

**RACIAL IDENTITY DIMENSIONS AND PARENTAL ACADEMIC
SOCIALIZATION AS PROMOTIVE AND
PROTECTIVE FACTORS FOR THE
ACADEMIC SUCCESS OF
BLACK STUDENTS**

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ABSTRACT

The current study investigated the role of racial identity dimensions (racial centrality and private regard), academic identity and parent socialization (specifically, academic, and ethnic/racial socialization: cultural socialization and preparation for bias), in promoting success among a diverse sample of Black students. The study aimed to examine how parent socialization and academic identity mediated the relationship between racial identity dimensions and academic achievement. Data was collected nationwide from 685 Black students through an online survey conducted in Spring 2022.

Path models were employed to explore the relationship between racial identity dimensions and academic achievement. To account for contextual factors, the analyses incorporated academic identity and parent socialization (academic and ethnic/racial socialization, including cultural socialization and preparation for bias) as mediators, while gender was considered as a moderator. However, the mediation analyses did not yield statistically significant results, highlighting the need for further research to investigate the nuanced relationship between these factors.

In addition to the path models, supplementary analyses were conducted, including bivariate correlations and exploratory factor analyses of the scales used: Identification with Academics (IAS, Osborne, 1997), Identification with School Questionnaire (ISQ, Voelkl, 1996), Education Socialization Scale (ESS, Bempechat et al., 1999), and Parent Ethnic/Racial Socialization (PERS, Hughes & Chen, 1999). The results of the exploratory factor analyses and subsequent evaluation of psychometric properties revealed inconsistencies between the factor structures suggested by previous studies and the current study for the Identification with Academic, Identification with School

Questionnaire, and Education Socialization Scale. This suggests the need for further refinement and validation of these measurement instruments. However, the exploratory factor analysis of the Parent Ethnic/Racial Socialization scale aligned with existing literature, indicating its appropriateness for use with Black students. Bivariate correlation analyses demonstrated small-to-moderate relationships that were consistently observed across most variables. Academic identity demonstrated a strong and significant correlation with private regard and a moderate and significant correlation with racial centrality. GPA demonstrated a moderate and significant correlation with academic identity and private regard, and a small but significant correlation with racial centrality and parent academic socialization.

Students who endorse a stronger academic identity and racial identity (private regard and racial centrality) are more likely to have better academic outcomes, including higher GPA. Furthermore, the findings related to parent academic socialization suggest that parental support and engagement may continue to have some influence on the academic performance of Black students, even in adulthood.

The implications of the findings were such that fostering a strong academic identity and a positive racial identity contributed to better academic outcomes for Black students. Further, the findings highlight the sustained influence of parental support and engagement on the academic performance of Black students, even as they transition into adulthood. This underscores the significance of ongoing parental involvement throughout a student's educational journey.

DEDICATION

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CHAPTER 1

INTRODUCTION

As a social construct, race profoundly influences the development of self-perception, interpersonal relationships, and navigation of spaces for people of color, particularly Black and Hispanic/Latinx individuals (Feagin, 2006; Johnson & Carter, 2019). Historically, and to an extent currently, Black individuals and Black culture are viewed as “culturally deficient” (Gutman & Sims, 2016) and compared to White individuals and the dominant culture. Historians and social scientists have analyzed and discerned distinctive characteristics within Black culture and Black cultural identity. Through this research, a myriad of defining elements have been identified that encapsulate the essence and uniqueness of Black cultural expressions. These identifiable features collectively form a rich tapestry, highlighting the artistic, linguistic, historical, and societal aspects that contribute to the diversity within Black cultural heritage (French & Allen, 2006; Johnson & Carter, 2019; Marshall et al., 2017)

The manifestation and experience of Black culture enables Black people to persevere in contexts of systemic racial oppression, discrimination, and trauma (Johnson & Carter, 2019). Therefore, Black resiliency, while multilayered and complex, is an act of survival and resistance (Holtorf, 2018; Wright et al., 2016), as they navigate through adversity while embracing change, growth, and positive experiences (Leath et al., 2019; Wittrup et al., 2019).

Movements like “Black boy joy” and “Black girl magic” acknowledge and celebrate the individuality, multidimensionality, and unique experiences of Black boys and Black girls through positive and affirming means (Halliday & Brown, 2018; Priest et

al., 2014; Walton & Basirat Oyewuwo-Gassikia, 2018). These movements, including Black Lives Matter, challenge the narrative that Black experiences are defined solely in relation to White people and the dominant culture. They recognize and celebrate the multifaceted nature of Black culture, acknowledging its presence within diverse intersecting ecosystems.

Further, in acknowledging that Black people and Black culture exists within a multilayered and intersecting systems, Boykin's triple quandary theory highlights the challenges faced by Black students as they navigate their identity development within the context of the education system. The theory proposes three interrelated dilemmas: the academic, cultural, and social quandaries. The academic quandary refers to the tension between achieving academic success while maintaining cultural authenticity. The cultural quandary involves reconciling the students' cultural heritage with the dominant culture of the school. The social quandary relates to the struggle of balancing peer acceptance and conformity with positive academic outcomes. Boykin's theory emphasizes the importance of creating culturally responsive educational environments that address these dilemmas to support the academic and social success of Black students (Boykin, 2006).

Students of color, particularly Black students, encounter aversive factors that undermine their academic attainment and overall quality of life (Osborne, 1997). In the face of adverse experiences, most Black students overcome and persevere. Yet, the persistent dominant narrative frames Black students as underperforming as compared to their White peers (Korpershoek et al., 2019). There exists a large body of scholarship regarding Black students that relies heavily on a deficit-based framework that focuses on the negative outcomes connected to the limited resources, opportunities, and adverse

circumstances that Black students and their families contend with (Benner et al., 2018; Cabrera, 2013; Jackson et al., 2020; Leath et al., 2019).

While these concerns represent the veritable circumstances and realities of some Black students (Harper, 2009; Harper & Davis, 2012; Harper & Kuykendall, 2012;) and their families, it fails to accurately and authentically represent the totality of their lived experiences (Harper & Kuykendall, 2012) and their resiliency as well as the strength-based strategies that the students and their families employ to mitigate their experiences of school-based racial discrimination (Harper, 2009).

While a growing body of research is approaching Black students and their experiences in the U.S. educational system through a strengths-based, resiliency-rooted, positive youth development perspective (Harper & Davis, 2012), the breadth of research is limited. By intentionally examining the experiences of Black students using a strengths-based approach, researchers can better understand how this population navigates school-based racial discrimination as well as the role that parents play in preparing their Black children for these experiences (Harper, 2009). Furthermore, recognizing and celebrating the unique cultural experiences of Black students and their families enables researchers to appropriately and accurately address the persistent inequities that permeate the education and lived experiences of Black students.

This is incorporating culturally sound and responsive practices within the academic curriculum, like teaching and embedding Black history throughout the calendar year. Celebrating Black achievement, approaching student challenges from a trauma-informed lens, as well as providing parents with alternative communication and engagement options (i.e., connect virtually if they are unable to attend parent-teacher

conference). In doing so, researchers build upon students and their families' strengths and understanding of the barriers that these families face in supporting their children's education (Sonnenschein & Sawyer, 2019, page 2).

Black students and their families do not only exist in relation to their White counterparts. Their experiences and achievements should not be framed only in relation to White students. Moreover, the expression and experience of Black culture, in conjunction with racial identity, reflects the internalized and externalized pride and power that Black people feel and continue to experience (Butler-Barnes et al., 2017; Rowley et al., 1998; Sellers et al., 1998). Black culture possesses a richness and strength that empowers those who embrace it. At its core, it makes visible and legitimizes the identities, and experiences of so many who have been and continue to be marginalized (Johnson & Carter, 2019). While Black people have gone through significant trauma and tragedy, from the period of enslavement through the Jim Crow era, the Civil Rights movement, and the continued structural and systemic racism and marginalization, Black culture has been an appreciation and celebration of community and life (Johnson & Carter, 2019).

Black culture and its values are tied to Black people's history and experiences worldwide. Researchers have identified cultural values that date back to African tribal communities that continue to be upheld by Black people presently (Hope et al., 2015; Johnson & Carter, 2019; Marshall et al., 2017). Johnson and Carter (2019) found that some cultural beliefs and practices of African ancestors are now customs and traditions for many Black people in America (Johnson & Carter, 2019). Examples of ancestral veneration, oral storytelling, spirituality and healing practices, art and visual experiences

illustrate how African cultural beliefs and practices have influenced and continue to shape the lives of Black people, fostering identity, resilience, and cultural continuity.

Black cultural practices are rooted in communalism, and spiritualism/religiosity. Moreover, communalism has played a significant role in the survival of Black people in America (Boykin et al., 1997). These cultural practices passed on intergenerationally continue to help Black people maintain their community and their sense of self-worth, especially during times of extreme oppression. These practices and values have progressed into collectivist characteristics (i.e., communalism, racism related coping strategies) of Black culture (Boykin et al, 1997).

The practices of cultural spirituality, racial identity, and racial socialization contribute to the Black cultural strengths that Black people utilize to help them navigate challenging times (Johnson & Carter, 2019; Johnson, 2017; Marshall et al., 2017). Researchers (Boykin, et al., 1997) highlight how Black cultural practices and orientations influence the relationship between the individual and their social world. Black cultural practices intersect to produce Black cultural strength (Johnson & Carter, 2019; Johnson, 2017). Examples such as call and response and the Griot tradition highlight the intersection of Black cultural practices, fostering strength, resilience, and identity within African and African American communities. These practices illustrate how various Black cultural practices intersect, contributing to the strength, resilience, and distinctiveness of Black culture. They serve as sources of pride, community cohesion, and identity affirmation within African and African American communities.

Therefore, to address these persistent disparities effectively and authentically, the strategies and approaches embedded within the evaluation and intervention development

process must be rooted within a cultural context (Boykin et al., 1997; Johnson & Carter, 2019). Specifically, it must be rooted within Black and Afrocentric cultural contexts that is identity-affirming and experience-validating (Boykin et al., 1997; Johnson & Carter, 2019). Embracing Black culture may be the key to addressing these persistent inequities. Using an Afrocentric cultural orientation is associated with positive youth development outcomes, including academic engagement (Williams & Chung, 2013) and self-esteem (Grills et al., 2016). Research has shown that an Afrocentric cultural orientation is a significant protective factor for psychological well-being of Black students (Grills et al., 2016; Neblett et al., 2012).

Utilizing a strengths-based approach or an identity-affirming perspective encourages researchers, and educators to implement more concerted efforts that center on Black students' success and positive performance (Harper, 2009). Harper (2009) posits that scholars and educators must question how their actions (i.e., what they are doing versus not doing) contribute to supporting and assisting students overcome obstacles. In doing so, they shift the responsibility from the students to the institution (Harper, 2009). By taking a progressive approach and embracing an anti-deficit model framework, an opportunity arises to critically re-evaluate the methodologies employed in research. This entails a thorough examination of the prevailing practices and a deliberate shift towards more inclusive and equitable research approaches. Researchers need to evaluate the opportunity gap through a more comprehensive lens, expanding it beyond simply looking at deficit-based behaviors and outcomes (Harper, 2009).

While his research primarily focused on Black men, Harper (2014) highlighted the disproportionate fixation with “bad data” (Harper, 2014, p. 127) found within

research rooted in deficit thinking of Black men (Harper, 2014). This excessive preoccupation emphasizes negative behavior and outcomes, and this fixation focuses on lower graduation rates, lower retention rates, and lower grade point averages. Working from an asset-based perspective framework, fosters opportunities to examine the protective factors Black students use to navigate adversity. In addition, researchers can better understand the advanced resiliency methods used by Black students and capture a more multidimensional image of the issue.

A strength-based approach can drastically change the way in which educators and school administrators support Black students (Harper, 2009). Through this approach, stakeholders can develop strategies aimed at fostering academic success and promoting wellbeing (García & Guerra, 2016; Lardier et al., 2018), exploring the impetus for school engagement, and belonging for students succeeding in school (Harper, 2014). In examining the experiences of Black students from a strengths-based perspective, stakeholders can better understand nuanced strategies employed by Black students, as well as the messages that they receive from their parents as they navigate school-based discrimination and other racialized experiences (Cabrera, 2013; Garcia Coll et al., 1996; Neblett et al., 2012; Stewart, 2006).

In building on the existing literature that utilizes a strengths-based framework, conducting culturally responsive and identity-affirming research is critical to accurately conceptualizing the racial/ethnic identities and experiences of students of color, in particular Black student (Chapman-Hilliard & Adams-Bass, 2015). Additionally, understanding how students of color navigate and overcome the unique academic, societal, and systemic circumstances allows for better informed practices that meet the

needs and support these students (Wang et al., 2020). This research is significant because it seeks to provide insight into the factors associated with promoting academic success in Black students through an asset-based lens. And while there is a growing body of research that is adopting the strengths-based framework, more research is needed to understand and examine how factors such as academic identification, racial identity attitudes (centrality and private regard) and parent academic socialization relate to each other and promote academic success.

The Current Study

Given the extent of the literature and the preoccupation with studying Black students through a deficit-based framework, there needs to be a better understanding of how Black students conceptualize their academic identity in relation to their racial identity through a strengths-based lens. This study examines the roles of racial identity attitudes (centrality and private regard) and parent academic socialization as promotive factors for academic success with a diverse sample of Black students.

CHAPTER 2

LITERATURE REVIEW

Academic Achievement

Over the past five decades, the academic achievements of students in the United States have witnessed a significant improvement. This positive trend is evident in the rising number of high school graduates and the increasing pursuit of higher education by students (de Brey et al., 2019; Musu-Gillette et al., 2016; Tabbodi et al., 2015). However, while the overall high school and college graduation rates have shown an upward trajectory across all demographic groups, it is important to recognize that not all students are progressing at the same pace (Hussar et al., 2020; de Brey et al., 2019; Musu-Gillette et al., 2016). Racial and ethnic minority students consistently experience lower high school and higher education completion rates compared to their white peers (Hussar et al., 2020; de Brey et al., 2019; Musu-Gillett et al., 2016).

Academic achievement is a significant predictor of future success. Therefore, it is essential to understand the racial/ethnic inequities that undermine academic performance and achievement. Extensive research has identified and examined the persistent gaps in achievement and opportunities among different racial and ethnic group within the United States education system (Assari et al., 2021; Harackiewicz et al., 2016; Hung et al., 2019; Paschall et al., 2018; Voight et al., 2015). Despite the existence of a substantial body of research investigating the academic achievement and opportunity gaps that persist among different racial/ethnic and marginalized groups, a consensus has yet to be reached regarding the most effective strategies and interventions for addressing these gaps (Jeynes, 2015, 2016; Williams et al., 2017).

Overview of Academic Achievement

Academic achievement, also referred to as academic performance, as defined by Steinmayr and colleagues (2014), is the exemplification of an individual's performance outcomes that denotes the degree to which an individual has shown adeptness toward specific aims within instructional environments, particularly in K-through-12 education and higher education (Steinmayr et al., 2016). Academic achievement correlates positively with advancement opportunities, financial, and career stability (Potter & Morris, 2017; Wright, 2009). Further, academic achievement is a central indicator of positive psychological functioning (Suldo et al., 2006). It is associated with higher self-concept and higher self-efficacy (Guay et al., 2003). Conversely, the presence of an academic achievement gap is associated with adverse life outcomes, including higher rates of incarceration, lower socioeconomic status, and compromised psychological and physiological well-being (Banerjee, 2016; Dupéré et al., 2015; Gregory et al., 2010; O'Malley et al., 2015).

The Academic Achievement Gap

The academic achievement gap refers to persistent disparities between minority and economically disadvantaged students and their Asian, White, and economically advantaged counterparts. Extensive research has established strong correlations between the achievement gaps experienced by racial/ethnic minorities and factors such as socioeconomic status, poverty rate, unemployment, and parents' education level. Studies have consistently shown that socioeconomic status plays a pivotal role in shaping educational outcomes and opportunities (Reardon, 2011; Sirin, 2005). Reardon (2011) found significant associations between socioeconomic factors and the achievement gap,

with students from lower socioeconomic backgrounds facing greater disparities in academic performance. By their senior year in high school, the average Black student is about four years behind their White counterparts. In some instances, Black high school seniors perform lower than White 8th graders in geography, mathematics, reading, and history (Thernstrom & Thernstrom, 2003).

Hussar and colleagues (2020) found that for the 2018 academic year, the overall college enrollment rate of recent high school graduates for all races was 68%; the racial breakdown for college enrollment was as follows: Asian-American = 78%; White = 70%; Hispanic/Latinx = 63%, and Black = 62% (Hussar et al., 2020). In the 2018 Status and Trends in the Education of Racial and Ethnic Groups, de Brey and colleagues (2019) reported the following college graduation rates: Asian-American = 74%; White = 64%; Hispanic/Latinx = 54%, and Black = 40% (de Brey et al., 2019).

Black and Hispanic/Latinx students continue to underperform compared to the national average on standardized assessments (Fleury DeVoe et al., 2008; Mertens, 2015). In the impact analysis of the No Child Left Behind (NCLB) statute on math and reading attainment of Black students in kindergarten through 12th grade, Lewis and colleagues (2008) found that the practices and policies implemented under the No Child Left Behind legislation had little to no impact on the achievement of Black students (Lewis et al., 2008).

Following the enactment of the Every Student Succeeds Act (ESSA) in 2015, which replaced the No Child Left Behind (NCLB) Act, states have increased autonomy and flexibility in K-12 education. With this shift, state and local actors have increased decision-making authority to them (Ayscue et al., 2022; Malin et al., 2017).

Consequently, states have greater control over the utilization of standardized tests to assess student performance, the establishment of academic standards, and the allocation of resources to disadvantaged and underperforming student subgroups (Ayscue et al., 2022; Malin et al., 2017).

Moreover, comprehensive research conducted through school district-led consortiums and organizations, like the Network of Equity and Student Achievement (NESA) and the Minority Student Achievement Network, have consistently revealed significant disparities between Black and Hispanic/Latinx students and their White counterparts across multiple dimensions, including access to resources beyond school, enrollment rates in advanced-level classes, proficiency in essential skills, and the impact of teacher encouragement (Boykin, 2006; Milner, 2012). Noguera and Wing (2006) highlighted that White students had access to supplemental education resources (i.e., private coaches and tutors), while Black and Hispanic/Latinx students did not. Noguera and Wing (2006) emphasized that Black and Hispanic/Latinx students struggled to access essential and relevant information about entrance to and succeeding in advanced placement classes and were overrepresented in remedial and special education classes (Noguera & Wing, 2006). Black and Hispanic/Latinx students have limited access to academic and college preparatory courses (Darling-Hammond, 2010). Underqualified teachers are disproportionately placed in low-income schools that have high concentrations of Black and Hispanic/Latinx students (Barton, 2004; Darling-Hammond, 2010).

In conceptualizing the issue as gaps in academic attainment, it forces stakeholders (policymakers, researchers, scholars, teachers, and others) to draw comparisons between

diverse (culturally, economically, ethnically, linguistically, and racially) students and their White counterparts without incorporating the historical and institutional oppressive acts, practices, and policies that are the root cause of the disparities and differences (Milner, 2010). The persistence of inequitable disparities necessitates acknowledging the key contributing factors that undermine the academic attainment of Black and Hispanic/Latinx students, notably the inequitable access to resources and opportunities available to them (Hung et al., 2019). Therefore, using the opportunity gap framework instead of the student-centered examination of academic performance, or underperformance, attention is placed on the conditions and obstacles students of color face throughout their academic careers.

Shifting from Achievement Gap to the Opportunity Gap

When discussing racial/ethnic disparities in academic performance, it is necessary to acknowledge how framing the gaps between Black and Hispanic/Latinx students and their White counterparts perpetuates the idea of White students as the norm. Moreover, this framing views Black and Hispanic/Latinx students through a deficit-based lens (Howard & Gay, 2010). Instead, Milner (2010) encourages stakeholders to center the experiences of students at an individual and group level, in addition to examining the impact of practices, policies, systems, and structures that have been historically rooted in racism and sexism (Milner, 2010). By shifting the framework from a narrow focus on educational outcomes to a comprehensive evaluation of students' lived experiences within the school and broadened societal context, a distinct and nuanced approach emerges for explaining the complexities of these disparities among student populations (Flores, 2007).

Flores' (2007) analysis sheds light on the disparities faced by Black and Hispanic/Latinx students, underscoring their reduced access to qualified and experienced teachers as well as equitable per-student funding compared to their White counterparts. Furthermore, these students are more likely to encounter low expectations from teachers and other adults (Flores, 2007). By emphasizing these enduring inequities of opportunity faced by low-income, Black, and Hispanic/Latinx students, it becomes evident that the achievement gap is better understood as a manifestation of the opportunity gap.

The Opportunity Gap

The opportunity gap is the acknowledgment and identification of the unequal opportunities amongst students, particularly students of color, that contribute to disproportionate differences in academic attainment (Darling-Hammond, 2010; Noguera, 2008). The opportunity gap captures the inequitable systems at play that undermine the academic achievement of students of color (Darling-Hammond, 2010). It emphasizes the persistent inequities of opportunity experienced by students of color. This framework highlights and confronts the institutional and system inequities contributing to student achievement (Johnson-Ahorlu, 2012). Extensive research demonstrates the pervasive nature of the opportunity gap experienced by Black students, manifesting as early as pre-kindergarten and persisting throughout higher education (Noguera, 2008). This gap is influenced by a multitude of factors, notably funding systems and limited access to important resources like experienced teachers, computers and internet connectivity, which significantly impact the educational landscape and shape the treatment and perception of students of color (Kim & Shah, 2020; Orfield & Lee, 2005).

Inequitable funding distribution exacerbates educational disparities, with schools serving predominantly Black and Hispanic/Latinx populations often receiving fewer resources compared to schools with predominantly White student populations (Kim & Shah, 2020; Orfield & Lee, 2005). Insufficient access to vital resources hinders students' academic progress and perpetuates the opportunity gap. Furthermore, the presence of racism, stereotypes, biases, and discriminatory practices within educational settings amplifies these disparities (Howard, 2001; Skiba et al., 2011). Racial biases can lead to disproportionate disciplinary actions and lower expectations for students of color, thereby impeding their educational opportunities and success (Gregory et al., 2010).

Gender Trends

In addition to the significant growth of students of color graduating from high school and enrolling in higher education, women and girls, in particular, have surpassed men and boys in high school performance, graduating, and attaining college and professional level degrees (Buchmann et al., 2008; Buchmann & DiPrete, 2016; DiPrete & Buchmann, 2006; Reynolds & Burge, 2008; Peter et al., 2005; Voyer & Voyer, 2014). Buchmann and colleagues found that in most industrialized countries, women and girls outperform men and boys across multiple indicators of academic success (Buchmann et al., 2008). Historical evidence suggests that prior to the 1970s and 1980s, girls faced academic disadvantages in male-dominated school environments due to a lack of gender equity and curricula centered around masculine teachings (Buchmann et al., 2008; Voyer & Voyer, 2014). Fueled by deep cultural changes taking place during the 1960s and 1970s, including the Civil Rights movements and the women's rights movement

contributed to a sharp and dramatic shift where women have improved their educational attainment considerably (Buchmann et al., 2008; Buchmann & DiPrete, 2016).

In their study examining a broadened focus of educational outcomes, Downey and Vogt Yuan (2005) found that women surpassed men in attaining bachelor's degrees as early as 1981 and continue to outpace men today (Downey & Vogt Yuan, 2005; Workman & Heyder, 2020). Additionally, high school girls outperform boys in multiple courses and typically enroll in more advanced classes (Downey & Vogt Yuan, 2005; Voyer & Voyer, 2014). In the United States Department of Education (2011, 2012), girls in the U.S. earned more credits than boys on average. Additionally, the National Science Board (2012, 2014) found that girls demonstrate a higher likelihood of completing pre-calculus and Algebra II courses compared to boys, and they are equally likely to complete calculus and statistics (National Science Board, 2011, 2012).

With women and girls outperforming men and boys across multiple academic domains (Workman & Heyder, 2020), including college and professional degree attainment (U.S. Department of Education, 2010), the focus of academic achievement has shifted from an examination of girls to that of boys (Workman & Heyder, 2020). Moreover, it is essential to note that the performance of men and boys on standardized tests has not worsened. However, the academic performance of women and girls over the last 30 years has improved rapidly compared to their male counterparts (Workman & Heyder, 2020). Despite the advancements made by women and girls in academic performance and the significant efforts from various interventions and initiatives, achievement, and opportunity gaps between Black, Hispanic/Latinx, Indigenous/First

Nations, and low-income students, and to their Asian, White, and economically advantaged counterparts remain (Workman & Heyder, 2020).

Racial/ethnic Trends

Olszewski-Kubilius and colleagues found that the achievement gap between Black and White students in math and reading has remained constant over the past twenty years (Olszewski-Kubilius et al., 2016; Rampey et al., 2009). In their longitudinal study, Rampey, Dion, and Donahue (2009) found that although the average performance for mathematics and reading has shown improvement for all racial/ethnic groups over the last thirty years, the gaps between Black, Hispanic/Latinx, and low-income students and their White and high-income counterparts remain stagnant (Cadelle Hemphill & Vanneman, 2011; Rampey et al., 2009).

Present explanations attribute the Black–White and Hispanic/Latinx – White academic gaps to disparities and inequities in school quality (Potter & Morris, 2017), family socioeconomic status, and belonging to historically marginalized groups (Potter & Morris, 2017; Rampey et al., 2009). Less explored explanations include family experiences, parents' level of education, educational expectations, and involvement (Cheadle, 2008; Cheadle & Amato, 2012).

A comprehensive understanding of the persistent racial/ethnic achievement gaps can be facilitated by recognizing and acknowledging the far-reaching impact of historical and ongoing socioeconomic and cultural inequities that persist in the United States. Students from historically marginalized groups face a higher likelihood of receiving lower-quality education, characterized by attending underfunded and resource-limited schools staffed by inexperienced teachers (Flores, 2007; Ladson-Billings, 2006).

Moreover, these students experience numerous opportunity gaps even before entering school, including limited access to high-quality childcare and preschool programs (Cascio & Schanzenbach, 2013). These disparities in educational resources and opportunities contribute to the perpetuation of inequities throughout their educational journey (Cascio & Schanzenbach, 2013; Morsy & Rothstein, 2015).

Children who face challenges in achieving academic success are likely to encounter significant obstacles throughout their adult lives (Morsy & Rothstein, 2015). The impact of lower levels of academic achievement extends beyond educational settings, affecting various aspects of their lives, including their economic and career prospects. Limited academic attainment can impede their ability to access higher-paying jobs, financial stability, and career advancement opportunities (Morsy & Rothstein, 2015). As a result, these individuals may experience ongoing difficulties in establishing and maintaining economic security, leading to increased vulnerability and socioeconomic disparities.

The persistence of opportunity gaps and the systemic inequities embedded within the United States education system further exacerbate the barriers faced by marginalized and minoritized students. These students often encounter additional challenges due to factors such as limited access to quality educational resources, discriminatory practices, and biased expectations (Ladson-Billings, 2006; Lee, 2004). These barriers hinder their educational progress, limit their opportunities for personal and intellectual growth, and contribute to disparities in academic outcomes. Conceptualizing the achievement gaps at the high school and higher education level and incorporating the impact of and function of academic disengagement and disidentification, especially in racial/ethnic minority

students, is vital to better understanding why these gaps persist. Consequently, examining academic identification as a multidimensional construct allows for a more dynamic conceptualization of how students, particularly students of color, formulate their identities within and beyond the academic setting. Understanding how the institutional factors undermine the academic success of Black, Hispanic/Latinx, and economically disadvantaged students allow for a comprehensive examination of the interplay of these factors.

Institutional Factors Undermining Academic Performance

Institutionalized racism (stereotyping, implicit and explicit bias) and systemic issues (school inequity) undermine Black and Hispanic/Latinx students' relationship and identification with school (Fordham & Ogbu, 1986; Harper, 2007; Kunstman et al., 2021). These factors also hinder and prevent Black and Hispanic/Latinx students from accessing resources and opportunities that facilitate academic progress (Codjoe, 2001). Racialized experiences influence how students of color perceive themselves and how they interact, relate, and function within an academic setting (Durkee et al., 2019; Scott et al., 2021). For Black and Hispanic/Latinx students who experience differentiated treatment (i.e., disproportionate discipline, hyper-surveillance, adultification, and inequitable access to resources and opportunities) in school, their relationship with the school is compromised, increasing the likelihood of them disidentifying and disengaging from school (Durkee et al., 2019; Scott et al., 2021).

Moreover, the academic outcomes of Black and Hispanic/Latinx students are significantly impacted by various additional factors. Insufficient support, from family and school staff, combined with experiences of identity-based discrimination, such as racism

and microaggressions, within the educational environment, have profound adverse effects. These factors diminish students' sense of belonging in school and undermine their academic identity development, leading to disengagement and compromising their overall academic achievement (Leath et al., 2019; Lewis et al., 2015). The combination of inadequate support and the detrimental effects of identity-based discrimination creates a challenging educational environment that hinders the educational progress and success of students of color.

School inequity, characterized by disparities in resource access, zoning practices, and funding, significantly contributes to racial and ethnic education gaps (Lee, 2004; Milner, 2010; Poekert et al., 2020). Lee (2004) identified three key factors related to the quality education for minority students: equitable opportunities, competency levels, and racial integration. Reardon's research (2016) reveals that school segregation persists long after the Brown vs. Board of Education ruling. Racial/ethnic and socioeconomic composition in schools is strongly linked to student outcomes. Racial segregation plays a significant role in racial achievement gaps (Reardon, 2016). Reardon's study explores the mechanisms behind the relationship between school segregation and persistent academic disparities. Reardon (2016) found that schools with higher poverty rates often face challenges such as limited resources, difficulty attracting skilled teachers, higher rates of violence, disruptions, and inadequate facilities (Reardon, 2016).

School-based discrimination as an academic risk factor

Racial discrimination is a risk factor for adverse academic outcomes for Black adolescents (Leath et al., 2019; Neblett et al., 2012). For many Black youth, the experience of racial discrimination is commonplace. This includes adverse treatment

from teachers (stereotype-based treatment, harsher punishment) and peers (e.g., social exclusion, verbal or physical harassment) (Chavous et al, 2008; Fisher et al., 2000; Leath et al, 2019). School-based racial discrimination experiences are detrimental to academic engagement. The interactions students have with administrators, peers, and teachers within the school environment play a crucial role in shaping their self-perception as learners and impacting their motivation and engagement. Given that students spend a substantial amount of time in schools and that schools serve as a primary context for social and academic interactions, these interactions significantly influence how students perceive themselves as learners/academics and affect their level of motivation and engagement. (Ladson-Billings, 1994; Miller & Wang, 2019).

Stereotype-based treatment and overt harassment undermine Black students' valuation of the self and belonging within the academic context, which increases the likelihood of school disengagement (Dotterer et al., 2009; Wong et al., 2003). Racial discrimination has been linked to a variety of outcomes relevant to the academic success of Black students (including decline in grades, academic self-efficacy, and school utility values, and increased school behaviors problems (Chavous et al., 2008; Smalls et al., 2007; Wong et al., 2003).

Given the adverse impact that institutionalized factors and school-based discrimination have on how Black students develop their academic identity and conceptualize their relationship with school/academic (vis-à-vis level of school engagement), greater attention (i.e., research and interventions) should identify and explore strength-based and protective factors that promote resiliency and academic success (Chavous et al., 2008; Gray et al., 2018; Neblett et al., 2006). Research has

shown that school-based experiences and academic-related messages shape Black students' attitudes and academic engagement (Chavous et al., 2008; Gray et al., 2018; Neblett et al., 2006).

The Coleman Report

The Coleman report, conducted in 1966, sought to comprehensively evaluate educational disparities in ethnicity, race, national origin, and religion. (Alexander & Morgan, 2016; Coleman, 1968). The study examined distinct groups of Black children (those in classes with primarily White children, those in classes with 50% White, those in classes where many of the students were Black, and those in classes with no White students) in various classroom settings and found that those in predominantly White classrooms achieved higher scores. The report also highlighted disparities in academic achievement, the importance of family background, the influence of school and environmental factors (Alexander & Morgan, 2016; Coleman, 1968). It endorsed redefining equal opportunity to address achievement gaps instead of focusing solely on inputs like spending and facilities (Alexander & Morgan, 2016; Coleman, 1968).

A replication of the Coleman study by Borman and Dowling (2010) revealed that attending high-poverty or highly segregated Black schools significantly impacted students' achievement beyond individual poverty or minority status. School-level factors, including racial/ethnic and social class composition, were more influential than individual factors (Borman & Dowling, 2010). However, this study's narrow focus on school-related aspects limited the exploration of other important influences, such as inequitable access to resources and parent involvement (Borman & Dowling, 2010).

To develop a thorough comprehension of students belonging to diverse racial and ethnic backgrounds and their connection with the educational institution, it is crucial to consider their complete identities and numerous factors that extend beyond their race or ethnicity. The original Coleman report minimized the role of family background and did not explore parent involvement or academic socialization (Coleman, 1968). Borman and Dowling's study did not examine the role of parent socialization in mediating or moderating the school effects, nor did it sufficiently address the protective factors employed by successful Black students in challenging environments (Borman & Dowling, 2010).

Strength-based resiliency and protective factors

A strengths-based approach that focuses on promoting resilience and using positive strategies can foster positive academic identity, enhance school belonging, and improve psychological well-being among Black students (Chun & Devall, 2019; Cooper & Smalls, 2009; Musu-Gillette et al., 2016; Suizzo et al., 2016). This approach recognizes and harnesses the strengths, capabilities, and resources of students and their families, promoting the belief that they can overcome adversity (Chun & Devall, 2019; Cooper & Smalls, 2009; Suizzo et al., 2016). By identifying and supporting resources and creating an environment that allows students to explore and utilize their internal strengths, stakeholders can empower Black students to thrive in an academic setting (Chun & Devall, 2019; Cooper & Smalls, 2009; Suizzo et al., 2016).

Protective factors like resiliency, strong/positive racial/ethnic identity, and affirmative/positive parent academic socialization can mitigate the adverse/traumatizing experiences that Black students experience in school and promote academic achievement

(Bryan et al., 2018; Darensbourg & Blake, 2014; Morrison Gutman et al., 2002; van Ryzin, 2011; Wittrup et al., 2019). While limited research looks at these elements collectively, the research on how each relates to academic identification and achievement is sound (Wang & Eccles, 2013).

While there has been an extensive amount of research done in the areas of academic self-efficacy, motivation, and resiliency, there is limited research into the areas of parent academic socialization and academic identification. Notably, there is little research on how these factors relate to each other and academic achievement in a racially/ethnically diverse sample of students. While the research on parent academic socialization and academic identification is growing, more research is needed to fully understand both the individual and collective roles these factors have in (1) addressing the racial/ethnic academic achievement gaps that exist between Black, Hispanic/Latinx and other students of color and their white and Asian counterparts. (2) Identifying strategies and interventions utilizing these factors that promote academic success.

Parental Academic Socialization

Recognizing parents as their children's primary instructors and socializers highlights their critical role in shaping their child's school experiences, identity formation, and environmental perceptions (Collins et al, 2000; Suizzo et al., 2014). Research has shown that home- and school-based parental involvement predicts academic success (Suizzo et al., 2016). While parental involvement in education tends to decline as children age, it continues to be essential for high school & college student's academic achievement (Benner et al., 2018; Stewart, 2006). Parental educational involvement is a multifaceted construct that includes a variety of parenting strategies, such as parents'

participation in school events, involvement with schoolwork at home, or communication about the importance of school (Chapman-Hilliard & Adams-Bass, 2015; Hill & Tyson, 2009; Stewart, 2006; Taylor et al., 2004).

Hill and Tyson (2009) categorize parental involvement into three classifications: home-based involvement, school-based involvement, and academic socialization (Hill & Tyson, 2009). Home-based involvement includes parents' structure of the home environment to support academics (e.g., enforcing house rules regarding how adolescents spend their time) and parents help with homework. School-based involvement includes parenting practices that involve visiting or communicating with the school, such as volunteering or attending parent-teacher organization meetings. Academic socialization involves parents' communication about the value of education for adolescents' education and career plans (Hill & Tyson, 2009; Wang & Sheikh-Khalil, 2014). All three forms of involvement have been associated with academic outcomes for middle and high school students (Benner et al., 2018; Jeynes, 2007; Suizzo et al., 2012).

Parent academic socialization is the collection of academic messages, school-related parent-child interactions, and parenting behaviors parents use to convey their academic values, beliefs, expectations, and assessment of their child's academic performance (Hill & Tyson, 2009). Through these interactions, children learn to interpret their academic experiences, build academic motivation and persistence, manage their engagement with academic content, and further develop their academic identities (Eccles, 2005; Taylor et al., 2004). Substantial evidence consistently demonstrates that parents' education is a significant predictor of children's educational achievements, alongside other influential family factors such as income, parental occupations, and the location of

residence. (Eccles, 2005). Parental academic socialization (PAS) is a mechanism through which parents influence/shape the academic processes and outcomes of their children (Hill & Tyson, 2009; McWayne et al., 2008).

PAS provides a broader and deeper perspective on parental involvement that more accurately measures parents' influence on their children's schooling. PAS includes educational beliefs, values, and practices, such as providing a home environment that supports learning and communicating about the importance of education (Taylor et al., 2004). With PAS, the focus is on discrete parent-child interactions that promote learning and achievement. Children internalize their parents' messages and values through these interactions, shaping their cognitive and emotional schema (Grusec, 2011). Although this mechanism works across SES groups (Hill & Tyson, 2009), for low-income parents who may be less involved in schools and have less social capital to support their children, transmitting these messages at home is especially important.

Research has explored the impact of parental involvement on child academic development and their engagement with academics (Fantuzzo et al., 2000). Parental behaviors have been found to predict students' academic engagement strongly and positively (Simpkins et al., 2010). Moreover, studies have started to uncover the connection between specific academic messages parents convey and their child's academic identification and performance (Frome & Eccles, 1998). Gender differences in parental behavior and children's participation have also been observed (Simpkins et al., 2010). Jeynes (2007) found that parental expectations had the strongest association with achievement among urban secondary students and these results were consistent across race/ethnicity (Jeynes, 2007). The most significantly studied messages included the

importance of academic effort, pressure to perform to parents' academic standards, shame for not meeting academic standards, and balancing a student's well-being or happiness with their academic strivings (Ross, 2017; Suizzo & Soon, 2006).

Cross-sectional research on distinguishing PAS messages has identified numerous relations between specific messages and academic functioning (Rogers et al., 2009). Ross (2017) found that the expression of parental pressure and shame has a detrimental impact on academic performance. Moreover, when parents place added pressure or respond with shameful messages to a less-than-ideal version, adolescents report less engagement with new material, diminished persistence when encountering difficulties with classroom material, and lower test scores in math and reading (Ross, 2017).

PAS messages of encouragement and support are positively associated with increased engagement and motivation (Suizzo & Soon, 2006). Positive/affirmative parental messaging has encouraged students to reach or exceed the expectations and standards that parents set forth (Ross, 2017). The nature of the messages (whether it be affirmative, negative, effortful, or neutral) being conveyed by parents to their children underscores the quality of their relationship with school and how they formulate their academic identity (Bempechat et al., 1999; Ross, 2017).

Bempechat and colleagues (1999) explored parents' academic socialization practices in a sample of Black, Latino, Indo-Chinese, and White fifth graders. Their results indicated that Latinx and Indo-Chinese children reported stronger feelings of shame than their Black or White peers for poor academic performance. Suggesting that either these children felt ashamed, or their parents made them ashamed of their mediocre performance (Bempechat, 1999). Ross (2017) found negative associations between

students' feelings of shame and their self-reported classroom engagement, suggesting that parents' messages of shame lead to harmful outcomes for youth. Rogers and colleagues (2009) explored the relationship between parents' educational involvement and their child's school achievement. The researchers concluded that parental use of academic pressures: commands, punishment, or coercive interactions, was negatively related to school achievement (as measured by GPA, overall math and reading competence, and self-concept in reading and math; Rogers et al, 2009).

Parental Racial/Ethnic Socialization

Just as important as the messages/socialization being conveyed to children and adolescents is the cultural context in which the messaging is delivered. Parents rarely communicate socialization practices in isolation, and academic socialization co-occurs with cultural socialization. (Cooper & Smalls, 2009). Racial/Ethnic socialization informs the lens through which children of color navigate their racialized contexts by assigning meaning to their racial/ethnic group membership, shaping beliefs about other groups and their in-group members, and tailoring their overall expectations about intra- and inter-race/ethnic interactions (Neblett et al., 2009). Parents of color often employ culturally informed, ecologically adaptive socialization practices that equip their children with tools to buttress their ability to contend with racial/ethnic marginalization (Garcia Coll et al., 1996; Suizzo et al., 2008).

Garcia Coll and colleagues (1996) outlined a framework illustrating the adaptive developmental competencies of children of color and how multiple systems of support buoy healthy development within a racist and segregated society (Garcia Coll et al., 1996). This integrative model positions the family system as a critical context shaping

children's development (Garcia Coll et al, 1996). Two common socialization goals identified in ethnic-racial socialization research are (1) ensuring that youth maintain a positive view of their group (i.e., cultural socialization) and (2) helping children cope with racism and discrimination (i.e., preparation for bias; Hughes et al., 2006). Research has most consistently associated cultural socialization with positive psychological outcomes, including lower levels of anxiety (Bannon et al., 2009), reduced reports of anger (Stevenson et al., 1997), decreased psychological distress in the face of discrimination (Bynum et al., 2007), positive self-esteem (Constantine and Blackmon, 2002), and fewer depressive symptoms in children (McHale et al., 2006).

Though little research captures PAS in Black and Hispanic/Latinx parents, the work indicates that Black and Hispanic/Latinx parents' PAS includes parents' educational attainment expectations, involvement, and general parenting behaviors (Suizzo et al., 2012). Black parents employ a range of strategies that encompass culturally distinctive socialization methods and practices that align with more universal approaches to academic socialization (Coard et al., 2004; Cooper & Smalls, 2009). Coard and colleagues explored the independent and interactive roles of parental academic and culturally distinctive socialization on the academic adjustment of Black adolescents. The study's findings provided partial evidence supporting the notion that cultural and academic socialization are independently linked to indicators of academic adjustment.

For Black parents, academic-related socialization practices may be viewed as facilitating positive self-views and greater school engagement for their children (Coard et al., 2004; Cooper & Smalls, 2009; Jones & Neblett, 2019). Black parents may utilize academic socialization as a vehicle for helping their children transcend societal barriers,

such as racism and discrimination (Jones & Neblett, 2019). The existing research reveals that ethnic-racial socialization (ERS) is also of consequence for Hispanic/Latinx children. In their study, Ayón and Nieri (2020) found that ERS is related to various outcomes, including children's ethnic identity development, academic adjustment, mental and behavioral health (Ayón & Nieri, 2020). Additionally, multiple patterns of racial socialization practices serve as risk, compensatory, and protective factors for the psychological adjustment of Black adolescents (Neblett et al., 2008). The messaging that Black, Hispanic/Latinx, and Asian/Asian American students receive is unique due to the cultural load and context these messages are rooted in (Cooper & Smalls, 2009).

McKay and colleagues (2003) demonstrated that socialization that emphasized awareness of racism (culturally distinct socialization) was associated with greater at-home involvement (e.g., help with homework; talk about the school day) among Black parents, thus suggesting a link between culturally distinctive and academic-related socialization practices (McKay, 2003). Suizzo and colleagues indicated that Black mothers endorsed the importance of racial and academic socialization in promoting positive outcomes in their preschool children (Suizzo et al., 2008). Recent research has found that Black parents hold higher expectations for their children than White and Latinx parents (Suizzo et al., 2012).

Black parents engage in Parental Academic Socialization (PAS) behaviors at similar or even higher rates than White and Hispanic/Latinx parents (Bempechat et al., 1999; Suizzo & Soon, 2006). They also adopt a parenting style known as no-nonsense parenting, characterized by a combination of high control and affection, which has been associated with positive academic outcomes for children (Brody & Flor, 1998).

Furthermore, the goals and motives of Black parents in relation to PAS are culturally distinct (Brody & Flor, 1998; Suizzo et al., 2014).

Black parents' PAS goals/motives are distinguished by their desire to prepare their children to navigate a racialized environment where they experience bias/discrimination. Through PAS, Black parents instill self-determination and self-worth in their children (Neblett et al., 2006; Suizzo et al., 2008; Wood et al., 2007). Black boys and girls receive different socializing messages from their parents. These messages are linked to differential outcomes in children (Mandara et al., 2010; Wood et al., 2007). In addition to the racial/ethnic socialization that students of color, particularly Black students, receive from their parents about race and academics, there may be gendered elements to said messages. The differential treatment and socialization of students of color, particularly Black boys and girls, significantly impact their academic trajectory and how they relate to, engage with, and identify with academics/school.

A potential consequence of the differential treatment and socialization between Black boys and girls is the pronounced gaps in achievement and education attainment between Black girls and boys (Mandara et al., 2010; Mandara & Murray, 2007). While some empirical work has found evidence that differential socialization supports the contention that variation in the socialization of Black boys and girls received may account for the variation in academic achievement between Black boys and girls (i.e., Mandara et al., 2010), few studies have examined how parent academic socialization shapes the relationship between academic identification and academic achievement. The same can be said about academic engagement and academic achievement. Limited

research has explored how these outcomes may vary by gender (Mandara et al., 2012; Mandara et al., 2010).

Identity

Identity is understood as recognizing and understanding oneself within society (Miller, 2002). It entails acknowledging various aspects of oneself and how one is situated or perceived in their surroundings (Miller, 2002). Erikson (1968) proposed that individuals progress through multiple developmental stages to comprehend and define their sense of self. Although identity development continues throughout life, adolescence is crucial (Erikson, 1968). Exploring and conceptualizing one's identity is a critical psychosocial task during adolescence. During this time, adolescents attempt to figure out who they are by integrating the various identities and roles they carry from childhood with the new ones that emerge during adolescence while simultaneously experiencing cognitive and physical developmental changes (Miller, 2002). At the end of adolescence, individuals are expected to have committed to an identity. Adolescents who have not discovered who they are or have trouble conceptualizing their identity by the end of this developmental period experience identity confusion or diffusion, struggling to make sense of who they are (Myers, 2005).

Racial Identity

Racial identity refers to the attitudes and beliefs about the importance and value of race that Black Americans utilize to define themselves (Sellers et al., 1997). Racial identification "attempts to balance racial group membership needs and personal desires for positive relations with the larger society" (Arroyo & Zigler, 1995, pg. 903). Sanders Thompson (2001) explains that racial identification is necessary because it unites and

divides people across racial lines and has significant implications for cultural, personal development, and social (Sanders Thompson, 2001). There have been several conceptual models and theoretical approaches aimed at defining and explaining racial identity that have emerged over the past 50 years.

These models and approaches include the Nigrescence Model (Cross, 1971), the Developmental Inventory of Black Consciousness (Milliones, 1976, 1980), African Self-Consciousness (Baldwin & Bell, 1985), the Adult Racial Identity Development (Parham, 1989), Phinney's Model of Ethnic Identity (Phinney, 1992), Sanders Thompson's Multidimensional Model of Racial Identity (Sanders Thompson, 1991), and the Multidimensional Model of Racial Identity (MMRI, Sellers et al, 1997). While these models have their interpretation of racial identity, the models define racial identity in either stage or as a status.

Extensive research has established racial identity as a significant factor influencing the academic achievement of Black students (Chavous et al., 2008; Harper & Tuckman, 2006; Sellers et al., 2006). However, the literature does not provide a conclusive understanding of whether racial identity exhibits a positive, negative, or neutral correlation with achievement outcomes. Notably, Fordham and Ogbu (1986) explored the negative correlation between achievement and racial identity. Their study suggested that the experiences of oppression and racism contribute to the development of an oppositional collective identity among Black youth (Fordham & Ogbu, 1986).

In their ethnographic study with 33 eleventh-grade students from a predominantly Black high school in a high poverty, low-income area. Fordham and Ogbu (1986) conducted a study revealing that some Black students associate school success with

White individuals, leading to the perception that high achievement equates to "acting White." Consequently, some students choose to underachieve or downplay their intelligence out of fear or concern about acceptance within their racial/ethnic group (Fordham & Ogbu, 1996). However, recent studies have provided contrasting evidence to challenge this notion (Eccles et al., 2006; Harper, 2006; Horvat & Lewis, 2003; Tyson et al., 2005), highlighting that individuals from diverse backgrounds pursue academic success without compromising their cultural identity or social acceptance.

Furthermore, Horvat and Lewis (2003) established that high-achieving Black girls received/were provided with positive reinforcement for their academic success from their peer groups. In a qualitative study conducted by Tyson and colleagues (2005), involving 40 Black and 36 White high-achieving students from eight public schools in North Carolina, it was found that Black students placed a high value on academic achievement and exhibited a greater fear of failure compared to success (Tyson et al., 2005).

Racial Identity and Positive Psychological Functioning

Numerous studies illustrate racial identity's positive impact on Black students' academic success. Additionally, a large body of research reveals the positive association between racial identity and positive psychological functioning (Rowley et al., 2006; Sellers et al., 2006). For example, Rowley and colleagues (2006) demonstrated that racial identity dimensions, specifically private regard, and centrality, were positively correlated to self-esteem for high school and college students. Sellers and his colleagues (1998) found that some dimensions of racial identity could mitigate the adverse effects of racial discrimination experienced by adolescence. Additionally, racial pride was associated with

more positive psychological outcomes irrespective of the level of discrimination experienced by students (Sellers et al., 1998).

Okeke and colleagues (2009) found that racial identity mediated the relationship between academic racial stereotypes and academic self-concept for Black middle school students. Subsequently, using the centrality dimension of the MIBI (MMRI, Sellers et al., 1998), Okeke and colleagues (2009) found that Black students with high racial centrality, who endorsed traditional academic stereotypes (i.e., White students are more competent than Black students), had lower self-perceptions of academic competence.

Anderson and Stevenson (2019) investigated racial identity and racial socialization as a predictor of academic self-efficacy beliefs. The results suggested that racial identity was a positive predictor of academic self-efficacy. More specifically, within the dimension of racial identity, private regard was a key predictor of self-efficacy (Anderson & Stevenson, 2019). In synthesizing this body of research, racial identity is critical to supporting Black students' academic success.

Racial-Identity as a Promotive and Protective Factor

Scholarship on racial identity research has shown that the process in which adolescents derive meaning around race and their racial identity in the face of racialized experiences (i.e., racism, discrimination, biases) can mitigate the harmful effects of those experiences (Butler-Barnes et al., 2013; Chavous et al., 2008; Thomas et al., 2009).

Given the significant role of race in the U.S., the development of a strong racial identity is crucial for ethnic minority students to adapt and thrive (Butler-Barnes et al., 2013).

Racial identity can be a source of resilience for Black individuals to the extent that it counters and buffers the harmful effects of racial discrimination (Smalls et al., 2007).

Wong and colleagues (2003) found that among a sample of Black adolescents who perceived higher amounts of discrimination, having a higher connection to their ethnic group was associated with higher self-competence beliefs and GPA (Wong et al., 2013).

The protective resilience model may help understand how racial identity (racial centrality and pride) may offset some of the adverse effects of school-based discrimination. Conceptualizing Racial identity as a meaning-making process allows Black individuals to define their racial membership so that academic success can be seen as valuable despite structural and individual-level racial barriers to academic success (Oyserman et al., 1995; Smalls et al., 2007). Altschul and colleagues (2006) indicated that Black middle school students who felt more connected to their Black identity and linked it to a value for achievement were more academically motivated and performed better than youth with lower group connections (Altschul et al., 2006).

Specific racial identity attitudes (private regard and public regard) may protect Black adolescents from the negative influences of racial discrimination (Sellers et al., 2006; Wong et al., 2003). Sellers and colleagues (2006) found that more positive feelings toward Black individuals (i.e., private regard) were associated with more positive psychological functioning in the context of racial discrimination compared to those Black adolescents with less positive attitudes towards Black individuals (Sellers et al., 2006). These findings aligned with previous research work by Wong and colleagues. Wong and colleagues (2003) found that Black adolescents with a solid connection to Black individuals were buffered from the negative impact of personal racial discrimination experiences on academic attitudes and performance relative to those with less connection with their racial group (Wong et al., 2003).

Multidimensional Model of Racial Identity

The Multidimensional Model of Racial Identity (MMRI; Sellers et al., 1997) defines racial identity in terms of the significance and qualitative meaning people attribute to their belonging within the Black racial group within their self-concepts (Sellers et al., 1997, p. 23). The Multidimensional Model of Racial Identity represents an incomparable method of capturing the intersectionality and multidimensionality of social identities, such as gender, race, and occupational identity, that is advantageous in exploring race and gender. The MMRI amalgamates racial identity development models and social identity theory (Harvey et al., 2012). Furthermore, Sellers and his colleagues (1998) further specified two fundamental questions the MMRI strives to answer: (a) How important is race in the individual's self-perception? and (b) What does it mean to be a member of this racial group? (Sellers et al., 1998).

The MMRI postulates four main conventions: (1). While identities are influenced situationally, they are also stable properties of the individual. (2). Individuals have multiple identities (e.g., gender, sex, ability, socioeconomic status) that are ordered hierarchically based on the significance and salience that the individual places on race in defining themselves. (3). A person's self-perceptions of their racial identity are the most valid indicators of their racial identity. This is the main reason the MMRI emphasizes self-perceptions over behavioral indicators. (4). The MMRI is concerned with an individual's racial identity status rather than their stage along a developmental continuum (Sellers et al., 1998). This model incorporates the changes to the meaning and significance of race throughout an individual's life span. Also, the MMRI defines what

constitutes a healthy versus unhealthy racial identity and theorizes that racial identity has multiple dimensions (Sellers et al., 1998).

Sellers and colleagues (1997, 1998) describe the dimensions of racial identity that elucidate the significance and meaning of race for Black Americans and their perceptions of what it means to be Black (Sellers et al., 1997; Sellers et al., 1998). The multiple dimensions include racial centrality, ideology, regard, and salience (Sellers et Al., 1997). Racial centrality and salience emphasize the importance that people ascribe to race in defining themselves. Centrality measures the significance of race to a person's self-concept, and this dimension remains stable across situations (Sellers et Al., 1997). Salience measures the extent to which race "is a core part of an individual self-concept" (Sellers et al., 1997, p. 806). The situation influences this dimension and is influential in predicting how individuals respond behaviorally to specific conditions (Sellers et al., 1997). Regard and ideology emphasize the individual's perceptions of being Black, specifically in the United States.

Racial regard is comprised of the private and public sub-dimensions. Private regard refers to individuals' positive or negative feelings towards their race and group membership. Public regard is related to the perception of how others view their racial group, either positively or negatively (Sellers et al., 1998). Ideology refers to how Black Americans should live, behave, and function within society. This dimension comprises four ideologies: (1). Assimilationist – characterized by emphasizing the similarities between Black Americans and other racial/ethnic groups, (2). Humanists – center on the commonalities and similar experiences among all humans regardless of class, gender, race, and other characteristics (3). Minority – recognizes the struggle of Black people, in

addition to acknowledging the commonalities between Black Americans and other oppressed groups, and (4). Nationalist – acknowledges the distinctiveness of the Black American experience and supports the philosophy that Black people control their destinies (Sellers et al., 1997).

This study utilized two major, highly researched dimensions: centrality and regard, specifically private regard. These dimensions were considered because research has established their significant role in psychological and academic outcomes of Black students (Okeke et al., 2009; Harper & Tuckman, 2006; Sellers et al., 2006). The Multidimensional Model of Racial Identity (MMRI; Sellers et al., 1997) has been operationalized and is measured by the Multidimensional Inventory of Black Identity (MIBI, Sellers et al., 1998). The MIBI (Sellers et al., 1998) was designed to assess the stable dimensions of the MMRI (centrality, ideology, and regard) in Black American adults and college students (Sellers et al., 1997).

Academic Engagement

Academic engagement describes students' feelings, behaviors, and thoughts about their school experiences and is an essential construct given its links to academic outcomes such as achievement and high school completion. There is growing interest in the construct of school engagement because it is presumed to be malleable and responsive to environmental variations (Jimerson et al., 2003). Engagement is often seen as a 'meta' construct representing the interaction between the individual and the environment, not as a trait-like characteristic of individuals (Korpershoek et al., 2019).

Academic engagement is a multifaceted phenomenon. Researchers identified three dimensions of school engagement: affective, behavioral, and cognitive (Jimerson et

al., 2003). Indicators of engagement that have appeared consistently across the literature include participation in school-related activities, achievement of high grades, amount of time spent on homework, and rate of homework completion. In addition to these behaviors, some researchers include delinquency, truancy, or misbehavior measurements in their engagement investigation (Hirschfield & Gasper, 2011; Jimerson et al., 2003; Wang & Fredricks, 2014).

Academic Identification

Academic identification, conceptualized as the emotional investment students place in academic learning, has been established as a principal factor of academic engagement and related to academic achievement (Finn, 1989; Fredricks et al., 2004; Wang & Eccles, 2013). According to Finn (1989), academic identification refers to a student's attitude towards school, encompassing their sense of belongingness and educational value. These aspects are crucial components of their self-concept, as Finn (1989) emphasized. Finn's interpretation of academic identification was borne from his proposed model of student engagement (Voelkl, 2012). The participation-identification model attempted to explain how the interaction of school attitudes and behaviors affected academic success (Voelkl, 2012). In this two-component model, participation indicated the behaviors involving students in learning and maintaining on-task behavior. Identification reflects a student's attitude regarding school, precisely feelings of belongingness and value (Voelkl, 2012).

Osborne and Walker (2006) studied academic identification through the context that connected academic achievement and self-esteem in relation to self-identity (Osborne and Walker, 2006). While multiple interpretations exist of academic

identification (or identification with school/academics), the theoretical orientation of academic identification, specifically the concept of identification with a domain, originated within the symbolic interactionist perspective on self-esteem (James, 1890/1981; Osborne & Jones, 2011). Osborne and Jones describe academic identification as a unique case of domain identification. Remarkably, the degree to which a person defines or conceptualizes their identity through a position or performance in a specific domain (i.e., academics, and schooling; Osborne & Jones, 2011).

Osborne & Jones (2011) interpreted James' idea of identification as a multilevel choice. A person may invest in an infinite number of selves but select to invest in identities that reinforce belief about self-esteem and self-efficacy. The authors reviewed the importance of psychological centrality and presented a theoretical model that directly connected self-motivation and academic outcomes. They sought to explore why people pursue or fail to pursue specific actions or goals. Osborne and Jones (2011) worked from the context that identification with a domain (i.e., academics) may increase motivation and improve performance due to these relationships between self-esteem and self-efficacy. The main limitations of their study were the limited options for directly measuring how psychologically connected students are to their academic identity. Osborne's academic identification scale does not measure academic identification directly/explicitly, and it measures the extent to which students' self-esteem is linked to academic achievement.

Academic identification was defined by Strambler and colleagues (2013) as a psychological and emotional perspective that influences outcomes within academics (Strambler et al., 2013). Additionally, researchers examine academic identification as a

concept with two parts: emotion and psychology (Strambler et al., 2013). Emotion – relating to caring and striving to achieve - is categorized under self-evaluation, self-motivation, and self-regulation. Psychology – relates to the domains of self-concept, self-efficacy, and self-esteem. According to Osborne and colleagues (1997/2011), academic identification affects global self-concept and self-esteem, distinct from academic or academic self-concept (Osborne, 1997; Osborne & Jones, 2011).

More recent definitions of academic identification are multidimensional, incorporating factors such as psychological/emotionality and self-concept. Strambler and colleagues (2013) use multilevel modeling to examine the relationship between parental socialization, academic identity, and academic achievement in a sample of Black and Hispanic/Latinx middle school students. So far, this is the first study to examine academic identification as a mediator of parental academic socialization and academic achievement. Their results indicated that academic identification mediated the relationship between parental academic socialization and academic achievement in two significant ways: Students reported higher academic achievement when parents employed teaching-oriented and future-oriented strategies. Moreover, teaching and future-oriented socialization had negative direct effects on achievements. However, it had a positive indirect effect when academic identification was factored in (via mediation).

An important limitation within this study was the conflicting findings for teaching and future-oriented socialization (also referred to as competitive mediation). Strambler and colleagues (2013) suggested that the model may not include other critical unmeasured mediators. Furthermore, they highlighted students' perceived parental involvement, specifically, students' perceptions of how their parents interact with them

regarding education (i.e., quality/nature of the physical interaction). The limitation lies in the fact that students' perceptions of their parents' interactions regarding education can vary and play a significant role in shaping their academic experiences. These perceptions can influence students' motivation, engagement, and overall academic success. By not adequately measuring or considering this aspect of parental involvement, the study may not fully capture the complex dynamics and nuances of the parent-child relationship and its impact on student outcomes.

Strambler and colleagues (2013) did not sufficiently explore academic disidentification across racial and gender lines. The sample was made up of only Black and Hispanic/Latinx students. Because of this, researchers could not compare their sample to Non-Black/Brown peers to fully determine racial/ethnic differences. Moreover, Strambler and colleagues (2013) had difficulty explaining why girls were more academically identified than boys. Their findings slightly suggested it may be due to "girls internalizing academic messages more strongly than boys," however, the researchers did not assess this.

Regarding the parental socialization indicators, the socialization subscales consisted of a few items (e.g., two items for guilt). These indicators may not capture the constructs as robustly or reliably as longer, more diverse subscales might. Academic identity and socialization are measured differently. Academic identity was measured using Osborne's academic identification scale, which does not measure academic identity directly. As stated, this instrument measured the extent to which students' self-esteem is linked to their academic achievement ($\alpha = .78$). Perceived parental educational socialization was measured with an adapted version of the Educational Socialization

Scale. This measured a student's perceptions of messages their parents communicate to them about education and their academic performance (alpha: guilt = .47; future = .85; teaching = .67; effort = .74; shame = .68).

McMillian and colleagues (2016), unlike Strambler, conceptualized their interpretation of academic identification within the identification–disidentification concept. In their longitudinal study, McMillian and colleagues (2016) sought to examine and determine whether gender differences existed in discounting, devaluing, and full-blown disidentification. Their findings revealed no gender differences in either discounting or full-blown disidentification. However, the evidence indicated that girls valued academics more than boys. The findings indicate the need for further investigation into the role of gender and potential intersectional factors in academic identification research. Several limitations were identified with the study. This study was based on pre-existing data from participants in a longitudinal study of an early childhood educational intervention that began during the participants' infancy. The measures collected were not specifically chosen for examining key factors of discounting, devaluing, and full-blown disidentification.

Additionally, the study focused on variables at the individual level only, and this was contradictory to academic disidentification research. Academic disidentification research emphasizes that academic disidentification results from an awareness of societal stereotypes about academic ability. Other researchers interpret identification with academics (also called psychological centrality of academics) as a malleable individual difference (Taylor & Brown, 1988; Tesser & Campbell, 1980; Tesser et al., 1988).

While these interpretations of academic identification are multidimensional, there is still a lack of consistency in how the construct is defined, assessed, and measured. Strambler and colleagues (2013) used Osborne's Academic identification scale, while McMillian and colleagues used two versions of Harter's self-perception profiles: the self-perception profile for children/adolescent versions. The researchers used the scholastic competence subscale from the children's profile and the Global self-worth and scholastic competence (i.e., academic self-concept subscales from the adolescent profile).

There is inconsistent research on whether there exist significant differences between genders. The research that exists has primarily centered on Black boys and girls. It may be worthwhile to examine/explore whether there are gender differences in other racial/ethnic groups (i.e., Hispanic/Latinx, Asian, and Bi/Multiracial groups). While existing research shows that by high school/college, Black boys experience academic disidentification at higher rates than Black girls, the research still lacks consensus on the factors driving these differences (Butler-Barnes et al., 2017). Consequently, more research is needed to explore academic disidentification and disengagement. The researchers mention disidentification and disengagement tangentially but fail to conceptualize them within the context of their studies appropriately. Especially given that low academic identification and negative/non-affirming parent academic socialization can further derail a student's academic ambitions, potentially resulting in the withdrawing/dropping out from school (Voelkl, 1996).

Students of color disidentify and disengage from school in response to their experiences; these include external factors such as lack of support, racism/discrimination, implicit & explicit bias, lack of belongingness, systemic/school inequity, as well as

internal factors, including low academic identification, motivation, self-efficacy (Cokley & Moore, 2007; Comeaux & Jayakumar, 2007; Foley, 2004, 2005). Not only do these factors undermine academic achievement, but they also hinder academic identification and how Black and Hispanic/Latinx students relate to school (Wright, 2009).

Students of Color, Socialization, and Academic Identity

While academic identity is central to the academic success of students of color (Oyserman, 2008), the cultural context in which academic identity develops fuels students of color to thrive. Facilitating an environment rooted in racial identity affirmation fosters greater academic identity. Similarly, for Black Students, research has shown that positive Hispanic/Latinx ethnic identification in Hispanic/Latinx students predicts several positive academic outcomes, including self-efficacy and achievement (Hughes et al., 2009; Oyserman, 2008). A unique aspect of the racialized experiences of students of color has been the interaction between race/ethnicity, the schooling environment, and (at times) the contradictory messages they receive from parents/family (Garcia & Dwyer, 2017; Huguley et al., 2019; Matthews et al., 2019).

Ultimately, understanding the relationship between group relations and identity from the perspective of students of color provides a more comprehensive understanding of the stressors/indicators that they experience as they attempt to develop a positive academic identity (Huguley et al., 2019). As referenced above, research has shown that the kind of messages provided to children predicts positive or negative academic trajectories (Huguley et al., 2019, Wang et al., 2020). Grindal and Niheri (2015) examined the interrelation of academic performance, ethnic-racial socialization, and ethnic identity in a sample of Hispanic/Latinx 9th graders. Their findings suggested that

the relationship between ethnic identity and academic performance was contingent on the prevalence of socialization messages stressing distrust of other ethnic and racial groups (promoting mistrust).

With their study, Grindal and Niheri (2015) sought to build upon previous literature that examined the varying dimensions of how ethnic-racial socialization either promotes or inhibits the relationship between academic outcomes and ethnic identity. The data utilized was collected during the 2010-2012 academic year as part of an acculturation and youth problem behavior study. While the original dataset comprised 310 racially and ethnically diverse youth, the racial/ethnic subgroups were not large enough to derive significant comparisons. The authors restricted their sample to the largest subgroup, students who identified as Latino. The final sample consisted of 193 participants, 56% were female, 44% were male, and 64% of the sample identified as low-income (defined by their school as having participated in the reduced cost/free lunch program).

The authors used ordinary least squares regression (OLS) to assess the effects of the three dimensions of ethnic-racial socialization. They then used iteratively reweighted least squares regression (IRLS) to examine the impacts of ethnic identity, ethnic-racial socialization, and their interaction terms on academic performance (Grindal & Nieri, 2015). IRLS was utilized due to the large number of outlying cases skewing the data. Regression analyses were conducted following the standardizing of the key variables (academic performance, cultural socialization, ethnic identity, preparation for bias, and promotion of mistrust) and the controls. This allowed for the minimization of multicollinearity and improved the interpretation of the coefficients.

Grindal's and Niheri's (2015) findings point to a complex interrelationship between ERS, ethnic identity, and academic performance, suggesting that parental strategies emphasizing cultural socialization over the promotion of mistrust may be optimal for promoting ethnic identity development and positive academic outcomes. While healthy social identity served as a predictor of Hispanic/Latinx success in schools, the mechanism through which Hispanic/Latinx students achieve success is contingent on the kinds of in-group/out-group messages Hispanic/Latinx parents promote in the home, which can affect how Hispanic/Latinx students see themselves in the greater contexts in which they find themselves. This may be the case for other racialized/ethnic folks.

The main limitation of Grindal's and Niheri's (2015) study was their sample's generalizability and homogeneity. The study participants were all Hispanic/Latinx students and was conducted during high anti-immigration sentiments in California. Suggesting that the prevalence of socialization messages emphasizing mistrust of other ethnic groups may uniquely impact Hispanic/Latinx adolescents. Furthermore, in their analyses and literature review, the authors did not discuss or address the racial background of the participants. They recognized that the experiences of students who identify as "Afro-Latina" are unique and different from those who are White Hispanic/Latinx. Specifically, Afro-Latinos experience discrimination and prejudice in both the Hispanic/Latinx communities and from White people/communities (Flores & Román, 2009; Lardier et al., 2018) due to their intersectional identities.

This study did not investigate the feelings, experiences, and sentiments of a group that experiences elevated levels of invisibility (Jones Brayboy, 2004; Flores & Román, 2009). Moreover, the participating schools in this study exhibited above-average

academic performance and had a predominantly ethnic-racial minority student population, specifically Hispanic/Latinx students. It is coupled with it being in Southern California, which has a specific ethnic-racial composition and a history of ethnic-racial relations.

Before stakeholders can design, develop, and implement strategies and interventions geared toward addressing the racial/ethnic academic achievement and opportunity gaps that persist, there needs to be a comprehensive understanding of how these factors relate to each other and the overall construct of academic achievement. Assessing how parent academic socialization and academic identification relate to each other and academic identification may inform strategies and interventions that promote academic success in students of color.

Summary

The academic achievement of students of color, particularly Black and Hispanic/Latinx students, is crucial for their academic, career, and life outcomes (Hill & Torres, 2010). Given the persistent achievement and opportunity gaps faced by students of color, it is essential to understand the key factors that can positively impact their academic success (Anderson & Stevenson, 2019; Cokley, 2003, 2005, 2006, 2007; Cokley & Chapman, 2008; DeLaney et al., 2021; Neblett et al., 2006; Rivas-Drake et al., 2014; Yip, 2018). While academic achievement has improved for all students in the United States over the past five decades (Lee, 2004), the progress has varied among different racial/ethnic groups (Hussar et al., 2020; de Brey et al., 2019; Musu-Gillett et al., 2016). Racial/ethnic minority students continue to have lower high school and college graduation rates compared to their Asian and White peers (de Brey et al., 2019; Hussar et

al., 2020; Musu-Gillett et al., 2016). Despite extensive research on academic achievement and opportunity gaps across racial/ethnic lines, there is a lack of consensus on effective strategies and interventions to address these disparities.

Current research on the achievement and opportunity gaps often adopts a deficit framework and a narrow focus. Previous and current studies primarily compare the performance of students of color with their Asian and White counterparts, highlighting areas where students of color underperform in relation to these groups. However, there is limited research that takes a comprehensive approach to examine the complex interplay of internal and external factors driving these gaps. Specifically, there is a scarcity of research exploring the influence of racialized/ethnic academic socialization and the mediating role of parents within this framework (Massé et al., 2010).

Furthermore, researchers have predominantly used Whiteness and White students as the standard against which other groups are compared. Students of color, including Asian/Asian American students, are often seen as deviating from this norm. Black, Hispanic/Latinx, and Indigenous/First Nations students are described as underperforming, while Asian/Asian American students are portrayed as overperforming (Castagano & Brayboy, 2008; Garcia & Guerra, 2004). Moreover, past and present research continue to focus on individual/student-level factors rather than educational and institutional factors, such as school quality, performance, and teacher quality, perpetuating a negative narrative surrounding the academic achievement of students of color (Ladson-Billings, 1995; Ladson-Billings & Tate, 1995; Rattan et al., 2015; Tyler et al., 2005).

Adopting an asset-based framework allows researchers to understand the adaptive strategies and techniques Black students employ to counteract the negative effects of

racially charged incidents in schools. This perspective recognizes and highlights their strengths and resilience (Anderson et al., 2021; Day & Dotterer, 2018; Jones et al., 2021; Huguley et al., 2019; Miller & Wang, 2019;). By examining the protective role of Black racial identity and the ethnic/racial academic socialization provided by parents of color, researchers adopt an identity-affirming approach to addressing these gaps (Anderson et al., 2021; Day & Dotterer, 2018; Huguley et al., 2019; Jones et al., 2021; Miller & Wang, 2019; Rattan et al., 2015; Wang et al., 2020).

The Current Study

This study aims to investigate the role of racial identity attitudes (centrality and private regard), academic identity, and parent academic socialization as factors that promote academic success among a diverse sample of Black students. Specifically, the study examines how parent socialization (academic and ethnic/racial socialization) and academic identity mediate the relationship between racial identity dimensions and academic achievement. By shifting the focus towards understanding the positive and protective factors that contribute to Black academic success, this study seeks to challenge the deficit-based narrative and explore the unique experiences and perspectives of Black students. By examining the interplay between racial identity attitudes, academic identity, and parent academic socialization, the study aims to provide a more nuanced understanding of the factors that shape academic achievement among Black college-age students.

Adopting an asset-based approach, this study centers on the lived experiences and strategies employed by Black students to navigate and mitigate school-based discrimination. An important aspect of this investigation is examining the mediating role

of parent academic socialization, specifically the culturally laden messages received by Black students from their parents regarding academics, in influencing the relationship between racial centrality and academic identification. Academic socialization within a racial identity-affirming context has been associated with increased preparedness for racial bias and discrimination, as well as the promotion of racial pride (Anglin & Wade, 2007; Constantine & Blackmon, 2002; Johnson & Carter, 2019; Thomas et al., 2010)

This study represents the first attempt to examine and establish multidimensional relationships between racial identity, academic identity, parent academic socialization, and academic achievement. Previous research has explored the protective benefits of strong academic identity and strong racial identity independently in promoting positive academic outcomes (Chavous et al., 2008; Umana-Taylor et al., 2014). However, there is a need for further research utilizing an asset-based and strengths-based framework when studying students of color. A deeper understanding of the relationships between racial identity, academic identity, and academic achievement is crucial for comprehending the factors that foster academic success among Black students.

Additionally, the demographic makeup of the participants in this study adds a novel aspect. It is the first investigation to examine and establish multidimensional relationships between these constructs within a sample of Black students. Previous research has primarily focused on academic identity and parental academic socialization in children or adolescents (Benner et al., 2018; Catsambis, 2001; Hoover-Dempsey & Sandler, 1995). Moreover, there have been limited studies examining the extent of the effects and impact of parental academic socialization for Black students. While this study employs novel approaches, there exists a substantial body of research that demonstrates a

relationship between parental academic socialization (PAS) and academic attainment across various age groups (Benner et al., 2018; Catsambis, 2001; Hill & Tyson, 2009; Suizzo & Soon, 2006; Taylor et al., 2004). By focusing on Black students, the aim is to gain a better understanding of the promotive and protective factors utilized by this demographic to achieve academic success. This knowledge can aid researchers and stakeholders in providing enhanced support for Black college students.

Research Questions

Question 1: What is the relationship between parental ethnic/racial socialization (preparation for bias, cultural socialization) and academic identification?

Hypothesis: It was hypothesized that there will be a positive relationship between parental ethnic/racial socialization, specifically preparation for bias and cultural socialization, and academic identification. Greater levels of parental preparation for bias and cultural socialization are expected to be associated with higher levels of academic identification in individuals.

Question 2: To what extent is the factor structure of the identified scales (Identification with Academics Scale, Identification with School Questionnaire, Education Socialization Scale, Parent Ethnic/Racial Socialization Scale) maintained in a diverse sample of Black students, and how effectively do these factors capture their unique experiences and perspectives?

Hypothesis: The factor structures for the identified scales will demonstrate partial consistency in a diverse sample of Black students, suggesting a combination of shared constructs and distinct factors that reflect both universal and culturally specific aspects of their experiences.

Question 3: To what extent is the relationship between racial identity dimensions (centrality and private regard) and academic achievement mediated by academic identification and PAS, and moderated by gender? (See Figure 1)

Hypothesis: it was hypothesized that the relationship between racial identity dimensions, specifically centrality and private regard, and academic achievement would be partially mediated by academic identification and parent academic socialization (PAS).

Furthermore, gender was expected to moderate this mediation, with a stronger mediation effect observed for one gender in comparison to the other.

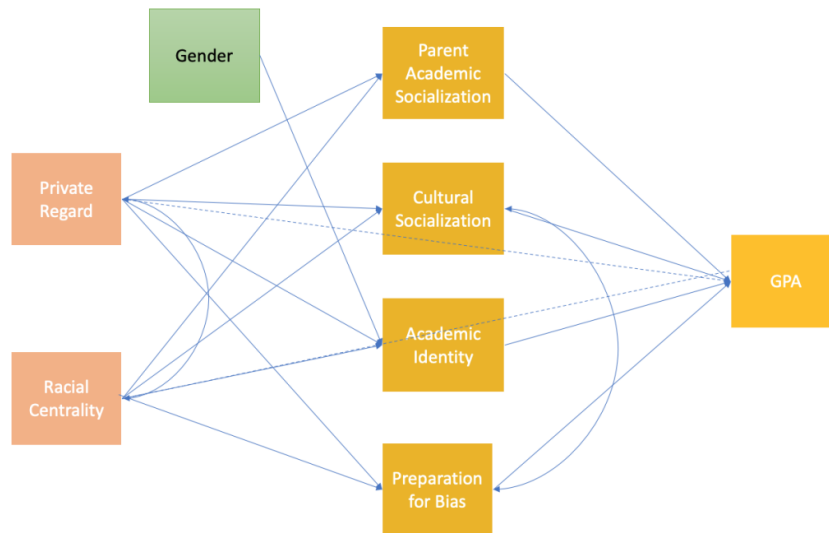


Figure 1: Proposed Model: Moderated, multiple mediator model

CHAPTER 3

METHODOLOGY

Participants

The current research comprised 685 individuals who self-identify as Black, ranging in age from 18 to 79 years old. Comprehensive demographic information was collected, including data on racial/ethnic background, GPA, education level, and other non-identifying characteristics. Participants were recruited to participate in a survey aimed at investigating the mediating effects of academic identity and socialization. The survey was administered using the online platform Qualtrics.

Recruitment

Participants were recruited using a variety of strategies. The primary recruitment approach involved targeting students enrolled in universities and colleges, including community colleges, 2-year and 4-year universities, as well as vocational and technical schools across the United States. To ensure a standardized process, schools were selected and categorized based on size: large university/college (>15,000 students), medium university/college (5,000 – 15,000 students), and small university/college (<5,000 students) according to the Carnegie Classification of Institutions of Higher Education (2021). Additionally, a secondary criterion was applied, requiring that the Black student population at the respective institution accounted for at least 5% of the total student population.

A comprehensive list was compiled for diverse educational institutions, including contact information for key personnel. Universities and colleges received email invitations sent to professors and instructors of undergraduate courses, while vocational

schools invited career and technical education program directors. Snowball sampling techniques utilized listservs, social media platforms (Facebook, Instagram, Twitter), and word of mouth to maximize participation. The inclusion criteria specified that participants must be currently enrolled in or have graduated from an undergraduate institution (2-year or 4-year university/college), graduate institution, or vocational/technical school. Participants were provided with a link to an online survey conducted through Qualtrics. Upon clicking the provided link or entering it into their web browser, participants were directed to an online consent form that needed to be completed before proceeding with the survey.

Measures

In addition to the demographic's questionnaire, participants completed a survey with the following scales the Identification with Academics scale (Osborne, 1997a), the Identification with School Questionnaire (Voelkl, 1996), and the Educational Socialization Scale (Choi et al., 1994), as well as the Parental Ethnic/Racial Scale, and the Private Regard and Racial Centrality subscales of the Multidimensional Inventory of Black Identity (Sellers et al., 1997). Academic achievement was measured through self-reported college GPA. In addition, to corroborate the self-reported GPA, participants were asked to upload or attach a screenshot or image of their unofficial GPA from their school's portal.

Demographics Information Questionnaire

Participants were asked to report several demographic variables, including age, educational level/GPA, gender identity, grade/year, mother's level of education (Ingels et al., 2004), race/ethnicity, socioeconomic status (history of receiving free/reduced lunch),

and school type (private, public university/college, community college, or vocational/technical school).

Academic Achievement

Academic achievement was measured using the participants' self-reported GPA. Academic achievement is assessed through grades and grade point average (York et al., 2015). Moreover, grade point average or GPA is the measurement most often used for assessing academic success and achievement. While the main reason behind the use of grade and GPA are primarily due to convenience and accessibility, research has demonstrated self-reported GPA to be a reliable and accurate indicator of academic achievement (Kuncel et al., 2005; Ratelle & Duchesne, 2014; Rosen et al., 2017). Furthermore, the practice of utilizing self-reported grades and GPA remains typical and continues to be securely used throughout educational research (York et al., 2015).

Nonetheless, while there is extensive research lauding the accuracy and reliability of self-reported grades and GPA, there exist a healthy amount of research on the misreporting of grades and GPA among low performing students (Caskie et al., 2014; Teye & Peaslee, 2015). Caskie and colleagues, in their investigation of reporting accuracy in a sample comprised of undergraduate students, found that in the lowest-performing groups, women on average, overreported their actual college GPA and men underreported their GPA (Caskie et al., 2014). Therefore, to ensure the robustness and accuracy of the self-reported GPA, participants were asked to upload or attach an image (screengrab/screenshot) of their GPA.

Multidimensional Inventory of Black Identity (MIBI)

The Multidimensional Inventory of Black Identity (MIBI) is a measure designed to assess the dimensions of the Black racial identity as outlined by the Multidimensional model of Racial identity (Sellers et al., 1997). It is comprised of 56 items and was originally designed with four dimensions: centrality, ideology, regard, & salience. It is a 7-point Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Furthermore, because the MIBI is grounded in the multidimensional conceptualization of racial identity, it would be unfitting to derive a composite score for the entire scale (Sellers, 2013). This study used the centrality scale and private regard subscale. To assess the participant's level of endorsement for each scale/subscale, a composite score was computed using the total subscale scores.

The Racial Centrality scale assessed the importance of race to one's identity, denoting an internal consistency of .77. As an 8-item scale, it is scored on a 7-point, Likert-type scale, ranging from 1 (strongly agree) to 7 (strongly disagree). Higher scores on the centrality scale are indicative of higher levels of racial centrality. The Private Regard subscale assesses individuals' personal evaluation of their positive or negative feelings toward being Black. It is a 6-item subscale, scored on a 7-point, Likert-type scale, ranging from 1 (strongly agree) to 7 (strongly disagree). The private regard subscale demonstrated an internal consistency of .60 (Rowley et al., 1998). Higher scores on the Private Regard subscale correspond with higher levels of positive feelings towards an individual's own race. Prior investigations of the psychometric properties of the MIBI have demonstrated moderate to strong internal consistency within subscales and the scale (Cokley & Helm, 2001; Simmons et al., 2008).

Following the establishment of the correlations, maximum likelihood extractions with a promax rotation were used for each scale. About 56% of the variance was accounted for these factors. In addition to the second factor analysis used to evaluate the one-factor structure of the centrality subscale, the maximum likelihood factor analysis with a promax rotation was also used, 63% of the variance was accounted for by a one-factor model. The same methodology was utilized to examine the two-factor structure of the regard subscales. To amplify the differences between the public and private subscales, a dual factor matrix was utilized; 62% of the variance was accounted for by the two-factor model.

Identification with Academics Scale

The Identification with Academics Scale (IAS) is a measure designed to assess the extent to which a student's self-esteem is related to academic achievement. Designed by Osborne (1997a), it is comprised of 11 items, scored on a 5-point Likert scale, ranging from (1) strongly disagree to (5) strongly agree. Higher scores were indicative of more or stronger identification between an individual's self-view and their academic performance. Osborne (1997a) normed the IAS with a sample of participants. The scale was used as a tool to track first-year students attending community college who were most at-risk for failing. In his original study, Osborne (1997a) conducted principal components factor analysis of the items that indicated a significant leveling, as visualized in the scree plot, in the scree curve from the first to the second factor. The first factor produced an eigenvalue of 4.78, which accounted 34.2% of the variance; the second factor had an eigenvalue of 1.36. Further, the identification with academic scale demonstrated an internal consistency of .82 (Osborne, 1997a).

Identification with School Questionnaire

The Identification with School Questionnaire is a measure designed to assess the extent to which students identify or disidentify with school, more specifically this scale evaluates the degree to which students place value in school and school related outcomes, as well as their sense of belonging in school (Voelkl, 1996). This has, historically, been used to study racial differences in school attachment. Developed by Voelkl (1996), it is made up of 16 items, scored on a 4-point Likert scale, that ranged from (1) strongly disagree to (5) strongly agree. Items were adopted and modified from the Psychological Sense of School Membership questionnaire developed by Goodenow (1993). Further, an overall Identification with school composite score and two subscale (belonging and valuing) composite scores were derived. In the original study, the Identification with School questionnaire demonstrated an internal consistency of .84 for the overall composite score, with 0.76 for belonging and 0.73 for valuing subscales, respectively (Voelkl, 1996).

Validity for the Identification with School questionnaire was established through the confirmatory factor analysis conducted during the creation of the scale (Voelkl, 1996). The results were analogous when the two-factor model (belonging and valuing) was compared to the (overall) one-factor model (identification). The one- and two-factor models were compared using four fit indices. These included the goodness-of-fit (GFI), which measures how much better the hypothesized model fits as compared to no model. The GFIs for the one- and two-factor models were .92 and .93, respectively. The root mean square error of approximation (RMSEA) measures the goodness of fit of the model in relation to its degrees of freedom. Brown and Cudeck (1993) found that values of 0.50

or less are indicative of a close fit of the model related to its degrees of freedom. Additionally, values of 0.80 or less are indicative of reasonable errors of approximation (Brown & Cudeck, 1993). For the Identification with School questionnaire, the RMSEA measures were 0.71 and 0.66 for the one- and two-factor solutions, respectively. These findings suggest a good fit of the predicted structures to the actual data.

The non-normed fit index (NNFI), also called the Tucker-Lewis Index (TLI), represents the ratio of the amount of variance related to the model to the total variance. Furthermore, the NNFI can be considered as a reliability coefficient (Bridgeman & Rock, 1993). For the one-factor model, the NNFI index was 0.82 and for the two-factor model, the NNFI index was 0.85. For the chi-square goodness of fit index, the indexes were comparable: for the one-factor model: $X^2 = 2400.76$, $df = 119$ and for the two-factor model: $X^2 = 2026.70$, $df = 118$. Moreover, the approximate correlations between belonging and valuing (two-factors) were 0.85. Collectively, these results reveal that the two-factor model does not account for the relationships among the items more so than the one-factor solution.

Educational Socialization Scale

Perceived parental educational socialization was assessed with the Educational Socialization scale. The Educational Socialization scale (ESS), developed from interviews and theory, was designed to assess a student's perceptions of the messages their parents communicated to them about education and their academic performance. Bempechat and colleagues (1999) conducted a factor analysis with 595 racially/ethnically diverse and impoverished/low-income fifth and sixth graders that identified five distinct factors (future, effort, guilt, teach, and shame) each with eigenvalues greater than 1.0.

Furthermore, the ESS has been shown to be correlated, in manners predictive of motivation theory, with the Motivation Orientation Scale (Nicholls, 1989) and the Sydney Attribution Scale (Marsh et al., 1984). The ESS is comprised of 17 items, on a 5-point Likert scale (1 = never, 5 = almost always), where each item elicits students' perceptions of the frequency with which their parents do or say things related to education (Bempechat et al., 1999; Choi et al., 1994) and contains five subscales: future (4 items), teaching (3 items), effort (4 items), shame (4 items), and guilt-oriented socialization (2 items). The ESS demonstrated an internal consistency of the subscales: future ($a = .81$), teaching ($a = .72$), effort ($a = .76$), shame ($a = .73$), and guilt ($a = .65$).

Parental Ethnic/Racial Socialization Scale

Parental ethnic/racial socialization was assessed with the parental ethnic/racialization scale (Hughes & Chen, 1997). The parental ethnic/racialization scale is comprised of 15-items that measure the frequency in which parents delivered messages related to cultural socialization, preparation for bias, and promotion of mistrust. The items are rated on a 5-point Likert scale (1 = Never, 5 = six or more times), where participants indicate the frequency in which their parents engaged in a specific socializing behavior (Hughes & Chen, 1997; Hughes, 2003). The parental ethnic/racial socialization scale has been modified for use across racial/ethnic groups, including Black and Hispanic/Latinx populations.

The initial construct validity of the three dimensions of ethnic/racial socialization was examined using principal axes factor analysis with varimax rotation. The findings indicated that the items were reflective by the proposed underlying dimensions. The initial factor explained 46.8% of the variance and included items relating to group

differences and explanations of racial bias. The second factor accounted for an added 12.6% variance. This factor included items related to cultural heritage awareness and teaching. The third factor accounted for 7% of the variance and consisted of items related to racial mistrust. Moreover, three unit-weighted subscales were developed: Preparation for Bias, consisted of eight items, $\alpha = .91$; cultural socialization, made up on five items, $\alpha = .84$, and promotion of mistrust, comprised of two items, $r^2 = .68$ (Hughes & Chen, 1997; Hughes, 2003).

Procedures

Following the approval from the Temple University Institutional Review Board, participants were recruited from universities, colleges (2-year and 4-year schools), as well as from vocational/technical schools through multiple comprehensive modalities (*see recruitment strategy*). The online modality was selected as the ideal format in which to conduct the current research due to the convenience and ease of access for participant completion, as well as the opportunity to maximize participant outreach and recruitment, increasing the size and representativeness of the non-probabilistic sample.

As part of the survey, participants were asked to provide demographic information (age, gender identity, race/ethnicity, mother's education level, socioeconomic status (parent income, subjective socioeconomic status). In addition to the demographic's questionnaire, participants were asked to complete a survey containing the following scales: Identification with Academics scale (Osborne, 1997a), the Identification with School Questionnaire (Voelkl, 1996), and the Educational Socialization Scale (Choi et al., 1994), Parent ethnic/racial socialization scale and the Private Regard and Racial Centrality subscales of the Multidimensional Inventory of

Black Identity (Sellers et al., 1997). Academic achievement was measured through a self-reported college GPA. To corroborate the self-reported GPA, participants were asked to upload or attach a screenshot or image of their GPA from their school's portal. No identifying information was retained to ensure confidentiality and to promote honesty.

Data Analytic Strategy

Preliminary Analyses

Descriptive statistics and intercorrelations among variables were collected. Additionally, an examination of the psychometric properties of each instrument was performed. The percentages and outliers of missing data were determined. Parameters for missing data: if the percentage of missing data was $\leq 5\%$, listwise deletion will be used (Roth & Switzer, 1999). If the percentage of missing data exceeds 5% but is within an acceptable threshold and below 30%, multiple imputation will be employed. Given that the study is comprised of categorical and ordinal variables, the use of Full Information Maximum Likelihood (FIML) was not appropriate (Johnson & Young, 2011). Instead, multiple imputation was more appropriate and was implemented.

The use of multiple imputation addressed nonresponse bias, while improving precision, validity, and statistical robustness (Rubin, 1987). The desirable properties of multiple imputation include estimating the consistent parameters, asymptotically normal, and asymptotically efficient under the MAR mechanism (Lang & Little, 2018). Furthermore, multiple imputation relies on regression models to predict incomplete and missing values while incorporating uncertainty through an iterative approach. This method avoids introducing bias, preserves the sample size (N), and provided accurate estimates of standard errors (Jakobsen et al., 2017).

Missing data are a common challenge often encountered in research, that when not addressed aptly, can undermine the study results. Therefore, it is crucial to consider and account for the primary reasons for missing data when assessing its potential effects (Rubin, 1987). Missing data are classified into three groups: Missing completely at random (MCAR), Missing at random (MAR), and missing not at random (MNAR).

When data are missing completely at random (MCAR), no systematic differences exist between the individuals with missing data and those who have complete data. This means that the data that are missing is “independent of the observed and unobserved data” (Papageorgiou et al., 2018). The missing data is considered and treated as a random sample of the population. There are several strategies that can be implemented to address this type of missing data. These include complete case analysis (i.e., listwise deletion), provided the missing data does not exceed 5%, single imputation, and multiple imputation. Of the three methods to addressing MCAR, multiple imputation allows for the uncertainty that arose from the missing data to be considered and addressed (Papageorgiou et al., 2018).

Data missing at random (MAR) implies that the probability of a missing value is related to other observed variables (Papageorgiou et al., 2018), indicating a systematic difference between missing and observed data. In the case of systematic missing data, employing multiple imputation is the recommended strategy to address MAR. Data that is missing not at random (MNAR) is indicative of a relationship between the predilection of a value to be missing and its values. Suggesting that the likelihood of the data missing is dependent on the unobserved value itself. As a result, the systematic discrepancies between the missing and the observed values persists, even considering and factoring all

other available information (Papageorgiou et al., 2018). This means there is additional information affiliated with the missing data that cannot be retrieved through using the relationships detected in the data. Therefore, if systematic missing data occurs, where the data are missing not at random (MNAR), a suitable strategy to address this would be through post-hoc sensitivity analyses, where an investigation of how sensitive the results are to different missing data assumptions is conducted (Papageorgiou et al., 2018; Thabane et al., 2013).

An exploratory factor analysis was conducted to uphold the existence of the underlying constructs, identifying the factor loadings and structure to determine the best fitting model (Gorsuch, 1988) within the data set. The EFA quantified aspects of the experiences with academic identification and parent socialization (academic and ethnic/racial). Factor extraction (principal axis factoring), rotation (oblique), selection of the factors, and evaluation of the model was performed. This analysis included all items found on each of the following scales: Identification with Academic Scale, Identification with School Questionnaire, Education Socialization Scale, and the Parental Ethnic/Racial Socialization Scale.

Conducting an exploratory factor analysis (EFA) was to validate existing factor constructs and determine the most suitable model by examining factor loadings and structure. In cases where the factor structure does not conform or the model does not fit adequately, adjustments to the model become necessary. These modifications are done according to prior theoretical frameworks. Also, any errors that arise, as indicated by the modification indices, are examined, and addressed. The exploratory factor analysis was conducted using the methodology outlined by Fabrigar and colleagues (1999).

There were several reasons for conducting an updated Exploratory Factor Analysis (EFA) for the identified scales. This included ensuring the validity of the research findings by examining whether the factor structure used to measure variables is still accurate and representative with the current sample. An updated EFA enhances the generalizability of the study by investigating whether the factor structure holds true in diverse samples, including Black students. Additionally, it allowed for cultural sensitivity by identifying and validating factors that reflect the experiences and perspectives of the specific population being studied, such as a sample of diverse Black students.

Principal axis factor analysis with an oblique (Oblimin) rotation was employed, which has been recommended by researchers due to its ability to provide a more precise and realistic depiction of the interrelationships among constructs, allowing for correlations between factors (Fabrigar et al., 1999). Furthermore, several factor retention methodologies were explored to determine the retention of factors. These methodologies encompassed minimum average partial (MAP) (Velicer, 1976), parallel analysis (Horn, 1965), interpretability, and the scree test (Cattell, 1966). Factor structure retention was based on Velicer's minimum average partial, in conjunction with interpretability, reliability of resulting factor structure, as well as prior research. MAP was primarily used because it is generally the most accurate and most robust (Zwick & Velicer, 1986). A priori criteria for factor retention included pattern coefficients $> .40$ item salience and a minimum of three salient items per factor.

Mplus statistical modeling software was used (Version 8.6; Muthén & Muthén, 2021). A complete structural model was carried out. Several standards for model fit were utilized based on the best practice. The Multilevel modeling (MLM) estimation method

was utilized. As means of determining the fit of the structural model specified, Chi-square model fit, goodness of fit index, comparative fit index (CFI), root-mean-square error of approximation (RMSEA; Steiger, 1990) and root mean square residual (SRMR) were examined. Researchers have suggested RMSEA less than .06 is advisable (Hu & Bentler, 1999). SRMR values should be $<.08$ and CFI should be $\leq .90$ (Hu & Bentler, 1999).

Using iterative processes (i.e., maximum likelihood), SEM estimates the complete parameters of the model simultaneously (Edwards & Konold, 2020). Structural equation modeling (SEM) conducted in Mplus (8.6, Muthén & Muthén, 2021) through the maximum likelihood method was performed to investigate the mediating role of racial identity dimensions on the relationship between academic identification and academic achievement. The model fit index to be considered for inclusion are root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), goodness of fit index (GFI) and comparative fit index (CFI). In accordance with relevant literature recommendations, the values of RMSEA and SRMR smaller than 0.08 and the values of GFI and CFI more than 0.90 indicate an acceptable fit. Furthermore, the 95% bias-corrected confidence interval was determined through the generation of bias-corrected bootstrapping methodology as a means of examining the significance of moderated mediation effect.

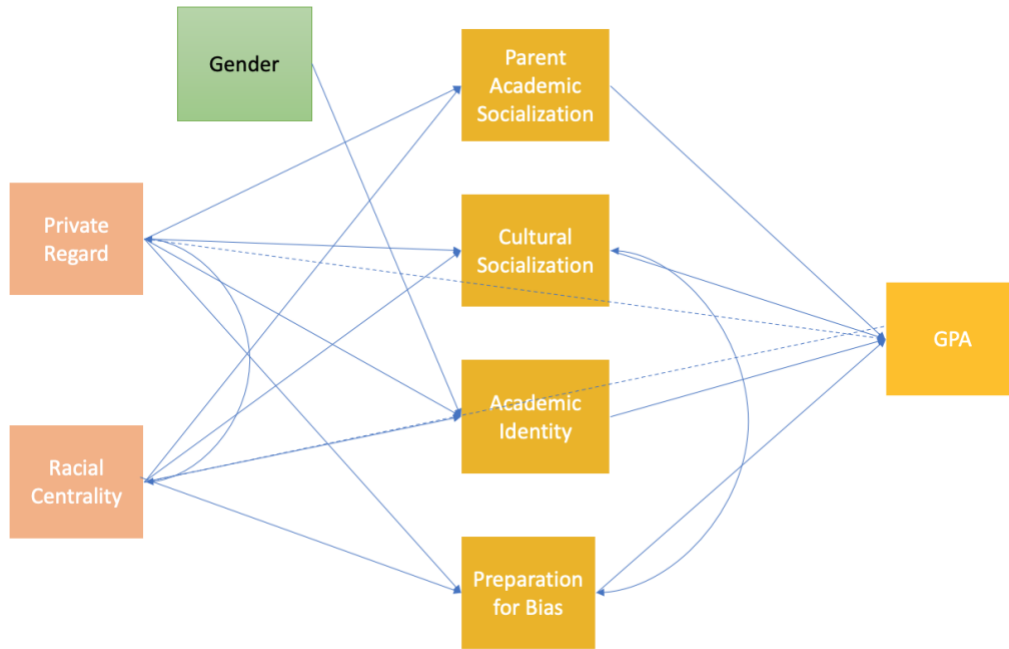


Figure 1 – Proposed Model – Moderated, multiple mediator model

CHAPTER 4

RESULTS

Data Screening

Because data collection for this study occurred via completion of an online survey with a gift card incentive, the study is vulnerable to invalid responses. Vulnerabilities include fraudulent activity and random responding, where respondents, either eligible or ineligible, participate multiple times to receive additional compensation (Teitcher et al., 2015). According to Teitcher and colleagues (2015), these risks can be mitigated by using Google's Completely Automated Public Turing test to tell Computers and Humans Apart (CAPTCHA). To preclude the random responding and fraudulent activity, on the first page of the survey, potential participants were asked to complete a task (i.e., selecting the image with stoplights or typing out a word that is blurry) to indicate that they are human. The reCAPTCHA is meant to prevent "bots" or software applications that perform automated tasks over the internet from undermining the integrity of the data (Teitcher et al., 2015). Qualtrics, survey software, possesses expert review quality response features that inspect the overall quality of the data collected before analysis is completed. These features included reCAPTCHA and RelevantID to prevent duplicate responses.

Preliminary Analysis

Missing Data

The study yielded 1097 responses. 195 (17.59%) were removed listwise due to missing responses for most items (>50% items). Of the 902 responses remaining, 130 (13.98%) responses were removed due to quality concerns. Qualtrics bot detection software detected that 80 of the responses were bots and 50 were duplicate responses, and

thus removed. A further 87 responses were removed for not meeting study criteria (i.e., declining to consent to study participation, identified as a non-Black/African American individual, be at least 18 years old, and enrolled or graduated from an undergraduate or graduate institute or vocational/technical school). The total sample following these removals was 685.

Little's Missing Completely at Random test was used in SPSS version 29 to determine if data were missing at random. These results were not statistically significant, this indicated that the data were missing at random ($\chi^2 = 11,355.06$, $df = 11,292$, $p > .05$), with little-to-no missing data patterns. In the examination of each variable, none of the variables had more than 15% of the data missing (Jakobsen et al., 2017). Thus, the multiple imputation method (MI; Rubin, 1987) was a proper method for addressing missing data (Jakobsen et al., 2017). In comparison to traditional methods (e.g., listwise deletion), multiple imputation improved accuracy while retaining statistical power (Roth & Switzer, 1999; Rubin & Little, 2002). With this technique, missing data were substituted with predicted values derived from simulated data (Horton & Kleinman, 2007).

The missing data demonstrated a non-monotonous pattern, wherein participants were not missing all data but only specific items. To address this non-monotonicity, the fully conditional specification Markov Chain Monte Carlo (MCMC) method with 10 iterations was employed (Jakobsen et al., 2017). The fully conditional specification MCMC method was used within the multiple imputation framework. The MCMC algorithm was applied to generate multiple imputed datasets, where each dataset represented a distinct set of imputed values. The MCMC algorithm iteratively imputed

the missing values by considering the conditional distribution of each missing variable given the observed variables. Through repeated iterations, a collection of imputed datasets was obtained. The combined utilization of both approaches yielded more robust and reliable results in comparison to using a single imputation method. This combined approach allowed for flexible modeling of the missingness mechanism through MCMC, while also effectively capturing the uncertainty associated with the imputations through multiple imputations.

Descriptive Statistics

Participants included in the data analyses (N = 685) range in age from 18 to 79 years-old (M = 26.93, SD = 8.86). Of those participants who self-selected their ethnicity, 150 (21.9%) participants identified as Hispanic/Latinx, 524 (76.5%) identified as non-Hispanic/Non-Latinx, and 11 (1.6%) chose to self-describe their ethnicity. Participants who self-selected their gender: 393 (57.4%) identified as female, 288 (42.0%) identified as male, 3 (.4%) identified as non-binary/gender non-conforming and 1 (.1%) identified as questioning. Participants who self-selected their sexual orientation: 591 (86.3%) identified as heterosexual, 38 (5.5%) identified as bisexual, 18 (2.6%) identified as gay, 12 (1.8%) identified as asexual, 11 (1.6%) identified as lesbian, 6 identified as queer (.9%), 5 (.7%) self-described their sexual orientation (i.e., polysexual, pansexual), and 4 (.6%) self-described (questioning).

Individual socio-economic status was reported as 337 (49.2%) identified as middle class, 184 (26.9%) identified as working class, 109 (15.9%) identified as upper-middle class, 39 (5.7%) identified as lower class, 14 (2%) identified as upper class and 2 (.3%) self-described. History of free and reduced lunch: 428 (62.5%) reported “Yes”, 239

(34.9%) reported “No”, and 18 (2.6%) reported uncertain to whether they received free and reduced lunch. Mother’s highest education level: 221 (32.3%) identified high school or equivalent, 128 (18.7%) identified some college, 97 (14.2%) indicated bachelor’s degree, 75 (10.9%) indicated Masters/Doctorate degree, 71 (10.4%) indicated associate degree, 56 (8.2%) middle school or equivalent, 21 (3.1%) indicated grade school or equivalent, and 13 (1.9%) indicated technical/trade school. Estimated total annual household income: 187 (27.3%) identified making between \$50,000 and \$74,999, 173 (25.3%) make between \$75,000 and \$99,999, 117 (17.1%) make between \$25,000 and \$49,999, 104 (15.2%) make between \$100,000 and \$149,999, 60 (8.8%) make over \$150,000 and 44 (6.4%) make between \$1 and \$24,999.

School demographic: 346 (50.5%) participants described their school as a Predominantly White Institution (PWI), 321 (46.9%) described their school as a Historically Black College/University (HBCU), 18 (2.6%) self-described their school as minority-serving, Hispanic serving institution, diverse online college, and Asian American, Native American/Pacific Islander serving institution. School type: 441 (64.4%) attend/attended a public 4-year college/university, 172 (25.1%) attend/attended a private 4-year college/university, 34 (5.0%) attend/attended a 2-year-college, 25 (3.6%) attend/attended a technical school and 7 (1.0%) attend/attended a trade school.

Demographic information for the study can be found in Table 1. Descriptive statistics for all scales and subscales are reported in Table 1. Most variables met criteria for normality according to cutoffs recommended by Kim (2013), indicating skewness should be +/- 2 and kurtosis should be +/- 3 within a large distribution. Demographic information for the study can be found in Table 1. Descriptive statistics for all scales and subscales are

reported in Table 2. Most variables met criteria for normality according to cutoffs recommended by Kim (2013), indicating skewness should be +/- 2 and kurtosis should be +/- 3 within a large distribution.

Table 1. Descriptive Statistics for Demographics (N = 685)

Demographics	N	%
Race		
Black	654	96
Biracial	20	3
Multiracial	8	1
Self-described	3	1
Ethnicity		
Non-Hispanic/Latinx	524	77
Hispanic	150	22
Self-described	11	2
Gender		
Female	393	57
Male	288	42
Non-binary/Gender non-conforming	3	< 1
Questioning	1	< 1
Sexual Orientation		
Heterosexual	591	86
Bisexual	38	6
Gay	18	3
Asexual	12	2
Lesbian	11	2
Queer	6	< 1
Self-described	5	< 1
Questioning	4	< 1
Socio-economic Status		
Middle Class	337	49
Working Class	184	27
Upper Middle Class	109	16
Lower Class	39	6
Upper Class	14	2
Self-described	2	< 1
History of free/reduced lunch		
Yes	428	63
No	239	35
Uncertain	18	3
Mother's highest education level		
High school or equivalent	221	32
Some college	128	19
Bachelor's degree	97	14

Table 2. (Continued)

Demographics	N	%
Masters/Doctorate degree	75	11
Associate's degree	71	10
Middle school or equivalent	56	8
Grade school or equivalent	21	3
Technical/trade school	13	2
Estimated total annual household income		
Between \$50,000 and \$74,999	187	27
Between \$75,000 and \$99,999	173	25
Between \$25,000 and \$49,999	117	17
Between \$100,000 and \$149,999	104	15
Over \$150,000	60	9
Between \$1 and \$24,999	44	6
School Demographic		
Predominantly White Institution (PWI)	341	51
Historically Black College/University (HBCU)	321	47
Minority Serving Institution*	18	3
School Type		
Public 4-year college/university	441	64
Private 4-year college/university	172	25
2-year college	34	5
Technical School	25	4
Trade School	7	1

Notes: Minority Serving Institution* = Hispanic serving institution, diverse online college, and Asian American, Native American/Pacific Islander serving institution. Percentages may not total 100% in each demographic category due to rounding.

Table 3. Descriptive Statistics for Survey Scales

Scales	N	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis
MIBI							
Centrality	685	16	56	38.60	7.95	.51	-0.57
Private Regard	685	16	42	33.54	6.94	-.39	-1.04
IAS Total							
Academic Identity	685	14	42	32.61	6.16	-.43	-0.49
ISQ Total							
Belonging	685	16	39	28.79	3.94	.30	0.18
Valuing	685	15	31	23.24	2.99	.29	-0.16
PERS Total							
Preparation for Bias	685	8	40	25.64	8.74	-.22	-0.75
Cultural Socialization	685	5	25	16.41	4.76	-.11	-0.36
Mistrust	685	2	10	5.35	2.48	.10	-1.11
ESS Total							
Future	685	4	20	14.62	3.40	-.64	0.55
Teaching	685	3	15	8.78	3.13	-.06	-0.88
Effort	685	4	20	13.97	3.60	-.71	0.28
Guilt	685	4	20	11.61	4.03	-.04	-0.84
Shame	684	2	10	6.34	2.17	-.33	-0.60

Note: MIBI is Multidimensional Inventory of Black Identity. IAS is Identification with Academics Scale. ISQ is Identification with School Questionnaire. PERS is Parental Ethnic/Racial socialization Scale. ESS is Education Socialization Scale. N = sample size. Min = minimum. Max = maximum. SD = standard deviation.

Correlation Analyses

Bivariate correlations were reported in Table 3 for the total sample (N = 685).

Correlations for most variables were significant at the $p < 0.05$ level. The pattern of small correlation was consistent across most variables. The strongest correlations were

observed within each respective scale. Academic identity demonstrated small to moderate correlations across the total scales and subscales for PERS, Racial identity dimensions, and PAS, indicating a range of associations between these variables. Racial identity dimensions, specifically private regard and racial centrality showed a range of significant (at the $p < .05$) and small to moderate correlations (ranging from .03 to .64) with the variables of academic identity, parent academic socialization, and parental ethnic/racial socialization. Refer to table 3 for total bivariate correlational information.

Table 4. Bivariate Correlations (N = 685)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. MIBI Centrality	1																
2. MIBI Private Regard	.696**	1															
3. IAS Total	.558**	.299**	1														
4. ISQ Total	.394**	.225**	.396**	1													
5. ISQ Belonging	.376**	.199**	.408**	.920**	1												
6. ISQ Valuing	.320**	.205**	.282**	.857**	.587**	1											
7. ESS Total	-.107**	-.216**	.199**	-.046	-.018	-.072	1										
8. ESS Future	.165**	.030	.294**	.276**	.286**	.194**	.621**	1									
9. ESS Teaching	-.141**	-.182**	.113**	-.170**	-.107**	-.211**	.634**	.307**	1								
10. ESS Effort	-.083*	-.242**	.186**	.114**	.106**	.096*	.747**	.441**	.252**	1							
11. ESS Shame	-.217**	-.186**	-.005	-.263**	-.234**	-.236**	.713**	.100**	.349**	.387**	1						
12. ESS Guilt	-.057	-.129**	.079*	-.122**	-.125**	-.088*	.599**	.207**	.216**	.339**	.445**	1					
13. PERS Total	.077*	.224**	.002	-.061	-.064	-.042	.264**	.237**	.233**	.062	.180**	.190**	1				
14. PERS Bias	.106**	.274**	-.019	-.056	-.071	-.023	.172**	.166**	.163**	-.013	.147**	.124**	.939**	1			
15. PERS Culture	.129**	.157**	.104**	.090*	.102**	.051	.268**	.366**	.244**	.119**	.025	.183**	.766**	.553**	1		
16. PERS Mistrust	-.213**	-.078*	-.119**	-.300**	-.286**	-.243**	.281**	-.031	.193**	.148**	.388**	.222**	.526**	.400**	.198**	1	
17. Academic Identity	.636**	.423**	.795**	.539**	.505**	.449**	.068	.287**	.015	.062	-.121**	-.009	.040	.045	.125**	-.188**	1
18. GPA	.367**	.417**	.271**	.394**	.208**	.224**	-.114**	.049	-.082*	-.131**	-.119**	-.097*	-.003	.032	.039	-.200**	.409**

Note: MIBI is Multidimensional Inventory of Black Identity (Subscale: Racial Centrality and Private Regard). IAS is Identification with Academics Scale (Subscale: Academic Identity). ISQ is Identification with School Questionnaire (Subscales: Belonging and Valuing). PERS is Parental Ethnic/Racial socialization Scale (Subscale: Preparation for Bias, Culture, and Mistrust). ESS is Education Socialization Scale (Subscales: Future, Effort, Teaching, Shame, Guilt). ** p < 0.01, * p < 0.05

Exploratory Factor Analysis

Analyses for the exploratory factor analysis were completed in SPSS Version 29. Principal axis factoring with oblique (Oblimin) rotation was used with the Identification with Academics Scale (IAS, 13 items), the Identification with School Questionnaire (ISQ, 16 items), the Educational Socialization Scale (ESS, 17 items) and the Parental Ethnic/Racial Socialization scales (PERS, 15 items) to re-examine and verify their psychometric properties with this sample (Rissing & Cogan, 2009). An oblique rotation was chosen because this method allowed for factors to be correlated (Costello & Osborne, 2005, Fabrigar et al., 1999).

The Bartlett's Test of Sphericity was statistically significant ($p \leq .001$), and the Kaiser Meyer Olkin Measure of Sampling Adequacy was at least .825 across each of the scales, which was indicative of acceptability for correlation matrix for factor analysis (Kaiser, 1974). Several methods of factor retention including MAP analysis (Velicer, 1976), parallel analysis (PA; Horn 1965), and scree test (Cattell, 1966), were utilized. The utilization of multiple methods for factor retention safeguarded against over- or under-identifying factors (Hayton et al., 2004) and was consistent with best practices in factor analysis (Costello & Osborne, 2005; Fabrigar et al., 1999; Hayton et al., 2004).

Due to their level of accuracy and objectivity, parallel analysis and MAP were relied upon heavily in factor retention decision (Patil et al., 2008; Ruscio & Roche, 2012; Watkins, 2018). The parallel analysis used the Monte Carlo Simulation method to generate a randomized data set parallel to the original data set and the expected eigenvalues are computed (Hayton et al., 2004; Velicer et al., 2000). The number of factors where the eigenvalue in the simulated sample was higher than that of the actual data is considered significant (Ledesma & Mora, 2007). Velicer's MAP test is a method that calculates the average of squared partial correlations until the minimum squared partial correlations are satisfied (Velicer, 1976).

Multidimensional Inventory of Racial Identity – Private Regard & Racial Centrality

Subscales

The multidimensional inventory of racial identity (MIBI) has undergone extensive examination of its psychometric properties (Cokley & Helm, 2001). Studies have consistently demonstrated adequate internal consistency of the MIBI subscales in various samples, including college students (Cokley & Helm, 2001) and adults (Rowley et al., 1998; Sellers et al., 1998). Given these findings, further evaluation of the psychometric properties of the Racial Centrality and Private Regard subscales of the MIBI was unnecessary. The Racial Centrality scale exhibited an internal consistency of .77, while the Private Regard subscale demonstrated an internal consistency of .60 (Rowley et al., 1998).

Identification with Academics Scale

All 13 items of the instrument were subjected to an EFA with oblique rotation (oblimin). The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy for the analysis. $KMO = .88$. Bartlett's test of sphericity $\chi^2(685) = 2517.81$, $df = 78$, $p < .001$, indicating that the correlation structure is adequate for factor analyses. The maximum likelihood factor analysis with a cut-off point of .40 and the observation of the scree test, suggested a two-factor solution, accounting for 47.26% of the variance. Factor 1 has an eigenvalue of 4.60 and accounts for 35.38% of variance. Factor 2 has an eigenvalue of 1.54 and accounts for 11.88% of the variance. Findings from the parallel analysis (PA; Horn, 1965) suggested that two factors should be retained. Velicer's MAP test suggested a two-factor solution. It should be noted that in the original study of the IAS, Osborne (1997a) conducted a principal components factor analysis and observe a

scree plot that suggested two factors (first factor eigenvalue = 4.78, accounting for 34.2% of variance; second factor eigenvalue = 1.36), however he stated "...all items indicated a marked leveling in the scree curve from the first to the second factor... indicating a single factor" (Osborne, 1997, pg. 4).

The results of the two vs. one factor analysis are presented in Tables 4 and 5. The Cronbach's alpha demonstrated acceptable reliability ($\alpha = .821$) for the total scale composite. While previous literature has used the Identification with Academics scale as a one factor scale for academic identity, in the present study, there is greater evidence for a two-factor structure. Factor 1 measures Academic identity and factor 2 appears to measure Academic devaluation. Factor 1 (referenced as Academic Identity subscale in subsequent analyses) had a Cronbach's alpha of .841, factor 2 (referenced as Academic Devaluation subscale in subsequent analyses) had a Cronbach's alpha of .731. Given the parameters of this study, the Academic Identity subscale from the one-factor solution was used in subsequent analyses.

Table 5. Results from the factor analysis of the Identification with Academics Scale (IAS), 2 factor structure

IAS Items	Factor Loading	
	1	2
Factor 1		
Being a good student is an important part of who I am.	.70	.41
I feel that the grades I get are an accurate reflection of my abilities.	.64	.32
School is satisfying to me because it gives me a sense of accomplishment	.72	.43
I often do my best work in school	.70	.37
I put a great deal of myself into some things at school because they have special meaning or interest for me	.69	.45
I enjoy school because it gives me a chance to learn many interesting things.	.68	.42
Factor 2		
My grades do not tell me anything about my academic potential (R).	.21	.50
I do not really care what tests say about my intelligence (R).	.25	.46

If the test we take were fair, I would be doing much better in school (R).	.31	.57
I am often relieved if I just pass a course (R).	.40	.50
School is very boring for me, and I am not learning what I feel is important (R).	.36	.60
I feel like the things I do at school waste my time more than the things I do outside of school (R).	.41	.62
No test will ever change my opinion of how smart I am (R).	.35	.49

Note: N = 685. The extraction method was principal axis factoring with an Oblimin Kaiser normalization rotation. All Factor loadings are reported. Reverse-scored items denoted with (R).

Table 6. Results from the factor analysis of the Identification with Academics Scale (IAS), 1 factor structure

IAS Items	Factor Loading
	1
Factor 1	
Being a good student is an important part of who I am.	.66
I feel that the grades I get are an accurate reflection of my abilities.	.57
School is satisfying to me because it gives me a sense of accomplishment	.68
I often do my best work in school	.64
I put a great deal of myself into some things at school because they have special meaning or interest for me	.68
I enjoy school because it gives me a chance to learn many interesting things.	.65
My grades do not tell me anything about my academic potential (R).	.35
I do not really care what tests say about my intelligence (R).	.36
If the test we take were fair, I would be doing much better in school (R).	.45
I am often relieved if I just pass a course (R).	.49
School is very boring for me, and I am not learning what I feel is important (R).	.24
I feel like the things I do at school waste my time more than the things I do outside of school (R).	.54
No test will ever change my opinion of how smart I am (R).	.45

Note: N = 685. The extraction method was principal axis factoring. All Factor loadings are reported. Reverse-scored items are denoted with (R).

Identification with School Questionnaire

All 16 items of the instrument were subjected to an EFA with oblique rotation (oblimin). The Kaiser-Meyer-Olkin measure (KMO) verified the sampling adequacy for the analysis. KMO = .832. Bartlett's test of sphericity $\chi^2(685) = 2769.617$, $df = 120$, $p < .001$, indicating that the correlation structure is adequate for factor analyses. The maximum likelihood factor analysis with a cut-off point of .40 and the observation of the scree test suggested a three-factor solution, accounting for 48.91% of the variance. Factor

1 has an eigenvalue of 3.49 and accounts for 21.78% of variance. Factor 2 has an eigenvalue of 3.10 and accounts for 19.31% of the variance. Factor 3 has an eigenvalue of 1.25 and accounts for 7.81% of the variance. Parallel analysis suggested a three-factor solution should be retained. Note that factor 3 failed to meet a priori criteria including pattern coefficients greater than .40. This suggests that a two-factor solution may be more appropriate.

Velicer’s minimum average partial correlation (MAP) test suggested a one-factor solution. In summary, the parallel analysis and scree test both supported a three-factor solution and the Velicer’s MAP test suggested a one-factor solution. The result of the three vs. two vs. one factor analysis is presented in Tables 6, 7, and 8. Cronbach’s alpha demonstrated acceptable reliability ($\alpha = .745$) for the total scale composite, with reliability for the subscales: Belonging ($\alpha = .647$), Valuing ($\alpha = .518$). The Identification with School Questionnaire was not used in subsequent analyses due to its insufficient psychometric properties, including concerns for low reliability, inconsistent findings with prior research, and the fact that many of the items failed to meet a priori criteria including pattern coefficients greater than .40.

Table 7. Results from the factor analysis of the Identification with School Questionnaire (ISQ), 3 factor structure

ISQ Item	Factor Loading		
	1	2	3
Factor 1 – Valuing			
I can get a good job even if my grades are bad (R)	.36	-.02	.22
School is one of the most important things in my life	-.07	.56	-.36
Many of the things we learn in class are useless(R)	.74	.01	-.08
Most of what I learn in school will be useful when I get a job.	.08	.34	-.41
School is often a waste of time (R)	.78	.03	-.11
Dropping out of school would be a huge mistake for me	-.73	.02	.06
School is more important than most people think.	.01	.55	-.32

Factor 2 – Belonging

I feel proud of being part of my school	.07	.37	-.46
I am treated with as much respect as other students in my class.	.08	.26	-.59
the only time I get attention in school is when I cause trouble (R)	.70	-.23	.16
I like to participate in a lot of school activities (i.e., sports, clubs, etc)	-.05	.42	-.19
Most of my teachers do not really care about me (R)	.74	-.10	-.25
Most of the time I would like to be any place other than in school (R)	.70	.02	-.10
there are teachers or other adults in my school that I can talk to if I have a problem	.11	.33	-.58
School is one of my favorite places to be.	.03	.73	-.32
People at school are interested in what I have to say.	-.00	.37	-.62

Note: N = 685. The extraction method was principal axis factoring with an Oblimin Kaiser normalization rotation. All Factor loadings are reported. Reverse-scored items denoted with (R).

Table 8. Results from the factor analysis of the Identification with School Questionnaire (ISQ), 2 factor structure

ISQ Item	Factor Loadings	
	1	2
Factor 1 – Valuing		
I can get a good job even if my grades are bad (R)	.32	-.13
School is one of the most important things in my life	-.12	.55
Many of the things we learn in class are useless (R)	.72	.07
Most of what I learn in school will be useful when I get a job.	.07	.45
School is often a waste of time (R)	.76	.10
Dropping out of school would be a huge mistake for me	.16	.27
School is more important than most people think.	-.04	.52
Factor 2 – Belonging		
I feel proud of being part of my school	.06	.51
I am treated with as much respect as other students in my class.	.10	.50
the only time I get attention in school is when I cause trouble (R)	.73	-.02
I like to participate in a lot of school activities (i.e., sports, clubs, etc)	-.09	.35
Most of my teachers do not really care about me (R)	.77	.11
Most of the time I would like to be any place other than in school (R)	.68	.09
there are teachers or other adults in my school that I can talk to if I have a problem	.12	.54
School is one of my favorite places to be.	-.05	.59
People at school are interested in what I have to say.	.01	.58

Note: N = 685. The extraction method was principal axis factoring with an Oblimin Kaiser normalization rotation. All Factor loadings are reported. Reverse-scored items denoted with (R).

Table 9. Results from a factor analysis of the Identification with School Questionnaire (ISQ), 1 factor structure

ISQ Item	Factor Loading 1
I can get a good job even if my grades are bad (R)	.26
School is one of the most important things in my life	.06
Many of the things we learn in class are useless (R)	.70
Most of what I learn in school will be useful when I get a job.	.20
School is often a waste of time (R)	.75
Dropping out of school would be a huge mistake for me	.23
School is more important than most people think.	.11
I feel proud of being part of my school	.20
I am treated with as much respect as other students in my class.	.23
the only time I get attention in school is when I cause trouble (R)	.67
I like to participate in a lot of school activities (i.e., sports, clubs, etc)	.02
Most of my teachers do not really care about me (R)	.75
Most of the time I would like to be any place other than in school (R)	.67
there are teachers or other adults in my school that I can talk to if I have a problem	.26
School is one of my favorite places to be.	.12
People at school are interested in what I have to say.	.17

Note: N = 685. The extraction method was principal axis factoring. All Factor loadings are reported. Reverse-score items denoted with (R).

Educational Socialization Scale

All 17 items of the instrument were subjected to an EFA with oblique rotation (oblimin). The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy for the analysis. KMO = .835. Bartlett's test of sphericity $\chi^2(685) = 4891.698$, $df = 136$, $p < .001$, indicating that the correlation structure is adequate for factor analyses. The maximum likelihood factor analysis with a cut-off point of .40 and the observation of the scree test suggested a four-factor solution, accounting for 63.26% of the variance. Factor 1 has an eigenvalue of 5.08 and accounts for 29.87% of variance. Factor 2 has an

eigenvalue of 2.62 and accounts for 15.41% of the variance. Factor 3 has an eigenvalue of 1.77 and accounts for 10.41% of the variance. Factor 4 has an eigenvalue of 1.29 and accounts for 7.57% of the variance. Parallel analysis suggested a five-factor solution.

The Velicer's MAP test suggested a three-factor solution. In summary, the parallel analysis suggested a five-factor solution, the scree test suggested a four-factor solution, and the Velicer's MAP test suggested a three-factor solution. Theoretically, the four and three-factor solutions were not supported in previous educational socialization studies (Beamon & Bell, 2006; Bempechat et al., 1999; Ross, 2017). Therefore, only the five-factor solution was accepted. The results of the four vs. five factor analysis are presented in Table 9 and 10. Cronbach's alpha demonstrated acceptable reliability ($\alpha = .850$) for the total scale composite, with acceptable reliability for the subscales: Future ($\alpha = .832$), Teaching ($\alpha = .768$), Effort ($\alpha = .769$), Shame ($\alpha = .810$), and Guilt ($\alpha = .715$).

Table 10. Results from a Factor Analysis of the Education Socialization Scale (ESS)

ESS Items	Factor Loading				
	1	2	3	4	5
Factor 1 - Effort					
My parents say I could do better in school if I worked harder	.77	.27	.21	.25	-.41
My parents say you can get smarter and smarter as long as you try hard	.58	.46	.16	.24	-.18
My parents say if I do not do well on a test, it is probably because I did not study hard enough or long enough	.64	.22	.13	.30	-.44
My parents say I can get good grades in school as long as I always try hard	.61	.51	.15	.21	-.14
Factor 2 - Future					
My parents talk about different kinds of jobs I can have when I grow up	.32	.63	.37	.20	-.16
My parents say it is important to think about what I want to be in the future	.21	.74	.15	.18	.01
My parents say it is important to think about the kinds of things I am interested in doing when I grow up	.30	.76	.23	.17	-.04
My parents say it is important to think about what I want to be when I grow up	.31	.84	.24	.21	-.08
Factor 3 - Teaching					
My parents (or someone else at home) help me with math homework	.07	.20	.90	.17	-.27
My parents (or someone else at home) help me with homework (not math)	.04	.25	.80	.13	-.21
My parents give me math problems that the teacher has not taught yet	.35	.26	.54	.24	-.38
Factor 4 - Guilt					
I feel badly because my parents work so hard to give me a good education	.33	.23	.18	.68	-.44
I feel badly that my parents have to work so hard	.09	.16	.15	.84	-.35
Factor 5 - Shame					
My parents make me feel ashamed if I do badly in school	.30	.03	.31	.39	-.89
I feel ashamed if I do badly in school	-.03	.16	.20	.40	-.43
My parents feel ashamed if I do badly in school	.34	.10	.25	.43	-.82
My parents punish me when I do not do well in school	.30	.03	.30	.34	-.75

Note: N = 685. The extraction method was principal axis factoring with an Oblimin Kaiser normalization rotation. All Factor loadings are reported. Reverse-scored items denoted with (R).

Table 11. Results from a Factor Analysis of the Education Socialization Scale (ESS)

ESS Items	Factor Loading			
	1	2	3	4
Factor 1 - Effort				
My parents say I could do better in school if I worked harder	.78	.23	.22	.32
My parents say you can get smarter and smarter as long as you try hard	.54	.46	.16	.20
My parents say if I do not do well on a test, it is probably because I did not study hard enough or long enough	.69	.18	.15	.38
My parent– say I can get good grades in school as long as I always try hard	.56	.51	.14	.15
Factor 2 - Future				
My parents talk about different kinds of jobs I can have when I grow up	.31	.60	.38	.21
My parents say it is important to think about what I want to be in the future	.16	.74	.13	.12
My parents say it is important to think about the kinds of things I am interested in doing when I grow up	.26	.75	.20	.13
My parents s–y it is important to think about what I want to be when I grow up	.27	.81	.23	.18
Factor 3 - Teaching				
My parents (or someone else at home) help me with math homework	.11	.15	.87	.24
My parents (or someone else at home) help me with homework (not math)	.06	.20	.80	.19
My parents give me math problems that the teacher has not taught yet	.40	.20	.56	.32
Factor 4 – Guilt/shame				
I feel badly because my parents work so hard to give me a good education	.38	.21	.18	.58
I feel badly that my parents have to work so hard	.18	.14	.14	.54
My parents make me feel ashamed if I do badly in school	.50	-.11	.37	.74
I feel ashamed if I do badly in school	.06	.10	.20	.54
My parents feel ashamed if I do badly in school	.51	-.02	.31	.73
My parents punish me when I do not do well in school	.47	-.09	.36	.64

Note: N = 685. The extraction method was principal axis factoring with an Oblimin Kaiser normalization rotation. All Factor loadings are reported.

Parental Ethnic/Racial Socialization Scale

All 16 items of the instrument were subjected to an EFA with oblique rotation (oblimin). The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy for the analysis. $KMO = .919$. Bartlett's test of sphericity $\chi^2(685) = 5731.920$, $df = 105$, $p < .001$, indicating that the correlation structure is adequate for factor analyses. The maximum likelihood factor analysis with a cut-off point of .40 and the observation of the scree test suggested a three-factor solution, accounting for 66.64% of the variance. Factor 1 has an eigenvalue of 6.90 and accounts for 46.00% of variance. Factor 2 has an eigenvalue of 1.81 and accounts 12.04% of the variance. Factor 3 has an eigenvalue of 1.29 and accounts for 8.59% of the variance. Parallel analysis suggested a three-factor solution. Velicer's MAP test suggested a three-factor solution. The result of this factor analysis aligns with the findings from Hughes and Chen's (1997) original study. The result of this factor analysis is presented in Table 11. Cronbach's alpha demonstrated acceptable reliability ($\alpha = .928$) for the total scale composite, with acceptable reliability for the subscales: Preparation for Bias ($\alpha = .928$), Cultural Socialization ($\alpha = .818$), Mistrust ($\alpha = .826$).

Table 12. Results from a Factor Analysis of the Parent Ethnic/Racial Socialization Scale (PERS)

PERS Items	Factor Loading		
	1	2	3
Factor 1 - Bias			
Talked to you about racial/ethnic stereotypes, prejudice, and discrimination against people of your racial/ethnic group?	.81	.45	.37
Talked to you about others who may try to limit you because of race/ethnicity?	.84	.45	.31
Talked to you about unfair treatment that occurs due to race/ethnicity?	.85	.50	.38
Talked to someone else about racial/ethnic discrimination when you could hear them?	.76	.45	.36
Talked to you about expectations others might have about your abilities based on your race/ethnicity?	.80	.45	.34
Told you that you must be better in order to get the same rewards given to others because of race/ethnicity?	.77	.46	.37
Explained something on TV to you that showed discrimination against your racial/ethnic group?	.75	.48	.39
Talked to you about discrimination against people of a racial/ethnic group other than your own?	.72	.50	.41
Factor 2 – Cultural Socialization			
Told you stories or read you story books involving characters who shared your race/ethnicity or “looked like” you?	.50	.64	.24
Took you to an event that celebrates or recognizes your cultural heritage?	.37	.78	.13
Purchased clothing for you that was popular in your cultural group, or, taken you to get a hairstyle popular in your cultural group?	.43	.56	.21
Told or read you stories about the history of your racial/ethnic group?	.41	.72	.16
Done something to celebrate the history of your racial/ethnic group?	.43	.75	.14
Factor 3 – Mistrust			
Done or said things to you as a child to keep you from trusting kids of other races	.39	.18	.86
Done or said things to encourage you to keep your distance from people of other races	.35	.18	.82

Note: N = 685. The extraction method was principal axis factoring with an Oblimin Kaiser normalization rotation. All Factor loadings are reported.

Mediation Path Models

A mediation path model was created to examine the relationship between racial identity attitudes (private regard and racial centrality), parental academic socialization, academic identity, and academic achievement. Parental academic socialization and academic identity were mediators between the relationship of racial identity attitudes and academic achievement. Based on previous research, factors such as parental academic socialization, academic identity, and positive racial identity attitudes have been shown to be correlated with and predictive of successful academic outcomes.

In the present study, it was hypothesized that the relationship between racial identity dimensions, specifically centrality and private regard, and academic achievement would be partially mediated by academic identification and parent academic socialization (PAS). Furthermore, gender was expected to moderate this mediation, with a stronger mediation effect observed for women and girls versus men and boys (Buchmann et al., 2008). These relationships were examined using mediation and moderation path models in MPlus.

The structural equation modeling theory is based on large sample sizes (Kline, 2015), the total sample of 685 participants were used to analyze this model. To determine goodness of fit for the model, various indices were used to evaluate model fit. RMSEA values close to zero (.08), preferably less than .06, and CFI/TLI values closer to one (> .95) suggest good model fit (Shi et al., 2019; Ullman & Bentler, 2013). In comparison to the Chi square, while the TLI is less sensitive to a large sample size, it is more sensitive to high correlations (Shi et al., 2019). Following the satisfaction of all these criteria, the model is considered statistically significant and an appropriate fit for the data (Gunzler et

al., 2013). Further, bootstrapping was used to improve the quality of the estimation. Refer to Figure 2 for proposed path model. Prior to testing the model, bivariate correlations between the variables and trajectory group were examined (*see table 3 for correlations*).

Mediation Path Model Results

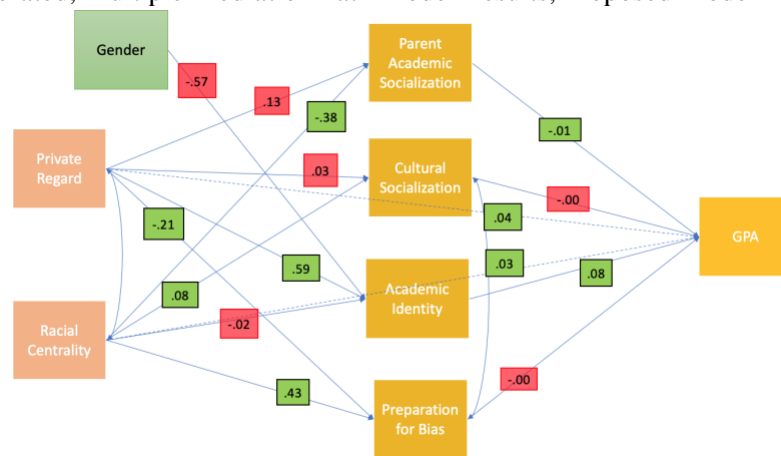
Proposed Model

The proposed model showed a statistically significant Chi-square test of model fit ($X^2 = 237.356, p < .001, df = 11$). The RMSEA = .173 (90% C.I. .155 to .194), indicating a moderate fit. The CFI = .778 and the TLI = .495, both suggesting a suboptimal fit. The SRMR = .116. In contrast, the baseline model had a significantly higher Chi-square test of model fit ($X^2 = 1043.043, p < .001, df = 25$), indicating a poor fit. Taken together, the findings from the fit indices for the proposed model suggested a poor fitting model.

Figure 2 provides a visual summary of the full structural equation model, displaying only the direct effects. See Table 12 for indirect effects. Out of the fourteen specified direct effect paths in the hypothesized model, nine paths were statistically significant ($p < .05$).

All reported coefficients are standardized parameter estimates.

Figure 2: Moderated, Multiple Mediation Path Model Results, Proposed Model



Note: The overall fit statistics indicated that the model had poor fit. Note. Dashed lines indicate indirect relationships in the model. Solid curved lines indicate correlated residuals and solid straight lines indicate effects. Red squares indicate non-significant estimates. Green squares indicate significant estimates.

Table 13. Direct and Indirect effects for Proposed Model

Effect	Estimate	SE	P-Value
GPA ON			
Academic identity	.08	.01	.00
Parent Academic Socialization	-.01	.01	.03
Preparation for Bias	-.00	.01	.64
Cultural Socialization	-.00	.02	.95
Private Regard	.04	.01	.01
Racial Centrality	.03	.01	.01
Academic Identity ON			
Gender	-.57	.37	.13
Private Regard	.59	.04	.00
Racial Centrality	-.02	.03	.53
Parent Academic Socialization ON			
Private Regard	.13	.08	.11
Racial Centrality	-.38	.07	.00
Preparation for Bias ON			
Private Regard	-.21	.06	.00
Racial centrality	.43	.06	.00
Cultural Socialization ON			
Private Regard	.08	.03	.01
Racial Centrality	.03	.04	.45
Preparation for Bias with Cultural Socialization			
	21.31	1.72	.00
Private Regard with Racial Centrality			
	38.40	2.57	.00
Means			
Private Regard	33.54	.27	.00
Racial Centrality	38.63	.30	.00
Intercepts			
Academic Identity	14.41	1.00	.00
Parent Academic Socialization	65.46	2.18	.00
GPA	2.63	.50	.00
Preparation for Bias	16.10	1.71	.00
Cultural Socialization	12.52	.96	.00
Residual Variances			
Academic Identity	22.59	1.24	.00
Parent Academic Socialization	113.83	6.15	.00

GPA	2.41	.13	.00
Preparation for Bias	22.02	3.75	.00
Cultural Socialization	69.48	1.19	.00
Total Effect of Private Regard on GPA	.04	.01	.00
Total Effect of Racial Centrality on GPA	.00	.01	.75
Indirect Effects			
Specific Private Regard on GPA via Academic Identity	.05	.01	.00
Specific Private Regard on GPA via Preparation for Bias	.00	.00	.65
Specific Private Regard on GPA via Parent Academic Socialization	-.00	.00	.19
Specific Private Regard on GPA via Cultural Socialization	.00	.00	.95
Specific Racial Centrality on GPA via Academic Identity	-.00	.00	.53
Specific Racial Centrality on GPA via Parent Academic Socialization	.01	.00	.04
Specific Racial Centrality on GPA via Preparation for Bias	-.00	.00	.64
Specific Racial Centrality on GPA via Cultural Socialization	.00	.00	.95

Note: The overall fit statistics indicated that the model had poor fit.

The consistently high values across multiple fit indices provided evidence of poor fit within the hypothesized model. Modifications were made to the hypothesized model to improve the model's fit. The variables, preparation for bias and cultural socialization, were removed as mediators because of their insufficient effects in contributing to the overall relationships among the variables. By removing these mediators, the modified model aimed to better capture and explain the observed patterns and associations within the data.

For the modified model, the Chi-square test of Model fit was statistically significant $X^2 = 105.223$, $p < .000$, $df = 5$. Further, the fit indices indicated less than

adequate model fit; RMSEA = .171 (90% C.I. .143 to .200). The CFI = .907, and the TLI = .778. The SRMR = .111. The Chi-Square Test of Model Fit for the Baseline Model had a value of 1093.595, $p < .000$, $df = 10$. A significant chi-square value ($p < .05$) suggests that the fitted model provides a better fit than the baseline model. Although the alternative model demonstrated improved fit, the model fit was still inadequate based on the RMSEA.

A visual summary of the full structural equation model (direct effects only) is presented in Figure 3. Indirect effects are listed in Table 13. Of the fourteen direct effect paths specified in the hypothesized model, nine paths were statistically significant ($p < .05$). All reported coefficients are standardized parameter estimates. Although the model was not statistically significant, the results yielded statistically significant relationships between racial identity dimensions, GPA, parent academic socialization, and parental ethnic/racial socialization. Parameter estimates for models with insufficient fit should be interpreted with caution. However, they are included here to ensure a comprehensive reporting of the findings.

Figure 3: Alternative Model- Moderated, Multiple Mediation Path Model Results

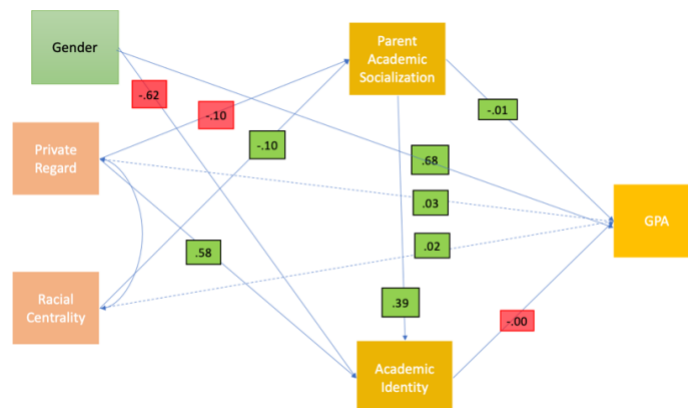


Figure 3. Note: Parameter estimates for models with insufficient fit should be interpreted with caution. However, they are included here to ensure a comprehensive reporting of the findings. *Note.* Dashed lines indicate indirect relationships in the model. Solid curved lines indicate correlated residuals and solid straight lines indicate effects. Red squares indicate non-significant estimates. Green squares indicate significant estimates.

Table 14. Direct and Indirect effects for Alternative Model

Effect	Estimate	SE	P-Value
Academic Identity ON			
Gender	-.62	.37	.09
Private Regard	.58	.03	.00
Parent Academic Socialization (total) ON			
Private Regard	-.10	.10	.31
Racial Centrality	-.10	.02	.00
Academic Identity	.39	.09	.00
GPA ON			
Private Regard	.03	.01	.03
Racial Centrality	.02	.01	.07
Academic Identity	.02	.01	.00
Parent Academic Socialization (total)	-.01	.01	.05
Gender	.68	.12	.00
Racial Centrality ON			
Parent Academic Socialization (total)	-.10	.02	.00
Private Regard WITH			
Racial Centrality	37.55	.27	.00
Means			
Private Regard	1.59	.02	.00
Intercepts			
GPA	1.91	.50	.00
Academic Identity	14.21	.95	.00
Racial Centrality	44.38	1.13	.00
Variances			
Private Regard	48.06	2.60	.00
Residual Variances			
GPA	2.30	.12	.00
Racial Centrality	60.64	3.29	.00
Academic Identity	22.43	1.21	.00
Indirect Effect			
Effects from Private Regard to GPA	.05	.01	.00
Effects from Parent Academic Socialization to GPA	-.00	.00	.09

Note: The overall fit statistics indicated that the model had poor fit.

Summary

Correlation analyses demonstrated a pattern of small-to-moderate relationships that was consistent across most variables. The strongest correlations were observed within each respective scale. Academic identity exhibited significant, but small-to-moderate correlations, $p < .05$ across the total scales and subscales for PERS, Racial identity dimensions, and PAS. Racial identity dimensions, private regard, and racial centrality demonstrated significant, but small-to-moderate correlation, $p < .05$, across the variables (academic identity, parent academic socialization, and parental ethnic/racial socialization). The mediation analyses indicated that the model was not statistically significant. These results suggested that the variables parent academic socialization and parental ethnic/racial socialization did not mediate the relationship between racial identity dimensions and academic achievement (GPA). Consequently, the moderating effects of gender were not fully examined within this model.

The conducted exploratory factor analysis (EFA) and subsequent examination of the psychometric properties provided support for the validity and reliability of the scales used in this study: the Identification with Academic scale, Education Socialization scale, and Parent Ethnic/Racial Socialization scale, among a diverse sample of Black adults. The EFA results for the Parent Ethnic/Racial Socialization scale were consistent with the findings of Hughes and Chen's (1997) original study. Additionally, the Parent Ethnic/Racial Socialization scale demonstrated acceptable psychometric properties in the present study.

However, there were discrepancies in the factor solutions between previous research and the present study for the Identification with Academic scale and Education

Socialization scale, despite both scales showing satisfactory psychometric properties. It is worth noting that the Identification with School Questionnaire, as assessed in this study, exhibited inadequate psychometric properties, and was therefore deemed unsuitable for further analysis within the given parameters. Overall, these results provide evidence for the reliability and validity of the examined scales, except the Identification with School Questionnaire. The findings contribute to our understanding of the constructs under investigation and highlight the need for continued refinement and evaluation of measurement instruments to ensure accurate and meaningful assessments in future research.

CHAPTER 5

DISCUSSION

Race significantly influences the identities and lived experiences of people of color (Feagin, 2006; Johnson & Carter, 2019). Across multiple domains (e.g., economics, education, health, housing, and more), Black individuals face numerous systemic and institutional barriers and experience significant inequities undermining their quality of life (Johnson & Carter, 2019). Black individuals face higher poverty rates, experience lower household incomes, and have limited access to quality education and job opportunities compared to their white counterparts (Johnson & Carter, 2019; Leath et al., 2019). Within education, Black students often face inadequate resources and disproportionate disciplinary actions, leading to lower graduation rates and increased interaction with the carceral system (Benner et al., 2018; Cabrera, 2013; Jackson et al., 2020). Furthermore, Black students face persistent educational inequities, including disproportionate representation in underfunded schools and special education programs, as well as lower college enrollment, and higher dropout rates (Benner et al., 2018; Cabrera, 2013; Jackson et al., 2020).

Within extant research, the existence and experiences of Black individuals, particularly Black students, have historically been in relation to their white counterparts. Historically, Black people and Black culture have been viewed as "culturally deficient" (Gutman & Sims, 2016). Furthermore, the prevailing and controlling narratives continue to frame Black students as underperforming and academically disengaged compared to their white and Asian counterparts (Korpershoek et al., 2019). This framework, rooted in a deficit-based perspective, accentuates, and emphasizes the adverse outcomes resulting

from the limited resources, opportunities, and adverse circumstances that Black students and their families encounter and experience (Benner et al., 2018; Cabrera, 2013; Jackson et al., 2020; Leath et al., 2019).

The current study examined promotive and protective factors contributing to Black students' academic identity and achievement. By employing a strengths-based perspective, this research seeks to illuminate the positive aspects of the Black student experience, centering their resilience and potential for academic success. Furthermore, it is essential to examine the relationship that parent socialization (educational and racial/ethnic socialization) and academic identity have with Black students' self-conceptualization. Through a deeper understanding of these relationships, stakeholders (researchers, policymakers, and school personnel) can better support the academic engagement of Black students.

Review of Findings

Factor Structure Summaries

The exploratory factor analyses and reliability analyses conducted in this study provided evidence supporting the validity and reliability of the Parent Ethnic/Racial Socialization scale, the Educational Socialization Scale, and the Identification with Academic scale for use with a diverse sample of Black students. These findings signify that the scale items effectively capture the multifaceted experiences and intricacies of identity development specifically within the context of Black students' lives. The validation process provided evidence that the scales accurately measure the constructs they intend to assess, providing confidence in their appropriateness for use in future research and practical applications. By employing these psychometrically sound scales,

researchers and practitioners can gather meaningful data to gain insights into the experiences and perceptions of Black students and tailor interventions and programs to address their unique needs and foster positive academic outcomes.

Factor Structure Summary of Parent Ethnic/Racial socialization scale

The findings of the PERS factor analysis were consistent with Hughes' and Chen's (1997) original study, endorsing a three-factor model among Black students. Cronbach's alpha demonstrated an acceptable internal consistency for the total composite score ($\alpha = .928$), and subscales: Preparation for Bias ($\alpha = .928$), Cultural Socialization ($\alpha = .818$), and Mistrust ($\alpha = .826$). The consistency of the factor analysis results with the original study suggests that the underlying factor structure of the scale applies to Black students who are highly educated and beyond the traditional college-age range. This indicates that the scale can be used confidently to assess similar constructs and compare findings across studies involving Black students. The acceptable internal consistency demonstrated by Cronbach's alpha coefficients indicates that the scale has reliable measurement properties among Black students. The high alpha values for the total scale composite and individual subscales (Preparation for Bias, Cultural Socialization, and Mistrust) suggest that the items within each subscale consistently measure the intended constructs. While the findings support the scale's reliability, further research is needed to establish its validity, specifically among Black students across the academic and developmental spectrum. Validity refers to the extent to which the scale measures the intended constructs accurately. Future studies should investigate the scale's convergent validity (relationship with related constructs) and discriminant validity (ability to differentiate between different constructs) among Black student populations to ensure the scale's meaningful

interpretation of their experiences. These findings indicate that the scale shows promise for use among Black students, given its consistent factor structure with previous research and acceptable internal consistency.

Factor Structure Summary of Educational Socialization Scale

The results of the ESS factor analysis suggested different factor solutions based on the parallel analysis, scree, and Velicer's MAP tests. While the five-factor solution was accepted in this study, it is essential to consider the theoretical background and previous research in educational socialization. The lack of support for the four and three-factor solutions in previous studies raises questions about the suitability and generalizability of those solutions to the experiences of Black students. Researchers should consider the theoretical and empirical support for the chosen factor structure when applying the scale to Black student populations.

Cronbach's alpha demonstrated acceptable reliability ($\alpha = .850$) for the total scale composite, with sufficient reliability for the subscales: Future $\alpha = .832$, Teaching $\alpha = .768$, Effort $\alpha = .769$, Shame $\alpha = .810$, and Guilt $\alpha = .715$. The acceptable Cronbach's alpha coefficients indicate that the scale has adequate internal consistency for the total scale composite and individual subscales among Black students. This suggests that the items within each subscale consistently measure the intended constructs in the context of Black students' experiences. However, it is essential to note that Cronbach's alpha assesses internal consistency reliability and does not capture other aspects of scale validity. Additionally, it is also important to note that alpha is subjected to its own limitations, including sensitivity its assumption of item homogeneity, sensitivity to scale length, insensitivity to item wording or directionality, dependency on the sample

characteristics, focus solely on internal consistency, and disregard for item discrimination.

The findings highlight the specific factor structure and reliability coefficients for each subscale (Future, Teaching, Effort, Shame, and Guilt) among Black students. Researchers using this scale with Black students should consider the unique interpretations and implications associated with each subscale concerning the measured construct. It is essential to examine the content and meaning of each subscale in the context of Black students' experiences to ensure appropriate interpretation and application.

This scale's factor structure and reliability results provide insights into its use among Black students. However, researchers should carefully consider the theoretical and empirical support for the chosen factor structure, explore further validation efforts, and interpret the scale's subscales within the specific context of Black students' experiences.

Factor Structure Summary of Identification of Academic Scale

The results of the IAS factor analysis suggested a two-factor solution, consisting of Academic Identity and Academic Devaluation, provided a better fit for the scale than a one-factor solution. This finding diverges from the previous literature that treated the scale as a unidimensional measure of academic identity. It suggests that for Black students, the scale may capture distinct dimensions related to their academic experiences, including a sense of academic identity and experiences of academic devaluation. The discrepancies between the original study and current study may be due to the demographic characteristics of the current sample. The sample consisted of highly educated individuals, with majority (90%) having attended a 4-year college or higher, as

well as participants who identified as Black. The original study was comprised of 165 first year students attending community college, who were majority white (91%) and female (64%) students.

The acceptable reliability demonstrated by Cronbach's alpha coefficients for both the total scale composite ($\alpha = .821$) and the individual subscales (Academic Identity: $\alpha = .841$; Academic Devaluation: $\alpha = .731$) suggests that the scale has reasonable internal consistency. This provides initial evidence for the scale's validity in assessing these dimensions of academic experience among Black students. However, further research is needed to establish the construct validity and generalizability of the scale in diverse Black student populations.

Given the findings, the Academic Identity subscale is recommended, demonstrating higher reliability, in future research involving Black students. This subscale captures the positive aspect of academic identity and aligns with the construct's theoretical interpretation. Including the Academic Devaluation subscale may provide additional insights into the experiences of devaluation and its impact on academic outcomes among Black students.

While the findings suggest that the scale measuring academic identity among Black students be treated as a two-factor measure comprising Academic Identity and Academic Devaluation, further research is needed to examine the factor structure across varying demographics. As previously stated, this sample consisted of Black individuals who are highly educated. Therefore, understanding how the measure functions across different demographics will provide valuable insights into the nuanced experiences and perspectives of students. It can help identify potential variations in the underlying

constructs and establish measurement equivalence. This nuanced understanding of academic experiences can help identify areas of strength and areas where interventions may be needed to address the challenges of devaluation. Researchers should consider these dimensions when assessing and supporting the academic experiences of Black students, acknowledging the multifaceted nature of their identities and the potential impact of devaluation on their academic outcomes.

Factor Structure Summary of Identification with School Questionnaire

The concerns for reliability arise from the mixed findings regarding the factor structure of the ISQ scale in the current study. While the parallel analysis and scree test suggest a three-factor solution, which differs from Voelkl's original study, Velicer's MAP test indicates a one-factor solution, aligns with Voelkl's study. It should be noted that Voelkl's original study suggested this scale can be used as either one factor or two factor scale. These discrepancies raise questions about the stability and consistency of the factor structure. The decision not to retain the three-factor solution due to Cronbach's alpha coefficient below the recommended threshold of 0.70 (Taber, 2018) for both subscales further emphasizes concerns regarding reliability.

Reliability assesses the consistency and stability of measurements over time, and the insufficient reliability of the subscales suggests potential issues with the consistency of the scores obtained from subscales. Moreover, the discrepancies in the factor structure between the current study and Voelkl's study raise concerns about the construct validity of the scale. These differing factor structures (three vs one) imply variations in how the scale captures and represents the underlying constructs of academic identity, casting doubt on the scale's construct validity.

Furthermore, these discrepancies may be due to the demographic characteristics of study. The primary differences between the current sample and Voelkl's sample are the age, race, and educational level of the participants. Voelkl's sample was comprised of Black/African American and white middle-school aged students, while this sample was comprised of highly educated Black adults.

The variation in sample characteristics, including adult participants in the current study compared to middle-school-aged students in Voelkl's study, and the majority of the sample being highly educated Black adults, impacts the generalizability of findings. Age differences highlight developmental and contextual variations, while race and educational level differences emphasize the unique experiences associated with the formation of academic identity. The variations in age, race, and educational level highlight the need for further research that includes diverse samples representing different age groups, racial backgrounds, and educational levels.

Considering the discrepancies in factor structure and the exclusion of the Identification with School Questionnaire, it may be necessary to adapt the scale for use among Black students. This adaptation could involve modifications to item wording, the inclusion of additional relevant items, or the removal of items that do not align with the experiences of Black students. The scale should be further evaluated and refined to ensure its validity and reliability within the specific context of Black students' identities and experiences. Further research is needed to explore the scale's construct validity and generalizability and refine it to accurately capture the unique aspects of Black students' identities and experiences.

Correlation Analyses

This study employed correlational analyses to investigate the associations between participants' academic identity, parent academic socialization, and parent ethnic/racial socialization. The findings revealed consistent small-to-moderate correlations among the variables under investigation, with the strongest identified correlations were observed between the academic identity subscale and racial centrality, as well as within each respective scale. These findings were consistent with prior research (Okeke et al., 2009; Matthews, 2014; Sellers et al., 1998; Tang et al., 2016). Overall, these findings emphasize the complex relationships between parental socialization, ethnic/racial socialization, and academic outcomes, consistent with existing literature on parental involvement and support (Jeynes, 2005; Hill & Taylor, 2004; Epstein, 1987). Parental socialization, particularly in academic and ethnic/racial domains, influences academic outcomes.

A strong academic identity is linked to positive academic outcomes, including higher GPA and lower levels of shame and guilt. These findings align with previous research showing the positive association between academic identity and academic performance indicators, motivation, persistence, and engagement (Wigfield et al., 2016; Oyserman et al., 2006; Oyserman et al., 2017; Steele et al., 2002; Smith et al., 2014; Steele et al., 2002; Smith et al., 2014).

Academic identity demonstrated small to moderate correlations across the total scales and subscales for parental ethnic/racial socialization, with cultural socialization being small and significant; with Racial identity dimensions, academic identity exhibited moderate and significant correlations with private regard and racial centrality. For Parent

Academic Socialization, academic identity exhibited a pattern of small and significant correlation with the future and shame subscales.

Racial identity dimensions, private regard and racial centrality showed a range of significant and small to moderate correlations with the variables of academic identity, parent academic socialization, and parental ethnic/racial socialization. GPA demonstrated moderate and significant correlation with academic identity and private regard, small and significant correlation with racial centrality, small and significant correlation with parent academic socialization (range across subscales (DeLaney et al, 2022; Park et al., 2019; Rivas-Drake et al., 2014; Smith et al., 2003)).

Path Model Analyses

To assess the proposed mediation and moderation model, a path analysis was employed as the analytical framework. The model did not meet the criteria for acceptable model fit. In other words, the hypothesized relationships between variables did not fit the actual patterns of relationships evident in the data.

As is best practice in SEM, an alternative model was also considered. This decision was made to simplify the model structure and increase its interpretability. Preparation for bias and cultural socialization were removed as mediators due to their insufficient effects, meaning that they did not significantly contribute to the overall relationships between the variables of interest. However, despite these modifications, the revised model still fell short in terms of adequacy and fit to the data. This may be due to model misspecification and the omission of key variables that may better account for the academic outcomes of Black students. The model structure may have been undermined by the exclusion of individual (e.g., SES, neighborhood, experiences with racism and

discrimination), internal (e.g., motivation, self-efficacy, self-perception, and history of school engagement), and external (e.g., system-level vs community level vs school-level factors) factors that shape and inform the experiences of Black individuals within academic/educational spaces. Further, the proposed and alternative models placed a disproportionate emphasis on parent socialization, given that the sample was comprised of highly educated adults.

Implications

The findings indicate that a stronger academic identity among Black students is associated with higher GPAs and a more pronounced racial identity. Moreover, a positive or elevated level of private regard is linked to academic achievement, while a higher sense of racial centrality can positively influence academic identity. Additionally, parental support and engagement in educational activities are suggested to have an impact on Black students' academic performance. The findings of this study provided insights into the relationships between academic identity, parental socialization, and racial identity. They underscore the importance of parental influence in shaping academic and racial identities of Black students, while also highlighting the interconnection between these domains. There were several key implications derived from these findings.

These findings suggest that these scales, namely the Identification with Academics scale, education socialization scale, and parental ethnic/racial socialization, are good measures of various constructs in Black students and these scales can be used for various purposes within the field of education. These findings support the use of these identified scales with Black students. The Identification with Academics scale, specifically the Academic identity subscale, is an accurate measure of academic identity

with Black students. The Parental Ethnic/Racial Socialization scale is an accurate measure of ethnic/racial socialization with Black students. Furthermore, these findings support the relationships between racial identity dimensions (private regard and centrality) and academic identity.

The Identification with Academics Scale, the Education Socialization scale, the Parent Ethnic/Racial socialization scale demonstrated sound psychometric findings, with consistent reliability and validity properties, comparable to their original studies, within a diverse sample of Black students. Furthermore, the findings of the exploratory factor analysis, demonstrated that the items within each scale adequately represent the underlying dimensions of academic identity, education socialization, parent ethnic/racial socialization, and identification with school.

While the scales, except the identification with school questionnaire, demonstrated sound psychometric properties, there were discrepancies in the factor structures identified (specifically with the identification with academic scale, education socialization scale, and identification with school questionnaire), as compared to their original studies. This suggest potential measurement issues (requiring further theoretical refinement and methodological improvements) that need to be addressed, especially when being used with Black students. These findings further support that the academic identity development of Black students are nuanced and complex.

Examining the relationships between parental socialization (academic and ethnic/racial socialization), academic identity, and academic outcomes in Black students provides insight for understanding the factors that shape and influence academic outcomes in Black students. The results demonstrated various relational strengths across

numerous factors. These findings help support the idea that the development and facilitation of Black academic identity and its corresponding factors are complex and nuanced (Brown et al., 2017; Murphy and Zirkel, 2015; Rivas-Drake et al., 2014). The identification and understanding of academic identity among Black students involve multifaceted factors that go beyond a simplistic one-dimensional perspective (Hughes et al., 2015; Rivas-Drake et al., 2014).

In conjunction with another key implication derived from these findings: the non-significant model. Parent academical socialization, academic identity, and parent ethnic/racial socialization (preparation for bias and cultural socialization) were hypothesized to mediate the relationship between racial identity dimensions (private regard and racial centrality) and academic achievement. Previous research has indicated that positive racial identity dimensions, such as high private regard and racial centrality, may be associated with increased parent academic socialization practices, which, in turn, can enhance academic achievement (Dotterer et al., 2009; Huguley et al., 2019; Neblett et al., 2013; Tang et al., 2016). Earlier research also indicated that positive racial identity dimensions may influence the development of a positive academic identity, which is associated with higher academic achievement (Chavous et al., 2008). However, the non-significant path model results may indicate that parent academic socialization and academic identity (either simultaneously or individually) may not be directly impacting academic outcomes, with or without accounting for individual and school level factors. This analysis did not consider nesting by location or school demographics.

Moreover, the complex nature of Black academic identity suggests that it is influenced by various external and internal factors. External factors may include societal

and institutional dynamics, such as systemic racism, inequitable educational opportunities, and cultural expectations, which shape how Black students perceive themselves academically. Internal factors encompass individual beliefs, values, aspirations, and the ways in which Black students navigate and make sense of their academic experiences within their cultural and social contexts (Matthews et al, 2014; Verkuyten et., al, 2019).

Limitations

While the study provided valuable insights, it is crucial to acknowledge and address its limitations. Foremost, the proposed and alternative models did not yield statistically significant results. Several factors could contribute to the lack of statistical significance in these models, including model misspecification, attenuation of restricted range. One potential explanation is that key variables were omitted from the models themselves. More precisely, the identified variables did not fully capture the totality of the experiences of Black students, future research should consider including individual level factors, as well as internal and external factors. Additional factors to consider include the neglect of nonlinear relationships, or the discounting of potential interactions between variables. Further, the proposed theoretical framework may not fully encompass the intricate interplay and underlying mechanisms between parent socialization (academic and ethnic/racial socialization), academic identity, and academic outcomes.

Recognizing the complex nature of Black academic identity, which is influenced by a variety of external and internal factors, the proposed and alternative models solely focused on internal factors and did not account for individual-level variables (such as age and socioeconomic status) or external factors (such as systemic racism, unequal

educational opportunities, cultural expectations, and other contextual factors). Contextual factors, such as school or community environments, can influence the relationships between parent socialization practices and academic outcomes. Individual differences, including unique personal characteristics or experiences, might moderate or mediate the relationships between the variables.

Additionally, it is important to note that the sample itself consisted primarily of highly educated individuals, with approximately 90% of the participants having attended or currently attending a 4-year college/university (restricted range of participants). This limits the generalizability of the findings to a broader population. The high level of education in the current sample suggests that the participants may possess certain characteristics, experiences, and perspectives that are distinct from those with lower educational attainment. These factors can shape individuals' identities, including their racial identity and academic identity. Consequently, the highly educated participants in the current study may have developed unique perspectives and experiences that differ from individuals with lower levels of education.

Therefore, the disparities between the original study and the current study may be partly attributed to the distinct educational profiles of the samples. Considering the educational background of the participants provides valuable context and highlights the importance of accounting for such demographic factors when interpreting and generalizing the findings of the current study.

Another potential limitation is that the study heavily relied on self-report measures, which are susceptible to biases and inaccuracies (Chan, 2010). Participants may provide socially desirable responses, have difficulty recalling information accurately

(participants were adults asked to remember socialization experiences from childhood and adolescence), or interpret questions incorrectly. Response set biases and lack of objectivity further compromise the validity of the data. Additionally, self-selection bias may affect the representativeness of the sample. Future research could benefit from employing multiple methods and incorporating objective measures to enhance the validity and reliability of the findings. Moreover, the study's focus on cross-sectional data restricts the ability to establish causality or determine the temporal relationships between variables. Incorporating longitudinal designs could provide more robust insights into the dynamic associations among parent socialization, academic identity, and academic outcomes over time.

Another potential limitation of the study could be the presence of age attenuation effects. The participant sample consisted of adults, (students and former students aged 18 years and older, spanning a wide age range from 18 to 79 years). Research has shown that while the long-term impact of parent socialization continues to be important, even into adulthood (Martinez-Escudero et al., 2020) the influence of parent socialization practices on their academic identity and outcomes may diminish due to age-related factors (Hughes et al., 2006). This developmental variation could affect the relationships between parent socialization, academic identity, and academic outcomes, highlighting the need to consider age-related factors when interpreting the results. Future research could explore age as a potential moderator to better understand the dynamics of these relationships across various stages of adulthood.

Another potential limitation of this study is the self-reported GPA. Only about ~10% of the participants provided a screengrab/screenshot verifying their GPA. For

GPA, there are several concerning factors to consider including accuracy, access concerns, and sampling bias. Self-report GPA relied on individuals accurately recalling and reporting their grades. Memory recall errors or inaccuracies in reporting can affect the reliability and validity of the self-reported GPA. Additionally, because participants were asked to corroborate their GPA with a screenshot, individuals who had graduated may have limited access to their records. Individuals who were completing the survey on their mobile devices may have had difficulty navigating between the survey and their academic records, adding an additional barrier and some inconvenience to the survey completion process. Further, self-reported GPA is based on voluntary participation, this can introduce sampling bias, as individuals who choose to participate may not be representative of the broader population, leading to potential distortions in the reported GPA.

Future Directions

Although the mediation analysis was not significant in the study, future researchers may examine these relationships using more advanced analyses, such as latent class growth analysis, general linear modeling, or multilevel model to examine the nuances of the relationships between these identified factors and additional internal (motivation, engage, self-efficacy) and external (experiences with discrimination, teacher beliefs, school cultural socialization, and class culture) factors.

Advanced Analyses

Latent class growth analyses (LGCA) can examine how parent socialization affect the academic identity and outcomes over time for Black students. Through LCGA, researchers can account for the heterogeneity that exists within a sample by identifying

different latent classes with distinct patterns of growth over time. When applied to parent socialization and academic outcome for Black students, this method can capture the diversity of experiences and trajectories that individuals may follow. For example, researchers may identify latent classes representing students who experience consistently high levels of supportive parent socialization throughout their academic journey, students who experience increasing levels of parent support over time, students who experience decreasing levels of parent support, or students who experience consistently low levels of parent support. By identifying these trajectories, researchers can examine how different patterns of parent socialization influence academic identity and outcomes over time.

General linear modeling can be used to examine group differences between individuals with higher vs lower GPA and how that corresponds with the nature (positive vs. neutral vs. negative) and frequency of parent socialization. By defining these groups based on GPA cutoffs (e.g., high GPA group vs. low GPA group), researchers can investigate whether there are significant variations in the nature and frequency of parent socialization between these groups. This analysis can provide insight into potential factors that differentiate high-achieving students from those with lower academic performance. Further, GLM allows for the inclusion of covariates and control variables that may influence the relationship between parent socialization and academic outcomes. For instance, researchers can account for factors such as socioeconomic status, parental education level, student motivation, or school characteristics, which might confound the relationship of interest. Controlling for these variables can help isolate the specific impact of parent socialization on GPA outcomes and provide a more accurate assessment of its significance.

Through multilevel modeling, researchers can explore how individual-level factors (Level 1, racial identity, and academic identity) are nested within neighborhoods (Level 2, neighborhood-level factors) to shape academic outcomes. Because Multilevel modeling allows for the examination of data that has a hierarchical or nested structure, it allows researchers to assess the extent of variation in academic outcomes at various levels, such as individual-level, school-and-neighborhood-level variation. factors (e.g., neighborhood type, school type, district type) interact and influence academic outcomes, across different time points.

Through the application of advanced analyses, researchers can gain a deeper understanding of the intricate and multifaceted processes that contribute to the development of academic identity among Black students. These analyses enable researchers to explore the interplay between various internal factors, such as identity dimensions, motivation, and self-perceptions, and external factors, including parental influence, educational experiences, and socio-cultural contexts. By employing techniques such as latent class growth analyses, multilevel modeling, and longitudinal designs, researchers can uncover dynamic patterns and trajectories of academic identity development over time. These analyses also allow for the examination of the influence of contextual factors, such as neighborhood characteristics and socio-economic status, on the formation and expression of academic identity among Black students.

Advance Psychometric Analyses

Further, future researchers can conduct added examinations of the psychometric properties of the IAS, ESS, and PERS scales to address the factor structure discrepancies found within the study. This may include conducting additional exploratory and

confirmatory factor analyses with different extraction methods, rotation techniques, and subgroup analyses (e.g., based on demographic characteristics). Through advanced examinations of the psychometric properties of identified measurement scales, future researchers can enhance the precision and validity of the measurements. By exploring various extraction methods and rotation techniques, researchers can identify the most suitable approaches to extract factors and rotate them, leading to clearer and more interpretable factor structures. This refinement of measurement methods ensures that the scales effectively capture the intended constructs and provide reliable and valid measurements. By improving the precision of these scales, researchers can more confidently assess the parent socialization and academic identity of Black students.

Future research can benefit from conducting measurement invariance analyses, which can offer valuable insights into the comparability of measurement instruments across diverse groups and over time. By examining measurement invariance across various demographic characteristics such as gender, ethnicity, and immigrant status, researchers can determine if the scales and constructs under investigation operate similarly across these groups. This analysis can ensure that the measurement instruments are capturing the intended constructs in a consistent and unbiased manner across diverse populations. Additionally, assessing the temporal stability of the measurement instruments allows researchers to investigate whether the measurement properties remain stable over time. Through these analyses, future research can enhance the robustness and generalizability of findings, leading to a deeper understanding of the phenomena under study and providing a solid foundation for evidence-based decision-making and interventions.

Longitudinal Study Design

Future researchers should consider longitudinal designs, examining how these relationships change over time. Conducting longitudinal studies allows for the exploration of causal relationships, as the directionality of effects can be better understood when observing changes over time. For example, researchers can investigate whether initial levels of parent socialization predict later levels of academic identity or if changes in parent socialization correspond to shifts in academic identity. Furthermore, researchers can investigate how the interplay between academic identity, Black racial identity, and parent socialization varies across different social and economic contexts. Additionally, researchers can explore individual differences in the trajectories of academic identity and parent socialization and examine how these trajectories interact with other contextual factors. By incorporating a longitudinal framework, researchers can gain a comprehensive understanding of the long-term effects of academic identity, Black racial identity, and parent socialization on educational outcomes for Black students. This approach can help identify protective factors, highlight areas of intervention, and inform the development of targeted strategies to support Black students' academic success and well-being within diverse social and economic contexts.

Mixed-method Approach

Another potentially valuable approach is using a mixed-methods approach. Combining quantitative data with qualitative approaches, such as interviews or focus groups, can offer a richer understanding of the experiences and perceptions of parents and children regarding academic socialization (Berkel et al., 2009; Hughes & DuMont, 1993; Yoshikawa et al., 2008). Research has shown that combining both types of data can give

researchers a more holistic view of the complex dynamics at play. Moreover, mixed methods enable the contextualization of findings by examining the social, cultural, and environmental factors that shape the experiences and outcomes of Black students. Qualitative data can provide contextual information about the socio-cultural contexts, familial dynamics, and community influences that may impact academic identity development and parent socialization practices. Furthermore, by incorporating qualitative and mixed methods, research can empower participants by giving them a voice to express their perspectives, and experiences (Hughes & DuMont, 1993; Hughes et al., 2006).

This mixed methods approach can provide nuanced insights into the complexities of parent-child dynamics and the cultural contexts in which they occur. Examining how these relationships unfold and evolve over time will enhance our understanding of the dynamic nature of parent-child interactions and their impact on academic outcomes (Dotterer, 2022; Hughes et al., 2006). Future research should consider exploring additional mediators and moderators can help discover underlying mechanisms and contextual factors that influence the relationships between parental practices and academic socialization. Factors such as academic motivation and engagement, peer influence, school climate, and socioeconomic status could be investigated to provide a more comprehensive understanding of the complex dynamics at play (Bempechat & Shernoff, 2012; Wang & Eccles, 2013).

Although the sample was comprised of individuals who identified as Black, there was limited diversity across ethnicity, gender, sexual identity, immigration status/history (e.g., first-generation student vs. second-or-third generation), and educational status. To enhance the generalizability of the findings, it is important to expand the sample to

include a more diverse range of participants, including individuals outside the heteronormative binary, with diverse immigration experiences, and varied educational paths. Additionally, involving researchers from diverse cultural backgrounds and perspectives will enrich the understanding of academic identity and parent socialization within the broader context of the family unit.

Conclusions

The study adopted a strengths-based perspective to explore the promotive and protective factors (racial identity dimensions, parent academic socialization, parent ethnic/racial socialization, and academic identity) of Black students' academic achievement. By investigating how Black students perceive and define their academic identity, within the context of parental socialization, researchers can improve their understanding of the complexities surrounding Black academic identity development. Although the study results demonstrated modest correlations among the identified factors, they underscore the critical importance of adopting a strengths-based approach in educating and assisting Black students. The findings of this study indicate that the active involvement and participation of parents within the academic sphere have significant positive implications for the academic outcomes of Black students. Furthermore, the EFA findings highlighted a crucial step of the measurement of academic identity and parent socialization in Black students. The discrepancies in factor structures, particularly with the identification with academic scale, education socialization scale, and identification with school questionnaire, highlight potential measurement issues when assessing academic identity and parent socialization among Black students.

These findings suggest the need for careful consideration and adaptation of measurement tools to ensure they are culturally sensitive and accurately capture the experiences and perspectives of Black students. Additionally, these discrepancies in factor structure imply that the academic identity development of Black students is nuanced and complex. It suggests that their experiences and perceptions of academic identity may differ from what has been traditionally captured by existing measures. In terms of parent socialization, the inconsistencies in factor structures also shed light on the intricacies of parent socialization among Black students. It suggests that the ways in which parents socialize their children around academics and education might vary within this population.

Further exploration and investigation of the interrelationships among academic identity, parental socialization, and academic achievement would be highly advantageous not only for Black students but also for students with other marginalized identities. By delving deeper into these dynamics, valuable insight into the unique experiences and challenges faced by students from diverse backgrounds. This expanded knowledge will encourage the development of more tailored and effective interventions, support systems, and educational frameworks that promote equitable and inclusive educational outcomes for all students.

REFERENCES

- Alexander, K., & Morgan, S. L. (2016). The coleman report at fifty: Its legacy and implications for future research on equality of opportunity. *The Russell Sage Foundation Journal of the Social Sciences*, 2(5), 1–16.
<https://doi.org/10.7758/RSF.2016.2.5.01>
- Altschul, I., Oyserman, D., & Bybee, D. (2006). Racial-ethnic identity in mid-adolescence: Content and change as predictors of academic achievement. *Child development*, 77(5), 1155-1169. <http://dx.doi.org/10.1111/j.1467-8624.2006.00926.x>
- Anderson, R. E., McKenny, M. C., & Stevenson, H. C. (2019). EMBR ace: Developing a racial socialization intervention to reduce racial stress and enhance racial coping among Black parents and adolescents. *Family Process*, 58(1), 53-67.
<https://doi.org/10.3390/ijerph15050898>
- Anderson, R. E., & Stevenson, H. C. (2019). RECASTing racial stress and trauma: Theorizing the healing potential of racial socialization in families. *American Psychologist*, 74(1), 63. <https://doi.org/10.1037/amp0000392>
- Anglin, D. M., & Wade, J. C. (2007). Racial socialization, racial identity, and black students' adjustment to college. *Cultural Diversity and Ethnic Minority Psychology*, 13(3), 207. <https://doi.org/10.1037/1099-9809.13.3.207>
- Arroyo, C. G., & Zigler, E. (1995). Racial identity, academic achievement, and the psychological well-being of economically disadvantaged adolescents. *Journal of personality and social psychology*, 69(5), 903. <https://doi.org/10.1037/0022-3514.69.5.903>

- Assari, S., Mardani, A., Maleki, M., Boyce, S., & Bazargan, M. (2021). Black-white achievement gap: Role of race, school urbanity, and parental education. *Pediatric Health, Medicine, and Therapeutics*, 12, 1.
<https://doi.org/10.2147/PHMT.S238877>
- Ayscue, J. B., D. Fusarelli, L., & Uzzell, E. M. (2022). Equity & early implementation of the every student succeeds act in state-designed plans during covid. *Educational Policy*, <https://doi.org/10.1177/08959048221130994>
- Ayón, C., Nieri, T., & Ruano, E (2020). Ethnic-racial socialization among Latinx families: A systematic review of the literature. *Social Service Review*, 94(4), 693–747.
<https://doi.org/10.1086/712413>
- Baldwin, J. A., & Bell, Y. R. (1985). The African self-consciousness scale: An afri-centric personality questionnaire. *The Western Journal of Black Studies*, 9(2), 61.
<https://doi.org/10.1177/009579848701300201>
- Bannon, W. M., McKay, M. M., Chako, A., Rodriguez, J. A., & Cavaleri, M. (2009). Cultural pride reinforcement as a dimension of racial socialization protective of urban African American child anxiety. *Families in Society*, 90(1), 79-86.
<https://doi.org/10.1606/1044-3894.3848>
- Bempechat, J., Graham, S. E., & Jimenez, N. V. (1999). The socialization of achievement in poor and minority students: A comparative study. *Journal of Cross-Cultural Psychology*, 30(2), 139-158. <https://doi.org/10.1177/0022022199030002001>
- Bempechat, J., & Shernoff, D. J. (2012). Parental influences on achievement motivation and student engagement. *Handbook of research on student engagement*, 315-342.
https://doi.org/10.1007/978-1-4614-2018-7_15

- Benner, A. D., Wang, Y., Shen, Y., Boyle, A. E., Polk, R., & Cheng, Y.-P. (2018). Racial/ethnic discrimination and well-being during adolescence: A meta-analytic review HHS Public Access. *American Psychology*, *73*(7), 855–883. <https://doi.org/10.1037/amp0000204>
- Berkel, C., Murry, V. M., Hurt, T. R., Chen, Y. F., Brody, G. H., Simons, R. L., ... & Gibbons, F. X. (2009). It takes a village: Protecting rural African American youth in the context of racism. *Journal of youth and adolescence*, *38*, 175-188. <https://doi.org/10.1007/s10964-008-9346-z>
- Borman, G., & Dowling, M. (2010). Schools and inequality: A multilevel analysis of coleman's equality of educational opportunity data. *Teachers College Record*, *112*(5), 1201–1246. <https://doi.org/10.1177/016146811011200507>
- Boykin, A.W., Tyler, K. M., Watkins-Lewis, K., & Kizzie, K. (2006). Culture in the sanctioned classroom practices of elementary school teachers serving low-income African American students. *Journal of Education for Students Placed at Risk*, *11*(2), 161–173. https://doi.org/10.1207/s15327671espr1102_3
- Boykin, A. W., Jagers, R. J., Ellison, C. M., & Albury, A. (1997). Communalism: Conceptualization and measurement of an afrocultural social orientation. *Journal of Black Studies*, *27*(3), 409-418. <https://doi.org/10.1177/002193479702700308>
- Brody, G. H., & Flor, D. L. (1998). Maternal resources, parenting practices, and child competence in rural, single-parent African American families. *Child development*, *69*(3), 803-816. <https://doi.org/10.2307/1132205>
- Brown, B. A., Mangram, C., Sun, K., Cross, K., & Raab, E. (2017). Representing racial identity: Identity, race, the construction of the african american stem

students. *Urban Education*, 52(2), 170-206.

<https://doi.org/10.1177/0042085916661385>

Browne, M. W., Cudeck, R. (1993). Alternative ways of assessing model fit. *Testing structural equation models*, 136-162.

<https://doi.org/10.1177/0049124192021002005>

Bryan, J., Williams, J. M., Kim, J., Morrison, S. S., & Caldwell, C. H. (2018). Perceived teacher discrimination and academic achievement among urban caribbean black and african american youth: school bonding and family support as protective factors. *Urban Education*. 57(9), 1487-1510.

<https://doi.org/10.1177/0042085918806959>

Buchmann, C., & DiPrete, T. A. (2016) The growing female advantage in college completion: The role of family background and academic achievement. *American sociological review*, 71(4), 515-541.

<https://doi.org/10.1177/000312240607100401>

Buchmann, C., DiPrete, T. A., & McDaniel, A. (2008). Gender inequalities in education. *Annual Review of Sociology*, 34, 319-337.

<https://doi.org/10.1146/ANNUREV.SOC.34.040507.134719>

Butler-Barnes, S. T., Chavous, T. M., Hurd, N., & Varner, F. (2013). African American adolescents' academic persistence: A strengths-based approach. *Journal of youth and adolescence*, 42, 1443-1458. <https://doi.org/10.1007/s10964-013-9962-0>

Butler-Barnes, S. T., Varner, F., Williams, A., Sellers, R., & Warren, G. (2017). Academic identity: A longitudinal investigation of african american adolescents' academic

persistence. *Journal of Black Psychology*, 43(7), 714–739.

<https://doi.org/10.1177/0095798416683170>

Bynum, M. S., Burton, E. T., & Best, C. (2007). Racism experiences and psychological functioning in african american college freshmen: Is racial socialization a buffer? *Cultural Diversity & Ethnic Minority Psychology*, 13 (1), 64-71.
<https://doi.org/10.1037/1099-9809.13.1.64>.

Cabrera, N. J. (2013). Positive development of minority children and commentaries. *Social Policy Report*, 27(2), 1–30. <https://doi.org/10.1002/J.2379-3988.2013.TB00075.X>

Cadelle Hemphill, F., & Vanneman, A. (2011). Achievement gaps how hispanic and white students in public schools perform in mathematics and reading on the national assessment of educational progress. Statistical Analysis Report. NCES 2011-459. *National Center for Education Statistics*.

Cascio, E. U., & Schanzenbach, D. W. (2013). the impacts of expanding access to high-quality preschool education. (No. w19735). National Bureau of Economic Research.

Caskie, G. I., Sutton, M. C., & Eckhardt, A. G. (2014). Accuracy of self-reported college GPA: Gender-moderated differences by achievement level and academic self-efficacy. *Journal of College Student Development*, 55(4), 385-390.
<https://doi.org/10.1353/csd.2014.0038>

Castagno, A. E., & Brayboy, B. M. J. (2008). Culturally responsive schooling for Indigenous youth: A review of the literature. *Review of educational research*, 78(4), 941-993. <https://doi.org/10.3102/0034654308323036>

- Catsambis, S. (2001). Expanding knowledge of parental involvement in children's secondary education: Connections with high school seniors' academic success. *Social psychology of education, 5*, 149-177.
<https://doi.org/10.1023/A:1014478001512>
- Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate behavioral research, 1*(2), 245-276. https://doi.org/10.1207/s15327906mbr0102_10.
- Chan, D. (2010). So why ask me? Are self-report data really that bad? In *Statistical and methodological myths and urban legends* (pp. 329-356). Routledge.
- Chapman-Hilliard, C., & Adams-Bass, V. (2015). A conceptual framework for utilizing Black history knowledge as a path to psychological liberation for Black youth. *Journal of Black Psychology, 42*(6), 479-507.
<https://doi.org/10.1177/0095798415597840>
- Chavous, T. M., Bernat, D. H., Schmeelk-Cone, K., Caldwell, C. H., Kohn-Wood, L., & Zimmerman, M. A. (2008). Racial identity and academic attainment among african american adolescents. *Child Development 74*(4).
<https://doi.org/10.1111/1467-8624.00593>.
- Cheadle, J. E. (2008). Educational investment, family context, and children's math and reading growth from kindergarten through the third grade. *Sociology of education, 81*(1), 1-31. <https://doi.org/10.1177/003804070808100101>
- Cheadle, J. E., & Amato, P. R. (2012.). A quantitative assessment of laureau's conclusions about class, race, and parenting. *Journal of Family Issues, 32*(5), 679–706.
<https://doi.org/10.1177/0192513X10386305>

- Choi, Y. E., Bempechat, J., & Ginsburg, H. P. (1994). Educational socialization in Korean American children: A longitudinal study *Journal of Applied Developmental Psychology*, 15(3), 313–318. [https://doi.org/10.1016/0193-3973\(94\)90033-7](https://doi.org/10.1016/0193-3973(94)90033-7)
- Chun, H., & Devall, E. (2019). A parental involvement and academic socialization model: A cultural approach. *School Psychology*, 34(5), 555. <https://doi.org/10.1037/SPQ0000330>
- Coard, S. I., Wallace, S. A., Stevenson, H. C., & Brotman, L. M. (2004). Towards culturally relevant preventive interventions: The consideration of racial socialization in parent training with African American families. In *Journal of Child and Family Studies* 13(3)277–293. <https://doi.org/10.1023/B:JCFS.0000022035.07171.f8>
- Codjoe, H. M. (2001). Fighting a “public enemy” of black academic achievement—the persistence of racism and the schooling experiences of black students in Canada. *Race Ethnicity and Education*, 4(4), 343–375. <https://doi.org/10.1080/13613320120096652>
- Cokley, K. (2003). What do we know about the motivation of African American students? Challenging the "anti-intellectual" myth. *Harvard educational review*, 73(4), 524–558. <https://doi.org/10.17763/haer.73.4.3618644850123376>
- Cokley, K. O. (2005). Racial (ized) identity, ethnic identity, and Afrocentric values: Conceptual and methodological challenges in understanding African American identity. *Journal of Counseling Psychology*, 52(4), 517. <https://doi.org/10.1037/0022-0167.52.4.517>

- Cokley, K. (2006). The impact of racialized schools and racist (mis) education on African American students' academic identity. *Addressing racism: Facilitating cultural competence in mental health and educational settings*, 127-144.
- Cokley, K. (2007). Critical issues in the measurement of ethnic and racial identity: A referendum on the state of the field. *Journal of counseling psychology*, 54(3), 224.
<https://doi.org/10.1037/0022-0167.54.3.224>
- Cokley, K. O., & Chapman, C. (2008). The roles of ethnic identity, anti-white attitudes, and academic self-concept in african american student achievement. *Social Psychology of Education*, 11, 349-365. <https://doi.org/10.1007/s11218-008-9060-4>
- Cokley, K. O., & Helm, K. (2001). Testing the construct validity of scores on the Multidimensional Inventory of Black Identity. *Measurement and Evaluation in Counseling and Development*, 34(2), 80-95.
<https://doi.org/10.1080/07481756.2001.12069025>
- Cokley, K., & Moore, P. (2007). Moderating and Mediating Effects of Gender and Psychological Disengagement on the Academic Achievement of African American College Students. *Journal Of Black Psychology*, 33(2), 169–187.
<https://doi.org/10.1177/0095798407299512>
- Coleman, J. S. (1968). *Integrated Education. Equality Of Educational Opportunity*.
<https://doi.org/10.1080/0020486680060504>
- Coll, C. G., Lamberty, G., Jenkins, R., McAdoo, H. P., Crnic, K., Wasik, B., & Vazquez Garcia, H. (1996). An Integrative model for the study of developmental

- competencies in minority children. *Society for Research in Child Development*, 67(5), 1891–1914. <https://doi.org/10.2307/1131600>
- Comeaux, E., & Jayakumar, U. M. (2007). Education in the United States: Is it a Black problem? *The Urban Review*, 39(1). <https://doi.org/10.1007/s11256-006-0031-9>
- Constantine, M. G., & Blackmon, S. (2002). Black adolescents' racial socialization experiences: Their relations to home, school and peer self-esteem. *Journal of Black Studies*, 32, 322-335. <https://doi.org/10.1177/00219347020320>
- Cooper, S. M., & Smalls, C. (2009). Culturally distinctive and academic socialization: Direct and interactive relationships with african american adolescents' academic adjustment. *Journal of Youth and Adolescence*. 2009 39:2, 39(2), 199–212. <https://doi.org/10.1007/S10964-009-9404-1>
- Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical assessment, research, and evaluation*, 10(1), 7. <https://doi.org/10.7275/jyj1-4868>
- Cross, W. E., Jr (1971). The negro-to-black conversion experience. *Black world*, 20 (13-27). <https://doi.org/10.1177/009579847800500>
- Darensbourg, A. M., & Blake, J. J. (2014). Examining the academic achievement of black adolescents: Importance of peer and parental influences of black psychology. *Journal of Black Psychology*, 40(2), 191–212. <https://doi.org/10.1177/0095798413481384>
- Darling-Hammond, L. (2013). Inequality and school resources. Closing the opportunity gap: What America must do to give every child an even chance, 77. <https://doi.org/10.1093/acprof:oso/9780199982981.003.0006>

- DeLaney, E. N., Williams, C. D., Jones, S. C., Corley, N. A., Lozada, F. T., Walker, C. J., ... & Dick, D. M. (2022). Black college students' ethnic identity and academic achievement: Examining mental health and racial discrimination as moderators. *Journal of Black Psychology*, 48(1), 100-129.
<https://doi.org/10.1177/00957984211034268>
- De Brey, C., Musu, L., McFarland, J., Wilkinson-Flicker, S., Diliberti, M., Zhang, A., ... & Wang, X. (2019). Status and Trends in the Education of Racial and Ethnic Groups 2018. NCES 2019-038. *National Center for Education Statistics*.
- DiPrete, T. A., & Buchmann, C. (2006). Gender-specific trends in the value of education and the emerging gender gap in college completion. *Demography*, 43(1), 1–24.
<https://doi.org/10.1353/DEM.2006.0003>
- Dotterer, A. M. (2022). Diversity and complexity in the theoretical and empirical study of parental involvement during adolescence and emerging adulthood. *Educational Psychologist*, 57(4), 295-308. <https://doi.org/10.1080/00461520.2022.2129651>
- Dotterer, A. M., Mchale, S. M., & Crouter, A. C. (2009). sociocultural factors and school engagement among african american youth: The roles of racial discrimination, racial socialization, and ethnic identity. *Applied development science*, 13(2), 61-73. <https://doi.org/10.1080/10888690902801442>
- Downey, D. B., & Vogt Yuan, A. S. (2005). Sex differences in school performance during high school: Puzzling patterns and possible explanations. *Sociological quarterly*, 46(2), 299-321. <https://doi.org/10.1111/j.1533-8525.2005.00014.x>
- Dupéré, V., Leventhal, T., Dion, E., Crosnoe, R., Archambault, I., & Janosz, M. (2015).

- Stressors and turning points in high school and dropout: A stress process, life course framework. *Review of educational research*, 85(4), 591-629.
<https://doi.org/10.3102/0034654314559845>
- Durkee, M. I., Gazley, E. R., Hope, E. C., & Keels, M. (2019). Cultural invalidations: deconstructing the “acting White” phenomenon among Black and Latinx college students. *Cultural Diversity and Ethnic Minority Psychology*, 25(4), 451–460.
<https://doi.org/10.1037/CDP0000288>
- Eccles, J. S. (2005). Influences of parents’ education on ten’s educational attainments: the role of parent and child perceptions. *London Review of Education*.
<https://doi.org/10.1080/14748460500372309>
- Eccles, J. S., Wong, C. A., & Peck, S. C. (2006). Ethnicity as a social context for the development of african american adolescents. *Journal of School Psychology*, 44(5), 407-426. <https://doi.org/10.1016/j.jsp.2006.04.001>
- Edwards, K. D., & Konold, T. R. (2020). Moderated mediation analysis: a review and application to school climate research. *Practical Assessment, Research, and Evaluation*, 25(1), 5. <https://doi.org/10.7275/16436623>
- Evans, A. B., Banerjee, M., Meyer, R., Aldana, A., Foust, M., & Rowley, S. (2012). Racial socialization as a mechanism for positive development among African American youth. *Child Development Perspectives*, 6(3), 251-257.
<https://doi.org/10.1111/j.1750-8606.2011.00226.x>
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological methods*, 4(3), 272. <https://doi.org/10.1037/1082-989X.4.3.272>

- Fantuzzo, J., Tighe, E., & Childs, S. (2000). Family involvement questionnaire: A multivariate assessment of family participation in early childhood education. *Journal of educational psychology, 92*(2), 367.
<https://doi.org/10.1037/0022-0663.92.2.367>
- Feagin, J. R. (2006). Systemic racism: A theory of oppression. *Systemic Racism: A Theory of Oppression*, 1–365. <https://doi.org/10.4324/9781315880938>
- Finn, J. D. (1989). Withdrawing From School. *Review of Educational Research, 59*(2), 117–142. <https://doi.org/10.3102/00346543059002117>
- Fisher, C. B., Wallace, S. A., & Fenton, R. E. (2000). Discrimination distress during adolescence. *Journal of Youth and Adolescence, 29*(6), 679–695.
<https://doi.org/10.1023/A:1026455906512>
- Fleury DeVoe, J., Darling-Churchill, K. E., & Snyder, T. D. (2008). *Status and Trends in the Education of American Indians and Alaska Natives: 2008*.
- Flores, A. (2007). Examining disparities in mathematics education: Achievement gap or opportunity gap? *Source: The High School Journal, 91*(1), 29–42.
- Flores, J., & Román, M. J. (2009). Latin American and Caribbean ethnic studies triple-consciousness? approaches to Afro-Latino Culture in the United States. *Latin American and Caribbean Ethnic Studies, 4*(3), 319-328.
<https://doi.org/10.1080/17442220903331662>
- Foley, D. (2004). Ogbu's theory of academic disengagement: Its evolution and its critics. *Intercultural Education, 15*(4), 385–397.
<https://doi.org/10.1080/1467598042000313412>

- Foley, D. (2005). Elusive prey: John Ogbu and the search for a grand theory of academic disengagement. In *International Journal of Qualitative Studies in Education* (18, 5, pp. 643–657). <https://doi.org/10.1080/09518390500224986>
- Fordham, S., & Ogbu, J. U. (1986). Black students' school success: Coping with the “burden of ‘acting white’”. *The urban review*, 18(3), 176-206.
<https://doi.org/10.1007/BF01112192>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. <https://doi.org/10.3102/00346543074001059>
- French, S., & Allen, L. (2006). The development of ethnic identity in adolescence. *Developmental psychology*, 42(1), 1. <https://doi.org/10.1037/0012-1649.42.1.1>
- Frome, P. M., & Eccles, J. S. (1998). Parents' influence on children's achievement-related perceptions. *Journal of personality and social psychology*, 74(2), 435.
<https://doi.org/10.1037/0022-3514.74.2.435>
- Garcia, S. B., & Guerra, P. L. (2004). Deconstructing deficit thinking: Working with educators to create more equitable learning environments. *Education and urban society*, 36(2), 150-168. <https://doi.org/10.1177/0013124503261322>
- García, S. B., & Guerra, P. L. (2016). Deconstructing deficit thinking: Working with educators to create more equitable learning environments. *Education and urban society*, 36(2), 150-168. <https://doi.org/10.1177/0013124503261322>
- Gorsuch, R. L. (1988). Exploratory factor analysis. *Handbook of multivariate experimental psychology*, 231-258. https://doi.org/10.1007/978-1-4613-0893-5_6

- Gregory, A., Skiba, R. J., & Noguera, P. A. (2010). The achievement gap and the discipline gap: Two sides of the same coin? *Educational researcher*, 39(1), 59-68. <https://doi.org/10.3102/0013189X09357621>
- Grills, C., Cooke, D., Douglas, J., Subica, A., Villanueva, S., & Hudson, B. (2016). Culture, racial socialization ion, and positive African American youth development. *Journal of Black Psychology*, 42(4), 343–373. <https://doi.org/10.1177/0095798415578004>
- Grindal, M., & Nieri, T. (2015). An Examination of ethnic identity and academic performance: Assessing the multidimensional role of parental ethnic-racial socialization among a sample of latino adolescents. *Race and Social Problems*, 7(3), 242–255. <https://doi.org/10.1007/S12552-015-9154-5/FIGURES/1>
- Grusec, J. E. (2011). Socialization processes in the family: Social and emotional development. *Annual review of psychology*, 62, 243-269. <https://doi.org/10.1146/annurev.psych.121208.131650>
- Guay, F., Marsh, H. W., & Boivin, M. (2003). Academic self-concept and academic achievement: Developmental perspectives on their causal ordering. *Journal of Educational Psychology*, 95(1), 124–136. <https://doi.org/10.1037/0022-0663.95.1.124>
- Gutman, H. G., & Sims, S. A. (2016). The Black family in slavery and freedom 1750–1925, *Journal of Black Psychology*, 4(1-2), 161-168. <https://doi.org/10.1177/009579847800400113>

- Halliday, A. S., & Brown, N. E. (2018). The power of Black girl magic anthems: Nicki minaj, beyoncé, and “feeling myself” as political empowerment, *Souls* 20(2), 222–238. <https://doi.org/10.1080/10999949.2018.1520067>
- Harackiewicz, J. M., Canning, E. A., Tibbetts, Y., Priniski, S. J., & Hyde, J. S. (2016). Closing achievement gaps with a utility-value intervention: Disentangling race and social class. *Journal of personality and social psychology*, 111(5), 745. <https://doi.org/10.1037/pspp0000075>
- Harper, B. E. (2009). Academic Achievement in Urban Settings. *Theory Into Practice*, 46(3), 230–238. <https://doi.org/10.1080/14241270701402231>
- Harper, B. R., & Davis C. H. (2012). They (don’t) care about education: A counternarrative on black male students’ responses to inequitable schooling. *Educational Foundations*, 26, 103-120.
- Harper, S. R. (2014). (Re)setting the agenda for college men of color: Lessons learned from a 15- year movement to improve Black male student success. In R. A. Williams (Ed.), *Men of color in higher education: New foundations for developing models for success* (pp. 116– 143). Sterling, VA: Stylus.
- Harper, S. R., & Kuykendall, J. A. (2012). Institutional Efforts to Improve Black Male Student Achievement: A Standards-Based Approach, *Change: The Magazine of Higher Learning*, 44(2), 23-29. <https://doi.org/10.1080/00091383.2012.655234>
- Harper, B. E., & Tuckman, B. W. (2006). Racial identity beliefs and academic achievement: does being black hold students back? *Social Psychology of Education*, 9, 381-403. <https://doi.org/10.1007/s11218-006-9001-z>

- Harvey, R. D., Blue, C. D., & Tennial, R. E. (2012). The conceptualization and measurement of racial identity and racial identification within psychology. In J. M. Sullivan & A. M. Esmail (Eds.), *African American identity: Racial and cultural dimensions of the Black experience* (pp. 29–52). Lexington Books/Rowman & Littlefield.
- Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational research methods*, 7(2), 191-205. <https://doi.org/10.1177/1094428104263675>
- Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology*, 45(3), 740. <https://doi.org/10.1037/A0015362>
- Hirschfield, P. J., & Gasper, J. (2011). The relationship between school engagement and delinquency in late childhood and early adolescence. *Journal of youth and adolescence*, 40, 3-22. <https://doi.org/10.1007/s10964-010-9579-5>
- Holtorf, C. (2018). Embracing change: how cultural resilience is increased through cultural heritage, *World archaeology*, 50(4), 639-650. <https://doi.org/10.1080/00438243.2018.1510340>
- Hoover-Dempsey, K. V., & Sandler, H. M. (1995). Parental involvement in children's education: Why does it make a difference? *Teachers college record*, 97(2), 310-331. <https://doi.org/10.3102/00346543067001003>
- Hope, E. C., Skoog, A. B., & Jagers, R. J. (2015). “It’ll never be the White kids; it’ll always be us”: Black high school students’ evolving critical analysis of racial

- discrimination and inequity in schools. *Journal of Adolescent Research* 30(1), 831-12. <https://doi.org/10.1177/0743558414550688>
- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, 30, 179-185. <https://doi.org/10.1007/BF02289447>
- Horton, N. J., & Kleinman, K. P. (2007). Much ado about nothing: A comparison of missing data methods and software to fit incomplete data regression models. *The American Statistician*, 61(1), 79-90. <https://doi.org/10.1198/000313007X172556>.
- Horvat, E. M., & Lewis, K. S. (2003). Reassessing the "burden of 'acting White'": The importance of peer groups in managing academic success. *Sociology of education*, 265-280. <https://doi.org/10.2307/1519866>
- Howard, T. C. (2001). Telling their side of the story: African American students' perceptions of culturally relevant teaching. *The Urban Review*, 33(2), 131-149. <https://doi.org/10.1023/A:1010393224120>
- Howard, T. C., & Gay, G. (2010). Why race and culture matter in schools: Closing the achievement gap in America's classrooms. Multicultural Education Series. *Teachers College Press*, 181.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Hughes, D., & Chen, L. (1999). The nature of parents' race-related communications to children: A developmental perspective. In L. Balter & C. S. Tamis-LeMonda

(Eds.), *Child psychology: A handbook of contemporary issues* (pp.467–490). Philadelphia, Psychology Press.

Hughes, D., & DuMont, K. (1993). Using focus groups to facilitate culturally anchored research. *American journal of community psychology, 21*(6), 775-806.

<https://doi.org/10.1007/BF00942247>

Hughes, M., Kiecolt, K. J., Keith, V. M., & Demo, D. H. (2015). Racial identity and well-being among African Americans. *Social Psychology Quarterly, 78*(1), 25-48.

<https://doi.org/10.1177/0190272514554043>

Hughes, D., Rodriguez, J., Smith, E. P., Johnson, D. J., Stevenson, H. C., & Spicer, P. (2006). Parents' ethnic-racial socialization practices: a review of research and directions for future study. *Developmental psychology, 42*(5), 747.

<https://doi.org/10.1037/0012-1649.42.5.747>

Hughes, D., Witherspoon, D., Rivas-Drake, D., & West-Bey, N. (2009). Received ethnic–racial socialization messages and youths’ academic and behavioral outcomes: Examining the mediating role of ethnic identity and self-esteem. *Cultural diversity & ethnic minority psychology, 15*(2), 112.

<https://doi.org/10.1037/a0015509>

Huguley, J. P., Wang, M. T., Vasquez, A. C., & Guo, J. (2019). Parental ethnic–racial socialization practices and the construction of children of color’s ethnic–racial identity: A research synthesis and meta-analysis. *Psychological bulletin, 145*(5),

437. <https://doi.org/10.1037/bul0000187>.

- Hung, M., Smith, W. A., Voss, M. W., Franklin, J. D., Gu, Y., & Bounsanga, J. (2019). Exploring student achievement gaps in school districts across the United States: *52(2)*, 175–193. <https://doi.org/10.1177/0013124519833442>
- Hussar, B., Zhang, J., Hein, S., Wang, K., Roberts, A., Cui, J., ... & Dilig, R. (2020). The Condition of Education 2020. NCES 2020-144. *National Center for Education Statistics*.
- Ingels, S. J., Pratt, D. J., Rogers, J. E., Siegel, P. H., & Stutts, E. S. (2004). Education Longitudinal Study of 2002: Base Year Data File User's Manual. NCES 2004-405. *National Center for Education Statistics*.
- Jackson, A. N., Butler-Barnes, S. T., Stafford, J. D., Robinson, H., & Allen, P. C. (2020). “Can I Live”: Black American adolescent boys’ reports of police abuse and the role of religiosity on mental health. *International Journal of Environmental Research and Public Health*, *17(12)*, 1–16. <https://doi.org/10.3390/ijerph17124330>
- Jakobsen, J. C., Gluud, C., Wetterslev, J., & Winkel, P. (2017). When and how should multiple imputation be used for handling missing data in randomized clinical trials—a practical guide with flowcharts. *BMC medical research methodology*, *17(1)*, 1-10. <https://doi.org/10.1186/s12874-017-0442-1>.
- James, W. (1890/1981). *The principles of psychology*. Cambridge, MA: *Harvard University Press*.
- Jeynes, W. H. (2015). A Meta-Analysis on the factors that best reduce the achievement gap review of the literature background of the problem. *Education and Urban Society*, *47(5)*, 523–554. <https://doi.org/10.1177/0013124514529155>

- Jeynes, W. H. (2016). A Meta-Analysis: The Relationship Between Parental Involvement and African American School Outcomes. *Journal of Black Studies, 47*(3), 195–216. <https://doi.org/10.1177/0021934715623522>
- Jimerson, S. R., Campos, E., & Greif, J. L. (2003). Toward an understanding of definitions and measures of school engagement and related terms. *The California School Psychologist, 8*, 7-27. <https://doi.org/10.1007/BF03340893>
- Johnson, V. E., & Carter, R. T. (2019). Empirical-Quantitative Black cultural strengths and psychosocial well-being: An empirical analysis with black american adults. *Journal of Black Psychology, 20*(1), 55–89. <https://doi.org/10.1177/0095798419889752>
- Johnson-Ahorlu, R. N. (2012). The academic opportunity gap: how racism and stereotypes disrupt the education of African American undergraduates, *15*(5), 633–652. <https://doi.org/10.1080/13613324.2011.645566>
- Johnson, D. R., & Young, R. (2011). Toward best practices in analyzing datasets with missing data: Comparisons and recommendations. *Journal of Marriage and Family, 73*(5), 926-945. <https://doi.org/10.2307/41329640>
- Jones Brayboy, B. M. (2004). Hiding in the ivy: American Indian students and visibility in elite educational settings. *Harvard Educational Review, 74*(2), 125-152. <https://doi.org/10.17763/haer.74.2.x141415v38360mg4>
- Jones, S. C. T., & Neblett, E. W. (2019). Black parenting couples' discussions of the racial socialization process: Occurrence and effectiveness. *Journal of Child & Family Studies, 28*(1), 218–232. <https://doi.org/10.1007/s10826-018-1248-4>

- Joseph, N. M., Hailu, M., & Boston, D. (2017). Black women's and girls' persistence in the P-20 mathematics pipeline: Two decades of children, youth, and adult education research. *Review of Research in Education*, 41(1), 203-227.
<https://doi.org/10.3102/0091732X16689045>
- Kim, J., & Shah, S. (2020). Racial/ethnic disparities in school funding: A comprehensive review of empirical studies. *Review of Educational Research*, 90(6), 859-892.
<https://doi.org/10.1093/sf/soz095>
- Korpershoek, H., Canrinus, E. T., Fokkens-Bruinsma, M., & Boer, H. de. (2019). The relationships between school belonging and students' motivational, social-emotional, behavioral, and academic outcomes in secondary education: a meta-analytic review. *Research papers in education*, 35(6), 641-680.
<https://doi.org/10.1080/02671522.2019.1615116>
- Kuncel, N. R., Credé, M., & Thomas, L. L. (2005). The validity of self-reported grade point averages, class ranks, and test scores: A meta-analysis and review of the literature. *Review of educational research*, 75(1), 63-82.
<http://dx.doi.org/10.3102/00346543075001063>
- Kunstman, J. W., Fitzpatrick, C. B., Moreno, R., Bernstein, M. J., Hugenberg, K., Semko, S., Espino-Pérez, K., & Major, B. (2021). Motives matter: White instructors' external race-based motives undermine trust and belonging for Black college students. *Cultural Diversity and Ethnic Minority Psychology*.
<https://doi.org/10.1037/CDP0000491>

- Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory into practice*, 34(3), 159-165.
<https://doi.org/10.1080/00405849509543675>
- Ladson-Billings, G., & Tate, W. F. (1995). Toward a critical race theory of education. *Teachers college record*, 97(1), 47-68.
<https://doi.org/10.1177/016146819509700104>
- Lang, K. M., & Little, T. D. (2018). Principled missing data treatments. *Prevention science*, 19(3), 284-294. <https://doi.org/10.1007/s11121-016-0644-5>
- Lardier, D. T., Garcia-Reid, P., & Reid, R. J. (2018). The interacting effects of psychological empowerment and ethnic identity on indicators of well-being among youth of color. *Journal of Community Psychology*, 46(4), 489–501.
<https://doi.org/10.1002/jcop.21953>
- Leath, S., Mathews, C., Harrison, A., & Chavous, T. (2019). Racial Identity, Racial Discrimination, and Classroom Engagement Outcomes Among Black Girls and Boys in Predominantly Black and Predominantly White School Districts. *American Educational Research Journal*, 56(4), 1318–1352.
<https://doi.org/10.3102/0002831218816955>
- Ledesma, R. D., & Valero-Mora, P. (2007). Determining the number of factors to retain in EFA: An easy-to-use computer program for carrying out parallel analysis. *Practical assessment, research, and evaluation*, 12(1), 2.
<https://doi.org/10.7275/wjnc-nm63>
- Lee, J. (2004). Multiple facets of inequity in racial and ethnic achievement gaps. *Peabody Journal of Education*, 79(2), 51–73. https://doi.org/10.1207/s15327930pje7902_5

- Lewis, C. W., Hancock, S., James, M., & Larke, P. (2008). African American students and No Child Left Behind legislation: Progression or digression in educational attainment. *Multicultural Learning and Teaching*, 3(2).
<https://doi.org/10.2202/2161-2412.1033>
- Lewis, A. E., Diamond, J. B., & Forman, T. A. (2015). Conundrums of integration: Desegregation in the context of racialized hierarchy, *Sociology of Race and Ethnicity*, 1(1), 22–36. <https://doi.org/10.1177/2332649214558687>
- Malin, J. R., Bragg, D. D., & Hackmann, D. G. (2017). College and career readiness and the Every Student Succeeds Act. *Educational Administration Quarterly*, 53(5), 809-838.
- Mandara, J., & Murray, C. B. (2007). How African American families can facilitate the academic achievement of their children: Implications for family-based interventions. In *Strengthening the African American educational pipeline: Informing research, policy, and practice* (pp. 165-186). State University of New York Press.
- Mandara, J., Murray, C. B., Telesford, J. M., Varner, F. A., & Richman, S. B. (2012). Observed gender differences in African American mother-child relationships and child behavior. *Family Relations*, 61(1), 129-141. <https://doi.org/10.1111/j.1741-3729.2011.00688.x>
- Mandara, J., Varner, F., & Richman, S. (2010). Do African American mothers really “love” their sons and “raise” their daughters? *Journal of Family Psychology*, 24(1), 41. <https://doi.org/10.1037/a0018072>

- Marshall, G. L., Thorpe, R. J., & Szanton, S. L. (2017). Material hardship and self-rated mental health among older Black Americans in the National Survey of American Life. *Health and Social Work, 42*(2), 87. <https://doi.org/10.1093/HSW/HLX008>
- Martinez-Escudero, J. A., Villarejo, S., Garcia, O. F., & Garcia, F. (2020). Parental socialization and its impact across the lifespan. *Behavioral Sciences, 10*(6), 101. <https://doi.org/10.3390/bs10060101>
- Massé, J. C., Perez, R. J., & Posselt, J. R. (2010). Equity & excellence in education revisiting college predisposition: Integrating sociological and psychological perspectives on inequality. *Professional School Counseling, 20*(1a), 1096-2409. <https://doi.org/10.1080/10665684.2010.492271>
- Matthews, J. S., Banerjee, M., & Lauermann, F. (2014). Academic identity formation and motivation among ethnic minority adolescents: The role of the “self” between internal and external perceptions of identity. *Child development, 85*(6), 2355-2373. <https://doi.org/10.1111/cdev.12318>
- McHale, S. M., Crouter, A. C., Kim, J. Y., Burton, L. M., Davis, K. D., Dotterer, A. M., & Swanson, D. P. (2006). Mothers’ and fathers’ racial socialization in African American families: Implications for youth. *Child Development, 77*, 1387-1402. [doi:10.1111/j.1467-8624.2006.00942.x](https://doi.org/10.1111/j.1467-8624.2006.00942.x)
- McKay, M. M., Atkins, M. S., Hawkins, T., Brown, C., & Lynn, C. J. (2003). Inner-City African American parental involvement in children's schooling: Racial socialization and social support from the parent community. *American Journal of Community Psychology, 32*(1-2), 107-114. <https://psycnet.apa.org/doi/10.1023/A:1025655109283>

- McMillian, M. M., Carr, M., Hodnett, G., & Campbell, F. A. (2016). A longitudinal study of academic identification among african american males and females. *Journal of Black Psychology, 42*(6), 508-529.
<https://psycnet.apa.org/doi/10.1177/0095798415603845>
- Mertens, D. M. (2015). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (4th ed.). Thousand Oaks, CA: Sage
- Miller, R. S., & Wang, M.-T. (2019). Cultivating Adolescents' Academic Identity: Ascertaining the Mediating Effects of Motivational Beliefs Between Classroom Practices and Mathematics Identity. *Journal of Youth and Adolescence 2019 48:10, 48*(10), 2038–2050. <https://doi.org/10.1007/S10964-019-01115-X>
- Miller-Cotto, D., & Byrnes, J. P. (2016). Ethnic/racial identity and academic achievement: A meta-analytic review. *Developmental Review, 41*, 51-70.
<https://psycnet.apa.org/doi/10.1016/j.dr.2016.06.003>
- Milliones, J. (1976,). The Pittsburgh Project Part II: Construction of a black consciousness measure. Paper presented at the Third Conference on Empirical Research in Black Psychology, Ithaca, New York.
- Milliones, J. (1980). Construction of a black consciousness measure: Psychotherapeutic implications. *Psychotherapy: Theory, Research, and Practice, 17*, 175-182.
<https://doi.org/10.1037/h0085908>
- Milner, H. R. (2010). Beyond a test score: Explaining opportunity gaps in educational practice. *Journal of Black Studies, 43*(6), 693–718.
<https://doi.org/10.1177/0021934712442539>

- Morrison Gutman, L., Sameroff, A. J., & Eccles, J. S. (2002). The academic achievement of African American students during early adolescence: An examination of multiple risk, promotive, and protective factors. *American Journal of Community Psychology, 30*(3). <https://doi.org/10.1023/A:1015389103911>.
- Morsy, L., & Rothstein, R. (2015). Five Social Disadvantages That Depress Student Performance: Why Schools Alone Can't Close Achievement Gaps. Report. *Economic Policy Institute*.
- Musu-Gillette, L., Robinson, J., McFarland, J., Kewal Ramani, A., Zhang, A., & Wilkinson-Flicker, S. (2016). Status and trends in the education of racial and ethnic groups 2016. *National Center for Educational Statistics, NCES 2016*, 188.
- Murphy, M. C., & Zirkel, S. (2015). Race and belonging in school: How anticipated and experienced belonging affect choice, persistence, and performance. *Teachers College Record, 117*(12), 1-40. <https://doi.org/10.1177/016146811511701204>
- Neblett, E. W., Rivas-Drake, D., & Umaña-Taylor, A. J. (2012). The promise of racial and ethnic protective factors in promoting ethnic minority youth development. *Child Development Perspectives, 6*(3), 295–303. <https://doi.org/10.1111/J.1750-8606.2012.00239.X>
- Neblett, E. W., White, R. L., Ford, K. R., Philip, C. L., Nguyễn, H. X., & Sellers, R. M. (2008). Patterns of racial socialization and psychological adjustment: Can parental communications about race reduce the impact of racial discrimination? *Journal of Research on Adolescence, 18*(3), 477–515. <https://doi.org/10.1111/j.1532-7795.2008.00568.x>

- Noguera, P. A. (2008). Creating schools where race does not predict achievement: The role and significance of race in the racial achievement Gap. *The Journal of Negro Education, 77*(2), 90–103.
- Noguera, P. A. (2008). The trouble with Black boys: The role and influence of environmental and cultural factors on the academic performance of african american males. *Urban Education, 43*(5), 608-620.
<https://doi.org/10.1177/0042085903038004005>
- Noguera, P. A., & Wing, J. Y. (Eds.). (2008). Unfinished business: Closing the racial achievement gap in our schools. John Wiley & Sons.
- Okeke, N. A., Howard, L. C., Kurtz-Costes, B., & Rowley, S. J. (2009). Academic race stereotypes, academic self-concept, and racial centrality in African American youth. *Journal of Black Psychology, 35*(3), 366-387.
<https://doi.org/10.1177/00957984093333615>
- Olszewski-Kubilius, P., Steenbergen-Hu, S., Thomson, D., & Rosen, R. (2016). Minority achievement gaps in stem: Findings of a longitudinal study of Project Excite, *Gifted Child Quarterly, 61*(1), 20-39. <https://doi.org/10.1177/0016986216673449>.
- O'Malley, M., Voight, A., Renshaw, T. L., & Eklund, K. (2015). School climate, family structure, and academic achievement: a study of moderation effects. *School Psychology Quarterly, 30*(1), 142. <https://doi.org/10.1037/spq0000076>
- Orfield, G., & Lee, C. (2005). Why segregation matters: Poverty and educational inequality. The Civil Rights Project at Harvard University.

- Osborne, J. W. (1997). Identification with academics and academic success among community college students. *Community College Review*, 25(1), 59–67.
<https://doi.org/10.1177/009155219702500105>
- Osborne, J. W., & Jones, B. D. (2011). Identification with Academics and Motivation to Achieve in School: How the Structure of the Self Influences Academic Outcomes. In *Educational Psychology Review* (Vol. 23, Issue 1, pp. 131–158).
<https://doi.org/10.1007/s10648-011-9151-1>
- Osborne, J. W., & Walker, C. (2006). Stereotype threat, identification with academics, and withdrawal from school: Why the most successful students of color might be most likely to withdraw. *Educational psychology*, 26(4), 563-577.
<https://doi.org/10.1080/01443410500342518>
- Oyserman, D., Gant, L., & Ager, J. (1995). A socially contextualized model of African American identity: Possible selves and school persistence. *Journal of personality and social psychology*, 69(6), 1216. <https://doi.org/10.1037/0022-3514.69.6.1216>
- Papageorgiou, G., Grant, S. W., Takkenberg, J. J., & Mokhles, M. M. (2018). Statistical primer: how to deal with missing data in scientific research? *Interactive cardiovascular and thoracic surgery*, 27(2), 153-158.
<https://doi.org/10.1093/icvts/ivy102>.
- Parham, T. A. (1989). Cycles of psychological nigrescence. *The Counseling Psychologist*, 17, 187-226. <https://doi.org/10.1177/0011000089172001>
- Park, I. J., Du, H., Wang, L., Williams, D. R., & Alegría, M. (2019). The role of parents' ethnic-racial socialization practices in the discrimination–depression link among

- Mexican-origin adolescents. *Journal of Clinical Child & Adolescent Psychology*.
<https://doi.org/10.1080/15374416.2018.1547969>.
- Paschall, K. W., Gershoff, E. T., & Kuhfeld, M. (2018). A two-decade examination of historical race/ethnicity disparities in academic achievement by poverty status. *Journal of Youth and Adolescence*, 47, 1164-1177.
<https://doi.org/10.1007/s10964-017-0800-7>.
- Patil, V. H., Singh, S. N., Mishra, S., & Donovan, D. T. (2008). Efficient theory development and factor retention criteria: Abandon the 'eigenvalue greater than one' criterion. *Journal of Business Research*, 61(2), 162-170.
<https://doi.org/10.1016/j.jbusres.2007.05.008>
- Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of adolescent research*, 7(2), 156-176.
<https://doi.org/10.1177/074355489272003>
- Poekert, P. E., Swaffield, S., Demir, E. K., & A. Wright, S. (2020). Leadership for professional learning towards educational equity: a systematic literature review. *Professional Development in Education*, 46(4), 541–562.
<https://doi.org/10.1080/19415257.2020.1787209>
- Potter, D., & Morris, D. S. (2017). Family and Schooling Experiences in Racial/Ethnic Academic Achievement Gaps: A Cumulative Perspective. *Sociological Perspectives*, 60(1), 132–167. <https://doi.org/10.1177/0731121416629989>
- Priest, N., Walton, J., White, F., Kowal, E., Baker, A., & Paradies, Y. (2014). Understanding the complexities of ethnic-racial socialization processes for both minority and majority groups: A 30-year systematic review. In *International*

Journal of Intercultural Relations (Vol. 43, Issue PB, pp. 139–155). Elsevier Ltd.
<https://doi.org/10.1016/j.ijintrel.2014.08.003>

Rampey, B. D., Dion, G. S., & Donahue, P. L. (2009). NAEP 2008: Trends in Academic Progress. NCES 2009-479. *National Center for Education Statistics*.

Ratelle, C. F., & Duchesne, S. (2014). Trajectories of psychological need satisfaction from early to late adolescence as a predictor of adjustment in school. *Contemporary Educational Psychology, 39*(4), 388-400.
<https://doi.org/10.1016/j.cedpsych.2014.09.003>

Rattan, A., Savani, K., Chugh, D., & Dweck, C. S. (2015). Leveraging mindsets to promote academic achievement: Policy recommendations. *Perspectives on Psychological Science, 10*(6), 721-726.
<https://psycnet.apa.org/doi/10.1177/1745691615599383>

Reardon, S. F. (2011). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations. *Whither opportunity, 1*(1), 91-116.

Reardon, S. F. (2016). School segregation and racial academic achievement gaps. *Journal of the Social Sciences September* (Vol. 2, Issue 5).
<https://doi.org/10.7758/rsf.2016.2.5.03>.

Reynolds, J. R., & Burge, S. W. (2008). Educational expectations and the rise in women's post-secondary attainments. *Social Science Research, 37*(2), 485–499.
<https://doi.org/10.1016/J.SSRESEARCH.2007.09.002>

Rissing, S. W., & Cogan, J. G. (2009). Can an inquiry approach improve college student learning in a teaching laboratory? *CBE—Life Sciences Education, 8*(1), 55-61.
<https://doi.org/10.1187/cbe.08-05-0023>.

- Rivas-Drake, D., Seaton, E. K., Markstrom, C., Quintana, S., Syed, M., Lee, R. M., ... & Ethnic and Racial Identity in the 21st Century Study Group. (2014). Ethnic and racial identity in adolescence: Implications for psychosocial, academic, and health outcomes. *Child development*, 85(1), 40-57. <https://doi.org/10.1111/cdev.12200>
- Rogers, M. A., Theule, J., Ryan, B. A., Adams, G. R., & Keating, L. (2009). Parental involvement and children's school achievement: Evidence for mediating processes. *Canadian journal of school psychology*, 24(1), 34-57. <https://doi.org/10.1177/0829573508328445>
- Rosen, J. A., Porter, S. R., & Rogers, J. (2017). Understanding student self-reports of academic performance and course-taking behavior. *AERA Open*, 3(2), <https://doi.org/10.1177/2332858417711427>
- Ross, L. (2017). *Perspective matters: Concordance in parental academic socialization in Black parent-adolescent dyads* (Doctoral dissertation).
- Roth, P. L., Switzer III, F. S., & Switzer, D. M. (1999). Missing data in multiple item scales: A Monte Carlo analysis of missing data techniques. *Organizational research methods*, 2(3), 211-232. <https://doi.org/10.1177/109442819923001>
- Rowley, S. J., Sellers, R. M., Chavous, T. M., & Smith, M. A. (1998). The relationship between racial identity and self-esteem in African American college and high school students. *Journal of Personality and Social Psychology*, 74(3), 715-724. <https://doi.org/10.1037/0022-3514.74.3.715>
- Rubin, D. B. (1987). The calculation of posterior distributions by data augmentation: Comment: A noniterative sampling/importance resampling alternative to the data augmentation algorithm for creating a few imputations when fractions of missing

- information are modest: The SIR algorithm. *Journal of the American Statistical Association*, 82(398), 543-546. <https://doi.org/10.1080/01621459.1987.10478461>
- Ruscio, J., & Roche, B. (2012). Determining the number of factors to retain in an exploratory factor analysis using comparison data of known factorial structure. *Psychological assessment*, 24(2), 282. <https://doi.org/10.1037/a0025697>.
- Sanders Thompson, V. L. (1991). Perceptions of Race and Race Relations Which Affect African American Identification 1. *Journal of Applied Social Psychology*, 21(18), 1502-1516.
- Scott, L. R. A., Brown, A., Wallace, W., Cormier, C. J., & Powell, C. (2021). If we're not doing it, then who? A qualitative study of black special educators' persistence. *Exceptionality*, 29(3), 182–196. <https://doi.org/10.1080/09362835.2020.1850453>
- Sellers, R. M., Chavous, T. M., & Cooke, D. Y. (1998). Racial ideology and racial centrality as predictors of African American college students' academic performance. *Journal of Black Psychology*, 24(1), 8-27. <https://doi.org/10.1177/00957984980241002>
- Simpkins, S. D., Davis-Kean, P. E., & Eccles, J. S. (2010). Parents' socializing behavior and children's participation in math, science, and computer out-of-school activities. *Applied Developmental Science*, 9(1), 14-30. https://doi.org/10.1207/s1532480xads0901_3.
- Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, 75(3), 417-453. <https://doi.org/10.3102/00346543075003417>

- Skiba, R. J., Simmons, A. B., Ritter, S., Gibb, A. C., Rausch, M. K., & Cuadrado, J. (2011). Achieving equity in special education: History, status, and current challenges. *Exceptional Children*, 77(3), 287-305.
<https://doi.org/10.1177/001440290807400301>
- Smalls, C., White, R., Chavous, T., & Sellers, R. (2007). Racial ideological beliefs and racial discrimination experiences as predictors of academic engagement among African American Adolescents. *Journal Of Black Psychology*, 33(3), 299–330.
<https://doi.org/10.1177/0095798407302541>
- Sonnenschein, S., & Sawyer, B. E. (2018). Introduction: The need to take a strengths-based approach to facilitate children’s educational growth. *Academic Socialization of Young Black and Latino Children: Building on Family Strengths*, 1-4. DOI:10.1007/978-3-030-04486-2_1
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, 25(2), 173–180.
https://doi.org/10.1207/s15327906mbr2502_4
- Steinmayr, R., Crede, J., McElvany, N., & Wirthwein, L. (2016). Subjective Well-Being, Test Anxiety, Academic Achievement: Testing for Reciprocal Effects. *Frontiers in Psychology*, 0(JAN), 1994. <https://doi.org/10.3389/FPSYG.2015.01994>
- Stevenson, H. C., Reed, J., Bodison, P., & Bishop, A. (1997). Racism stress management: Racial socialization beliefs and the experiences of depression and anger in African American youth. *Youth & Society*, 29, 197-222.
<https://doi.org/10.1177/0044118X97029002003>

- Stewart, E. B. (2006). Family-and individual-level predictors of academic success for African American students a longitudinal path analysis utilizing national data. *Journal of black studies*, 36(4), 597-621.
<https://doi.org/10.1177/0021934705276798>
- Strambler, M. J., Linke, L. H., & Ward, N. L. (2013). Academic identification as a mediator of the relationship between parental socialization and academic achievement. *Contemporary Educational Psychology*, 38(1), 99–106.
<https://doi.org/10.1016/J.CEDPSYCH.2012.11.001>
- Suizzo, M. A., Jackson, K. M., Pahlke, E., Marroquin, Y., Blondeau, L., & Martinez, A. (2012). Pathways to achievement: How low-income Mexican-origin parents promote their adolescents through school. *Family Relations*, 61(4), 533-547.
<https://doi.org/10.1111/j.1741-3729.2012.00727.x>
- Suizzo, M.-A., Jackson, K. M., Pahlke, E., McClain, S., Marroquin, Y., Blondeau, L. A., & Hong, K. (2016). Parents' School Satisfaction and Academic Socialization Predict Adolescents' Autonomous Motivation: A Mixed-Method Study of Low-Income Ethnic Minority Families. *Journal of Adolescent Research*, 31(3), 343–374.
<https://doi.org/10.1177/0743558415605617>
- Suizzo, M. A., Pahlke, E., Yarnell, L., Chen, K. Y., & Romero, S. (2014). Home-based parental involvement in young children's learning across US ethnic groups: Cultural models of academic socialization. *Journal of Family Issues*, 35(2), 254-287. <https://doi.org/10.1177/0192513X12465730>
- Suizzo, M. A., Robinson, C., & Pahlke, E. (2008). African American mothers' socialization beliefs and goals with young children: Themes of history, education,

- and collective independence. *Journal of Family Issues*, 29(3), 287-316.
<https://doi.org/10.1177/0192513X07308368>
- Suizzo, M. A., & Soon, K. (2006). Parental academic socialization: Effects of home-based parental involvement on locus of control across US ethnic groups. *Educational psychology*, 26(6), 827-846. <https://doi.org/10.1080/01443410600941961>
- Suldo, S., Riley, N. K., & Shaffer, J. E. (2006). *Academic Correlates of Children and Adolescents' Life Satisfaction*. 27(5), 567–582.
<https://doi.org/10.1177/0143034306073411>
- Tabbodi, M., Rahgozar, H., & Makki Abadi, M. M., (2015). The relationship between happiness and academic achievements. *European-Science.Com*, 4(1).
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in science education*, 48, 1273-1296.
<https://doi.org/10.1007/s11165-016-9602-2>
- Tang, S., McLoyd, V. C., & Hallman, S. K. (2016). Racial socialization, racial identity, and academic attitudes among African American adolescents: Examining the moderating influence of parent–adolescent communication. *Journal of youth and adolescence*, 45, 1141-1155. <https://doi.org/10.1007/s10964-015-0351-8>
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: a social psychological perspective on mental health. *Psychological bulletin*, 103(2), 193.
<https://doi.org/10.1037/0033-2909.103.2.193>
- Taylor, L. C., Clayton, J. D., & Rowley, S. J. (2004). *Academic Socialization: Understanding Parental Influences on Children's School-Related Development in*

the Early Years. *Review of General Psychology*, 8(3), 163–178.

<https://doi.org/10.1037/1089-2680.8.3.163>

Tesser, A., & Campbell, J. (1980). Self-definition: The impact of the relative performance and similarity of others. *Social Psychology Quarterly*, 341-347.

<https://doi.org/10.2307/3033737>

Tesser, A., Millar, M., & Moore, J. (1988). Some affective consequences of social comparison and reflection processes: the pain and pleasure of being close. *Journal of personality and social psychology*, 54(1), 49. <https://doi.org/10.1037/0022-3514.54.1.49>

Teye, A. C., & Peaslee, L. (2015, December). Measuring educational outcomes for at-risk children and youth: Issues with the validity of self-reported data. In *Child & youth care forum* (Vol. 44, pp. 853-873). Springer US.

Teitcher, J. E., Bocking, W. O., Bauermeister, J. A., Hoefler, C. J., Miner, M. H., & Klitzman, R. L. (2015). Detecting, preventing, and responding to “fraudsters” in internet research: ethics and tradeoffs. *Journal of Law, Medicine & Ethics*, 43(1), 116-133. <https://doi.org/10.1111/jlme.12200>.

Thabane, L., Mbuagbaw, L., Zhang, S., Samaan, Z., Marcucci, M., Ye, C., ... & Goldsmith, C. H. (2013). A tutorial on sensitivity analyses in clinical trials: the what, why, when and how. *BMC medical research methodology*, 13(1), 1-12. <https://doi.org/10.1186/1471-2288-13-92>.

Thernstrom, A., & Thernstrom, S. (2004). *No excuses: Closing the racial gap in learning*. Simon and Schuster.

- Thomas, O. N., Caldwell, C. H., Faison, N., & Jackson, J. S. (2009). Promoting academic achievement: The role of racial identity in buffering perceptions of teacher discrimination on academic achievement among African American and Caribbean Black adolescents. *Journal of educational psychology*, 101(2), 420.
<https://psycnet.apa.org/doi/10.1037/a0014578>
- Tyler, K. M., Boykin, A. W., Boelter, C. M., & Dillihunt, M. L. (2005). Examining mainstream and Afro-Cultural value socialization in African American households. *Journal Of Black Psychology*. 31(3), 291-310.
<https://doi.org/10.1177/0095798405278199>
- Tyson, K., Darity Jr, W., & Castellino, D. R. (2005). It's not “a black thing”:
Understanding the burden of acting white and other dilemmas of high achievement. *American sociological review*, 70(4), 582-605.
<https://doi.org/10.1177/000312240507000403>
- Umaña-Taylor, A. J., Quintana, S. M., Lee, R. M., Cross Jr, W. E., Rivas-Drake, D., Schwartz, S. J., ... & Ethnic and Racial Identity in the 21st Century Study Group. (2014). Ethnic and racial identity during adolescence and into young adulthood: An integrated conceptualization. *Child development*, 85(1), 21-39.
<https://doi.org/10.1111/cdev.12196>
- Valadez, J. R. (2002). The influence of social capital on mathematics course selection by Latino high school students. *Hispanic Journal of Behavioral Sciences*, 24, 319–339. <https://doi.org/10.1177/0739986302024003004>
- van Ryzin, M. J. (2011). Protective factors at school: Reciprocal effects among adolescents’ perceptions of the school environment, engagement in learning, and

- hope. *Journal of Youth and Adolescence*, 40(12), 1568–1580.
<https://doi.org/10.1007/s10964-011-9637-7>
- Velicer, W. F. (1976). The relation between factor score estimates, image scores, and principal component scores. *Educational and Psychological Measurement*, 36(1), 149-159.<https://doi.org/10.1177/001316447603600114>
- Voelkl, K. E. (2012). School identification. In *Handbook of Research on Student Engagement* (pp. 193–218). Voelkl & Frone. https://doi.org/10.1007/978-1-4614-2018-7_9
- Voight, A., Hanson, T., O'Malley, M., & Adekanye, L. (2015). The racial school climate gap: Within-school disparities in students' experiences of safety, support, and connectedness. *American journal of community psychology*, 56, 252-267.
<https://doi.org/10.1007/s10464-015-9751-x>
- Voyer, D., & Voyer, S. D. (2014). *Psychological Bulletin Gender Differences in Scholastic Achievement: A Meta-Analysis*. *Psychological Bulletin*, 140(4), 1174–1204. <https://doi.org/10.1037/a0036620>
- Walker, C. O., Greene, B. A., & Mansell, R. A. (2006). Identification with academics, intrinsic/extrinsic motivation, and self-efficacy as predictors of cognitive engagement B. *Learning and Individual Differences*, 16, 1–12.
<https://doi.org/10.1016/j.lindif.2005.06.004>
- Walton, Q. L., & Basirat Oyewuwo-Gassikia, O. (2018). The case for #BlackGirlMagic: Application of a strengths-based, intersectional practice framework for working with black women with depression. *Affilia*, 32(4), 461–475.
<https://doi.org/10.1177/0886109917712213>

- Wang, M. T., & Eccles, J. S. (2013). School context, achievement motivation, and academic engagement: A longitudinal study of school engagement using a multidimensional perspective. *Learning and Instruction, 28*, 12–23.
<https://doi.org/10.1016/j.learninstruc.2013.04.002>
- Wang, M. T., & Fredricks, J. A. (2014). The reciprocal links between school engagement, youth problem behaviors, and school dropout during adolescence. *Child development, 85*(2), 722-737. <https://doi.org/10.1111/cdev.12138>.
- Wang, M. T., Smith, L. V., Miller-Cotto, D., & Huguley, J. P. (2020). Parental ethnic-racial socialization and children of color's academic success: A meta-analytic review. *Child Development, 91*(3), e528–e544.
<https://doi.org/10.1111/CDEV.13254>
- Watkins, M. W. (2018). Exploratory factor analysis: A guide to best practice. *Journal of Black Psychology, 44*(3), 219-246. <https://doi.org/10.1177/0095798418771807>
- White-Johnson, R. L., Ford, K. R., & Sellers, R. M. (2010). Parental racial socialization profiles: Association with demographic factors, racial discrimination, childhood socialization, and racial identity. *Cultural Diversity and Ethnic Minority Psychology, 16*(2), 237. <https://doi.org/10.1037/a0016111>
- Williams, J. M., Bryan, J., Morrison, S., & Scott, T. R. (2017). Protective factors and processes contributing to the academic success of students living in poverty: Implications for counselors. *Journal of multicultural counseling and development, 45*(3), 183-200. <https://doi.org/10.1002/jmcd.12073>
- Williams, W. S., & Chung, Y. B. (2013). Do cultural attitudes matter? The role of cultural orientation on academic self-concept among Black/African college students.

Journal of College Counseling, 16(3), 228–242. <https://doi.org/10.1002/J.2161-1882.2013.00039.X>

Wittrup, A. R., Hussain, S. B., Albright, J. N., Hurd, N. M., Varner, F. A., Mattis, J. S., &

Wittrup, A. (2019). Natural mentors, racial pride, and academic engagement among Black adolescents: Resilience in the context of perceived discrimination.

Youth & Society, 51(4), 463–483. <https://doi.org/10.1177/0044118X16680546>

Wood, D., Kaplan, R., & McLoyd, V. C. (2007). Gender differences in the educational expectations of urban, low-income African American youth: The role of parents and the school. *Journal of Youth and Adolescence*, 36, 417–427.

<https://doi.org/10.1007/s10964-007-9186-2>

Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The Influence of ethnic discrimination

and ethnic identification on African American adolescents' School and

Socioemotional Adjustment. *Journal of Personality*, 71(6), 1197–1232.

<https://doi.org/10.1111/1467-6494.7106012>

Workman, J., & Heyder, A. (2020). Gender achievement gaps: the role of social costs to

trying hard in high school. *Social Psychology of Education*, 23(6), 1407–1427.

<https://doi.org/10.1007/s11218-020-09588-6>

Wright, B. L. (2009). Racial-ethnic identity, academic achievement, and African

American males: A review of literature. *Journal of Negro Education*, 78(2), 123–134.

Wright, C., Maylor, U., & Becker, S. (2016). Young black males: resilience and the use of

capital to transform school 'failure.' *Critical Studies in Education*, 57(1), 21–34.

<https://doi.org/10.1080/17508487.2016.1117005>

- Yip, T. (2018). Ethnic/racial identity—A double-edged sword? Associations with discrimination and psychological outcomes. *Current directions in psychological science*, 27(3), 170-175. <https://doi.org/10.1177/0963721417739348>.
- York, T. T., Gibson, C., & Rankin, S. (2015). Defining and measuring academic success. *Practical assessment, research, and evaluation*, 20(1), 5. <https://doi.org/10.7275/hz5x-tx03>
- Yoshikawa, H., Weisner, T. S., Kalil, A., & Way, N. (2008). Mixing qualitative and quantitative research in developmental science: Uses and methodological choices. *Developmental psychology*, 44(2), 344. <https://doi.org/10.1037/0012-1649.44.2.344>
- Zwick, W. R., & Velicer, W. F. (1986). Comparison of five rules for determining the number of components to retain. *Psychological bulletin*, 99(3), 432. <https://doi.org/10.1037/0033-2909.99.3.432>