



# Promoting Psychology as a STEM Discipline at an Historically Black University

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## INTRODUCTION

Psychology has long been recognized as a scientific discipline. However, as cited in the *Report of the American Psychological Association Presidential Task Force: On the Future of Psychology as a STEM Discipline*<sup>1</sup>, there are inconsistencies in recognizing psychology as a core STEM discipline. While federal agencies such as the National Science Foundation recognize psychology as an important science, funding streams do not mirror that of other STEM disciplines and it is often regarded as a “soft” science. By 2050 the US population will be mostly comprised of racial/ethnic minorities, most of whom will make-up the US STEM workforce, including the behavioral sciences. Despite these projections, underrepresented populations are a small percentage of those pursuing STEM. For example, African Americans comprise of about 12% of the US population yet only about 6% of the STEM fields. To address this, a program was developed to advance psychology as a STEM discipline at a Historically Black University.

The program included the development of a Psychology is STEM website, a distinguished speaker symposium, experiential demonstrations, and the development of a Psyc Is STEM app. Prior to program implementation, the Perception of Psychology as a Science scale was administered to students taking introductory science courses.



Figure 1: Psychocentric theory of the university

## PROGRAM COMPONENTS

**SOCIAL MEDIA:** A website and mobile app were designed to promote Psychology as a STEM discipline.

**SPEAKER SYMPOSIUM:** This was a collaboration with the American Psychological Association to showcase the role of women in the Psychological Sciences. 8 Psychology alumna of Morgan State University were featured speakers.

**EXPERIENTIAL DEMONSTRATIONS:** Designed to expose students to laboratory experiences in Psychology.

**ASSESSMENT:** The Perceptions of Psychology as a Science Scale (PAS) measured students beliefs about psychology as a STEM discipline.

## PSYC IS STEM WEBSITE



Website developed to promote Psychology as a STEM discipline by connecting it to disciplines associated with STEM.  
[WWW.PSYCISSTEM.COM](http://WWW.PSYCISSTEM.COM)

- Website has 7 Sections:
1. Home Page
  2. Link & Learn
  3. Careers
  4. Research
  5. Media
  6. Contact Us
  7. About

## I AM PSYCHED! SPEAKER SYMPOSIUM

Embracing the Past, Engaging the Present, and Empowering the Future



## EXPERIENTIAL DEMONSTRATIONS

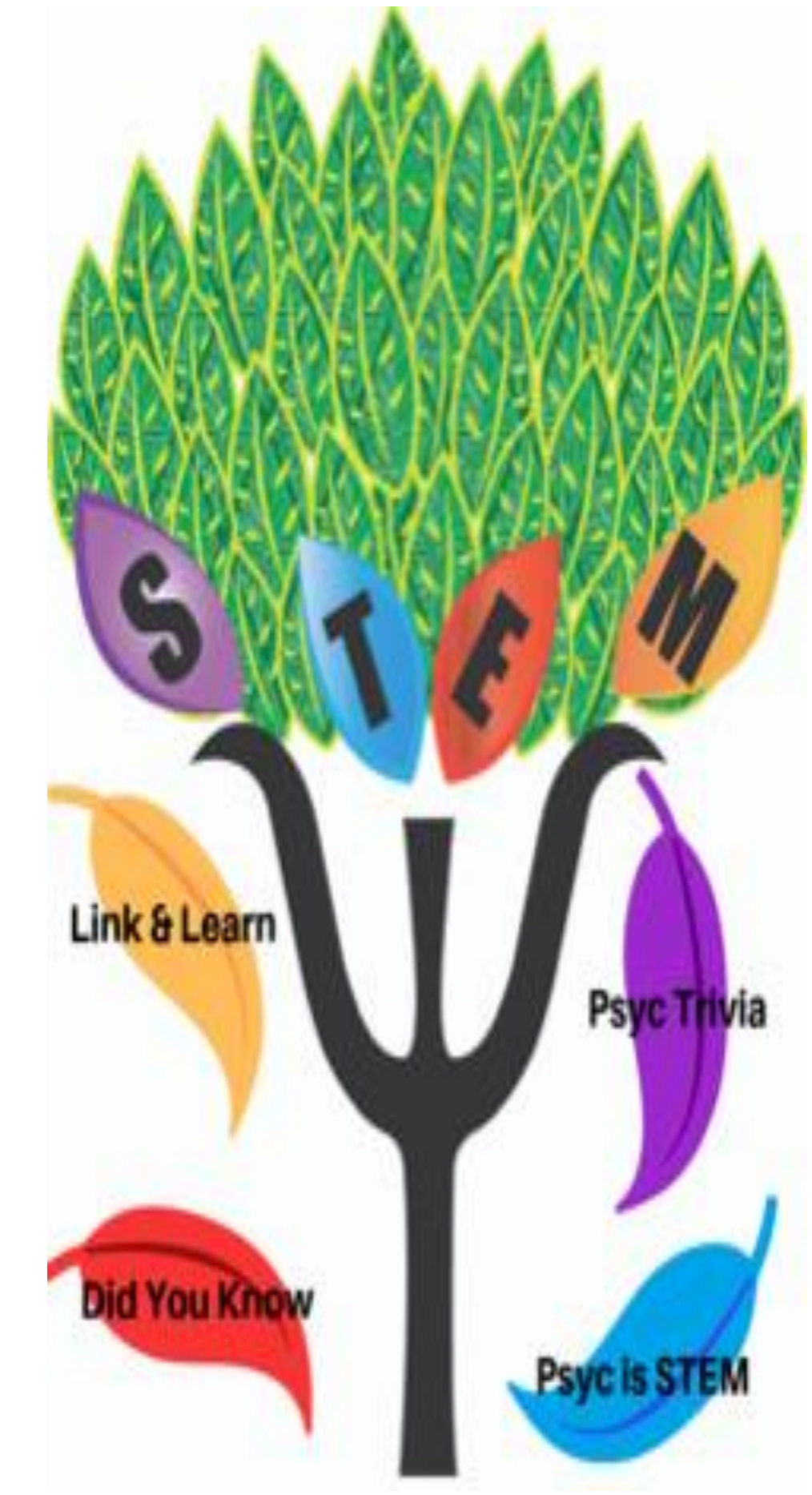


## PSYC IS STEM APP

The PSYC Is STEM App is available via Google Play and includes 4 sections:

1. Link and Learn
2. Did you know?
3. Psyc Trivia
4. Psyc Is STEM

The app is free and is another dissemination strategy used to showcase Psychology as a STEM discipline.



## PROGRAM PRE-ASSESSMENT

Table 1: Sample Characteristics: N = 296

	%
<b>Gender</b>	
Male	30
Female	70
<b>Race</b>	
Black	92
<b>Classification</b>	
Lower	70
Upper	30
<b>Major</b>	
Psychology	27
Social Sciences	17
Other	48

**Measure: PAS Scale**  
20 item scale assessing the extent to which psychology is perceived as a “Science”. Items are rated on a Likert scale ranging from 1 Strongly Disagree to 7 Strongly Agree. Items are summed and higher scores reflect more favorable perceptions. Cronbach’s alpha = .67

**Example item:** The study of psychology should be seen primarily as a science.

**Procedure**  
Upon receiving IRB approval, student rosters for introductory level courses in STEM, Psychology, and Social Science courses was obtained from the university’s Institutional Research department. Student e-mail addresses were obtained and the PAS and demographic questionnaire was distributed via an on-line survey to approximately 2,000 students. 396 students completed the survey and 296 had complete data.

## PRELIMINARY RESULTS

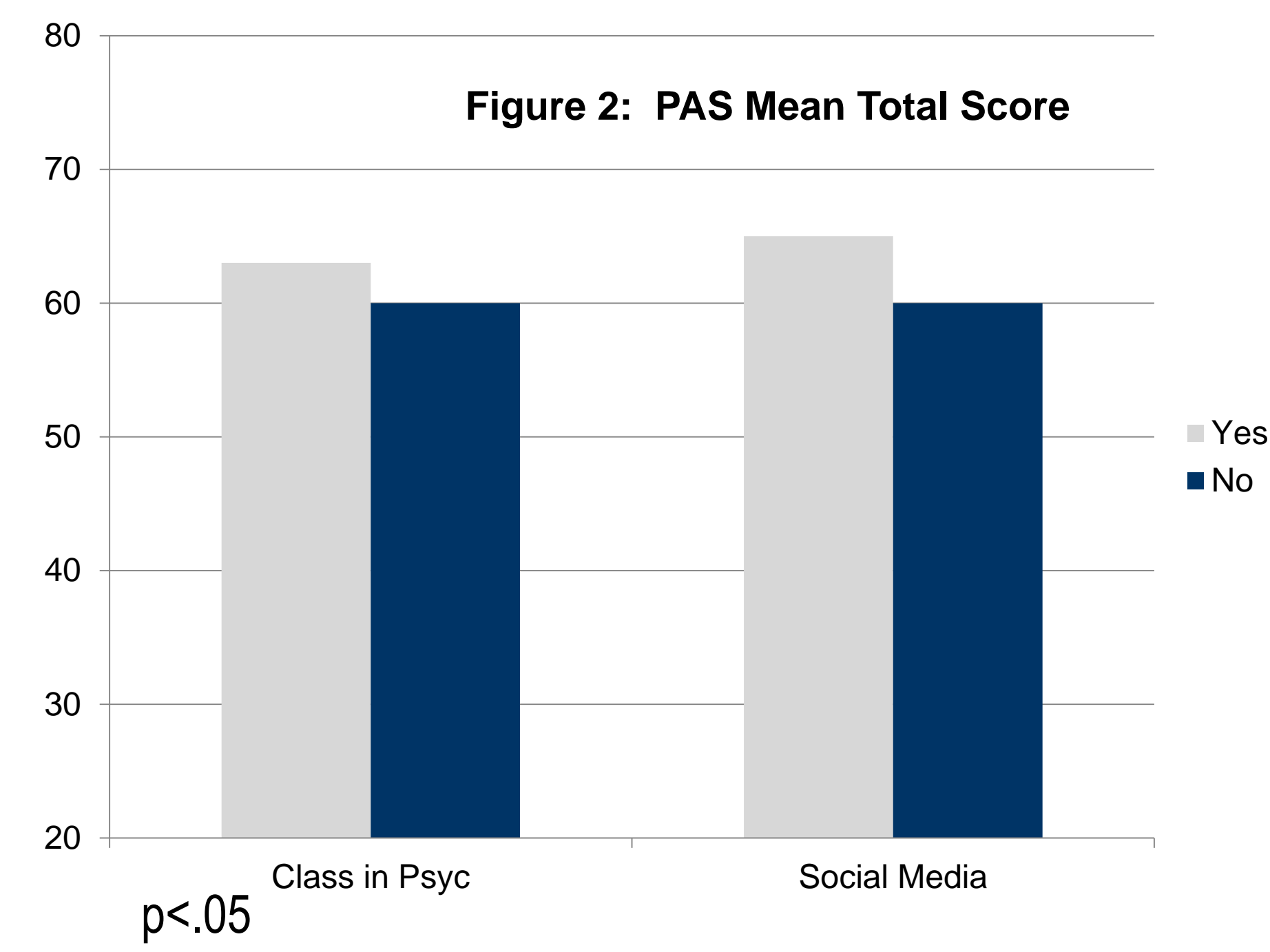


Table 2: Mean Scores in Response to Question “Psychology should be primarily seen as a science”

	Mean (SD)	t(df)	p-value
<b>Major</b>			
STEM	5.6 (1.44)	-2.312	.01
Psychology	6.1 (1.16)	(115)	
<b>Major</b>			
NonSTEM	5.7 (1.37)	2.03	.01
Psychology	6.1 (1.16)	(223)	
<b>Class</b>			
Lower	5.7 (1.36)	-2.85	.005
Upper	6.3 (1.05)	(259)	
<b>Social Media</b>			
Yes	6.0 (1.22)	-2.52	.01
No	5.6 (1.46)	(291)	

## LIMITATIONS

- Poor response rate
- Missing data
- Scale reliability
- Limited generalizability

## IMPLICATIONS

Preliminary findings suggest that student perceptions of psychology as a science significantly differed by classification, major, whether they have taken a psychology course, and exposure to psychology via social media. Findings also suggest that exposure to psychological science may influence perceptions of psychology as a science. Psychology is a popular major and can aid in diversifying the STEM workforce. Future research will examine if perceptions of psychology as a STEM discipline influence decisions to pursue graduate education and careers in STEM.

## References & Acknowledgements

<sup>1</sup> www.apa.org/pubs/info/reports/stem-discipline.aspx  
<sup>2</sup> Friedrich, J. (1996). Assessing students’ perception of psychology as a science: validation of a self-report measure. *Teaching of Psychology*, 23(1), 6 – 13.

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