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Abstract

Despite post-racial rhetoric, stereotypes remain salient for American youth. We surveyed 150 elementary and middle schoolers in Northern California and conducted case studies of 12 students. Findings showed that (a) students hold school-related stereotypes that get stronger in middle school, (b) African American and Latino students experience greater divergence between stereotype awareness about their group and endorsement than other students, and (c) students who eschewed the applicability of stereotypes to them demonstrated higher engagement and achievement in math. This study has implications for studying race in schools and mathematics, and the need for urban educators to facilitate racialized counter-narratives.

Keywords

race, identity, mathematics, adolescent, urban education, African American students, Hispanic students, minority academic success

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Introduction

In U.S. society, racial stereotypes have been historically long standing and widely held (Bobo, 1999; Devine, 1989; Steele, 1998). African Americans and Latinos are particularly targeted by negative stereotypes, and are assumed to lack an achievement orientation and to engage in anti-social behavior (Cowan, Martinez, & Mendiola, 1997; Devine & Elliott, 1995; Niemann, Jennings, Rozelle, Baxter, & Sullivan, 1994). Such beliefs are “in the air” (Steele, 1998), with children being exposed to them from birth and making sense of them as early as 3 to 4 years old (Van Ausdale & Feagin, 2001).

Studies of stereotype consciousness have shown that between the age of 5 and 10 years, children become increasingly aware about racial stereotypes and become able to infer stereotypes on the part of others (McKown & Weinstein, 2003). Children also become able to separate their own stereotypes (endorsement) from the stereotypes that they think that *others* hold (awareness) (Ambady, Shih, Kim, & Pittinsky, 2001; Augoustinos & Rosewarne, 2001; Black-Gutman & Hickson, 1996) as their cognitive capabilities and social perspective taking develop (Bigler, 1995; Bigler & Liben, 1992; Doyle, Beaudet, & Aboud, 1988; McKown & Strambler, 2009).¹ In short, children are aware of stereotypes and grapple with how to understand them and their inferences for themselves and others.

The transition to middle school is a particularly critical time for stereotype awareness. Research shows that stereotypical beliefs increase near the transition from elementary to middle school as children become more aware of their social environment and status (Black-Gutman & Hickson, 1996). The specific ages at which children become aware of racial stereotypes varies, such that children from negatively stereotyped groups (African Americans and Latinos) develop stereotype awareness earlier than white² and Asian American students (McKown & Weinstein, 2003). However, the implications this earlier awareness has for differences across racial groups in endorsing stereotypes about their own racial group remains unclear.

It is clear that awareness about stereotypes about one's group extends to achievement. Age-old stereotypes about the lower intelligence of African Americans and Latinos (Devine & Elliott, 1995; Steele, 1998) can infer that students from these groups are less likely to succeed in school. Stereotype threat research shows that awareness of a stereotype about one's group, and the fear that it will be applied to oneself, can depress academic performance (Aronson & Steele, 2005; Steele, 1997, 1998), and can lead to avoidance of domains—like mathematics—to which the stereotype applies (McKown & Strambler, 2009; McKown & Weinstein, 2003; Steele, Spencer, & Aronson, 2002).

Some direct evidence suggests that children often do hold academic racial stereotypes, and that endorsement of these stereotypes increases with age. Rowley, Kurtz-Costes, Mistry, and Feagans (2007) found that middle schoolers of all races were more likely than fourth graders to think that white students were smarter than African American students. Interestingly, stereotype threat seems to follow the same developmental trends ([Ambady et al., 2001](#)). When primed with stereotypical images of Asians or women, Asian girls' performance on a math test was affected (positively for Asian priming, negatively for female priming) for middle school students, but not for students in late elementary school, reinforcing the notion of a critical transition in the awareness of and impact of stereotypes for students at middle school.

Research that examines whether students equate being African American or Latino with doing poorly in school ([Carter, 2005](#); [Horvat & O'Connor, 2006](#)) suggests that such beliefs exist, but that they are not monolithic. Okeke, Howard, Kurtz-Costes, and Rowley (2009) found that African American adolescents who endorsed racial stereotypes were more likely to have lower self-perceptions of academic competence, that is, less likely to see themselves as good students. This effect was mediated by racial centrality, such that students for whom being African American was central to their identities exhibited the negative relation between endorsement of stereotypes and academic self-concept, and those whose race was not central to their identity did not.

Indeed, many studies affirm the importance of the relation between perceptions of race and racial group membership, and academic outcomes ([Oyserman, Harrison, & Bybee, 2001](#)). [Carter \(2005\)](#) found that while some students in an after school program saw being African American or Latino as not being aligned with academic success, others successfully straddled both the academic world and their cultural worlds, leading to higher levels of academic success. Nasir, McLaughlin, and Jones (2009) reported that high-achieving students from a predominately African American, urban high school viewed being African American as aligned with success in school, and saw their school success as a part of their responsibility to the African American community.

Taken as a whole, this research highlights that perceptions and beliefs about racialized stereotypes and racial group membership are related to academic identity, engagement, and achievement. Yet little research (with the exception of [Copping, Kurtz-Costes, Rowley, & Wood, 2013](#)) examines racial differences in students' patterns of endorsement of racial stereotypes. Given that stereotype awareness is more prevalent among children from stigmatized groups and children who are aware of stereotypes about their group are more likely to experience stereotype threat ([McKown & Strambler, 2009](#); [McKown & Weinstein, 2003](#)), it is useful to investigate whether similar

conditions hold for stereotype endorsement. There is also limited research on the effects, academic or in relation to one's sense of self, of endorsing versus not endorsing negative stereotypes about one's group once aware of them.

These gaps in the literature raise the following questions: Are groups who are negatively stereotyped with respect to school—such as African Americans and Latinos—more or less likely to endorse these stereotypes about their group than students who are not members of these groups? And if these groups are more likely to be *aware* of negative academic stereotypes about their group, are they more or less likely to *endorse* these stereotypes? Finally, if they do not endorse them, what affordances or consequences might this resistance have for their sense of self in relation to school?

Intersecting the Cultural With the Individual

Theorists from sociocultural (Cole, 1996; Rogoff, 2003; Vygotsky, 1978) and ecological (Bronfenbrenner, 1977, 1986; Lewin, 1948; Spencer, 2006) perspectives have highlighted the importance and nuances of understanding individual developmental and learning processes as occurring within multiple levels of social contexts. Bronfenbrenner developed an ecological model that takes into account the nested layers of context, from the immediate family and school, to the various institutions that individuals encounter, to the broader social, cultural, political, and economic systems within which these contexts are embedded (Bronfenbrenner, 1977). Similarly, Cole (1996) has argued that there are multiple layers of change that occur as development happens—change at one layer has implications for change at other layers. For Cole, these layers begin with the development that occurs moment-to-moment (microgenesis) and over the life span (ontogenesis), as well as cultural-historical change and evolutionary change. For both ecological and sociocultural approaches, individual development is fundamentally influenced by where individuals are located in relation to a range of social and cultural factors.

Young people's understanding of racial stereotypes about school highlights this intertwining of cultural process and individual development. Stereotypes are related to social processes, such as discrimination and oppression (Coll et al., 1996; McKown & Strambler, 2009), that have implications for identity, well-being, and academic success, and potentially critical effects upon individuals' functioning and school achievement (Essed, 1991; Steele, 1998). Sociologists argue that stereotypes are a core mechanism by which racial and social stratification are maintained (Bobo, 1999; Omi & Winant, 1994)—as such, stereotypes serve as justification for unequal access to a range of resources, including schooling, housing, income, and jobs (Massey,

2007). Stereotypes also support the maintenance of racial stratification by allowing inequality to remain unquestioned.

Understanding stereotypes and their effects is particularly important for urban educators and researchers because of the sheer volume of racially non-dominant students who navigate through urban schools. Without scholarship that examines how stereotypes operate and their relationships with engagement and achievement, racialized and deficit-oriented stereotypes about students' educational, engagement, and academic ability and performance can be relentlessly perpetuated within urban schools.

Current Study

The study presented in this article had three purposes. The first was to document the existence (or lack thereof) of *awareness* and *endorsement* of racial stereotypes about academics for upper elementary and middle school students. The second was to examine racial group differences in levels of awareness of stereotypes versus endorsement of them. The third purpose was to understand how African American and Latino upper elementary and middle school students manage levels of awareness and endorsement, and to explore the effects of these different levels of awareness and endorsement on students' engagement in math class and their sense of themselves as students.

Our inquiry was guided by the following research questions:

Research Question 1: Do elementary and middle school students hold racial stereotypes about who is “good at school”?

Research Question 2: Are there differences between racial groups with respect to *awareness* of stereotypes about their group and *endorsement* of these stereotypes?

Research Question 3: How do fifth- and seventh-grade students from marginalized groups manage varying levels of awareness and endorsement, and what implication does this have for their academic identity and their engagement in school and in their math class?

Method

This study included student surveys, interviews, and classroom observations. Research Questions 1 and 2 were addressed primarily with survey data. Research Question 3 drew upon interview and observational data to capture the process by which young people managed stereotype awareness and endorsement and its implications for students' identity and academic engagement. The study took place at a diverse middle school and its

feeder elementary school in a medium-sized Northern California city. We used multiple methods because surveys allowed us to analyze broad trends in students' perceptions about stereotypes, and qualitative methods such as interviews and classroom observations afforded us the opportunity to analyze and offer detailed explanations of how these perceptions were shaping students' ideas of themselves as students and how students' perceptions related to their participation in mathematics.

Context

The study took place in two school sites (an elementary school and a middle school) in the same neighborhood in a mid-sized city in Northern California. Both schools (and the neighborhood they served) were racially diverse. In the 2008-2009 school year, when these data were collected, the student population at the elementary school was 27% Hispanic/Latino, 21% Filipino, 15% Asian American, 10% white, and 9% African American, with about 15% of students not stating race or being multi-racial. The elementary school had a student population of 438 students, and the middle school enrolled 767 students. Both schools were relatively high-achieving, with Academic Performance Index (API) scores of between 750 and 780. They were also fairly traditional with respect to institutional norms and pedagogical style, with teachers primarily utilizing traditional classroom management styles and curricular materials.

Survey

Participants. Sixty-three fourth- and fifth-grade students and 89 seventh- and eighth-grade students (total $N = 152$) participated in two surveys during their math class in the winter of 2009. The sample included 60 Asian American (31 elementary, 29 middle), 15 Black (five elementary, 10 middle), 41 Latino (19 elementary, 22 middle), and 21 white (three elementary, 18 middle) students.³

Procedures and measures. All students in fourth, fifth, seventh, and eighth grades at the two participating schools were told about the study during their math classes and given consent forms. Students brought the forms home for parent or guardian consent, and only those who returned signed consent forms and assented to participation were included in the study. The survey was administered by a researcher during students' math class. The researcher read the directions aloud and made themselves available to answer questions. Non-participating students were given activities by their teacher to complete while their classmates completed the survey. Students were told that their

answers would be confidential and that they could skip questions they did not wish to answer. The survey took approximately 20 to 30 min to complete.

The survey used Likert items to measure students' awareness of and endorsement of stereotypes about Asian Americans', African Americans', Latinos', and whites' intelligence, academic ability, and mathematics ability and to measure students' academic identity. To measure stereotype endorsement, students were asked to mark their opinion of how friendly,⁴ smart, good at math,⁵ and good at school people from each of four different race groups (African American, Latino, white, and Asian American) were on a 5-point Likert-type scale ranging from *very negative* to *very positive*.

To measure stereotype awareness, we drew on Augoustinos and Rosewarne's (2001) procedure to help students differentiate between their own opinion and their perception of others' opinions. Students were shown a map of the United States filled with faces of people of varied ages and ethnicities and were told that there are lots of different types of people that live in the United States. They were then asked to tell us, "what you believe most people think" rather than their personal opinion. Using this frame, students rated each group on the same three traits as above (intelligence, academic ability, and mathematics ability) on Likert-scales. Here, we report survey findings on the items about smartness and ability in school as we are focusing on general notions of being a student, rather than discussing domain-specific notions.

Analysis. Survey data were entered into a statistical data analysis software program (SPSS), and data were analyzed using a series of ANOVAs and bivariate correlation analyses.

Interviews

To better understand the experiences and opinions of students from potentially negatively stereotyped groups, we selected target students to interview at each site. The analysis of these interviews centered around our third research question: How do fifth- and seventh-grade students from marginalized groups manage varying levels of awareness and endorsement, and what implication does this have for their academic identity and their engagement in school and in mathematics?

Participants. Participants in the interview portion of the study were all African American and Latino students, and represented a range of achievement levels—some were quite successful academically, while others struggled. We sought a mix of boys and girls, but the low numbers of African American and Latino students at the school and rates of consent resulted in our final sample

including 12 students (four boys and eight girls). At the middle school, our focus students included one African American boy, three African American girls, two Latina girls, and one Latino boy. At the elementary school, our focus students included two African American boys and three Latina girls.

Procedures and measures. After consulting with classroom teachers, we approached target students about being involved in interviews either at their lunch (lunch was provided) or physical education (PE) times. All target students that were approached agreed to participate in the interview process, with one boy at the middle school discontinuing participation before the second interview. Interviews lasted between 20 and 40 min and were audiotaped. Each target student was interviewed twice.

Interview 1 focused on students' self descriptions, including questions of how relevant their ethnic/racial and academic identities were to them in general and in school and math contexts. Students were also asked about the implications of each of their self descriptors for their behavior, and how they thought others expected them to participate in school and in math class. Interview 2 focused on students' feelings about school and math, and on their awareness and endorsement of stereotypes about who does well in school and in math. All interviews were transcribed.

Observations

To understand the interaction between stereotypical beliefs and classroom engagement and participation, we observed one fifth-grade and one seventh-grade mathematics class twice a week over the course of 3 months. Our observations focused on whether race and racial stereotypes came up and how, talk and behaviors that suggested a connection/disconnection to math or school, the ways students participated in class, and the types of identities students presented and took up. With respect to the target students, observers noted how they participated in classroom activities, how they interacted with peers and teachers, and how they positioned (or were positioned by others) in relation to the learning setting of the classroom. Observers generally sat near the rear or side of the classroom and took notes as unobtrusively as possible. When asked by teacher or students, observers would offer support to students. However, observers tried to take up the position of a friendly adult and not as someone with teacher-like authority. For example, observers did not correct off task students. Observation notes were taken by hand, then typed into a word processing program, and elaborated as soon as possible after the observation. Observers sought to capture exact dialogue whenever possible, as well as gestures, tone, and body language.

Analysis. To analyze interview and observational data, we read through the entire corpus of field notes and transcribed interviews, looking for emergent themes in how students were discussing and interacting with issues of race/ethnicity, stereotypes, and identity. Several key themes emerged across the data set. These themes (and their complexity) seemed best illustrated by developing full case write-ups for each of our target students. We first iteratively read all of the data relevant to each target student, looking specifically for instances of talk or participation around student identity (academic identity, racial identity, math identity, etc.), stereotype awareness and endorsement (about both one's own group and other groups), perceptions of academic success, and engagement and participation in math class. Focusing on these themes, each researcher analyzed two student cases (one at the elementary level, and one at the middle school level) independently after which we compared our analyses across researchers to assure that the interpretation of our qualitative data was consistent.

We read one another's cases and discussed any differences that we had until consensus was reached. This process resulted in very similar analyses of the field notes and interviews for each target student among researchers. After each student's interview and observational data were analyzed into the aforementioned categories, we looked across students to identify patterns in how they were talking about these issues. This resulted in the emergence of four categories that we describe in our findings. The analysis section includes interview excerpts that best illustrate these thematic findings and the complexities (Yin, 2003) that students navigate relative to their awareness and endorsement of stereotypes and their own identification with stigmatized racial groups.

Results

Our presentation of the findings below is organized by research question.

Research Question 1: Do elementary and middle school students hold racial stereotypes about who is "good at school"?

Our analyses handled this question in two ways. We first examined whether or not students reported being *aware of* racial stereotypes about who can be good at school and who is smart. Then we examined whether or not students reported *endorsing* these racial stereotypes. We reserve our analyses of differences by race for Research Question 2; here, we report on findings for both elementary and middle school students, across racial groups.

Awareness

Recall that our measure of stereotype awareness asked students to report what they think most people in America believe about each of four racial groups—Asian American, white, Black, and Latino. Furthermore, they were asked to rate their perceptions of others beliefs (on a Likert-type scale) on four characteristics: academic ability (good in school), intelligence (smart), math ability (good at math), and friendliness. To determine whether students were *aware* of racial stereotypes related to academics, we conducted repeated measures analyses of variance on student responses as to whether they thought most Americans believed members of each racial group were smart and/or good in school. These analyses revealed that students were aware of racialized stereotypes about smartness, $F(3, 417) = 71.528, p < .001$, and ability in school, $F(3, 420) = 79.578, p < .001$. We conducted paired t tests to compare student responses to stereotype awareness questions about each group. These tests showed that elementary and middle school students thought that most Americans hold positive academic stereotypes about Asian Americans and whites. Students reported a belief that people think Asian Americans are smarter, $t(140) = 10.437, p < .001$, and better students, $t(141) = 12.159, p < .001$, than African Americans, as well as smarter, $t(140) = 9.913, p < .001$, and better at school, $t(141) = 7.527, p < .001$, than Latinos. Similarly, students reported an awareness of stereotypes that white people are smarter, $t(140) = 9.741, p < .001$, and better students, $t(141) = 10.438, p < .001$, than African Americans, and that white people are smarter, $t(140) = 8.188, p < .001$, and better students, $t(141) = 7.527, p < .001$, than Latinos.

To examine whether there were developmental differences in students' awareness of stereotypes, we conducted a univariate analysis of variance with the stereotype awareness measures as dependent variables and student grade level as the independent variable. These analyses revealed significant differences in awareness of academic stereotypes between elementary school students and middle school students (see Figure 1). Middle school students were more aware than elementary school students of positive academic stereotypes about Asian Americans. Compared with elementary school students, middle school students reported a higher awareness of stereotypes that Asian Americans are smart, $F(1, 140) = 6.593, p = .011$, and good students, $F(1, 140) = 6.284, p = .013$. Middle school students were more likely than elementary students to believe that most Americans hold negative academic views of African American and Latino students, than for white and Asian American students. Compared with elementary school students, middle school students were less likely to say that most people think African Americans are smart, $F(1, 140) = 11.897, p = .001$, and good students, $F(1, 140) = 15.661, p < .001$.

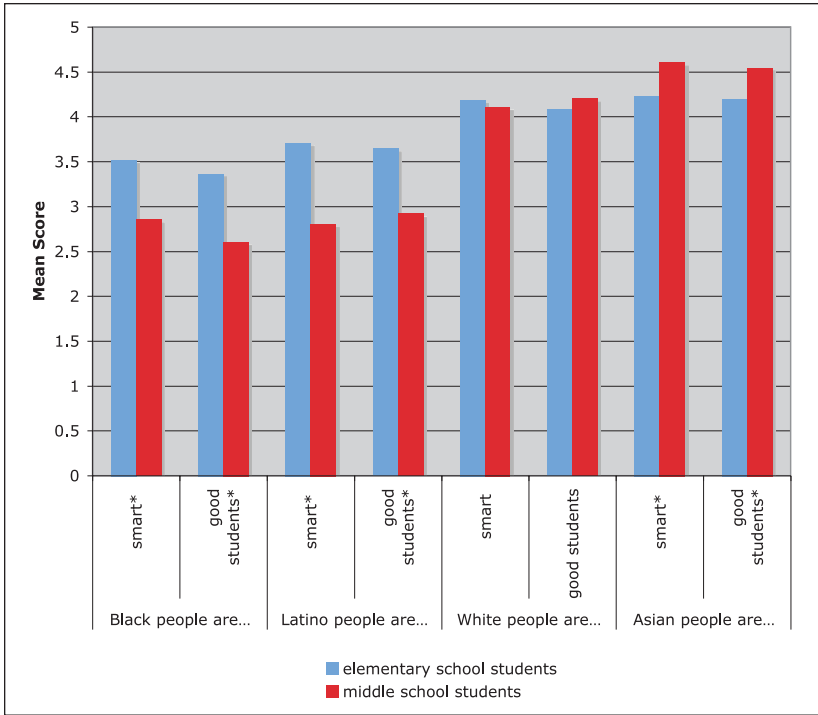


Figure 1. Awareness of beliefs about racial/ethnic groups, by grade level.
 *Indicates differences at $p = .05$ or less.

Similarly, middle school students were less likely than elementary school students to say that people think Latinos are smart, $F(1, 139) = 20.983, p < .001$, and good students, $F(1, 140) = 13.55, p < .001$. There were no statistically significant differences between elementary and middle school students in awareness of stereotypes about white students.

Endorsement. The prior analysis focused on students’ beliefs on what “most Americans” think. In this analysis, we examine students’ self-reported beliefs about whether *they* think African American, Latino, Asian American, and white students are smart and/or good in school. To determine whether students *endorsed* these racial stereotypes related to academics, we conducted repeated measures ANOVA on student responses to each stereotype endorsement question. These analyses revealed that students endorsed stereotypes about smartness, $F(3, 408) = 33.743, p < .001$, and ability in school,

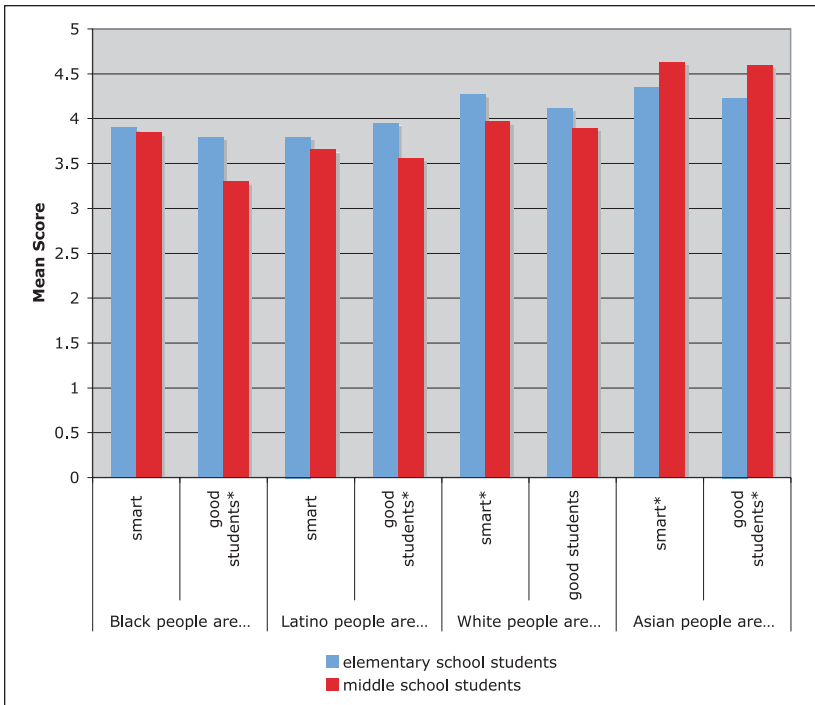


Figure 2. Endorsement of beliefs about racial/ethnic groups, by grade level.

*Indicates differences at $p = .05$ or less.

$F(3, 405) = 33.451, p < .001$. We conducted paired t tests to compare students' perceptions for each racial group. These analyses showed that students endorsed stereotypes that Asian Americans are smarter, $t(139) = 8.148, p < .001$, and better students, $t(137) = 8.587, p < .001$, than African Americans and smarter, $t(138) = 9.298, p < .001$, and better students, $t(140) = 7.447, p < .001$, than Latinos.

To examine whether there were developmental differences in stereotype endorsement, we conducted a univariate ANOVA that compared student responses to the stereotype endorsement questions across grade levels. These analyses revealed some significant differences between elementary school students' and middle school students' endorsement of academic stereotypes (see Figure 2). Middle school students were *more* likely than elementary school students to endorse the stereotypes that Asian Americans are smart, $F(1, 139) = 4.539, p = .035$, and good students, $F(1, 140) = 7.114, p = .009$. Middle school students were *less* likely than elementary school students to

report a belief that African Americans are good students, $F(1, 136) = 7.3, p = .008$, and that Latinos are good students, $F(1, 139) = 5.369, p = .022$. For stereotypes about white students, elementary school students reported a stronger belief than middle school students that whites are smart, $F(1, 139) = 4.014, p = .047$.

Findings show that by middle school, students are highly aware of stereotypes that white students are good students and are smart, and are increasingly aware of these stereotypes for Asian American students. Overall, middle school students were more aware of positive stereotypes about Asians and negative stereotypes about African Americans and Latinos. Middle school students were also more likely to endorse positive stereotypes about Asian American students (that they are good students and smart) and more likely to endorse negative stereotypes about African Americans and Latinos (that they are not good students). However, elementary school students were more likely to believe that white students are smart, a departure from the trend that endorsement of racial stereotypes regarding academics gets stronger from elementary school to middle school. One explanation for this might be that by middle school, stereotypes about Asians were so strong that by comparison whites were viewed as less smart.

Research Question 2: Are there differences between racial groups with respect to awareness of stereotypes about their group and endorsement of these stereotypes?

This question examines the variation in awareness and endorsement by racial group. The above findings indicate that students reported awareness of more positive academic stereotypes about whites and Asian Americans than Blacks and Latinos; and that, in general, students' endorsement of stereotypes increases from elementary to middle school. We also wanted to examine potential racial differences in awareness and endorsement. A univariate ANOVA comparing students on awareness and endorsement by their racial group revealed that African Americans were less likely than Asian American students to believe that most Americans view African Americans as being good students, $F(3, 134) = 2.657, p = .051$, with Tukey's post hoc ($p = .04$). Similarly, a univariate ANOVA showed between-group differences on endorsement of stereotypes about smartness, $F(3, 132) = 3.355, p = .021$, such that Latinos were more likely to view their own group as smart, as compared with Asian American students (Tukey's post hoc, $p = .025$).

To examine differences between awareness and endorsement, we analyzed *differences between* awareness and endorsement by racial group. We created new variables that represented the difference between students' endorsement

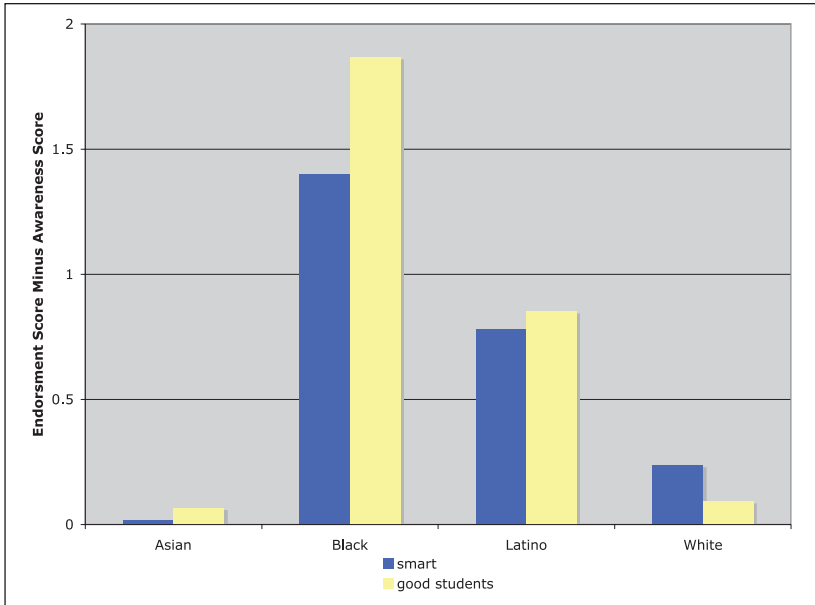


Figure 3. Difference between own-group stereotype endorsement and awareness.

and awareness of stereotypes about their own group. Thus, a larger value represents a greater difference between respondents' beliefs and what they think most Americans believe. A smaller value represents less difference between what respondents believe and what they think most Americans believe. One-way ANOVAs tested differences on these variables between racial groups. These tests revealed between-group differences on stereotypes about smartness, $F(3, 133) = 7.626, p < .001$, and ability in school, $F(3, 133) = 10.912, p < .001$. Tukey's post hoc analysis showed that there were greater discrepancies for African American students and Latino students than for white and Asian American students between how they viewed their own groups and how they perceived others to view them (see Figure 3). In thinking about their own group as smart, Black students had a greater endorsement versus awareness difference than did Asian American ($p < .001$) or white ($p = .017$) students, and Latino students had a greater endorsement versus awareness difference than did Asian American students ($p = .007$). With respect to the stereotype about who is a good student, Black students had a higher difference score on this measure than their Asian American ($p < .001$), white ($p < .001$), and Latino

($p = .032$) peers, and Latino students had a higher difference score than Asian American students ($p = .009$).

These findings show that Black students were more likely than white and Asian American students to have a high discrepancy between their own views that their group was smart and good students and their perception of how others viewed their group. Similarly, Latino students were more likely than Asian American and white students to have a higher discrepancy between their own views that their group was smart and good students and their perception of how others viewed their group. That is to say, Black and Latino students were more aware of the negative stereotypes about their groups, but they were less likely to endorse them. Next, we turn to an analysis of the qualitative data to better understand how Black and Latino students navigated higher levels of stereotype awareness in combination with lower levels of stereotype endorsement.

Research Question 3: How do fifth- and seventh-grade students from marginalized groups (e.g., Black and Latino students) manage varying levels of stereotype awareness and endorsement? What implications does this have for their achievement and engagement in math?

Survey data revealed very few Black and Latino students who explicitly endorsed negative academic stereotypes about their own group. However, in interviews, some of our target students did endorse negative stereotypes about their own groups in more nuanced or subtle ways, or felt conflicted or fearful about the stereotype despite explicitly denying any endorsement of the stereotype. Given the literature on the negative impacts of stereotype threat, we were interested in how the balance of awareness and endorsement of stereotypes about one's own group that a young person holds might have implications for their academic engagement and achievement. To inform our understanding of how students were managing varying levels of stereotype awareness and endorsement, we not only conducted interview but also engaged in classroom observations of the 12 target students.

In analyzing the qualitative data, several key themes emerged (see Table 1). We identified three patterns of awareness and endorsement that students displayed: (a) students who were not aware of stereotypes about their group and thus did not endorse them, (b) students who were aware of negative stereotypes, but did not endorse them, and (c) students who were aware of negative stereotypes and did endorse them.⁶ Below we present case study data from students who displayed each of the patterns and how they managed participation in their mathematics classroom.

Table 1. Target Students' Awareness and Endorsement of Negative Stereotypes About Their Own Racial or Ethnic Group.

	No awareness of negative stereotypes about one's own group	Awareness of negative stereotypes about one's own group
No endorsement of negative stereotypes about one's own group	Keith (5) Lariana (5) Angelina (5) Frank (5) Julia (7)	Darius (7) Susana (5) Sharon (7) Mari (7)
Endorsement of negative stereotypes about one's own group		Byron (7) Kenya (7) Normani (7)

Note. Numbers in parentheses indicate students' grade levels at the time of the study.

Group 1: No Awareness or Endorsement of Negative Group Stereotypes

Students in this group gave no indication of either being aware of or endorsing any negative stereotypes about their own racial or ethnic group. Of the five students in this group, three students stated no awareness of any stereotypes (positive or negative) about any racial or ethnic group, and two students displayed awareness and endorsement of *positive* academic and math stereotypes about Asian American students.

Consistent with the quantitative data that suggest that middle school students were more aware of stereotypes, the students who stated no awareness or endorsement of any stereotypes were predominately elementary students, four fifth graders and one seventh grader. These students were committed to the idea that race did not matter and emphasized effort, interest, and determination as key features of the types of students who succeed in school, and tended to either say that their racial or ethnic group was not an important part of who they were or to emphasize cultural foods, dress, language, and celebrations as the most important parts of their racial or ethnic identities. All three of these students were active participants in their math classrooms, and all three of these students were achieving at a level above most of their peers.

Take Lariana for instance. Lariana, a fifth-grade girl of Mexican descent, was a regular contributor to classroom math conversations who sought mastery by asking questions of both peers and her teacher until she fully

understood a concept. In our interviews, Lariana expressed that she valued her Mexican heritage because it made her unique and related being Mexican to language, travel, dress, and food preferences. When she was asked whether she had heard that certain groups of students did better or worse in school than others, her response was focused on issues of motivation and hard work and on peer pressure rather than comment about racial groups or about racialized stereotypes,

Interviewer: Ok. What about, have you ever heard, some people say that kids, certain groups of kids do worse in school than other groups of kids.

Lariana: Yeah, sometimes

Interviewer: What have you heard?

Lariana: Uh, like, usually my grandma says when you hang out with people that are like kinda like mean or something that you start to get mean, and um, like I guess kind of like that.

Interviewer: So what does that have to do with doing well in school?

Lariana: Like, you want to be smart in school and you wanna get good grades um, and sometimes if uh, like, if people hang out with certain people, sometimes they would tell them “Oh, tell me all the answers,” and uh, and uh, “Oh don’t do well in school. Come with me to, uh, summer school.” But people don’t really wanna go to summer school, so . . .

Interviewer: Right. So are there certain groups of people that you think are more likely to do those things?

Lariana: Uh, yeah

Interviewer: What groups of people?

Lariana: Like the people who always go to each other’s house and study.

Interviewer: Mm hmm.

Lariana: And they like practice doing uh, stuff that they need help on.

Lariana displayed no awareness of any stereotype that people from certain racial groups were better at school. Similarly, the other two students (one African American fifth-grade boy, and the other a Latina seventh-grade girl) with this profile did not acknowledge any conception of racial stereotypes about African American or Latino students’ academic competence even when asked about racial groups. Both saw themselves as successful students and believed that others saw them that way as well. For instance, Julia says, “I’m a successful person . . . I get my homework done, and if I need help I ask for help.” When the interviewer asks whether other people see her as a successful student, Julia responds

simply, “Yes.” They were students who believed in school and who viewed themselves and were viewed by teachers as successful students.

In addition to the two fifth graders and one seventh grader who expressed no awareness or endorsement of any sort of stereotype, two of our target fifth-grade students with no awareness or endorsement of negative stereotypes about their own group did express awareness and endorsement of positive stereotypes about other groups’ performance in school. In both cases, these students held stereotypes that Asian American students were better at school and/or math. Although these students did not explicitly indicate that they were aware of negative stereotypes about their own group, from the perspective of Social Identity Theory (Tajfel, 1982), the belief that an out-group has particular academic strengths has implications for these students as members of an in-group. That is, although they did not explicitly say that their group was not as good in school as others, they implied it with regard to the mentioned out-group. Both of these students were engaged in class and achieved in school, but were quite anxious about their performance, and whether they measured up academically.

For example, Angelina, a Mexican American girl, was in fifth grade. Angelina was a regular participant in her math class. She routinely volunteered to answer questions and asked questions when she was confused. Angelina often also displayed a great deal of mathematical competence, getting answers right and helping others who were confused. However, Angelina had a lot of anxiety about her math performance. When parent conferences came up, for example, Angelina expressed great anxiety about what the teacher would tell her parents, and in interviews she said that she and math problems were “not friends.”

Although Angelina did not state any awareness or endorsement of negative academic stereotypes of any group, she did endorse the positive stereotype that Chinese kids and white kids are better at math than other kids. She explained this stereotype as emerging from her own experience,

Angelina: Well, like sometimes I, like what I think, is that, like not to be racist or anything, but like Chinese people are really good at math. Because Carrie, Jacqueline and Lariana come, I mean Julie, Sara come from all that person. Also Americans like Aidan, they’re very good at math.

Interviewer: Ok, so what makes you think that?

Angelina: They’re like always y’know speeded up, and the rest they’re fine, but they’re not the ones that are speeded up. They just take their time and talk to their, um, partners and everything. And they’re just the

ones that are concentrating and writing all these problems down and y'know finishing up first.

Although Angelina did not explicitly state that she was aware of or endorsed stereotypes that her own group is bad at school or math in comparison with Asian Americans and whites, the seeds of this belief were implied in her comparison. In addition, Angelina showed early signs of internalizing her out-group status as a non-Asian, non-white student, and this seemed to have implications for her perceptions of herself in school. In fact, when asked about her racial identity, Angelina spoke directly to the impact of her ethnic group membership on her performance in school.

Interviewer: Mm hm. Mm hm. So what does it mean to you to be Mexican?

So if somebody said, y'know, what does it mean to be a Mexican person, what would you say?

Angelina: It's fun. You, you go where you belong to, like the place, and it's, yeah, it's nice . . .

Interviewer: Ok. And how does being Mexican affect how you see yourself?

Angelina: It affects me a lot, because sometimes I get confused with the words. Sometimes I say, like words that are in Spanish in school and I get confused because I speak English and Spanish. So I get kind of confused sometimes, but it's fine.

On one hand Angelina appreciated the cultural practices and sense of belonging; on the other hand, she indicated that being bilingual (which she views as a part of being Mexican) caused her to be confused more often. Although Angelina was not explicitly aware of negative stereotypes about her own group, she had started to endorse the notion that being Mexican negatively affected her school performance.

Similarly, Frank, a boy of East African descent, on one hand, saw being African American as linked to being proud, organized, and helpful. However, he also endorsed the stereotype that "Chinese" students are good at math, because, "they really try their hardest." Interestingly, at times in the interview he said that he sometimes thinks of himself as Indonesian or Indian, because "they're mostly pretty helpful and they always pay attention." It is not clear, but his willingness to identify himself with another ethnicity may say something about his awareness and endorsement of stereotypes. Like Angelina, Frank not only also displayed both high levels of competence academically but also evidenced some anxiety about his performance.

Group 2: Awareness of Negative Stereotypes About One's Own Group, but No Endorsement

The four students in this group (one fifth grader and three seventh graders) expressed a clear awareness of negative stereotypes about their own racial/ethnic group. They reacted to their awareness of negative stereotypes in different ways: one became empowered to prove the stereotype wrong, two treated the stereotype as irrelevant, and one student angrily rejected the stereotype while becoming very sensitive to its application to her. Consistent with McGee's (2013) discussion of stereotype management, in this sample of elementary and middle school students, the more strongly students rejected stereotypes the higher their achievement levels were. The student who expressed a stance of empowerment was one of the top achievers in his math classroom, the two students who stated an awareness of negative stereotypes about their group and rejected but treated them as irrelevant were average (C) students, and the student who was sensitive about stereotypes being applied to her was one of the lowest achievers in her math class.

Darius, a seventh-grade African American boy who had an A+ in his math class, took an empowered rejection stance toward negative stereotypes about his group. In interviews, Darius admitted to being aware of negative academic stereotypes about African American and Mexican students, but he unequivocally rejected them.

Darius: Like people say that Caucasians are very smart and they know what they're doing. So, yeah.

Interviewer: Ok. What do you think about that?

Darius: I think . . . I'm not trying to be mean or anything, but . . .

Interviewer: No, that's ok and this is totally confidential, no one else is gonna hear.

Darius: Yeah, I think it's kinda rude because like other people are like, other ethni—ethnicities.

Interviewer: It's hard to say!

Darius: Yeah, are very smart, so people shouldn't be saying like one type of group is better than others.

Interviewer: Ok. And some people also say that kids from certain groups don't do as well as other kids. Have you heard anything like that?

Darius: Yeah. Blacks and Mexicans

Interviewer: Yeah?

Darius: That they don't do good, 'cause once they're all, they're in jail and everything. 'Cause mostly in jail it's Blacks and Mexicans so they don't do well, they don't have anything in life to do.

Interviewer: Ok. What do you think about?

Darius: I don't think it's true at all. 'Cause I know a lot of Blacks and Mexicans that are very smart and talented; have a career and life.

Darius specifically cited his own experience with "smart and talented" Blacks and Mexicans in his rejection of negative ethnic/racial stereotypes. In line with the literature and our own quantitative findings that show large discrepancies between Black students' awareness of stereotypes and their endorsement of stereotypes, this ability may be based on the presence of in-group role models that offer counter evidence of the stereotypic belief (Zirkel, 2002).

Darius's empowered stance to rejecting negative stereotypes about his own group were related to his racial identity meanings. Again aligning with the notion of stereotype management (McGee, 2013) by high-achieving students, for Darius being African American was deeply tied to disproving stereotypes.

Interviewer: How would you describe your ethnic or racial group?

Darius: Um, 'cause some people like they doubt the African Americans or like they're dumb and like they don't stand out to people. Like they're just like other people and stuff so I don't like people saying that about me and stuff, 'cause I'm really smart, a lot smarter than other kids but, so that's why I like my culture and stuff.

When faced with stereotypes about African Americans, Darius rejected these stereotypes and attempted to embody a new vision of African Americans. Darius seemed to overtly resist the idea that African Americans were not strong in school, and this resistance seemed to be related to a more positive connection with school.

In contrast, Susana, a fifth-grade girl of Mexican descent, had a very different reaction to her awareness of stereotypes. Rather than expressing an empowerment to prove stereotypes wrong, Susana expressed a sense of deep anger and concern about stereotypes being applied to her. Susana was one of the lowest achievers in her fifth-grade math class. She was sporadic in her class participation, and both she and the teacher saw her participation as linked to how competent she felt at the particular math task. When Susana got answers right in class, she often proudly showed off to others. However, when she got even a hint that her answers might be wrong, she often shut down, doodling, chatting with neighbors, or just putting her head down. Sometimes this extended to public displays of being defeated, such as marking all of her answers wrong when she got the first problem wrong, or giving herself a D before the grading was complete and slamming her book shut.

Like Darius, Susana was aware of negative stereotypes about her group. In fact, when asked about what it meant to her to be Mexican, Susana responded with a mixture of both pride in Mexican cultural practices and worry about the ways that others made fun of Mexicans. After saying that being Mexican was cool because, “in Mexico they have parties like Saturdays and Sundays and they like their clothes are so cool and mostly when they dance, they’re kinda cool,” she went on to take a defensive stance that being Mexican is, in and of itself, something that was judged and made fun of by others.

Interviewer: Ok, ok. So what does it mean to you for someone to be Mexican? What does that mean?

Susana: I’m just Mexican.

Interviewer: Mm hmm. But if somebody said, “that person’s Mexican,” what would you think? What are the things that would come to your mind about somebody who was Mexican? What would that mean?

Susana: I’d think that they’re making fun of me.

The sensitivity that others are making fun of her was a recurrent theme for Susana. In interviews, she stated that she believed that most of the kids in class made fun of her or thought she was stupid. She linked this to her poor performance in reading and to her ethnic group membership. Susana was also aware of stereotypes that Mexican students are not as smart as other kids. Like Darius, Susana expressed anger about these stereotypes. Unlike Darius, however, Susana did not take an empowered interest in proving the stereotype wrong. Instead, she seemed fearful of being teased or labeled as stupid at any turn.

Interviewer: Ok. Well, what about, have you ever heard anyone say that people in some groups are worse at school than other groups?

Susana: Yes. They think like the Mexicans are retarded.

Interviewer: Why do you say that?

Susana: ‘Cause like I hear people, like when I’m walking through the mall and there’s like a lot of people like they’re Mexican, they talk, like the white people talk about them like, “The Mexicans are retarded. They don’t have papers,” and everything. That gets me mad.

Interviewer: Mm hmm. Can you tell me about, about feeling mad about that? Tell me about how you feel about that.

Susana: ‘Cause like, I’m Mexican, who cares, I can have papers. I will be born here. I can speak different languages. I can be like, I can be Filipino, half Mexican, everything.

Interviewer: Uh huh

Susana: You don't have to make fun of people.

Interviewer: Yeah. What do you think about their idea that Mexicans aren't as good at school?

Susana: It's just messed up.

Although Susana rejected the stereotype as “messed up,” her reasons were very different from Darius's. Whereas Darius cited counter-examples of role models he knew who did not fit the stereotype, positioning himself alongside these role models, Susana's reason for feeling angry about the stereotype was that people do not have full information about her personally—she did have papers and was part Filipino. Although Susana identified primarily as Mexican, to argue against stereotypical assumptions about her group's academic and intellectual competence, she highlighted her Filipina identity. Given Susana's sensitivity to others' stereotypical assumptions, and her own mercurial participation in class, Susana in many ways exemplified the stereotype threat that can emerge as students become more and more aware of racial and ethnic stereotypes about their participation in school.

The other two students in this group (a seventh-grade Latina girl, and a seventh-grade African American girl) were aware that others held negative academic stereotypes about Blacks and Latinos, but they found these stereotypes to be irrelevant to them. For instance, Michelle said,

Well they say that mostly that, um, Chinese people are like the smartest and that Mexicans are like the dumbest. But I don't think that's true, because like I said, everybody can do the same at least if they try.

The other student in this group, Sharon, said, “I've heard that Black people are a little bit slower at math, and that's not exactly true . . . It [what they say] doesn't really matter, I just keep on living my life.”

Rather than countering such stereotypes, these students dismiss them. Both of these students somewhat believe that school is important, but both believe that they could do better in school. Both are average (C students) achievers in class.

Group 3: Awareness and Endorsement of Negative Stereotypes About One's Own Group

Three students, all seventh graders, expressed both an awareness of and some endorsement of negative stereotypes about their own group. Of these students, two expressed a sense of being conflicted about the stereotype

(rejecting it in some places then endorsing it in others), and one endorsed the stereotype as true of his group, but not of himself personally, explicitly disavowing his connection with his ethnic group. Academically, both of the conflicted students were achieving at a below average level (one student was failing in her math class, the other was earning a C-) and the student who rejected the stereotype as personally relevant earning an A in his math class. Below we examine cases of two of these students.

At the time of the study, Kenya, an African American girl, was in seventh grade. Being African American was an important piece of how Kenya saw herself, and her description of what it meant to her to be African American included feeling more confident about what she could accomplish as we now have an African American president. In her words, "Mm, well, well since we have a African American president, I feel more um confident about what I can do now in life."

Kenya never mentioned the word "stereotype" in our observations or interviews; however, she did speak about observations she had made around school that seemed to fit with stereotypical views. According to Kenya, there were racially segregated social groups within her school, one of which she described as mostly Filipino and one as mostly Black.⁷ Kenya attributed positive characteristics to the Filipino group, describing its members as polite and smart, and negative characteristics to the Black group, whose members she said cursed and got in trouble.

Kenya: Oh, yeah. Um, like for instance at our school there's like, I'm not trying to be racist, but there's like um a Filipino group and like only like I don't really know who they are, but I see them a lot and it's like this Filipino group that hangs out and this Black group and everything, it's like just different groups.

Interviewer: Uh huh

Kenya: But some people, like some different um people go on them, but um I think, like all of them are like A students from what I've heard about them or and like some of them I talk to,

Interviewer: Uh huh

Kenya: The ones they hang out with are actually really smart, and they don't really like do what other people do like . . . for instance in the black group what they do is they like cuss, and if they get in trouble they would like swearing and everything like that, and the Filipino group they'll be like, "Oh, I'm sorry," and something like that. And, I just think that they're, they just seem smart.

Interviewer: Ok. The Filipino group?

Kenya: Yeah. 'Cause one of my friends that is in them, she got, there was an assignment that was one hundred points, and she got one hundred points plus twenty.

Interviewer: Wow.

(Kenya laughs).

Interviewer: So you, so it seems like that Filipino group does better in school?

Kenya: Yeah.

Interviewer: And what about that Black group?

Kenya: Some of 'em, well, when I ask 'em what their grades are they usually say A's, but I really don't know.

Interviewer: Mmm. Ok.

Kenya: From the way they act I, I don't think so, but I can't judge anyone. So . . .

Interviewer: Ok. Are you in . . . would you put yourself in any group?

Kenya: I get along better with the Black one, but

Interviewer: Ok.

Kenya: But, um, I think it would be better if I went into the other group, but . . . yeah.

Kenya situated herself in the Black group, which was consistent with our observations that she socialized primarily with other Black students, but she expressed a belief that she might be better off in the other group. She did not explain this comment further, but it seemed to indicate an endorsement of negative views about her racial group (at least the one she belonged to in her local school context), as well as a resulting struggle to reconcile her identity as a proud African American with her desire to succeed in school and her belief that her African American friends get in trouble and do not get good grades.

This struggle was evidenced in her participation and achievement in math class. Kenya was a social member of her math class, and most of her socializing was with other African American students. Kenya also, however, strived to please her mom, through good grades and good behavior in school. She felt that she was "brought up to be" a respectful and polite person who did not swear. However, she had some disciplinary issues in school (she claimed the principal threatened to expel her if she got in trouble one more time), and says that her "grades aren't that good."

Kenya was often a visible member of her math class, but this was due to her chattiness and off-task behavior rather than to her participation in the day's lesson. She was often called to task by her teacher for talking, being out of her seat and not paying attention. When she did participate, though, Kenya

was not afraid to ask questions or to express confusion about the math concepts being discussed.

Although conflicted, Kenya seemed to have in some ways internalized the notion of herself as a member of an under-achieving group. Normani, also a seventh-grade African American girl, was similarly struggling with a sense of herself as a member of an academically inferior group. Similar to Kenya, when asked whether others saw her as a successful student, she said, "They just don't see me like that. Like, I don't see other people like that too. I don't, no offense, I'm not trying to be racist or anything, I only see Asian people like that." Despite this belief, Normani, like Kenya, was clear that being African American was important to her. Normani's participation in class was spotty, and she presented herself as a student who struggled with math. In contrast, Byron, a high-achieving boy of Mexican descent also endorsed negative stereotypes about his group, but disavowed them as personally relevant by distancing himself from his group.

In interviews, Byron described himself as both a "hard worker when it comes to learning" and a "slacker, who tend(s) sometimes to also do just mediocre work, regular work, not try my best, and try and do the littlest possible." He described himself as a "high achiever" in math class and elaborated that "I do all of the work and I also get extra credit for other things that I do extra." This extra credit work might explain Byron's A grade in math, despite scoring in the mid-60s on two quizzes during the time we were in his classroom.

When asked whether his ethnicity was an important part of who he was, Byron said yes. He then went on to talk about Mexicans in a stereotypical way. He said that being Mexican did not affect how he saw himself; it affected how other people saw him.

Interviewer: Um, how would you say being Mexican affects how you see yourself, if it does.

Byron: Mmm, it doesn't really affect how um I see myself it really affects how people see me.

Interviewer: Do you feel like people expect something.

Byron: Yeah.

Interviewer: Of you? And what do you think that is?

Byron: Um, well, not that bright, um, doesn't really do much work, mostly does labor work . . .

Interviewer: Ok, ok. Um, how do you think you might be different if you weren't Mexican?

Byron: Well the only difference it would be is that people wouldn't stereotype me.

Byron went on to agree with the stereotype, claiming that it was rare for him to see Mexicans who do try hard. However, he did not want to be seen by others in this light and felt that being Mexican meant that he had to “try harder to disprove, disprove that stereotype.”

Interviewer: What, how would you describe your race or ethnic group?

Byron: Well, I would kind of describe . . . well usually around in the United States.

Interviewer: Uh huh.

Byron: The ones that come here um, um well the kids of the parents they, well the other ones they don't really, I see them as, they don't really try hard.

Interviewer: Who's they, sorry, what is the, what race or ethnicity would you describe yourself as?

Byron: Mexican.

Interviewer: Mexican, ok. So, um, so you say that you see Mexicans who don't try hard.

Byron: Yeah.

Interviewer: Yeah? Do you think that . . . do you also see Mexicans who do try hard?

Byron: Very . . . that's very rare for me to see.

Interviewer: It is?

Byron: Yeah.

Interviewer: Um, so what does it, what would you say it means to you to be Mexican?

Byron: Um, it means that I have to try harder to disprove, disprove that stereotype.

Like Darius, Byron expressed a desire to prove the stereotype wrong, however, unlike Darius, Byron described himself as “not like others of (his) race,” because he listened to different types of music (while he thought Mexicans listened to rap, hip hop, R & B, and reggae, Byron preferred rock) and because he hung out with different people. At the same time, Byron described himself in ways that are similar to the stereotypes of Mexicans that he cited. He claimed that he was a “slacker” and that he is “sometimes too lazy to do the work,” and when we tried to schedule a second interview with Byron, he told us that he did not want to do it because he was “too lazy.”

Like Kenya, Byron seemed to experience a struggle with his racial/ethnic identity. Although Kenya seemed to want to hold on to her racial identity despite her belief in negative stereotypes about her group, Byron worked to relinquish his. Kenya and Byron's different reactions to their awareness of stereotypes about their group parallels Okeke et al.'s (2009) findings that the

endorsement of negative academic racial stereotypes affects academic self-concept for young people who are high in racial centrality but not for those who are low in racial centrality.

Discussion

This study adds to the literature on the relationship between stereotypes, students' perceptions of race, and their academic identities. First, this study is salient to understanding how urban elementary and middle school students grapple with racial storylines ([Nasir & Shah, 2011](#)) about who is "good" at mathematics and how they rationalize their endorsement or rejection of a racialized hierarchy of mathematical ability (Martin, 2009). Second, this study contributes to our understanding about how self-report and qualitative data can be used to examine this relationship. Third, our study adds the limited body of literature that analyses explicit measures of urban students' awareness and endorsements of racial stereotypes about school, and the limited empirical work that examines the connection between how students, particularly negatively stereotyped students in urban environments, think about racial stereotypes and how they perform in school. Existing literature has discussed these issues and relationships anecdotally or qualitatively but have not measured them quantitatively nor measured how qualitative analyses speak to quantitative ones.

Our findings showed that students in urban schools are aware of and do hold school-related racial stereotypes, and that these stereotypes about who can be good at school get stronger in middle school. This study has also begun to break new theoretical territory in understanding racial differences between awareness of racial stereotypes and endorsement of those stereotypes, and has illustrated that African American and Latino students within urban schools experience greater divergence between their views of their group's abilities in school, and their beliefs about how others view their group.

The qualitative data points to the complexity of negotiating emerging awareness of stereotypes for Black and Brown students. Simply knowing whether students are aware of or endorse negative stereotypes about their group does not have clear implications in and of itself. However, our qualitative data indicate that the sense students are making of these stereotypes and their relevance to the self may have important implications for school achievement and engagement in urban schools that warrant further exploration. The varied reactions that students with the same awareness/endorsement profile can have may explain the lack of statistical significance between these patterns and achievement. This raises important questions about how schools

can support students who are members of negatively stereotyped groups to create new more empowered meanings.

The qualitative data also illustrated several important findings with respect to the relation between awareness and endorsement of academic racial stereotypes and engagement and achievement in urban school. A key aspect of these processes seemed to be the extent to which youth saw the stereotypes as being applied to *them*, and being unsure about how to respond when they felt these stereotypes were being applied to them. It was this set of concerns, consistent with research on stereotype threat, that seemed to hamper students' engagement and performance in math class.

When we consider the African American and Latino students who were achieving well in school, these included students who were unaware that negative racial stereotypes might be applied to them (a fleeting phenomenon that had all but disappeared by middle school), students who knew stereotypes about their group existed, but did not find them personally consequential,⁸ and students who had strong counter-narratives about school and their racial/ethnic group and who saw themselves as change agents. This is consistent with findings from high school populations (Carter, 2005; Nasir et al., 2009). Students who were aware of racial stereotypes, who saw them as personally consequential, but who did not have strong counter-narratives or sense of group agency fared much worse academically.

These findings may also be related to important trends in the racial socialization literature (Hughes & Chen, 1997; Hughes et al., 2006), which highlight the importance of young people being actively socialized into the meanings and practices of youth, as well as a wide range of work from psychology, anthropology, and education that points to the ways particular youth, sometimes in the context of certain school or program environments, learn to construct narratives about race and achievement that counter the stereotypes that are so common in our society (Davidson, 1996; Schaffer & Skinner, 2009).

Limitations

There were important limitations in our study. Although our qualitative data suggested some trends between the meaning students were making of stereotypes and their achievement and engagement in their math classrooms, these trends were observed in a very small subsample of the entire population, and would need to be investigated further with a larger sample. In addition, although these findings suggest that a correlation may exist between these variables, we cannot say whether there is a causal link between the sense young people are making of negative stereotypes about their ethnic or racial group and their achievement and engagement in math class.

Constraining the discussion of stereotypes to four ethnic/racial groups has also oversimplified the experience of many students. For example, students who are multi-racial or come from non-dominant Asian groups (e.g., Filipino students) may make sense of stereotypes in much more complex ways. We felt that these constraints were necessary to understand broad trends in stereotype awareness and endorsement, but further research would benefit from exploring the impacts of these stereotypes on students with a more nuanced lens.

Finally, it is important to consider the local school context in examining the nature of racial stereotype awareness and endorsement in schools. Although the schools we studied were in an urban environment (Milner, 2012), were racially diverse, and did not have a single ethnic majority, the fact that African American and Latino students did not constitute a majority of the population may have intensified awareness and endorsement of racial stereotypes and limited opportunities for variation to be accepted within racial groups. It is possible that patterns of stereotype awareness and endorsement and the meanings that students make of them may be different in schools in which Black and Latino youth are in the majority.

Conclusion

This study confirms that race is quite prevalent for young people as they navigate their lives in urban schools. These findings support a deeper understanding of the role of stereotypes in urban students' academic experience, and have implications for how we might support students in managing the effects of these stereotypes. Educators must be aware of the salience and impact of these racialized stereotypes and be proactive in facilitating counter-narratives that re-frame traditional academic racial stereotypes and support youth's critical consciousness about such stereotypes. Likewise, researchers need to use multiple and mixed methods to deeply examine non-dominant and dominant students' awareness and endorsement of racialized stereotypes, and their potential effects on students' engagement and achievement in mathematics and in school more broadly. This scholarship is needed to debunk racialized and deficit-oriented stereotypes about non-dominant students' intelligence, achievement orientation and trajectories, and behavior within schools. Educators and researchers in and around urban schools in particular need to interrogate the relationships between racialized stereotypes, student identity, and academic engagement and achievement. It is within these urban schools that the tense battle for public education, and for quality education as a constitutional right (e.g., Perry, Moses, Cortes, Delpit, & Wynne, 2010), is being waged.

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Notes

1. Social perspective taking is the distinctly human capacity to understand the motivations and feelings of others.
2. The non-capitalization of “white” is intentional. Unlike the term “Black” which connotes ancestry within the African Diaspora and often a shared socio-political experience in the United States, the racial designation of “white” has been attributed to a rotating cadre of racial and ethnic groups whose socio-political experiences in the United States have similarly shifted over time. There is thus a lack of agreement about who is white even though there is historical consistency about the privileges of being white.
3. These demographics were roughly representative of the demographics of the schools as a whole.
4. Friendliness was not a variable of interest. It was a distinction task.
5. Math ability is not a focus of this study
6. This assumes that awareness of stereotypes is a necessary predecessor of their endorsement. Student interviews support this assumption, as we found no students who endorsed negative stereotypes without stating an awareness of them.
7. Although she pointed out that there are some white students in the Filipino group and some Latino students in the Black group.
8. In some cases, rejecting stereotypes as personally relevant involved a troubling rejection of one’s own race. In line with Okeke, Howard, Kurtz-Costes, and Rowley’s (2009) findings, our qualitative data suggested that students for whom being a member of their racial group was not an important part of how they saw themselves were able to distance themselves from stereotypes in a way that may have allowed them to achieve. Although this own-group rejection may have allowed for higher achievement, it came at a huge expense for these students’ racial identities, and thus arguably cannot be considered a positive outcome for the whole child.

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