

## Stereotype Threat and the Standardized Test Performance of Black Children: When Does the Threat Become a Relevant Performance Inhibitor?

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**Abstract:** As Black students become more invested in the outcome of standardized tests, stereotypes become salient, subsequently depressing performance (Steele, 1997). As federal law has increased the importance of standardized testing at the elementary level, research is needed to determine when the stereotype threat becomes a relevant performance inhibitor.

The standardized test underperformance of Black students is a serious concern and source of debate (Herrnstein & Murray, 1994; Jencks & Phillips, 1998). Each year, statistics from statewide and national testing programs reiterate a troubling test score gap between White and Black Americans at every grade level (College Board, 2006; Florida Department of Education, 2006). Prevailing stereotypes about the intellectual and cognitive abilities of certain groups salient for individuals who belong to those groups leads to lower performance (Croizet & Claire, 1998; Gonzales, Blanton, & Williams, 2002; Spencer, Steele, & Quinn, 1999; Steele, 1997; Steele & Aronson, 1995). Specifically, Steele & Aronson (1995) found that Black college students performed significantly worse than their White counterparts on a standardized test when the test was presented as diagnostic of their intellectual abilities. However, they performed about as well as Whites when the same test was presented as a nondiagnostic problem-solving task. The possibility of confirming the common stereotype of Black intellectual inferiority became salient when the test was framed as diagnostic, disrupting cognitive processes and depressing performance. Racial performance gaps may be a product of situational cognitive processes that may be amenable to intervention.

Stereotype threat refers to being in a social situation where a stereotype about one's group could apply. The theory assumes that underperformance is triggered by the possibility of being judged in terms of said stereotype. Given the ubiquity of stereotype threat effects and the possibility of positive intervention, a necessary next step is to determine when, developmentally, people begin to experience them. The purpose of this paper is to explore the literature on the topic and propose a future study. The research questions that guided this paper are: When do Black children begin to experience the effects of stereotype threat as related to standardized testing? How are these effects mediated by performance domain-identification, goal-orientation, self-efficacy, and anxiety? Standardized testing is becoming increasingly important at the elementary level. Therefore, it is of relevant interest to determine when exactly the disruptive cognitive processes induced by stereotype threat begin to negatively influence the standardized test performance of Black students. If child test performance is significantly affected, it is of additional interest to determine specifically what cognitive processes are involved. This information will provide educators with the means to intervene to mitigate the maladaptive performance of their students.

### Domain Identification

A stereotype could be threatening only when a student is invested in performing well on a standardized test (Spencer, Steele, & Quinn, 1999; Steele, 1997). How threatening the standardized testing situation can be depends on a person's identification with that stereotype-

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relevant domain that is an area where one knows they may be seen through a stereotypical lens. Performance is lessened only when the stereotype threatens a student's self-concept. Threatening situational pressure thus affects a subset of the stereotyped group that places higher importance on the standardized test results. In such cases, cognitive processes are disrupted because students who are domain-identified not only have traditional testing concerns but also the added pressure of not confirming a prevailing stereotype about their group. If students care about doing well on a standardized test, the prospect of being viewed stereotypically is upsetting and disturbing, resulting in a deleterious effect on their performance.

High school and college students understand that their performance on standardized tests is important for their academic future and that such a high-stakes evaluative environment makes salient their social identity and relevant stereotypes (Good, Aronson, & Inzlicht, 2003). No Child Left Behind Act (NCLB) of 2001 emphasized standardized testing in elementary grades. As a result, young children are made acutely aware of standardized tests at an earlier age and have a heightened investment in high performance on such tests, as low performance may result in retention. Assuming that retention is an undesirable result (Jimerson, Ferguson, Whipple, Anderson, & Dalton, 2002), adequate performance on standardized tests would be more self-relevant to young children. Thus, a pressing need is present for research on how the standardized test performance of early children is now influenced by the situational pressures outlined in stereotype threat theory.

Children's awareness of stereotypes increases dramatically between the ages of 6 and 10, and Black children of all ages are more likely to be aware of academic stereotypes than White children (McKown & Weinstein, 2003). This phenomenon, combined with an increased level of domain-identification, enhances stereotype threat effects during elementary grade standardized testing. For example, NCLB requires third-graders to be retained, with few exceptions, if they do not receive state mandated scores, which makes third-graders more domain-identified than first-graders (decisions on first grade retention are largely based on teacher judgment). Black third-graders experience more deleterious stereotype threat effects than Black first-graders. Black-White test score gap would be more pronounced in third grade than in first grade.

Children's investment in performance may also be relevant to their value for successful performance, another important part of their self-definition (Wigfield & Eccles, 1992). Therefore, even students without exceptional academic capabilities who highly value their success on a standardized test may be sensitive to stereotypes and stereotype threat effects (Ryan & Ryan, 2005). Students would value adequate standardized test performance more as they approach third-grade due to the NCLB decision on retention at that grade.

### **Achievement Goal Theory**

Achievement goal theory addresses the reasons students attribute to their achievement behaviors (Dweck, 1986). Achievement goals refer to a schema regarding beliefs about purpose, ability, and probability of success that influence an individual's attitude towards and engagement in an achievement task (Dweck & Leggett, 1988). More specifically, a mastery goal concerns a focus on evaluating one's competence regarding if one has mastered a task or completely developed one's skills. A performance goal concerns a focus on normative standards and one's competence is evaluated regarding how well one has done compared to others (Elliot & McGregor, 2001).

### *Anxiety*

Some researchers have found no association between stereotype threat and self-reported test anxiety. Schmader (2002) suggested that the performance impairment of women on a math

assessment was not paralleled by self-reported feelings of anxiety. However, stereotype-threatened individuals do not always present non-verbally expressed anxiety in self-reports (Bosson, Haymovitz, & Pinel, 2004). Other research (Inzlicht & Ben Zeev, 2003; Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995) asserts that when students experience stereotype threat, they show increased anxiety. The possibility of being judged according to a stereotype during a standardized test adds pressure, increases anxiety, threatens an individual's self-worth, and leads to worry regarding performance evaluation and decreased test performance. In relation to achievement goal theory, this frames their goal as *performance-avoid*: children focus on avoiding negative judgments, instead of on mastering the task. Performance-avoid goals have been linked to increased anxiety and lower levels of performance (Elliot & McGregor, 2001; Elliot, McGregor, & Gable, 1999; McGregor & Elliot, 2002; Skaalvik, 1997). Related to standardized testing, Ryan & Ryan (2005) suggest a model in which the situational cues that initiate stereotype threat orient an individual towards a performance-avoid achievement goal, leading to increased test anxiety and diminished performance. Given the stereotype awareness of Black children (McKown & Weinstein, 2003) and the increasing importance of standardized testing at the elementary level, Black children may orient themselves towards a performance-avoid goal in a standardized testing situation, which may lead to increased anxiety and depressed performance.

#### *Self-Efficacy*

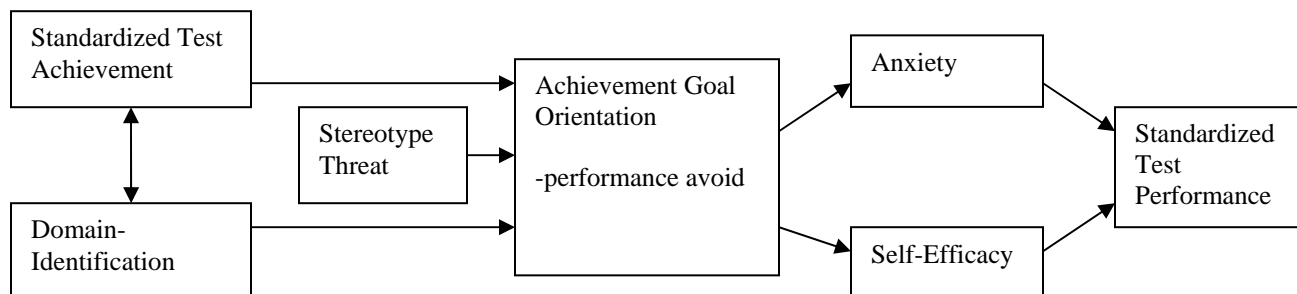
Stereotype threat situations do not lower expectancies for test success and set up self-fulfilling prophecies (Aronson, Quinn, & Spencer, 1998; Shih, Pittinsky, & Ambady, 1999; Steele & Aronson, 1995). Instead, the situations introduce negative stereotypical thoughts which individuals must contend with during an exam. Thus, stereotype threat may not instantly influence self-efficacy (i.e., individuals' beliefs about their own abilities) for the exam but rather set up an *interpretive framework* for continuous self-evaluation, so that when difficulty is experienced, self-efficacy falters, and performance is depressed (Steele, 1997). Stereotype threat has been also shown to cause self-doubt immediately prior to exam (Spencer, Steele, & Quinn, 1999). More specifically, Black standardized test participants displayed significantly more self-doubt than White participants or than Black participants in a nondiagnostic condition (Steele & Aronson, 1995). When difficulty is encountered during a diagnostic standardized test, the self-efficacy of invested Black students falters, although further research seems necessary.

Performance-avoid goal sets up a situation that undermines self-efficacy (Skaalvik, 1997). If stereotype threat leads to a performance-avoid achievement goal, then when difficulty is experienced during a standardized test, Black students are likely to be concerned that this might indicate low ability, which undermines self-efficacy (Ryan & Ryan, 2005). Given the stereotype awareness of Black children (McKown & Weinstein, 2003) and the importance of standardized testing at the elementary level, Black children might experience similar stereotype threat results.

#### *Stereotype Threat Theory and Achievement Goal Research*

Ryan and Ryan (2005) have proposed a model (see Figure 1) that integrates stereotype threat theory with achievement goal research. I have adapted this model to apply to the standardized test performance of Black children. The researchers suggest that such a stereotype threat situation heightens performance-avoid goal orientation. A performance-avoid goal orientation in turn heightens the maladaptive effects of increased anxiety (Elliot & McGregor, 2001; Elliot, McGregor, & Gable, 1999; McGregor & Elliot, 2002; Skaalvik, 1997) and diminished self-efficacy (Skaalvik, 1997). These resulting effects depress the performance on

exams for domain-identified members of stereotyped groups. It could be, therefore, expected that Black children would increasingly experience anxiety and diminished self-efficacy as they approach third grade, where students become more invested in their standardized test performance.



*Figure 1.* Conceptual model of the processes underlying stereotype threat and standardized test performance.

### **Extending Stereotype Threat Research to Children**

Although research has focused mainly on college populations, the effects of stereotype threat have been replicated several times, for several different cultural populations, and in a variety of performance domains (Aronson, Lustina, Good, Keough, Steele, & Brown, 1999; Inzlicht & Ben-Zeev, 2002; Gonzales, Blanton, & Williams, 2002; Stone, Sjomeling, Lynch, & Darley, 1999). Much previous stereotype threat research has focused on standardized testing and college students. High performing college students are likely to be domain-identified with academic performance. Little attention, however, has been given to early children, despite the fact that they have a developed social identity and are aware of stereotypes (McKown & Weinstein, 2003; Phinney, 1990).

The recent No Child Left Behind Act imposed high-stakes standardized testing in elementary grades. As a result, young children are made highly aware of standardized test significance at an earlier age and have a heightened investment in their test performance. Low performance may result in retention. Thus, a pressing need for research is present on how the standardized test performance of early children is influenced by the situational pressures outlined in stereotype threat theory. This is of particular importance because, as outlined, stereotype threat research has demonstrated that racial performance gaps are influenced by cognitive processes that may be amenable to intervention. Limited research has already demonstrated the success of such intervention. Specifically, stereotyped seventh grade students who were mentored to either view intelligence as malleable, or to attribute academic difficulties in the seventh grade to the novelty of the educational setting, experienced significantly reduced stereotype threat effects, and improved exam performance (Good, Aronson, & Inzlicht, 2003).

I propose future research to investigate the impact of stereotype threat manipulations on the standardized test performance of Black children, who are targeted by the negative stereotype of Black intellectual inferiority. Research on the concept of stereotype threat suggests that the salience of the negative stereotype about racial identity induced by the standardized testing situation can impede performance, causing invested Black college students to perform more poorly than they would in a neutral context (Steele & Aronson, 1995). I propose that similar effects will occur in an elementary school setting. My proposed research would examine the mediating cognitive processes. My hypothesis is that all children will report increased domain-

identification as they approach third-grade. This would make Black children more susceptible to negative stereotype threat effects (Steele, 1997). Therefore, I also expect that Black children will orient themselves towards a performance-avoid goal, demonstrate increased anxiety, and report decreased self-efficacy in regard to standardized testing situations as they approach third-grade. As a result I expect the Black-White gap in standardized test scores to increase as children move toward this grade level. Lastly, I hypothesize that stereotype threat effects, and the performance gap, can be mitigated by presenting exams as nondiagnostic.

In order to test my hypotheses, I propose a quasi-experimental 2 x 2 design, at two grade levels (first grade and third grade), adapted from Steele & Aronson (1995). Participants will be elementary school students in Miami-Dade or Broward County. The factors will be the race of the participants, Black or White, and a test description factor where the test will be presented as either a practice standardized test (the Florida Comprehensive Achievement Test), or as a nondiagnostic problem-solving activity. The foremost dependent variable will be participants' performance on the practice test items derived from moderate to difficult grade level reading comprehension study guides. Participants will also be asked a series of questions before the test administration to determine their domain-identification and self-efficacy. Self-efficacy will be reassessed at a midway point during testing. Self-reported anxiety will also be measured for all participants using established anxiety scales after the test. Although research has established that stigmatized individuals suffer impaired performance under stereotype threat conditions, the anxiety presumed to help mediate this effect has proven difficult to establish through self-reports. Therefore, following the model of Bosson, Haymovitz, and Pinel (2004), anxiety will also be assessed by a judge blind to all procedures directed to look for behaviors that communicate anxiety during the test. Results should demonstrate the standardized test performance effects of stereotype threat on Black first- and third-graders, and also highlight mediating psychological factors.

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