaged in some degree of involvement behaviors, with most scores falling at least one point above the minimum score for each indicator. Second, 52

mothers (7%) made up a Highly Involved profile, wherein mothers engaged in school-based involvement and academic socialization moderately frequently overall, but at higher frequencies than other profiles, as well as engaged in indicators of home-based involvement at high levels.

Table 4.4

Class Variations across Parent Academic Involvement Items used in Latent Profile Analyses in Study 3

	Profiles	School communication	School volunteering	Homework help	Material provision	Academic socialization	*n*
1	Less Involved	2.57_{a}	1.49_{a}	2.60_{a}	2.42_{a}	3.12_{a}	61
2	Homework-focused	2.99_{b}	1.65_{a}	5.32_{b}	2.28_{a}	3.63_{bc}	91
3	Provision-focused	2.83_{ab}	2.12_{b}	2.14_{c}	4.99_{b}	3.43_{ab}	153
4	Home-based Overall	3.07_{b}	2.12_{b}	5.18_{b}	5.00_{b}	3.87_{c}	400
5	Highly Involved	3.70_{c}	4.14_{c}	5.28_{b}	5.58_{c}	4.33_{d}	52
	$F_{(4, 748)}$	11.64***	142.73***	550.39***	414.56***	18.05***	
	R_2	0.07	0.48	0.74	0.68	0.09	

Note. Items are on 1 to 6 scales. Within each column of parent academic involvement, cells sharing the same superscript are not statistically significant from each other.
***$p < 0.001$.

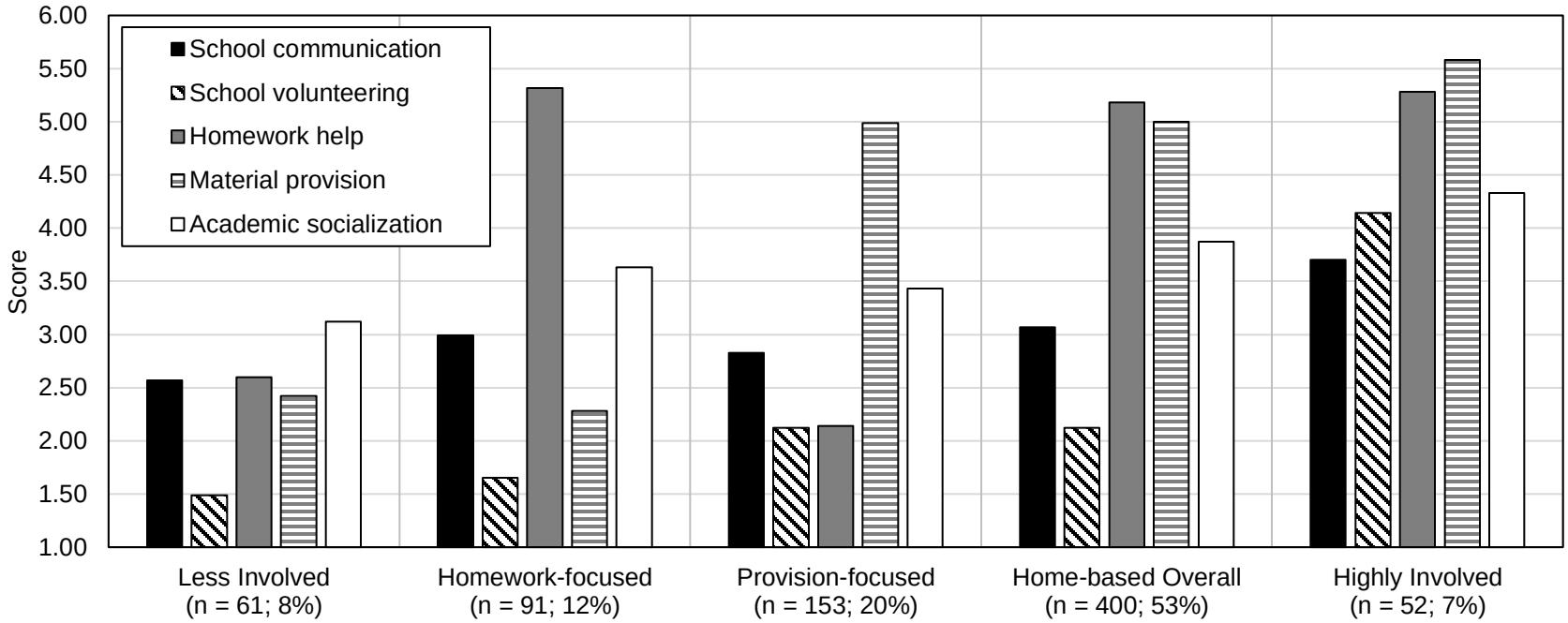
Also as predicted, I found three profiles that indicated mothers who frequently engaged in only some involvement strategies (see Figure 4.1). The variety in these profiles revolved around indicators of home-based involvement. First, 91 mothers (12%) fit into a Homework-focused profile, frequently engaging in homework help but engaging in other strategies less frequently. Second, a Provision-focused profile included 153 mothers (20%) who frequently engaged in material provisions but comparatively less so in other involvement behaviors strategies. Finally, a majority of the mothers (n = 400; 53%) in the sample made up a Home-based Overall profile, indicated by high levels of both homework help and material provision and comparatively lower

levels of school-based involvement and academic socialization. Re-estimation of the LPA using a random 50% split of the sample largely replicated these profiles (see Appendix 4.2).

There were demographic differences across involvement profiles. First, the profiles differed according to adolescents' gender, χ_2 (4) = 14.61, $p < 0.01$, Cramér's $V = 0.14$),wherein girls overrepresented the Provision-focused profiles compared to boys (Observed = 93, Expected = 75.86, ASR = 3.05). Second, differences between profiles also emerged in terms of family structure, χ_2 (4) = 36.72, $p < 0.001$, Cramér's $V = 0.22$). Compared to mothers from one-parent households, mothers from two-parent household were overrepresented in the Provision-focused (Observed = 107, Expected = 94.31, ASR = 2.30) and Highly Involved profiles (Observed = 42, Expected = 30.84, ASR = 3.26) but were underrepresented in the Less Involved (Observed = 23, Expected = 37.96, ASR = -3.97) and Homework-focused profiles (Observed = 45, Expected = 58.72, ASR = -3.00). Third, there were also socioeconomic differences across profiles ($F_{4, 781}$ = 21.98, $p < 0.001$, $\eta^2 = 0.10$), which indicates that mothers in the Provision, Home-based, and Highly Involved profiles came from higher SES households than those in the Less Involved and Homework Help profiles. Finally, there were significant differences across profiles with regards to mothers' reports of adolescent academic talents, χ_2 (4) = 16.79, $p < 0.01$, Cramér's $V = 0.15$. Compared to mothers who did not report their adolescent as having academic talents, mothers who did report adolescents as academically talented were overrepresented in the Provision-focused profile (Observed = 67, Expected = 53.96, ASR = 2.47) but were underrepresented in the Homework-focused profile (Observed = 20, Expected = 32.10, ASR = -2.83).

Figure 4.1

Raw Scores of Parental Educational Involvement Items across Five Latent Classes from LPAs



Note. N = 783.

Associations between Educational Involvement Profiles and Academic Outcomes

Per my second research aim, I hypothesized that higher levels of involvement would not be appropriate to the academic development of adolescents identified as academically talented, as higher involvement may undermine youths' growing sense of academic autonomy and competence. In contrast, I hypothesized that higher levels of involvement would be appropriate to the academic development of adolescents who were not identified as academically talented, as there may be a warranted need for mothers' involvement in order to improve adolescents' academic functioning. To test these hypotheses, I conducted planned comparisons using orthogonal contrast coding across the profiles found in the LPAs (see Appendix 4.3). First, for a given dependent variable, I created a contrast code comparing the means of the Less Involved profile and the combined means of the other profiles combined. Second, I compared the means of the Highly Involved profile and the combined means of the three home-based, specialized profiles (i.e., Homework-focused, Provision-focused, and Home-based Overall). Finally, I created two orthogonal contrast codes to parse out differences in the dependent variables across the home-based, specialized profiles: 1) Home-based Overall versus Homework- and Provision-focused profiles combined and 2) Homework-focused profile versus Provision-focused profile.

Academic Self-Concept

I present the results for the associations between contrasts of mothers' educational involvement profiles and academic self-concept in 7th and 11th grades in Table 4.5. I did not find significant bivariate or multivariate associations between any of the contrasts and adolescents' academic self-concept in 7th and changes in academic self-concept from 7th to 11th grades. However, there was a significant interaction between reports of academic talent and the contrast between the Less Involved profile and the other, more involved profiles combined, controlling

Table 4.5

Unstandardized Results for the Associations between Mothers' Educational Involvement Profiles and Adolescents' Academic Self-Concept

	7th grade academic self-concept			*11th grade academic self-concept*		
Predictors	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Contrast						
C1. Less Involved vs.	0.00	0.02	0.00	0.03	0.03	-0.01
"More Involved" profiles	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.04)
C2. Highly Involved vs.	0.04	0.02	0.04	0.03	0.02	0.06
"Specialized" profiles	(0.03)	(0.04)	(0.03)	(0.04)	(0.04)	(0.07)
C3. Home-based Overall vs.	0.03	0.04	0.06	-0.01	0.01	0.04
Provision *OR* Homework	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)
C4. Provision vs. Homework	0.00	-0.09	-0.11	0.04	-0.01	0.07
	(0.09)	(0.09)	(0.11)	(0.07)	(0.07)	(0.10)
Academic talent reported		0.18*	0.25**		0.13	0.28*
		(0.08)	(0.09)		(0.09)	(0.13)
Cross-products						
Talent reported x C1			0.09			0.12*
			(0.07)			(0.06)
Talent reported x C2			-0.02			-0.08
			(0.07)			(0.10)
Talent reported x C3			-0.05			-0.11
			(0.06)			(0.09)
Talent reported x C4			0.08			-0.24
			(0.18)			(0.20)
Covariates						
SES		0.03	0.03		-0.08	-0.09
		(0.05)	(0.05)		(0.08)	(0.08)
Adolescent is female		-0.08	-0.08		-0.01	-0.01
		(0.07)	(0.07)		(0.08)	(0.08)
Two-parent household		0.08	0.07		-0.07	-0.09
		(0.09)	(0.09)		(0.12)	(0.12)
5th grade achievement		0.23***	0.22***		0.26***	0.27***
		(0.05)	(0.05)		(0.06)	(0.06)
7th grade academic self-concept				0.30***	0.24***	0.23***
				(0.05)	(0.05)	(0.05)
Constant	5.32***	5.26***	5.25***	3.42***	3.76***	3.77***
	(0.05)	(0.09)	(0.09)	(0.29)	(0.30)	(0.31)
N	754	754	754	754	754	754

Note. SE = Robust standard errors clustered around 23 schools in the data. "More Involved" indicates profiles with high scores in at least one strategy. "Specialized" indicates specific profiles with high scores in only *some* strategies. *$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

for covariates (B = 0.12, SE = 0.06, β = 0.09, $p < 0.05$). As hypothesized, academically talented adolescents in the Less Involved profile had significantly higher increases in academic self-concept from 7th to 11th grade than academically talented adolescents in the other, more involved profiles combined. Further, as represented in Figure 4.2A, academically talented adolescents in the Less Involved profiles had significantly higher 11th grade academic self-concept (M = 5.75, SE = 0.19) than their counterparts in the other, more involved profiles combined (M = 5.15, SE = 0.08). However, for adolescents not identified as academically talented, there were no differences in the change in academic self-concept across contrast groups.

Academic Importance Value

Results for the relations between involvement profiles and academic importance value are presented in Table 4.6. There was no significant variation in adolescents' academic importance value in 7th grade and the change in academic importance value from 7th to 11th grades across the contrasts. However, mothers' reports of academic talent moderated the association between the change in academic importance value from 7th to 11th grade and the contrast between the Less Involved profile and the more involved profiles combined (B = 0.21, SE = 0.08, $p < 0.01$). Aligning with hypotheses, academically talented adolescents in the Less Involved profile had significantly higher increases in academic importance value from 7th grade to 11th grade than their counterparts in the other, more involved profiles combined. Additionally, as represented in Figure 4.2B, academically talented adolescents in the Less Involved profiles perceived higher academic importance value (M = 5.97, SE = 0.31) in 11th grade than their counterparts in the more involved profiles (M = 5.03, SE = 0.10). However, for adolescents not identified as academically talented, there were no differences between the Less Involved profile and more involved profiles in the change in academic self-concept from 7th to 11th grade.

Table 4.6

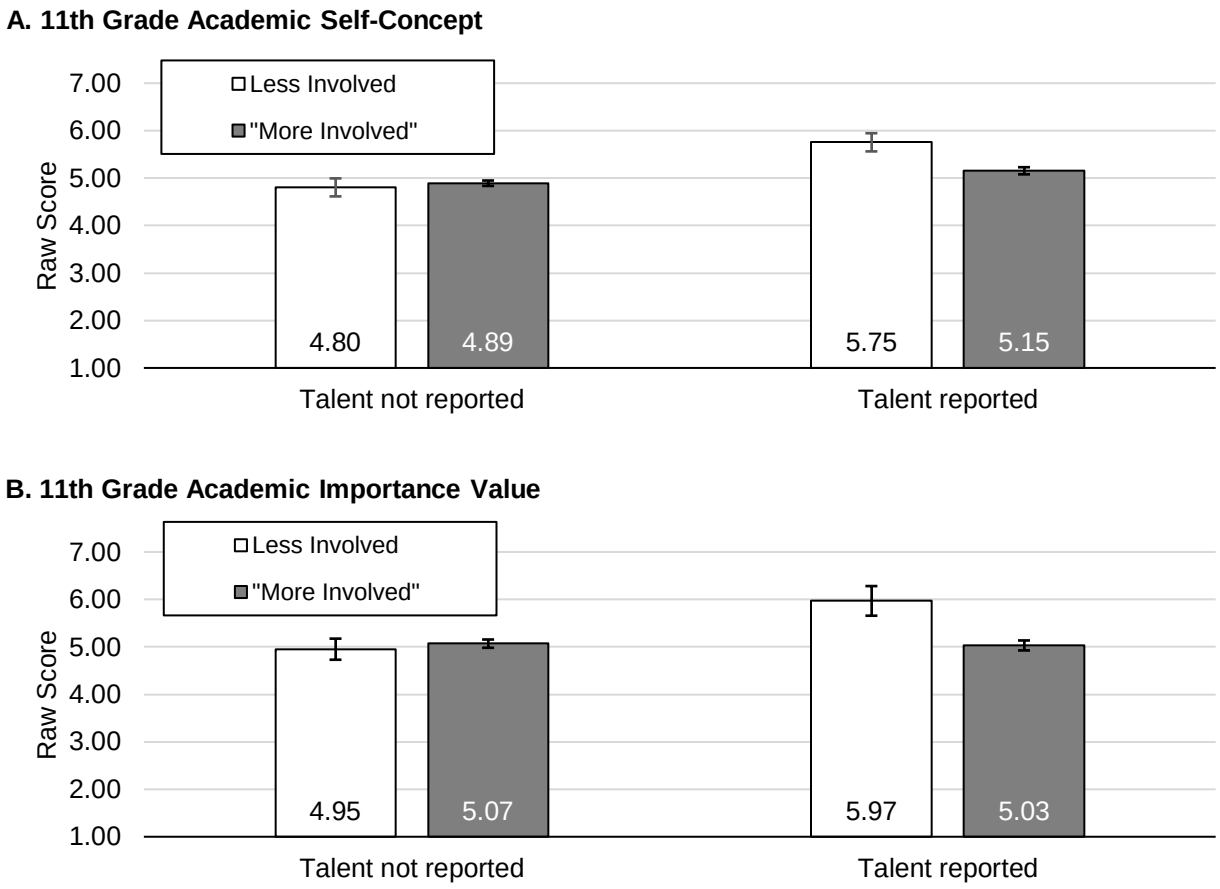
Unstandardized Results for the Associations between Mothers' Educational Involvement Profiles and Adolescents' Academic Importance Value

	7th grade academic importance value			*11th grade academic importance value*		
Predictors	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Contrast						
C1. Less Involved vs.	-0.00	-0.01	-0.02	0.03	0.05	-0.03
"More Involved" profiles	(0.04)	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)
C2. Highly Involved vs.	-0.02	-0.02	0.00	0.09	0.08	0.11
"Specialized" profiles	(0.04)	(0.04)	(0.05)	(0.06)	(0.06)	(0.10)
C3. Home-based Overall vs.	0.01	0.01	-0.00	0.03	0.04	0.07
Provision *OR* Homework	(0.04)	(0.04)	(0.04)	(0.05)	(0.06)	(0.07)
C4. Provision vs. Homework	-0.13	-0.10	-0.07	0.10	0.04	0.12
	(0.07)	(0.07)	(0.11)	(0.11)	(0.12)	(0.13)
Academic talent reported		0.16*	0.17		-0.07	0.15
		(0.08)	(0.13)		(0.14)	(0.21)
Cross-products						
Talent reported x C1			0.04			0.21**
			(0.10)			(0.08)
Talent reported x C2			-0.04			-0.08
			(0.08)			(0.13)
Talent reported x C3			0.01			-0.12
			(0.06)			(0.12)
Talent reported x C4			-0.10			-0.27
			(0.20)			(0.27)
Covariates						
SES		-0.07	-0.07		0.02	0.02
		(0.06)	(0.06)		(0.11)	(0.11)
Adolescent is female		-0.05	-0.05		0.07	0.07
		(0.10)	(0.10)		(0.14)	(0.14)
Two-parent household		0.01	0.01		0.14	0.11
		(0.13)	(0.13)		(0.14)	(0.14)
5th grade achievement		-0.06	-0.06		0.12*	0.12*
		(0.05)	(0.06)		(0.05)	(0.05)
7th grade academic importance value				0.18**	0.18***	0.18***
				(0.06)	(0.05)	(0.05)
Constant	5.54***	5.50***	5.50***	4.13***	3.99***	3.95***
	(0.07)	(0.10)	(0.11)	(0.36)	(0.35)	(0.35)
N	754	754	754	754	754	754

Note. SE = Robust standard errors clustered around 23 schools in the data. "More Involved" indicates profiles with high scores in at least one strategy. "Specialized" indicates specific profiles with high scores in only *some* strategies. *$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

Figure 4.2

Significant Interactions for 11th Grade Academic Motivational Beliefs



Note. Error bars indicate standard errors.

GPA

I present results for the relations between mothers' educational involvement profiles and adolescents' GPA in Table 4.7. Controlling for socio-demographic covariates and adolescents' 5th grade achievement, adolescents in the Provision-focused profile had significantly higher GPAs at the end of 7th grade than adolescents in the Homework-focused profile (B = 0.11, SE = 0.05, $p < 0.05$). Further, I found a significant interaction between mothers' report of adolescents' academic talent and the contrasts between the Less Involved profile and the other, more involved profiles combined in predicting adolescents' 7th grade GPA (B = 0.10, SE = 0.04, $p < 0.05$). This

Table 4.7

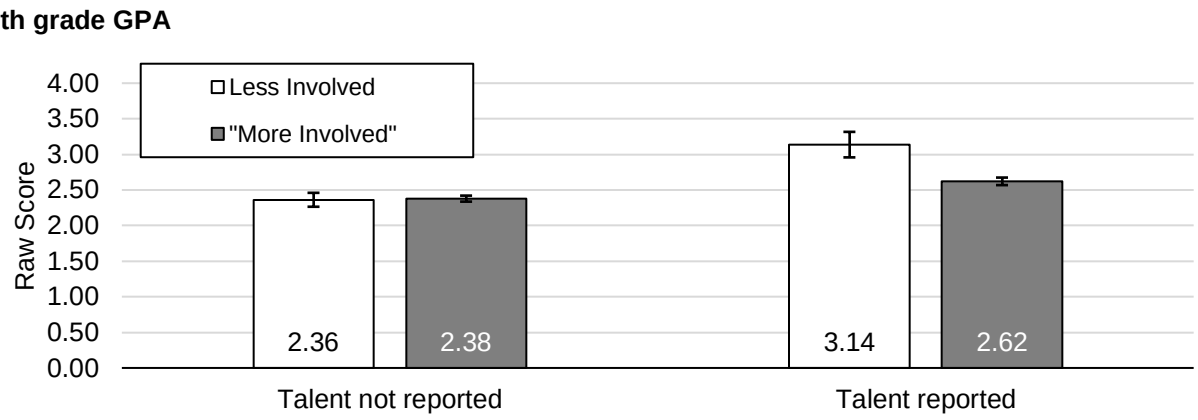
Unstandardized Results for the Associations between Mothers' Educational Involvement Profiles and Adolescents' GPA

	7th grade GPA			*11th grade GPA*		
Predictors	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Contrast						
C1. Less Involved vs.	-0.03	0.02	-0.00	0.03	0.05*	0.05*
"More Involved" profiles	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
C2. Highly Involved vs.	0.06*	0.01	0.01	0.03	0.00	0.03
"Specialized" profiles	(0.03)	(0.02)	(0.02)	(0.05)	(0.04)	(0.06)
C3. Home-based Overall vs.	0.01	-0.00	0.03	0.02	0.03	0.05
Provision *OR* Homework	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.04)
C4. Provision vs. Homework	0.28***	0.11*	0.01	0.15*	0.04	0.06
	(0.06)	(0.05)	(0.07)	(0.07)	(0.06)	(0.07)
Academic talent reported		0.16***	0.12		0.01	0.06
		(0.05)	(0.06)		(0.05)	(0.08)
Cross-products						
Talent reported x C1			0.10*			-0.01
			(0.04)			(0.04)
Talent reported x C2			0.05			-0.05
			(0.06)			(0.07)
Talent reported x C3			0.00			-0.09
			(0.04)			(0.06)
Talent reported x C4			0.21			-0.11
			(0.12)			(0.15)
Covariates						
SES		0.28***	0.15***		0.02	0.01
		(0.05)	(0.04)		(0.05)	(0.05)
Adolescent is female		0.49***	0.41***		0.35***	0.34***
		(0.06)	(0.05)		(0.06)	(0.06)
Two-parent household		0.15*	0.12		0.00	-0.00
		(0.07)	(0.07)		(0.06)	(0.06)
5th grade achievement			0.32***		0.20***	0.21***
			(0.05)		(0.04)	(0.03)
Constant	2.45***	2.07***	2.15***	2.85***	2.67***	2.66***
	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)	(0.06)
N	754	754	754	754	754	754

Note. SE = Robust standard errors clustered around 23 schools in the data. "More Involved" indicates profiles with high scores in at least one strategy. "Specialized" indicates specific profiles with high scores in only *some* strategies. *$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

Figure 4.3

Significant Interactions for 7th Grade GPA



Note. Error bars indicate standard errors.

interaction is represented in Figure 4.3. In line with hypotheses, academically talented adolescents in the Less Involved profile (M = 3.14, SE = 0.18) had significantly higher GPAs at the end of 7th grade than their counterparts in the other, more involved profiles combined (M = 2.62, SE = 0.05). However, there were no differences in 7th grade GPA between the Less Involved profile (M = 2.36, SE = 0.10) and the other, more involved profiles combined (M = 2.38, SE = 0.04) for adolescents who were not reported as academically talented.

In terms of adolescents' 11th grade GPA, I found a significant bivariate association with adolescents' GPA indicating that adolescents in the Provision-focused had higher 11th grade GPA than adolescents in the Homework-focused profiles, (B = 0.15, SE = 0.07, $p < 0.05$). However, this relation became non-significant when accounting for socio-demographic covariates and adolescents' 5th grade achievement. Further, controlling for covariates and 5th grade achievement, adolescents in the Less Involved profile had higher GPAs in 11th grade than adolescents in the other, more involved profiles combined (B = 0.05, SE = 0.02, $p < 0.05$). I found no significant interactive effects between mothers' reports of academic talent and any of

the contrasts, suggesting that differences in 11th grade GPA between adolescents' in the Less Involved profile and the other profiles combined were true for the overall sample.

Discussion

Framed by theories on parental involvement, family socialization, and stage-environment fit, the current study examined the links between African-American mothers' educational involvement and adolescents' 7th and 11th grade academic motivational beliefs and achievement. I used a pattern-centered approach to uncover five diverse, conceptually meaningful constellations of mothers' educational involvement in early adolescence. I also used theoretically driven planned comparisons to test whether there were differential relations between involvement profiles and academic well-being based on mothers' beliefs of adolescents' academic talents. Specifically, among adolescents identified as academic talented, youths in profiles indicating comparatively less involvement had higher GPAs in 7th grade and higher academic self-concepts and importance value in 11th grade than youths in more involved profiles. Though parental involvement still plays an important role in African-American youths' academic development in adolescence (Hill & Tyson, 2009), their growing need for self-determination requires parents to modulate the level of involvement they provide (Eccles, Midgley et al., 1993).

Patterns of African-American Mothers' Educational Involvement

One key contribution of the current study is the emergence of five distinct patterns of parental educational involvement among African-American mothers of 7th grade adolescents. Much of the literature has focused on establishing different categories of parental educational involvement that exist (Epstein, 1995; Hill & Tyson 2009), but fewer studies have examined the ways in which parents use involvement behaviors in combination. In the current study, I found two distinct profiles wherein about 15% of mothers engaged in all involvement behavior at

relatively similar levels (i.e., Less Involved and Highly Involved profiles). These profiles provide some credence to specific assumptions made by parenting studies using variable-centered approaches. Namely, studies examining the holistic nature of parental educational involvement as an overall scale (i.e., composite or latent variable) implicitly assume that parents engage in involvement behaviors in uniformly linear ways (i.e., low or high overall; e.g., Hill & Tyson, 2009; Jeynes, 2016). Given the small number of mothers in our sample who exhibited these patterns of involvement, however, this assumption may not reflect the reality of African-American mothers' involvement.

The emergence of three involvement profiles with non-uniform patterns of involvement challenging the assumption of uniformity in parents' involvement behaviors. These profiles included mothers who frequently engaged only in homework help, material provision, or both homework help and material provision. As these non-uniform profiles made up the vast majority (85%) of the sample, variable-centered approaches that combine involvement behaviors into an overall scale may likely mischaracterize the ways in which African-American mothers engage in these behaviors holistically. Specifically, mothers in these different, non-uniform profiles would be conceptualized together as indicating a uniformly moderate level of educational involvement, a pattern of involvement which may not actually exist within African-American families. As such, study findings provide a more concrete understanding of the varied ways in which African-American mothers engage in educational involvement behaviors in combination.

A large percentage of the variability in the profiles were explained by variations in mothers' homework help and material provision. These involvement behaviors are notable because they likely reflect differences in mothers' home-based involvement across socio-demographic lines and across mothers' perceptions of adolescents' academic talents. For

example, higher SES mothers were more likely to be in profiles with higher levels of material provision (i.e., Provision-focused, Home-based Overall, and Highly Involved profiles) than lower SES mothers. This is in line with prior literature showing SES differences in parents' provisions of materials, services, and opportunities for their adolescents (e.g., Lareau, 2011; Smetana et al., 2002; also see Study 1). Socioeconomic advantages afford parents the ability to purchase learning materials and supplies that can promote cognitive stimulation at home and academic achievement in scholastic endeavors. Economic constraints among lower SES mothers who are otherwise educationally involved make such provisions difficult to implement. Hence, lower SES mothers engaged in behaviors that were less likely to come with economic costs

Group differences across involvement profiles also emerged with regards to mothers' reports of adolescents' academic talents. Adolescents whose mothers identified them as academically talented were more likely to be in the Provision-focused profile, whereas adolescents who were not identified as academically talented were more likely to be in the Homework-focused profile. In line with Stage-Environment Fit Theory, these differential involvement behaviors across mothers' perceptions of academic talent may be indicative of the ways in which African-American mothers are responsive to adolescents' developmental needs (Eccles, Midgley et al., 1993). Specifically, when mothers viewed their adolescent as academically talented, they might have perceived less involved and facilitative strategies like material provisions as most developmentally appropriate, as they afforded adolescents opportunities to exercise autonomy to develop their academic competence on their own accord. In contrast, analyses found that adolescents who were not identified by their mothers as academically talented were more likely to have lower academic motivational beliefs and achievement. As such, mothers might have perceived a warranted need to directly help their

children make improvements in their academic progress through the use of highly involved and facilitative strategies like home help. Overall, these findings provide evidence that many African-American mothers are responsive to their adolescent children's educational needs. As discussed below, the extent to which mothers' educational involvement patterns predict adolescents' academic motivational beliefs and achievement partially supports this conclusion.

Stage-Environment Fit in African-American Mothers' Educational Involvement

Another contribution of the current study is partial confirmation of the differential links between mothers' educational involvement and adolescents' academic outcomes according to mothers' perception of adolescents' academic talent. For adolescents identified by mothers as academically talented, those from households exhibiting lower involvement had significantly higher increases in academic self-concept and importance value in 11th grade, as well as higher GPAs at the end of 7th grade compared to adolescents in other profiles combined. These findings align with my hypotheses based on Stage-Environment Fit Theory positing the need for parents to modulate their control over adolescents' lives (Eccles, Midgley et al., 1993). The combination of adolescents' demonstrated academic talent and increasing desire for self-determination necessitates parents to respond accordingly by easing up on their educational involvement. This did not mean, however, that mothers who engaged in lower involvement s were uninvolved or disengaged per se. Instead, these mothers were involved only some of the time but at lower levels compared to mothers in other, more involved profiles. As a result, this modulated level of educational involvement afforded adolescents more autonomy in scholastic endeavors, which proved beneficial to academically talented adolescents' GPAs at the end of 7th grade and motivational beliefs over time.

However, contrary to hypotheses, I found no differences across profiles in adolescents' motivational beliefs in either grade levels or GPAs in 7th grade, specifically for adolescents who were not identified as academically talented by their mothers. Explanations for these nonsignificant differences may stem from limitations in the way that the study operationalized mothers' perceptions of adolescents' academic talent. Guided by EEVT's family socialization model, I used mothers' perceptions of youths' academic talent as it is theorized to inform parents' involvement behaviors and youths' academic outcomes (Eccles, 1993; Simpkins et al., 2015). The use of self-generated reports from open-response questions provided insight into whether mothers explicitly perceived their adolescent as academically talented. However, failing to report adolescents as having academic talents may not necessarily mean that adolescents lack talent in academics. Instead, mothers might have thought of other more salient talents that their adolescents possessed. As such, the group of adolescents who were not explicitly identified as academically talented may have a mix of adolescents who are actually struggling academically and those who were nevertheless academically achieving but not identified.

One possible solution to this underreporting problem is to use more objective measures of youths' prior academic abilities, as with past studies (e.g., Benner et al, 2016). In the data, closest possible variable is adolescents' 5th grade achievement test scores. However, checks for the moderating role of 5th grade academic achievement in the hypothesized associations revealed sparse significant relations (see Appendix 4.4). In line with EEVT's family socialization model, such results suggest that mothers' child-specific perceptions more proximally inform parents' behaviors, adolescent outcomes, and their associations than actual prior achievement. Nevertheless, future research would benefit from close-ended, Likert-score measures that more directly probe the extent to which mothers perceive their adolescents as academically talented

(e.g., Eccles, 1993; Simpkins et al., 2015). Still, adolescents who were identified as academically talented had higher motivational beliefs and academic achievement overall than adolescents who were not, giving a degree of truthfulness to mothers' reports.

Findings also revealed that adolescents in the Provision-focused profile also had higher GPAs at the end of 7th grade than adolescents in the Homework-focused profile, and this result was true regardless of mothers' perceptions of adolescents' academic talent. These findings align with hypotheses for adolescents whom mothers identified as academically talented, which posit that less involved and lower overall involvement behaviors would predict higher academic achievement. These findings also align with past studies that have found that adolescents' academic achievement is positively linked to parents' provisions of educational materials and cognitive stimulation at home (e.g., Davis-Kean, 2005; Hardaway et al., 2019; Hill & Tyson, 2009) but negatively linked to parents' homework help and direct instructions (Froiland et al., 2012; Hill & Tyson, 2009; Patall et al., 2008). Mothers' homework help behaviors, which entails mothers' close, guided assistance in adolescents' schoolwork, is comparatively more hands-on than mothers' provision of enriching educational materials at home. As adolescents who were identified as academically talented also showed higher academic motivation and achievement at baselines than youths who were not, mothers' material provisions were likely to be more developmentally appropriate than homework help, as provisions provided adolescents the needed autonomy to continue developing their academic competence at their own accord.

However, this finding runs counter to the hypothesis positing that more involved or higher overall levels of involvement behaviors would be more beneficial for adolescents who were not identified as academically talented by mothers. In this study, these adolescents had lower academic motivational beliefs during 7th grade and academic achievement in 5th grade and

were also overrepresented in the Homework-focused profiles than adolescents identified as academically talented. As such, mothers were likely intervening on these adolescents' relative under-achievement by helping adolescents improve on their schoolwork. Still, results suggested that mothers' homework help may not be sufficiently effective compared to material provision, even after controlling for prior achievement in 5th grade. Hence, this finding points to a possible tension between mothers' desire to directly help adolescents move towards academic competence and the need to afford youths the self-determination they may desire in adolescence. One possible remedy, however, is for mothers to enroll their children in tutoring services and scholastic programs, which provide academic help for youths and new educational contexts that afford adolescents the autonomy they need to attain academic competence. (Assari, et al., 2018).

Finally, adolescents in the Less Involved profile had higher levels and increases in GPAs at 11th grade compared to adolescents in more involved profiles regardless of whether mothers perceived adolescents as academically talented. These associations confirmed my hypothesis for adolescents who were identified as academically talented. Given that these adolescents already demonstrate academic competence, less educational involvement likely provided a stage-environment fit that was beneficial for adolescent's grades in 11th grade compared to high levels of involvement is any strategy (Eccles, Midgley et al., 1993). However, these findings were contrary to the hypothesis for adolescents not identified by mothers as academically talented. As these adolescents tend to have lower academic motivation and achievement, I predicted that mothers' higher educational involvement might be more appropriate than lower involvement so that adolescents improve their academic performance. The fact that these adolescents academically benefited across 7th and 11th grades when their mothers were less involved suggests that mothers' high involvement may impede on youths' developmental needs in the long-term

regardless of the need for youths' academic improvement. As such, in line with Stage-Environment Fit Theory, findings revealed that parents need to strike a balance between over-involvement and affording youths autonomy. Ultimately, the constellations of educational involvement among mothers in the Less Involved profile guide what such balance may look like.

Limitations and Future Directions

The current study contributes to the field's understanding of African-American mothers' educational involvement patterns and the role of stage-environment fit in family socialization processes. However, it is not without its limitations. First, as previously mentioned, the ways that I operationalized mothers' perceptions of adolescents' academic talent does not completely get at the degree to which mothers' perceived their adolescents to be in need of academic intervention. Hence, future work should use close-ended Likert scales to more precisely measure mothers' perceptions of their adolescents' academic abilities.

Second, study findings should only be generalized to populations of families similar to the study's sample of African-American mothers and adolescents. Given that past studies have found that the behaviors of mothers and fathers have differential associations with youth outcomes (McHale et al., 2006; Simpkins et al., 2015), future work on the processes under investigation should expand to other socializers within the family unit. Third, the current study cannot make causal claims for the processes examined given the use of survey and interview data. Still, the study benefitted from examining both concurrent and longitudinal relations with controls to rule out the continuity of earlier, baseline levels of the dependent variables.

Finally, the current study provides one particular snapshot of mothers' educational involvement behaviors at a given period in adolescents' lives (i.e., 7th grade) and their links to adolescent outcomes. Past studies have found parents' educational involvement changes across

adolescence (e.g., Bhargava & Witherspoon, 2015). As such, the patterns of mothers' educational involvement and the associations between these patterns and adolescents' academic outcomes may change over time, which the current study cannot address. Thus, future work should examine the extent to which mothers change in their patterns of involvement through the use of analytic techniques such as latent transition analysis. The extent to which changes in mothers' involvement patterns matters for adolescent outcomes is particularly relevant in testing the parental modulation processes posed by the Stage-Environment Fit Theory in adolescence.

Conclusion

Guided by a rich research base on parental educational involvement and Stage-Environment Fit Theory, the present study extends knowledge of the diversity in African-American mothers' educational involvement in adolescence and the extent to which they matter for different adolescents' academic motivational beliefs and achievement. Overall, the existence of distinct involvement patterns challenges implicit assumptions made by variable-centered research and provides a more concrete understanding of the varied combinations of educational involvement behaviors that exist within African-American families. The extent to which these patterns of educational involvement differentially predict the adolescents' academic outcomes suggest that mothers must be cognizant of the degree to which their involvement is warranted for youths' academic success. Ultimately, the current study underscores the necessity for parents to increasingly let go of their control and involvement in order to be developmentally responsive to adolescents' growing needs for self-determination.

Appendix 4.1

List of Survey Items in Study 3

Mothers' Talent-related Perceptions

- Does (CHILD) have any special talents, skills, or interests such as music, reading, arts, athletics, drama, schoolwork, or some other ability?
  - What are these talents or interests?
    - Any other talents?

Mothers' School Communication

- While (CHILD) was in the 7th grade, how many times did you (or your spouse/partner)…
  - attend a parent/teacher conference?
  - receive notes or phone calls from the school about (CHILD)?
  - contact the school about (CHILD)?
- While (CHILD) was in the 7th grade, how many times did (his/her) teachers…
  - tell you (or your spouse/partner) what skills (he/she) needed to learn during the year or what the learning goals were for the year?
  - explain how to check (his/her) homework or give you (or your spouse/partner) ideas about how to help (CHILD) at home?
  - send you interim reports during the grading period or progress reports between report cards?

Mothers' School Volunteering

- While (CHILD) was in the 7th grade, how many times did you (or your spouse/partner)…
  - help the teacher in the classroom, or help somewhere else in the school?
  - go to an "open house" or special school program?
  - attend a P.T.A., P.T.O. or P.T.S.A. meeting?
  - help out at school by doing things like going to school performances, baking for bake sales, chaperoning parties, assisting on field trips, helping with fund raising, etc.
  - go to classes or work-shops at (CHILD's) school?
  - take part in an advisory board, school committee, governing board or meet with school board or other officials to ask for changes in rules?

Mothers' Homework Help (Youth-Reported)

- How often do these things happen?

1 = *Almost never* 2 = *Less than once a month* 3 = *one to three times a month* 4 = *About once a week* 5 = *A few times a week 6 = Almost every day*

  - Your (PARENT) helps you with your schoolwork.
  - Your (PARENT) checks your homework after it's completed; for example, checking that it's done correctly, or proof-reading reports.

Mothers' Material Provision

- Families have various things in their house that children sometimes use. Please indicate whether you have any of the following in your home. Put a check mark by each if you have it (or them). Please check each thing you have in your home.
  - Dictionary
  - Encyclopedia
  - Books designed to help children acquire specific skills

- Fiction books for kids your 7th grader's age
- Educational books or magazines
- Newspapers
- Computer

Mothers' Academic Socialization

- Please tell us how often these kinds of things happen with your 7th grader.

1 = *Almost never* 2 = *Less than once a month* 3 = *one to three times a month* 4 = *About once a w* *times a week 6 = Almost every day*

- My 7th grader and I talk about his/her plans for the future.
- My 7th grader talks to me about problems he/she is having at school.
- My 7th grader and I talk about future jobs he/she might have
- My 7th grader and I or about what courses he/she should take in school and how these courses will prepare him/her for these future jobs.

- How often have you or your spouse/partner done the following activities with your 7th grader in the last month?

1 = *Never* 2 = *Once or twice* 3 = *At least once a week* 4 = *Several times a week* 5 = *Daily less than one hour* 6 = *Daily more than one hour*

- Discussed your 7th grader's experiences at school with him/her (e. g., asking child what he/she did at school)?
- Discussed news or current events with your 7th grader?

Adolescents' Academic Self-concept

- How good are you in...

1 = *Not at all good*, 7 = *Very good*

- Math?
- Other school subjects?

- Compared to other kids your age, how well do you do in ...

1 = *Much worse than other kids*, 7 = *Much better than other kids*

- Math?
- Other school subjects?

Adolescents' Academic Importance Value

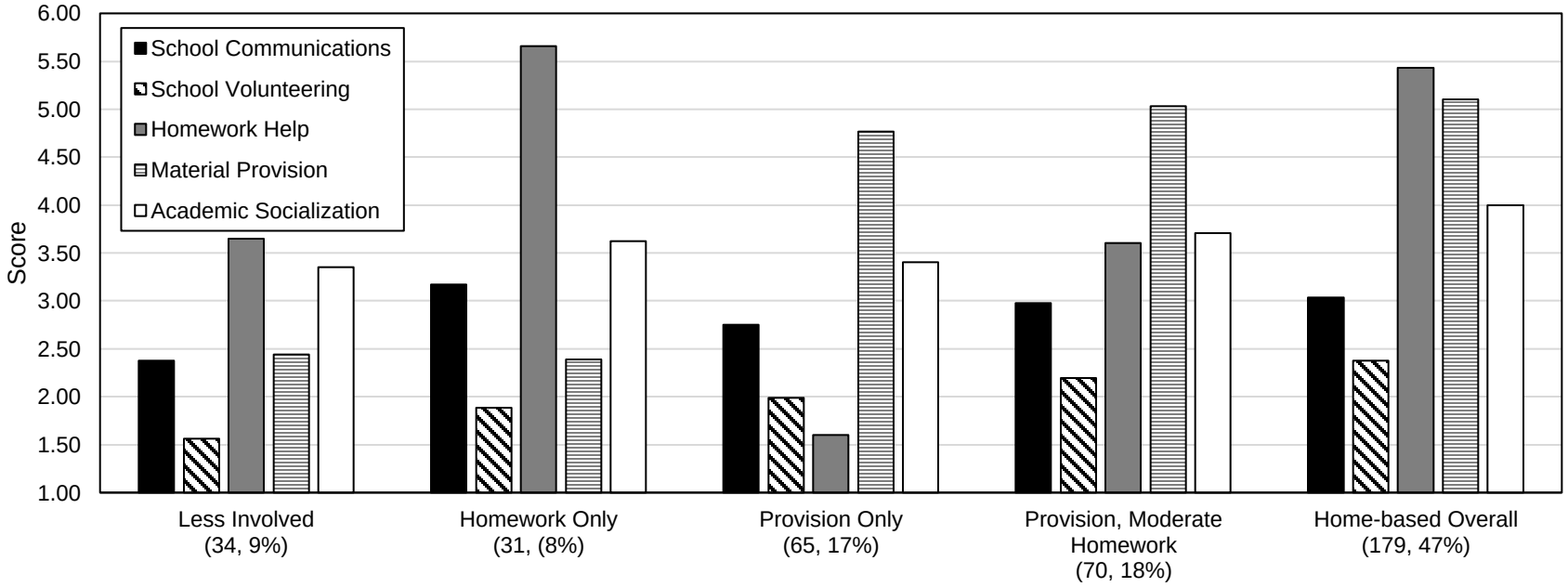
Compared to other kids your age, how important are each of the following activities to you?

1 = *Much less important to me than to other kids*, 7 = *Much more important to me than to other kids*

- Math?
- Other school subjects?

Appendix 4.2

Results from Replication of Latent Profile Analysis using a Random 50% Split of the Analytic Sample



Note. N = 379. AIC = 5082.918, BIC = 5216.794, aBIC = 5108.919, Entropy = 0.85, VLMR p = 0.031, LMR p = 0.035, BLRT p = 0.000.

Appendix 4.3

Orthogonal Contrast Coding for Study 3 Inferential Analyses

Contrast	Less Involved	Homework-focused	Provision-focused	Home-based Overall	Highly Involved
C1. "Involved" vs. Less Involved	-4	1	1	1	1
C2. Highly Involved vs. "Specialized"	0	-1	-1	-1	3
C3. Home-based overall vs. Homework *OR* Provision	0	-1	-1	2	0
C4. Provision vs. Homework	0	-1	1	0	0

Appendix 4.4

Interactions between 5th Grade Academic Achievement and Contrasts of Educational Involvement Profile on Adolescent Academic GPA, Self-Concept and Importance Value

	GPA		Academic self-concept		Academic importance value	
Predictors	Grade 7 B (SE)	Grade 11 B (SE)	Grade 7 B (SE)	Grade 11 B (SE)	Grade 7 B (SE)	Grade 11 B (SE)
Contrast						
C1. Less Involved vs.	0.02	0.05*	0.02	0.04	-0.01	0.07
"More Involved" profiles	(0.02)	(0.02)	(0.03)	(0.03)	(0.04)	(0.03)
C2. Highly Involved vs.	0.01	0.01	0.02	0.01	-0.02	0.07
"Specialized" profiles	(0.02)	(0.04)	(0.03)	(0.04)	(0.04)	(0.06)
C3. Home-based Overall vs.	0.01	0.02	0.03	0.01	-0.01	0.02
Provision *OR* Homework	(0.02)	(0.03)	(0.04)	(0.03)	(0.04)	(0.05)
C4. Provision vs. Homework	0.08	0.02	-0.11	-0.05	-0.12	0.05
	(0.05)	(0.06)	(0.09)	(0.07)	(0.07)	(0.11)
5th grade academic achievement	0.33***	0.22***	0.21***	0.38***	0.00	0.26*
	(0.07)	(0.06)	(0.05)	(0.10)	(0.06)	(0.11)
Cross-products						
5th grade achievement x C1	-0.01	-0.00	-0.01	0.01	0.02	0.14***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.06)	(0.04)
5th grade achievement x C2	-0.00	-0.04	-0.07	0.03	-0.03	-0.00
	(0.03)	(0.04)	(0.04)	(0.07)	(0.05)	(0.08)
5th grade achievement x C3	0.00	-0.04	-0.04	-0.10*	-0.06	-0.02
	(0.02)	(0.03)	(0.03)	(0.05)	(0.04)	(0.07)
5th grade achievement x C4	-0.09	-0.09	-0.11	-0.05	-0.19	-0.14
	(0.05)	(0.04)	(0.08)	(0.10)	(0.11)	(0.14)
Covariates						
Academic talent reported	0.07	0.01	0.20*	0.11	0.18*	-0.06
	(0.05)	(0.05)	(0.08)	(0.09)	(0.08)	(0.14)
SES	0.14***	0.01	0.02	-0.08	-0.07	0.03
	(0.04)	(0.05)	(0.05)	(0.08)	(0.06)	(0.11)
Adolescent is female	0.41***	0.35***	-0.08	-0.00	-0.05	0.07
	(0.05)	(0.06)	(0.07)	(0.08)	(0.10)	(0.14)
Two-parent households	0.13	0.01	0.09	-0.08	0.01	0.10
	(0.07)	(0.06)	(0.09)	(0.12)	(0.13)	(0.15)
7th grade academic self-concept				0.24***		
				(0.06)		
7th grade academic importance value						0.18**
						(0.05)
Constant	2.17***	2.67***	5.26***	3.78***	5.51***	4.08***
	(0.08)	(0.06)	(0.09)	(0.32)	(0.10)	(0.35)
N	754	754	754	754	754	754

Note. SE = Robust standard errors clustered around 23 schools in the data. "More Involved" indicates profiles with high scores in at least one strategy. "Specialized" indicates specific profiles with high scores in only *some* strategies. *$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

CHAPTER 5

GENERAL DISCUSSION

The overarching goal of this dissertation was to explore the varied ways that African-American mothers foster their children's developing talents. Such an endeavor can be a tricky balancing act especially in adolescence when the nature of parent-child relationships shifts, and adolescents begin to impose their autonomy over their own lives. Like other parents, African-American mothers face the task of helping their children develop talents and skills while also responding to adolescents' growing needs for self-determination. There may be different ways for parents to successfully achieve this balance, and some parents may find it difficult to accomplish. To understand these processes, I was guided by EEVT's family socialization model and Stage-Environment Fit Theory to address two major research aims: (1) To examine the heterogeneity in African-American mothers' socialization and involvement behaviors; and (2) to test specific hypotheses on the links between mothers' behaviors to specific adolescent outcomes, like non-academic talent engagement and academic-related motivational beliefs and achievement. In this chapter, I discuss the major findings and implications of my inquiry.

Heterogeneity in African-American Family Socialization

There were two distinct ways that I examined the variety in African-American mothers' socialization and involvement behaviors. First, in Study 1, I sought to describe a more complete set of mothers' socialization strategies than what is typically investigated in the literature. I found six main categories of mothers' talent socialization strategies, encompassing positive discussions, working with adolescents, provision of experiences, use of social networks, monitoring and regulation, and negative reactions. I also found that certain strategies are uniquely linked to specific talents that adolescents possessed. Specifically, mothers provided

materials and services and monitor schoolwork to promote adolescents' academic talents; use positive encouragement for adolescents' athletic and artistic talents; and seek the help of the church community to foster adolescents' musical talents.

Second, in Studies 2 and 3, I used a pattern-centered approach to uncover distinct combinations of strategies that exist within households. I examined patterns of mothers' talent socialization strategies within specific talent domains in Study 2, as well as patterns of mothers' educational involvement in Study 3. In both studies, similar patterns of strategies emerged across multiple subgroups and samples. For example, in each talent group in Study 2 and for the whole sample in Study 3, profiles indicating frequent engagement in all of the parenting behaviors under investigation emerged (i.e., the High and Diverse profiles in Study 2 and the Highly Involved profile in Study 3). Further, in non-academic talent groups in Study 2, a profile indicating non-involvement in all socialization strategies except for praise emerged (i.e., Low, Praise Only profiles). Finally, much of the variations in the profiles in Studies 2 and 3 were largely due to home-based behaviors like teaching and provision strategies. As such, patterns of socialization and involvement emerged that indicated a specific focus on teaching, provision of experiences, or a combination of both. Hence, although mothers varied in their patterns of behaviors, the recurrence of similar socialization indicated some level of stability in the combinations of behaviors that existed within African-American households.

Links between Mothers' Behaviors to Adolescent Outcomes

This dissertation also expanded our understanding of the pathways from mothers' socialization and involvement behaviors to adolescents' outcomes by integrating Stage-Environment Fit Theory into the processes outlined by EEVT's family socialization model. Challenging notions of positive linear relations between mothers' behaviors and adolescents'

outcomes, I tested specific hypotheses based on the notion that parents need to modulate their socialization of youths' domain-specific talents during adolescence.

In Study 2, I tested two competing hypotheses based on two possible interpretations of this notion of stage-environment fit in family socialization and found initial, partial support depending upon adolescents' gender and talent domain. A Moderate Overall hypothesis was confirmed for academically talented boys and athletically talented girls. That is, profiles indicating more moderate levels of or specialization in a few socialization strategies were related to adolescents' talent-related behaviors. By contrast, a Multiple Pathways hypothesis was confirmed in the arts and music domains. That is, among artistically talented girls and musically talented adolescents generally, those in profiles indicating overall moderate, specializing, and overall high socialization had similarly higher talent engagement than those in comparatively lower involvement profiles.

Likewise, in Study 3, I tested two separate hypotheses of these mother-adolescent links depending upon whether mothers perceived their adolescent as academically talented. In line with the hypothesis that less involvement would be most beneficial for academically talented adolescents (that is, involvement that provides youth academic autonomy), these adolescents had higher grades in 7th grade and motivational beliefs in 11th grade if their mothers were comparatively less involved than. There were also main effects that aligned with this hypothesis for academically talented adolescents but were contrary to the hypothesis positing that more involvement would be most beneficial for adolescents not identified as academically talented. For example, all adolescents had higher 7th grade GPAs when their mothers used less hands-on but still promotive strategies like material provisions than when their mothers primarily used more hands-on, involved strategies like homework help. Likewise, all adolescents had higher

11th grade GPAs when their mothers were less involved regardless of whether their mothers perceived them to be academically talented. Challenging positive, linear pathways posed by traditional family socialization models, these findings provide evidence that African-American mothers need to strike a balance between their control and the growing determination of adolescents demonstrating domain-specific talents. In the next section, I discuss the implications of these major findings to theory and practice, organized by two themes: 1) conceptualization of parental behaviors and 2) the utility of stage-environment fit in family socialization

Conceptualizing Parental Behaviors

Empirical operationalization of parental socialization and involvement behaviors must align with existing theoretical conceptualizations and examine a more complete set of behaviors. Furthermore, understanding the diversity within African-American families must also entail examining how parents combine socialization behaviors differently across households. To the first point, the research base has focused largely on a small set of parenting behaviors that African-American parents use to socialize adolescents' talent development (e.g., Cleveland, Turrisi, Gibbons, Gerrard, & Marzell, 2018; Gutman & McLoyd, 2000; Hill et al., 2018; Mandara et al., 2010; Jarrett et al., 2011). While these past studies provide important insights into the role of specific strategies on adolescent development, they fail to provide knowledge on the holistic and comprehensive ways in which parents may matter. Guided by family management and family socialization models, the most comprehensive studies have either focused on predominantly European-American families of younger children (Simpkins et al., 2015) or low SES African- and European-American families (Furstenberg et al., 1999).

While these studies are steps in the right direction, they still did not capture the socialization strategies existing within African-American families from a wide range of socio-

demographic circumstances. The behaviors uncovered in Study 1 were those that were self-generated by mothers and applied to families from different socioeconomic backgrounds. As such, an important direction to move family socialization research forward is the development of parental behavior scales that examine the frequency to which parents engage in the strategies found in this dissertation. Scales that capture a more complete, comprehensive set of parental behaviors can avail better data in order to examine the extent to which African-American parents' multiple strategies co-occur and conjointly predict adolescents' academic and developmental outcomes.

To the second point, the results in this study underscore the utility of using a pattern-centered approach not only to understand the content of socialization within African-American families but also the extent to which these behaviors differentially shape adolescents' talent-related outcomes. The findings of this dissertation challenge past studies that have taken a variable-centered approach in studying parental socialization holistically (e.g., Jeynes, 2016; Simpkins et al., 2015; Trask-Tate & Cunningham, 2010) in that composite and linear variable scaling techniques largely obscure important constellations of socialization behaviors that exist within families. An overall score of parental behaviors may hide the variations across individual parental behaviors; as a result, what is implicitly assumed in these analytic models is that higher scores on *all* parenting indicators are linearly related to adolescent outcomes.

While there were some instances when such an assumption of uniformity applied, the vast majority of the profiles in Studies 2 and 3 indicated that most mothers engaged in different strategies at variable frequencies. Further, specific configurations of parental strategies were differentially associated with adolescent outcomes. Specifically, mothers who focused largely on provision strategies had adolescents with higher talent-related behaviors than those who focused

largely on instructional strategies (i.e., teaching skills, homework help). Furthermore, there were instances wherein mothers who used many different strategies had similarly high levels of talent engagement as mothers who used only a few, key strategies, specifically within the arts and music domains. Ultimately, our understanding of family socialization processes can benefit further from the use of pattern-centered approaches, as these approaches provide a more concrete understanding of the combinations of strategies that exist and are linked to positive outcomes. Coupling this approach with the use of a more comprehensive set of parental strategies would move the field toward a more nuanced and complete understanding of family socialization.

Stage-Environment Fit in Family Socialization Processes

This dissertation also provides insights into the ways in which family socialization research can integrate Stage-Environment Fit Theory in their examinations. Past studies focusing on stage-environment fit within families have largely focused on general parenting or examine the extent to which types of strategies can be conducive to developmental fit in adolescence (Bhargava & Witherspoon, 2015; Eccles, Midgley et al., 1993; Gutman, et al., 2007; 2011). In this dissertation, I sought to expand our understanding by integrating Stage-Environment Fit Theory with family socialization processes of talent development. I examined which patterns of socialization strategies predicted talent-related beliefs and behaviors for different adolescents groups. I specifically examined these processes across adolescent gender and across mothers' perceptions of adolescents' academic talents.

Overall, what was most beneficial for talented adolescents was when mothers engaged in more moderate levels of socialization or engaged in only some key strategies (e.g., provisions of activities and materials) than if their mothers engaged in either lower or higher levels overall. In the case of arts (specifically for girls) and music, these patterns of socialization were also

similarly beneficial as high levels of socialization. These findings provide some concrete evidence for the utility in parents' modulation of their control over their youths' lives, as posited by Stage-Environment Fit Theory (Eccles, Midgley et al., 1993). In these cases, moderate levels of socialization allow adolescents to exercise autonomy over their own development in domains in which they already show competence. It also provides some credence to the notion that high levels of socialization may be perceived by adolescence as overly involved and controlling, which undermines youths' motivational beliefs and achievement-related behaviors.

With regard to adolescent gender, specific patterns of socialization mattered for adolescents in talents wherein their gender group was less favored stereotypically. For example, athletically talented girls engaged in more sports activities (a male-stereotyped domain) when their mothers used more moderate levels of strategies overall or only some strategies compared to when mothers used many different strategies frequently. Also, academically talented boys fared better in academics (a female-stereotyped domain) when their mothers engaged in moderate levels of strategies or in only some strategies compared to when their mothers used many strategies frequently. Such patterns of association suggest that, for these adolescents, high levels of talent socialization may put unwanted pressures and stress on adolescents, especially in domains where their gender is deemed at a disadvantage. Such patterns concretize EEVT's postulation that gender stereotypes play a macro-level role in family socialization processes in new ways (Eccles [Parsons] et al., 1983; Eccles, 1993; Simpkins et al., 2015).

Nevertheless, such a supposition is qualified by findings in Study 3 that found that all academically talented adolescents fared better academically when their mothers were less educationally involved than when their mother engaged in at least one involvement behavior frequently. Further, in Study 2, these patterns were not found in the arts and music domains,

which are typically female-stereotyped. As such, more empirical work is needed to further test how gender membership and stereotypes intersect with stage-environment fit and socialization processes. Still, the evidence for the role that Stage-Environment Fit Theory plays in family socialization processes across different domains for talented adolescents underscores why researchers must take into account youths' developmental needs at a given period to more thoughtfully hypothesize the family socialization processes underlying youths' achievement.

These findings also have practical implications for African-American parents. Findings underscore the diminishing returns of increased family socialization of talented African-American adolescents. As parents figure out how to help their children's talent-specific development, they also need to support youths' general development and their increasing needs for self-determination in adolescence (Eccles, Midgley et al., 1993). A balanced consideration for what adolescents need in their general development and in their talent-specific development likely makes autonomy-supporting behaviors and more moderate levels of socialization the optimal paths for fostering adolescents' talent-related successes. As such, moving the needle toward adolescents' talent achievement may not require parents to be highly involved at all. Indeed, accumulating evidence from general parenting literature has found that highly involved, "helicopter" parenting can be detrimental to youths' psychological wellbeing and academic achievement (Schffrin, Liss, Miles-McLean, Geary, Erchull, & Tashner, 2014; Schiffrin & Liss, 2017). Hence, adolescents must be appropriately guided, and not helicoptered, through adolescence and into adulthood. To this end, parents must let go of their control as youths gradually become independent, well-functioning members of society in adulthood

Limitations and Future Directions

The findings in this dissertation must be interpreted in light of a few limitations that future studies must address. First, the sample of families in this dissertation were African-American mothers and adolescents who were in the 7th grade in 19991. Although this sample was socio-demographically diverse, which allowed me to compare across different family backgrounds and make findings more generalizable across a wide range of African-American families, findings should not be generalized to other ethnic/racial groups. Furthermore, the age of data may give undue pause to some as to the relevance of the findings to more recent times. While I expect that the strength of the associations found to change across time, it is likely that the actual associations themselves would hold given the extensive literature reviewed in this study. Still, it will be important to understand the processes under investigation within families of different racial/ethnic groups and confirm whether the associations found still stand today.

Second, the ways that MADICS researchers probed mothers' talents relied on self-generated responses. Though these types of responses were less likely to be primed by the researchers' preconceived notions, it does leave the possibility of underreporting, which may have played a role in the largely nonsignificant findings in Study 3 for adolescents' not identified as academically talented by mothers. As mentioned in Study 3, data sources using close-ended Likert-scale measures of parents' perceptions of adolescents' talents may help get a more concrete understanding of the degree to which parents believe youths are talented in a domain.

Third, the available data probed the frequency to which mothers engaged in a list of socialization and involvement behaviors. While the frequency of behaviors is a commonly measured dimension of parental socialization, it does not provide information on the quality to which these behaviors are implemented. Theorists and scholars, for example, have found that the quality of parent-child relationships moderates the links between parental practices and youths'

outcomes (Darling & Steinberg, 1993; Simpkins, Weiss, McCartney, Kreider, & Dearing, 2006). As such, understanding both the frequency of parental behaviors and the manner and context in which these behaviors are implemented play conjoint roles in family socialization processes. Further, understanding the ways in which these conjoint influences occur in the stage-environment fit of family socialization is an important research endeavor to also undertake.

Finally, it is also imperative to examine whether patterns of African-American mothers' socialization and involvement behaviors would shift over time. Recent studies have examined how different types of involvement become more or less frequent across early to late adolescence. For example, home-based and school-based involvement steadily decline yet academic socialization increases from middle school to high school (Bhargava & Witherspoon, 2015). In line with Stage-Environment Fit Theory (Eccles, Midgley et al., 1993), it may be the case that appropriate shifts in the patterns of mothers' socialization and involvement strategies are linked more strongly to adolescents' academic and non-academic talent development. As such, an important step to move this ongoing inquiry forward is to examine transitions in the patterns of family socialization of adolescent talents from early to late adolescence and their links to adolescent outcomes in late adolescence and adulthood.

Conclusion

The primary aim of this dissertation was to examine how African-American mothers foster adolescents' talent development. Although there was partial evidence to my hypotheses, there were consistent indications that moderate levels of socialization and the use of some, key strategies were more indicative of youths' talent-related achievement than lower or higher levels of behaviors. Ultimately, the success of African-American mothers' family socialization hinges on its responsiveness to adolescents' growing needs for self-determination.

APPENDIX A

A Historical Perspective on African-American Families and Research

African-American families occupy a unique, historical space in American society and scholarship, marked by a legacy of societal barriers and continued oppression. As such, a fuller understanding of African-American families must consider a socio-historical lens for the ways in which African-American family organization have developed in our society. In doing so, we may conceptualize African-American family socialization as a product of their historical and societal contexts, going beyond purely developmental and psychological perspectives.

African-American Family Organization and its Debates

During the period of slavery, African enslaved people faced innumerable dangers and challenges to maintain the survival of their families. The enslaved were deemed as "chattels personal", similar in standing as property and having no legal authority over their own bodies, children, and family members (Du Bois, 1909; Goodell, 1986). Nevertheless, scholars have documented many instances whereby enslaved people resisted via continual attempts to run away from slave plantations and search for their children and freedom (Gutman, 1977; Franklin, 2000). Under slavery, the model of the nuclear family—developed during the time of industrialization and characterized by the division of labor between the archetypes of the breadwinner father and homemaker mother—was rarely realized among enslaved families. Mother-child relationships exclusively defined a family unit, and an almost exclusive portion of enslaved mothers' nurturance focused on slave masters' children (Adkison-Bradley, 2011; Hill, 2001). Still, though marriage was prohibited unless it served some economic benefit to slave owners, matrimonial ceremonies of enslaved couples "jumping over the broomstick" were common within slave communities (Gutman, 1977). Enslaved people also centered their lives around their family when

possible, ably rearing and providing a sense of security and hope for their children with the help of extended family members and fictive kin (Adkison-Bradley, 2011; Billingsley, 1992).

With the abolition of slavery after the Civil War in 1865, challenges to African-American families took shape in the legal system. Apprenticeship laws were passed in the South that placed formerly enslaved children into indentured servitude under their former masters' rule if their parents were unmarried or unemployed (Billingsley, 1992; Gutman, 1977). These laws posed great challenges to formerly enslaved people who had limited legal authority over their own marriage decisions as slaves and whose employment prospects were scarce and difficult to attain after slavery (Scott, 1985; Hill, 2001). Still, many African-American parents fought in the courts to gain or retain custody of their children at the risk of their own lives and wellbeing.

In the post-slavery period, the nuclear family model grew into greater prominence and became an idealized family model in the United States. Although African-American marriages and two-parent families increased after slavery (Frazier, 1939; Gutman, 1977), the gendered roles of the breadwinner-homemaker were still rarely a part of African-American family organization. This lack of subscription to the nuclear family model became a source of contention among scholars from assimilationist and cultural relativist perspectives (Peters, 2007).

Frazier (1939, 1959), a prominent scholar of African-American families who espoused assimilationism, attributed the lack of African-American nuclear families to various socio-historical factors. He cited social conditions at the time that denied African-American fathers employment that provided a living wage to sustain their family's needs (Frazier, 1959). As a result, African-American mothers were forced to participate in the labor force with often menial housekeeping occupations and thereby positioning themselves as both breadwinner and homemaker for their families (Frazier, 1959; Hill, 2001; Collins, 1990). Due to employment

challenges and the growing prominent roles of mothers, Frazier (1939) also described a pattern of desertion by African-American fathers from their families, leading to what he deemed as dysfunctional family organizations. Consequently, he argued that African American's assimilation into the dominant Eurocentric model of the nuclear family was the solution to counter the corrosion and struggle of the African-American family (Frazier, 1939). More controversially, Frazier (1939) also claimed that the attitudes and behaviors of African-American people were primarily shaped by the institution of slavery, defined by a limited role of fathers in the family and mothers working to tend to their slave owners' households and children. To Frazier, the shortage of nuclear African American families was therefore rooted in a history of disorganization within African American family structures as families became more matriarchal.

Afrocentric and cultural scholars, however, contended that the lack of subscription to the nuclear, male-headed family model among African Americans did not grow out of the traumas of slavery, but instead stemmed from African cultural values dating back to pre-enslavement (Gutman, 1977; Nobles, 1985). These values promoted egalitarianism between family members, flexibility of gender roles, faith and spirituality, a unified and collective work ethic, cooperative economics, collective responsibility between community members, and reliance on extended and fictive kin (Billingsley, 1992; Karenga & Karenga, 2007; Nobles, 1985; Sudarkasa, 2007). Furthermore, because the ideal of the nuclear family was denied to African-American families during slavery, these African principles already in practice became central as a way to sustain themselves under oppression. These scholars argue, therefore, that African heritage and culture were core to the functioning and survival of African American families. By assuming that African-American family organization was rooted in the traumas of slavery, these theorists

argued that assimilationists ignored the ways in which African-American values were derived from West African culture and were sustaining their families (Gutman, 1977).

The "Tangle of Pathology" and its Criticisms

In spite of its criticisms, Frazier's view of African-American family dysfunction and its roots in slavery had major implications among policy makers in the subsequent years to come. Amidst the rapid urbanization of poor African-American communities following migration to the North in the 1960's, sociologist and then Assistant Secretary of Labor Daniel Moynihan wrote "The Negro Family: The Case for National Action" (i.e., Moynihan Report) in March 1965. Coinciding with the Johnson administration's "War on Poverty", the report used Frazier's argument to assert that the root of African Americans' economic hardships was the rise of matriarchal, single-headed family structures brought on by enslavement. As these structures were in contrast to the nuclear family model in American society, Moynihan (1965) posited a "tangle of pathology" that "retards the progress of the group as a whole, imposes a crushing burden on the Negro male and, in consequence, on a great many Negro women as well."

Moynihan's (1965) analysis was based on the 1960 Census report that 25% of African-American households were poor, female-headed, and had children born out of wedlock—a substantially higher proportion compared to European-American households. While Moynihan noted that structural barriers and racist norms afflicted African Americans in the United States, he claimed that "at the heart of the deterioration of the fabric of Negro society is the deterioration of the Negro family" (Moynihan, 1965). The report, however, faced criticism for pathologizing African models of families, victim blaming, and failing to account for the heterogeneity and historical contexts of African Americans (Billingsley, 1968; Dodson, 2007; Geary, 2015).

On methodological grounds, scholars like Billingsley (1968) argued that Moynihan minimized the 75% of African American families in the United States who fit his definitions of stable and well-organized families. Furthermore, Moynihan did not account for social class and the barriers African Americans faced in his analyses. Using the same data, Billingsley (1968) found that the rates of so-called dysfunctional African-American families were largely explained by family income. He also pointed out that comparisons between European- and African-American groups were problematic due to differences in social class, institutional resources, and structural barriers between European and African Americans during the time of the Civil Rights Movement. Hence, the claim that "weak" African-American family structures were the root cause of African Americans' tangle of pathology fundamentally ignored the ways in which poverty, prejudice, and disenfranchisement had historically disadvantaged African Americans (Billingsley, 1968). Nevertheless, the Moynihan Report had powerful implications for the ways in which policy and social science researchers would conceptualize African-American families.

African-American Families in Social Science Research

The closing section of the Moynihan Report (1965) called for national efforts and policies "designed to have the effect, directly or indirectly, of enhancing the stability and resources of the Negro American family". In the decades that followed, social science research on African Americans largely took on a comparative deficit approach to "correct" African-American family dysfunction (Hill, 2001; Peters, 2007; Rainwater, 1970). Stemming from an assimilationist rationale, studies often compared African American families to their European-American counterparts (a practice still common today) and were treated as inferior and "culturally deprived" if they lacked mainstream, Eurocentric norms and values (Dodson, 2007; Peters, 2007; Rainwater, 1970). These deficit approaches often found African-American mothers

to be overly harsh and punitive and fathers to be insecure and uncaring (Portes, Dunham, & Williams, 1986; Radin & Kamii, 1965). Moynihan's report also shifted research foci toward low-income and urbanized African-American families. However, findings from research on these families (who made up a minority of African-American families) were typically generalized to *all* African-American families in the United States (Billingsley, 1968; Peters, 2007; Tamis-Lemonda et al., 2008). Coupled with a comparative deficit perspective, these researchers also typically compared poor and working class African-American families with middle-class European-American families (Nobles, 1997; Peters, 2007; Radin & Kamii, 1965). As a result, many parenting interventions focused largely on helping poor African-American families develop more "appropriate" child-rearing and disciplinary behaviors based on middle-class, White standards (Peters, 2007). Thus, African-American families were perceived as unable to socialize their children, lacking adequate organization to survive on their own.

Critics of comparative deficit approaches pointed to the ways in which these perspectives perpetuated long-standing negative stereotypes of African Americans (Billingsley, 1968; Collins, 1990; Geary, 2015). Indeed, scholarly portrayals of African-American families as dysfunctional coincided with racial triangulation patterns that de-valorized African Americans via controlling images of an urban underclass who were passive victims of their own pathologies (Collins, 1990; Kim, 1999; Omi & Winant, 2014). Critics also asserted a false dichotomy in Black-White comparisons, as these groups have had long racialized histories, marked by still-prevailing structural inequalities that have privileged European Americans to the detriment of African Americans in the United States (Billingsley, 1968; Peters, 2007; Staples, 1999). Hence, to many critics, examinations of African-American families must entail an understanding of their historical and societal contexts while also forgoing comparisons to a standard reference group.

Hence, scholars have criticized deficit approaches for their monolithic view of *all* African-American families as pathological, for making racial comparisons that do not account for socio-demographic circumstances, and for failing to account for the heterogeneity within African-American families. In fact, many contemporary studies often fail to consider the socio-demographic diversity within these families, typically focusing on specific segments of African-American populations at a time (e.g., Brody et al., 2001; Clark, 1983; Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999; Jarrett & Jefferson, 2003). Hence, capturing a fuller picture of African-American families must also entail expanding analyses to a more diverse set of families.

Within the last two decades, as a reaction against comparative deficit perspectives, many scholars have developed theoretical models that focus on the strength, resilience, and heterogeneity of African-American and other racial/ethnic minority families and children (e.g., Garcia-Coll et al., 1996; Furstenberg et al., 1999; McLoyd, 1990; Spencer, Dupree, & Hartmann, 1997). These strengths-based models emphasize on African-American families' historical, social, and economic contexts, their adaptive responses to negative experiences within the larger society, and the value of examining heterogeneity within racial/ethnic groups without reference to an "ideal" comparison group. These notions are by no means novel at the time, as anthropologists have carefully detailed the great variety in the cultural contexts of child-rearing and development across the world (e.g., Edwards, 2000; Super & Harkness, 1986; Whiting & Whiting, 1975). Nevertheless, these resilience models have been influential in a shift in psychological research that leverages a strengths-based perspective on ethnic-minority children's development (see Perez-Brena, Rivas-Drake, Toomey, & Umana-Taylor, 2018 for an example).

Scholars also point out that a long legacy of dehumanization has transformed the socialization processes of African-American families. These researchers have posited that

African-American families have developed unique child-rearing repertoires that promote both children's positive development and resilience against challenges faced by African Americans in the larger society. This socialization largely entails the integration between the dominant and their own culture. For example, family researchers have documented that many African-American families socialize their children on the norms and principles of Eurocentric middle-class values (Hill, 2001; Taylor, Chatters, Tucker, & Lewis, 1990) along with African-based values and worldviews (Hill, 2001; Nobles, 1985). These dual family socialization patterns of positive development and resilience reflect African-American individuals' desire to achieve social and economic mobility and need to combat racist structural forces that may undermine them (Du Bois, 1899; McAdoo, 2002). As such, a key motivation in this dissertation is to describe and examine African-American family socialization processes through a lens that positions parents as positively facilitative of their children's skills and talent development and directly responsive to the specific needs that youths face in adolescence.

Historical Foundations as Prologue

An overview of the history of African-American families provides a basis for the ways in which they hold a distinctive social position in contemporary United States. A legacy of African culture has shaped their family organization, which has sustained them during enslavement and continued inequality. However, the idealization of the "traditional" nuclear family model has perpetuated perceptions of African-American families as culturally deprived, dysfunctional, and pathological. These perceptions were then bolstered by research frameworks failing to account for their heterogeneity and historical distinctiveness from European-American families. These deficit frameworks, however, have been challenged by strengths-based models of African-American and other racial/ethnic minority families in the last few decades.

As such, in the present dissertation, I used these historical foundations as prologue to understand the dynamic patterns and processes within socio-demographically diverse African-American families. Specifically, I examined the heterogeneity of African-American family socialization, examining the roles of contextual factors important to socialization and development, such as adolescent gender and family SES. Further, I also considered African-American families as the primary facilitators of their children's positive skill development. I made concerted efforts to avoid placing value judgment on whether specific behaviors are indicative of family pathology or functioning. Instead, I conceptualized parental behaviors as purposeful and contextualized to their aims (i.e., development of specific talents) in order to continue a strengths-based tradition in understanding African-American family socialization. To this end, in this dissertation, I was guided by theoretical frameworks that view African-American parents as experts to the family socialization process and responsive to the developmental needs of their adolescent children.

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