

Gender Stereotypes among Undergraduate Students at an HBCU

Abstract

The proposed research will examine the traditional gender stereotypes about science fields and in science education held by undergraduate students at a Historically Black College and University (HBCU). The study will compare previously reported elementary age students' science related gender stereotypes to those of undergraduate college students who attend Albany State University. The participants will include approximately 40 female students and approximately 40 male students who are currently enrolled in psychology and computer science courses and who are classified as junior and seniors. The participants will be asked to draw a black scientist and to complete a questionnaire that will ascertain their demographic information, assess their drawings, and assess stereotypic perceptions about science. The proposed research will determine if science related gender stereotypes exist among HBCU college students. In addition, if gender-specific stereotypes exist, it will examine whether those stereotypes play a role in the aspirations of HBCU students to pursue careers in science.

Introduction

Gender stereotypes associating men with science emerge early in development (Chambers, 1983; Steffens, Jelenec, & Noack, 2010). Chambers attempted to discover the age at which the stereotypic image of the male scientist first appeared by using the Draw a Scientist Test (DAST). Chambers examined the drawings of 4,807 school children between the ages of 5 and 11 years. Even though 49% of Chamber's participants were girls, only 28 drawings of female scientists were created which was 0.56% of his total sample. Chambers speculated that

gender stereotypes could potentially affect the desire of girls to pursue education in the sciences. Surprisingly, two decades after Chambers' initial research, the stereotype had not changed.

Thomas, Henley, and Snell (2005) examined the DAST images produced by college students at a primarily white university and found the same percentage of females drawn that Chambers (1983) found. However, Thomas et al. argued their sample could not lack the self-efficacy to become scientists because their sample was science majors. Nonetheless, stereotypic associations may have weakened. In 1966 women earned 19% of the chemistry bachelor's degrees in the US compared to 49% in 2014 (National Science Board, 2014). More recently, Farland-Smith (2009) found that 35% of American children viewed scientists as women.

The purpose of the proposed research is to examine the scientist gender stereotypes held by undergraduate students at a Historically Black College and University (HBCU). The proposed research will determine if science related gender stereotypes exist among HBCU college students and whether those stereotypes play a role in the aspirations of HBCU students to pursue careers in science. The proposed research has a strong publication potential because the relationship between HBCU students' scientist stereotypes and desires to pursue careers in science has never been investigated.

Methods

Participants. The participants will be between 80 and 100 undergraduate students who are currently enrolled in psychology or computer science courses at Albany State University and who are classified as juniors or seniors. The participants will volunteer to participate or participate in exchange for class credit. Testing will take place in classrooms in either the Psychology Department or the Computer Science Department.

Materials. The proposed study will consist of completing two forms. The first form will be a sheet of paper that instructs participants to draw a scientist without speaking or talking to other participants during the study. The participants will be allowed 15 minutes to complete the first form. The second form is a brief questionnaire that is used to determine age, classification, major, participants gender, gender of drawing, the identity of the scientist drawn (if famous), the identity of the participants favorite scientist, type of scientists drawn, number of female and male instructors in the department tested, what they aspire to be after graduation and the gender of the last person with whom the participant had a meaningful conversation.

Procedure. Participants will be told that the study consists of two tasks and their instructions will be on the forms. After 15 minutes for drawing time has passed, the participants will be instructed to turn in their papers face down. The participants will then be given the questionnaire. After completing the questionnaire, the participants will be debriefed and dismissed.

Analyses. The proposed research will determine if science related gender stereotypes exist among HBCU college students by comparing the ratios of male and female participants to the ratios of male and female scientists drawn by those participants. In addition, if gender-specific stereotypes exist, the relationship between the presence of the stereotype and the aspirations of HBCU students to pursue careers in science will be examined to determine if the stereotype affects the intent to pursue a career in science.

References

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