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Exploring a Mechanism Underlying Stereotype Threat in ADHD

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EXPLORING A POSSIBLE MECHANISM UNDERLYING STEREOTYPE THREAT IN ADHD

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Attention Deficit Hyperactivity Disorder (ADHD) is a common behavioral diagnosis among young adults. Those who have ADHD are distracted easily, talk excessively, and even have deficits in working memory (American Psychiatric Association, 2013; Dawson et al., 2004; Swanson & Sachs-Lee, 2001). These ADHD symptoms contribute to the stereotypes that are often applied to those who have the diagnosis. Chew, Jensen, and Rosén (2009) found that college students used negative adjectives more so than positive adjectives when describing their peers with ADHD. Students with ADHD are not immune to having these negative stereotypes of the disorder. In the same study, students diagnosed with ADHD described their ADHD peers more negatively than students without ADHD did. Not all research has documented negative perceptions of ADHD by those with the disorder, however. Gajaria, Yeung, Goodale, and Charach (2011) found three times as many positive as negative comments about ADHD posted on Facebook ADHD support-group pages. The students with ADHD who frequented these pages were aware of the negative stereotypes about their diagnosis, but they did not talk about ADHD in a negative light.

Although findings have been mixed with regard to ADHD stereotypes, there is evidence that the negative stereotypes held about those who have ADHD could negatively affect the self-perceptions and cognitive performance of those people. Foy (2015) examined the potential role of stereotype threat in influencing the cognitive performance of students with ADHD. Of the 114 participants in his study, 53 reported having a history of ADHD. Half of the participants from the ADHD group, as well as half of the participants from the control group, were exposed to stereotype threat, while the remaining participants were not. Before asking the participants to answer GRE questions, Foy asked students in the threat condition to complete the Adult ADHD Self-Report Scale (ASRS) symptoms checklist and warned them that those with ADHD usually score much lower on GRE questions compared to those without ADHD. Demonstrating the negative impact that stereotypes can have on cognitive performance, Foy found that students with ADHD who were exposed to stereotype threat performed significantly worse on

quantitative GRE questions compared to those with ADHD who were not exposed to the threat.

Interestingly, the negative effect of ADHD-related stereotype threat on cognitive performance is *not* limited to those who have an ADHD diagnosis. Wei and Suhr (2015) had 72 undergraduate college students who had *not* been diagnosed with ADHD complete the ASRS; only those who scored above the 50th percentile and who had a high concern about having ADHD were chosen to participate in the study. The researchers told half of these students that they would be playing a computer game (control condition) and the other half that they would complete a computerized task assessing working memory and attention that is commonly used to evaluate ADHD (diagnostic threat condition). Those students who were exposed to the diagnosis threat performed worse on the computerized assessment compared to their peers who were playing the same computer game for fun. Their findings suggest that when college students believe they are being evaluated on skills that they are concerned about, their performance is negatively affected even when they are not officially diagnosed with ADHD.

In another study, Suhr and Wei (2013) not only investigated the influence of perceived threat on college students without ADHD but also examined attributions that these students made about their performance. This study included 85 participants, none of whom had ADHD. Half of the participants were told that they were going to play a computer game for fun (control condition), and the other half were told that they were going to play a computer game that measured intelligence (evaluative threat condition). The students in the evaluative-threat condition performed worse on the complex working-memory measure compared to those who were given nonthreatening instructions. Even more revealing, the students who were high in trait self-handicapping and who had experienced the threat reported more ADHD symptoms after completing the test compared to their peers in the nonthreatening control condition. These findings suggest that even students without ADHD may attribute their poor performance to ADHD symptoms.

Although no studies have examined the self-perceptions of students *with* ADHD, Privitera, Agnello, Walters, and Bender (2015) conducted a study on the self-perceptions of college students who were *misled* to believe that they had ADHD. Undergraduate students completed a pretest, the ASRS. Fifty-four participants, all of whom scored below clinical significance, were chosen to participate in the study. When they returned one week later, participants received random feedback from the pretest. “Negative” indicated that they did not have symptoms consistent with ADHD, “positive” indicated that they did have

symptoms consistent with ADHD, and "no feedback" meant that the results were not ready yet. Participants then completed a posttest, which included the same items from the ASRS, presented in backward order to reduce testing effects. Although all participants had been selected for inclusion based on scoring below clinical significance on the pretest, those in the "positive" condition reported significantly more ADHD symptoms after receiving false-positive feedback. More specifically, both total scores and scores in the "inattentive domain" significantly increased at posttest for the students who received the false-positive feedback. Presumably, these students changed their self-perceptions because they believed that they might have ADHD. This suggests that telling individuals that they have ADHD symptoms affects their self-perceptions even if they do not have a formal diagnosis of the disorder.

In summary, previous studies have shown that college students without ADHD may believe that they have ADHD and may report more ADHD symptoms in response to either performing poorly on working memory tasks or being told that they have ADHD (Privitera et al., 2015; Suhr & Wei, 2013; Wei & Suhr, 2015). In addition, Foy (2015) found that students with ADHD who were exposed to stereotype threat performed significantly worse on cognitive tests compared to those with ADHD who were not exposed to stereotype threat. Together, these findings raise the possibility that the effects of stereotype threat on the working memory of students with ADHD may emerge from changes in perceptions and expectations that those students experience because of the threat; however, no past studies have examined how stereotype threat affects self-perceptions of students diagnosed with ADHD, or the potential influence of these self-perceptions and related expectations about performance on actual tests.

The current study examines whether exposing college students with ADHD to positive or negative stereotypes about the disorder will change their self-perceptions and their performance expectations, thereby changing their performance. We chose to include a positive-stereotype threat condition in this study because we knew that participants would be aware that they were recruited because of their ADHD diagnosis, possibly contributing to negative stereotype threat even without exposure to negative stereotypes. We hoped that a positive stereotype condition would counteract these effects. Additionally, previous studies have documented evidence supporting stereotype boost theory, which proposes that exposure to positive stereotypes improves performance. For example, Shih, Pittinsky, and Ambady (1999) investigated how Asian American women performed on quantitative tests after either their race or their gender was made salient to them.

The results of the study supported their hypothesis that those who were in the Asian-identity-salient condition performed better on the quantitative test than those in the female-identity-salient condition. They believed that because Asians stereotypically perform better on quantitative measures, making this characteristic salient boosted their performance. The opposite occurred for those in the female-identity-salient condition.

We expect that exposing those with ADHD to positive or negative stereotypes about the disorder will affect their performance in the same manner. That is, we hypothesize that participants with ADHD who are exposed to negative stereotype threat will report more ADHD symptoms, will expect to perform worse on working-memory tasks, and will perform worse on working-memory tasks than will participants with ADHD who are exposed to positive information about the disorder. We also anticipate that the differences in the participants' expectations regarding their test performance that result from exposure to the stereotype threat will explain the differences we observe in their test scores. If these hypotheses are supported, this could reveal a mechanism that could explain how stereotype threat decreases cognitive achievement in a vulnerable college-student population.

Methods

Participants

Twenty college students with a mean age of 19.80 (SD = 1.03) and a mean age of ADHD diagnosis of 14.85 (SD = 4.10) participated in this study. Half of the participants were assigned to read and answer questions regarding a paragraph containing negative stereotypes about ADHD (n = 10) while the other half read a paragraph containing positive stereotypes about ADHD (n = 10). Demographic data for participants in the two conditions are summarized in Table 1. Students in both conditions were statistically equivalent in age, education, diagnosis age, and elapsed time since their last dose of ADHD medication (all ps > .57). To assure the validity of their ADHD diagnosis, all participants were registered through Butler University's Student Disabilities Services office. Participants either were paid for their participation in the study at a rate of $10 per hour or received extra credit in a psychology course in exchange for their time.

Materials

"Memory" Paragraphs

The stereotype threat was presented in the context of a "memory" test. All participants read three paragraphs on various topics and answered five questions about what they had read following each paragraph. For students in the negative-stereotype threat condition, one of those three paragraphs reinforced common stereotypes of ADHD, including how those with ADHD struggle cognitively and academically (see Appendix A). For the students in the positive-stereotype threat condition, one of the paragraphs summarized how individuals with ADHD can overcome their symptoms through easily implemented strategies (see Appendix B).

Adult ADHD Self-Report Scale (ASRS)

The ASRS (Kessler et al., 2005) is a symptom checklist with 18 items reflecting the DSM-IV criteria for ADHD. Participants rated how often they have experienced each of these symptoms over the past six months.

Internal Restlessness Scale (IRS)

The IRS (Weyandt et al., 2003) assesses the construct of "mental restlessness" frequently reported by adults with ADHD. The IRS includes 24 statements such as "Thoughts race through my mind" and "I feel internally restless." Participants rated each statement on a Likert scale ranging from 1 (none of the time) to 7 (all of the time).

Dual 2 Back

The Dual 2 Back (Jaeggi et al., 2007) is a test of working memory that requires participants to attend to both auditory and visual information simultaneously. Participants heard an automated voice speaking letters of the alphabet and were told to press the "L" key on the computer keyboard when they heard the same letter that had been spoken two letters before. At the same time, participants also attended to visual information. They saw blocks appear one at a time somewhere within a 3x3 grid on the computer screen. Similar to what was done with the auditory information, they pressed the "A" key on the computer keyboard when they saw the same block light up that had been lit two blocks previously. Participants were given visual feedback on the computer screen

whenever they made an omission or commission error on either the auditory or the visual portion of the task.

Letter-Number Sequencing (LNS)

During the LNS test (Wechsler, 1997), participants heard increasingly longer sequences of intermixed single-digit numbers and letters. They first recited the numbers in ascending order, then the letters in alphabetical order.

Paced Auditory Serial Addition Test (PASAT)

During the PASAT (Gronwall & Sampson, 1974), participants heard a sequence of single-digit numbers first at a rate of 3 seconds per digit and later at a rate of 2 seconds per digit. They added adjacent digits together and verbally reported the sum while also attempting to remember the last digit they had heard so that could add it to the next number.

Prediction and Postdiction of Task Performance

In this measure from Suhr and Wei (2013), before completing each memory task, participants heard a description of the upcoming task and were asked to rate how well thought they would perform on a scale from 1 (much worse than most people my age) to 10 (much better than most people my age). In addition, after completing each task, participants indicated how well they believe they had performed, using the same scale.

Demographic and ADHD questionnaire

This questionnaire asked participants' age, education, race, and gender. It also included questions about their ADHD, such as age at diagnosis and typical medication regimen.

Procedure

After giving informed consent, participants were quasi-randomly assigned to one of two stereotype threat conditions. The number of participants in each condition was kept equal by assigning every second participant who volunteered for the study to a different condition. After completing the "memory" test, participants responded to the ASRS and IRS. Next, they took three working-memory tests: (1) Dual 2 Back, (2) LNS, and (3) PASAT, providing predictions

and postdictions before and after each test. Then, participants provided background information on the demographic and ADHD questionnaire. Finally, before being thanked for their time, participants were debriefed about the true purpose of the study and why the deception had been necessary.

Results

Manipulation Check

To ensure that participants paid adequate attention to the "memory" paragraph containing the ADHD stereotype threat, we ran a 3 ("Memory" Paragraph: 1, 2, 3) x 2 (Condition: negative-stereotype threat, positive-stereotype threat) mixed-model ANOVA with the number of correct responses to the questions from each paragraph as the dependent variable (see Table 2). We wanted to ensure that participants recalled the information from paragraph 2 just as well as they remembered the material from the other paragraphs.

A significant main effect of paragraph emerged, $F(2, 17) = 17.78$, $p = .00$, $\eta_p^2 = 0.68$. Follow-up analyses indicated that participants did not remember the details of paragraph 1 as well as those from paragraph 2 [$F(1, 18) = 14.87$, $p = .001$, $\eta_p^2 = 0.45$)] or paragraph 3 [$F(1, 18) = 33.45$, $p = .000$, $\eta p^2 = 0.65$]. In contrast, there was no significant difference in how well participants remembered information from paragraphs 2 and 3, $F(1, 18) = 1.00$, $p = .33$, $\eta_p^2 = 0.053$. There was also no main effect of condition [$F(1, 18) = 2.42$, $p = .14$, $\eta_p^2 = 0.12$] and no interaction between paragraph and condition [$F(2, 17) = 1.01$, $p = .39$, $\eta_p^2 = 0.11$]. Thus, it was not the case that participants in the negative- versus positive-stereotype threat condition differentially remembered the target paragraph or that they remembered the target paragraph less well than the other paragraphs they read.

Primary Analyses

We ran a MANOVA to test our hypothesis that participants with ADHD who were exposed to negative-stereotype threat would report more ADHD symptoms than those exposed to positive stereotypes (see Figure 1a). Contrary to expectations, participants in the two conditions reported the same levels of symptomatology on the ASRS and the IRS regardless of condition, $F(2, 16) = 0.57$, $p = .58$, $\eta_p^2 = 0.07$.

Next, we examined the effect of the stereotype-threat manipulation on participants' predictions and postdictions regarding their working-memory test

performance (see Figure 1b). Again, there were no significant differences between participants in the two conditions in terms of their predictions and postdictions, $F(6, 13) = 0.54$, $p = .77$, $\eta_p^2 = 0.20$.

Using a MANOVA, we also examined whether participants in the two stereotype threat conditions performed differently on the objective working-memory measures (see Figure 2). Because the main effect of condition neared significance with a moderate effect size [$F(3, 16) = 2.50$, $p = .096$, $\eta_p^2 = 0.32$], we looked at the differences between the conditions on each of the three working-memory measures to determine what was driving the near-significant effect. There were no significant differences between conditions on the Dual 2 Back [$F(1, 18) = 0.28$, $p = .60$, $\eta_p^2 = 0.02$] or on the LNS [$F(1, 18) = 0.62$, $p = .44$, $\eta_p^2 = 0.03$]; however, there was a significant difference between conditions on the PASAT, $F(1, 18) = 5.37$, $p = .03$, $\eta_p^2 = 0.23$ (see Figure 2). Interestingly, this indicates that participants in the negative-stereotype condition outperformed those in the positive-stereotype condition on this measure of working memory.

Even though we found no differences across the two stereotype threat conditions in participants' self-perceptions or on two of the three objective test scores, we wanted to determine whether self-perceptions and performance expectations related to the scores that participants earned on the working-memory measures; thus, we calculated Pearson correlation coefficients among self-perceptions, performance expectations, and objective working-memory performance (see Table 3). We found significant relationships between self-perceived symptomatology and performance expectations, as well as between self-perceived symptomatology and perceived performance. Specifically, the correlations between self-reported symptoms on the ASRS and how well participants believed they would do on the Dual 2 Back [$r(18) = –0.63$, $p = .003$] and on the PASAT [$r(18) = –0.50$, $p = .02$] reached significance. There were also significant correlations between self-reported symptoms on the ASRS and how well participants believed they had performed on the Dual 2 Back [$r(18) = –0.46$, $p = .04$] and the LNS [$r(18) = –0.53$, $p = .02$]. Self-reported symptoms on the IRS and participants' Dual 2 Back predictions [$r(17) = –0.57$, $p = .01$] and LNS postdictions [$r(17) = –0.07$, $p = .001$] also correlated significantly. The only significant correlation involving an objective test was that between scores on the PASAT and participants' PASAT postdictions, $r(18) = 0.57$, $p = .009$. As shown in Table 3, no other significant correlations emerged between self-perceived symptomology and actual performance on any of the working-memory tests, nor between performance expectations and actual test scores.

Discussion

The goal of this study was to examine the effects of exposure to negative or positive stereotypes on self-perceptions, perceived working-memory performance, and actual working memory of college students with ADHD. Previous research has shown that various forms of threat can negatively influence cognitive performance. Foy (2015) demonstrated that exposure to negative stereotypes led to decreased quantitative GRE scores of students with self-reported ADHD. Similarly, Wei and Suhr (2015) found that students who were concerned about having ADHD but who did not actually have the disorder performed significantly worse on a working-memory task when they were told that the task was used to assess ADHD. These studies led us to hypothesize that participants with ADHD who were exposed to negative-stereotype threat would perform worse on working-memory measures compared to those who were exposed to positive stereotypes. In another study, Suhr and Wei (2013) found that students who were not diagnosed with ADHD but who were exposed to negative stereotypes about ADHD and had high self-handicapping traits reported having significantly more ADHD symptoms compared to those who were not exposed to the negative ADHD stereotypes. This led to our hypothesis that students with ADHD who encountered negative stereotypes about the disorder would report more ADHD symptoms, which in turn would explain their decreased performance expectations and poor performance. If our hypotheses were supported, the relationship between performance self-perceptions and performance itself could help explain why college students with ADHD struggle academically (Norwalk, Norvilitis, & MacLean, 2009).

Our hypotheses, however, were not supported by the data collected in this study. We found no significant differences between participants in the two stereotype threat conditions in self-perceptions, perceived working-memory performance, or scores on two of the three working-memory measures. Unfortunately, because the stereotype threat did not affect symptom self-perceptions or performance expectations, we were unable to investigate whether self-perceptions mediate performance; however, we did find a few significant correlations between self-reported symptoms and self-perceived performance on working-memory tasks. The ASRS was significantly correlated with how well students expected to perform on the Dual 2 Back and the PASAT, and with how well they thought they performed on the Dual 2 Back and the LNS. The IRS was also significantly correlated with the Dual 2 Back prediction and the LNS postdiction. There was an inverse relationship between participants' symptom self-perceptions and performance perceptions; when participants reported having more

ADHD symptoms, they also believed they would perform or had performed worse on these measures. These findings provide insight into a possible mechanism underlying stereotype threat in ADHD. If students who perceive themselves as more symptomatic also expect to do poorly on objective test measures, they may in turn underperform relative to their true underlying capabilities. Past research has shown that self-efficacy, or how someone expects to perform on a task, affects how well they actually complete the task (Bandura, 1989).

Even though positive and negative stereotypes did not affect self-perceived symptoms or performance expectations, a significant difference did emerge between the scores of students in the two conditions on one of the three working-memory measures included in this study. Surprisingly, those in the negative-stereotype threat condition outperformed those in the positive-stereotype threat condition on the PASAT. This finding is not consistent with those documented in past studies (Foy, 2015; Suhr & Wei, 2013; Wei & Suhr, 2015). One explanation for this could be that the "memory" paragraphs may not have elicited the negative and positive stereotypes we had hoped. Those who were in the positive-stereotype threat condition read a paragraph about effective strategies to manage ADHD symptoms, which hinted at potential positive outcomes without directly addressing positive aspects of ADHD itself (see Appendix B). In fact, it is possible that the positive-stereotype paragraph instead acted as a negative-stereotype threat by reminding participants that they have a disorder that requires additional strategies (that they may not currently be using) to overcome their struggle with attention and organization. Perhaps a more effective positive-stereotype threat paragraph could have summarized positive attributes and advantages of having the disorder, such as explaining that individuals with ADHD are more creative and intuitive compared to their non-affected peers.

Similarly, exposure to stereotypes in the negative-stereotype paragraph may not have influenced working-memory performance because it did not directly speak to stereotypes regarding ADHD and working memory. Foy (2015) explicitly warned participants that those with ADHD perform significantly worse on the quantitative GRE measures that they were about to complete. This method of stereotype-threat exposure may have had a stronger effect on the participants, thus leading to the significant differences between those who experienced the threat and those who did not in his study.

Several limitations of our procedures may have led to the lack of statistically significant differences between conditions on most of the included measures. First, our ability to detect significant effects was limited by the small sample size; we had

only 10 participants in each condition in our primary analyses. This small sample size was a result of the strict participation eligibility criteria that we utilized for our study. We invited only students who were registered with Butler University's Student Disabilities Services office to participate, to ensure that all participants had undergone a rigorous diagnostic process. As demonstrated by Privitera et al. (2015), simply giving participants a false ADHD diagnosis can lead them to report more ADHD symptoms, suggesting that ADHD can be easily overdiagnosed if an individual believes that he or she has the disorder. Although Foy (2015) included participants who self-reported having a history of ADHD, we intentionally set strict eligibility criterioa for our study in order to disqualify those who may have been told by a teacher, parent, or primary care physician that they have ADHD but may have not been diagnosed according to official ADHD criteria.

Additionally, we found a significant difference on only one of the three working measures included in this study. Given the large number of outcome measures, this may represent a type II error. We tried to control the likelihood of making a type II error by submitting scores to a MANOVA rather than running a series of independent sample *t*-tests. At the same time, the MANOVA that focused on the working-memory measures resulted only in a near-significant effect of condition. Because of the small sample size in each condition and because the effect size associated with this difference was moderate, we proceeded to examine the differences between conditions on each working-memory measure. This led to the discovery of the significant difference in PASAT scores across the two conditions. Larger sample sizes in future replications of this study could uncover significant differences on other working-memory measures and will be necessary to determine whether positive stereotypes can truly undermine the working-memory performance of students with ADHD as these results preliminarily suggest. Meanwhile, the current results should be interpreted with caution, given these limitations.

Even though our hypotheses were not supported, our data do not rule out the possibility that changes in self-perceptions in response to stereotype threat could account for subsequent changes in performance. Future studies examining stereotype threat and how it affects those with ADHD should recruit participants who have an official ADHD diagnosis, as this difference may affect the power of the study to detect true differences. Future research should also include a control condition in which participants are not exposed to any stereotype threat. Although we originally intended to include this condition in our study, we were limited by our already small sample size. Instead, we focused only on the negative- and

positive-stereotype threat conditions. Finally, using more direct and strongly worded negative- and positive-stereotype paragraphs in future studies could enhance the possibility of finding performance differences in response to stereotype threat so the possible role of symptoms and performance perceptions in this relationship can be examined more effectively.

In summary, neither negative nor positive stereotype threat significantly affected self-perceptions or perceived performance. A significant difference was found for one of the three working-memory measures included in the study, with those in the negative-stereotype threat condition surprisingly outperforming those in the positive-stereotype threat condition. Future studies can adapt their approach to further explore a possible mechanism underlying stereotype threat in ADHD and to examine whether positive stereotypes can, indeed, have a paradoxical effect on working memory. Results of these studies could then be used to design interventions to combat potentially negative effects of everyday stereotypes experienced by those who have the disorder.

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Table 1

Mean (Standard Deviation) or Percent for Participant Demographics by Condition

	Negative-Stereotype Threat (*n*=10)	Positive-Stereotype Threat (*n*=10)
Age	19.70 (0.95)	19.90 (1.20)
Gender (% Female)	50.00	70.00
Year in College	2.40 (0.84)	2.40 (1.17)
Age of Diagnosis	14.80 (4.32)	14.90 (4.33)
Time Since Last Dose of ADHD Medication (hours)	30.41 (42.77)	21.09 (24.93)

Table 2

Mean (Standard Deviation) Number of Questions Answered Correctly for Each Paragraph on the "Memory" Test by Condition

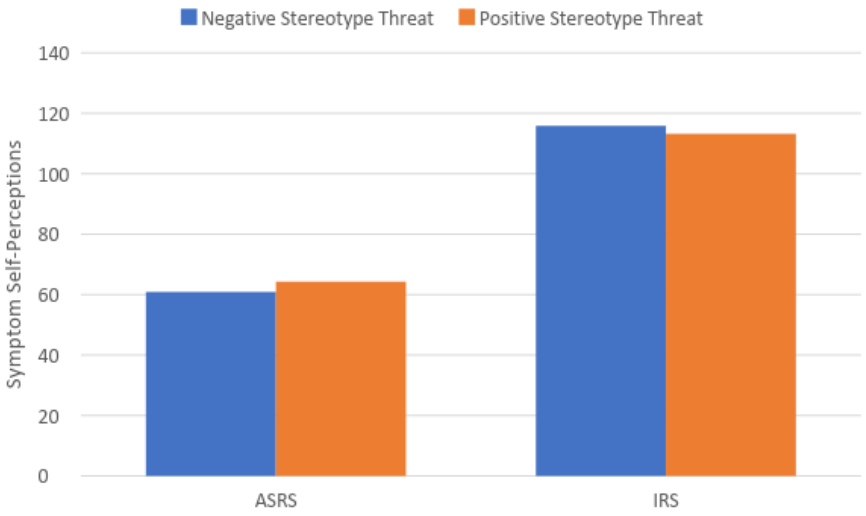
	Negative-Stereotype Threat (*n*=10)	Positive-Stereotype Threat (*n*=10)
Paragraph 1	2.80 (1.40)	3.40 (1.43)
Paragraph 2 (Stereotype Paragraph)	4.30 (0.82)	4.80 (0.42)
Paragraph 3	4.70 (0.48)	4.80 (0.63)

Table 3

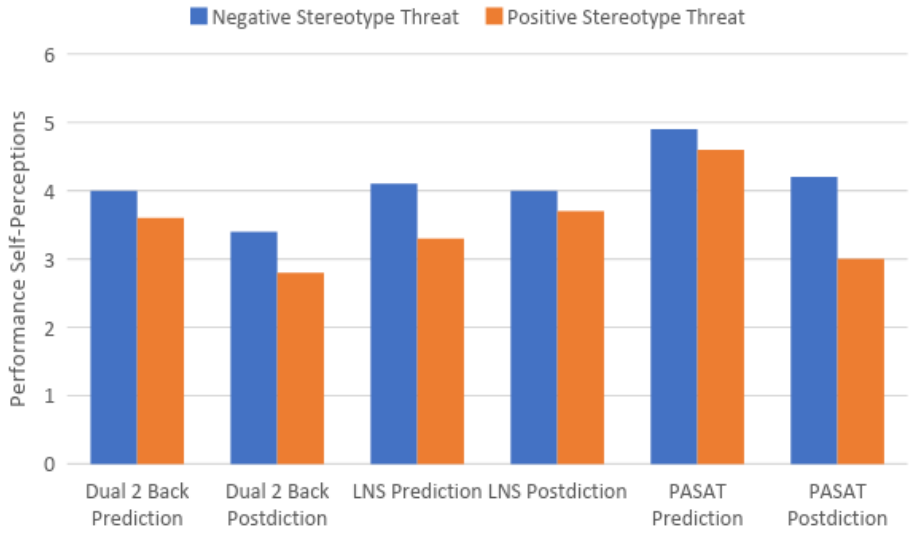
Correlations between Symptom Self-Perceptions and Performance Expectations and Working-Memory Performance, as well as between Performance Expectations and Actual Test Scores

	Dual 2 Back Errors			LNS			PASAT		
	Pre	Score	Post	Pre	Score	Post	Pre	Score	Post
ASRS	**−.629***	.409	**−.458***	−.275	−.114	**−.528***	**−.503***	−.311	−.303
IRS	**−.566***	.152	−.418	−.334	−.147	**−.700***	−.362	−.196	−.452
		Score			Score			Score	
Prediction		−.401			.397			.433	
Postdiction		−.366			.324			**.565****	

***p* < .01. **p* < .05.



a)



b)

Figure 1. The impact of negative (blue bars) versus positive (orange bars) stereotype threat on symptom self-perceptions (a) and performance self-perceptions (b). There were no significant differences between the two conditions on any of these measures.

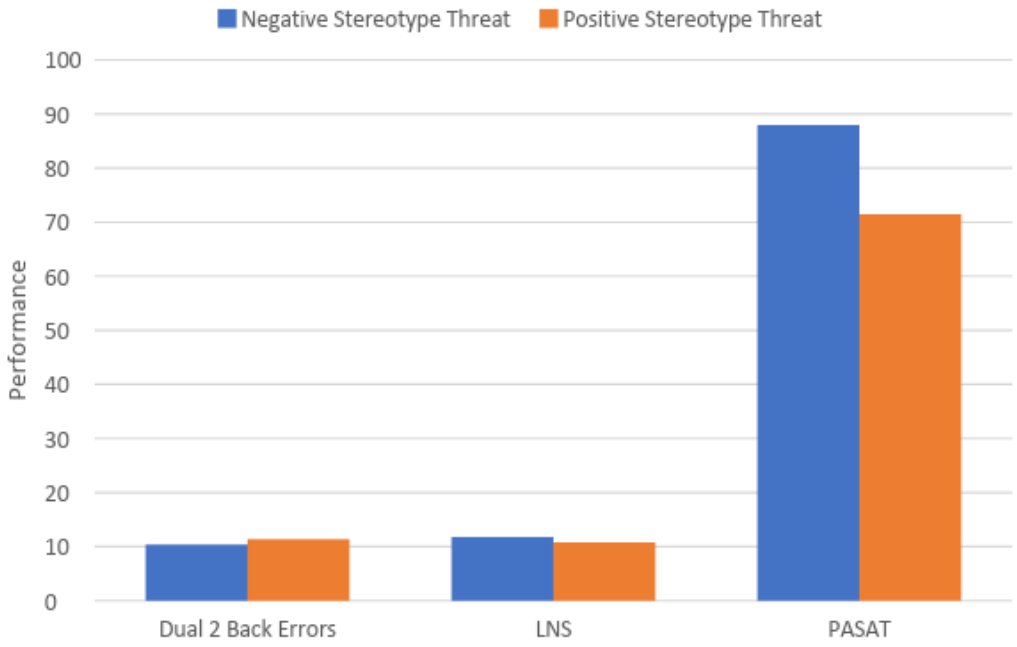


Figure 2. The impact of negative (blue bars) versus positive (orange bars) stereotype threat on working-memory performance. There were no significant differences between the two conditions on the Dual 2 Back and LNS, but participants in the negative-stereotype condition significantly outperformed those in the positive-stereotype threat condition on the PASAT.

** Mean difference is significant at the .05 level*

Appendix A

Negative-Stereotype Threat Paragraph

Deficits associated with Attention Deficit Hyperactivity Disorder

Empirical evidence shows that Attention Deficit Hyperactivity Disorder (ADHD) negatively affects those who suffer from this mental illness. The rate of emotional development for children with ADHD is as much as 30% slower than it is for children without the condition. For example, a 10 year old with ADHD operates at the maturity level of about a 7 year old; a 16 year old beginning driver is using the decision making skills of an 11 or 12 year old. 30% of teens with ADHD have failed or have had to repeat a year of school. 35% of teens with ADHD eventually drop out of school. Of the parents with a child or children with ADHD, 44% reported their children to be dissatisfied with their school life, with responses ranging from slightly to extremely dissatisfied. Additionally, 41% described their children as dissatisfied with their social life using the same scale.

Appendix B

Positive-Stereotype Threat Paragraph

Positive outcomes associated with Attention Deficit Hyperactivity Disorder

Recent research indicates that after receiving appropriate treatment, most children with Attention Deficit Hyperactivity Disorder (ADHD) experience a dramatic turnaround. These children are able to focus, and even those with hyperactivity or impulsivity are able to pay attention in classroom lessons, according to the ADHD Awareness Coalition. Scientists that have shown positive results advise that it is important to identify successful strategies, resulting in remarkable levels of functioning. Some studies had participants compile a list of 50-60 different techniques that they know work for them. When called on to perform and become engaged, these participants then understood which techniques are most beneficial. These strategies have been shown to work for many individuals with ADHD, because they allow them to step back and figure out the approaches they need to take to succeed. This provides lifelong help because it encourages those with ADHD to build on the many strengths they already possess.