Women in Science: Are Portrayals on Primetime Television Negative, and What Are the Effects of Exposure to Such Content?

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Abstract

Twenty years ago, the United States began investing millions to get more girls interested in science, technology, engineering and math (STEM) fields. Yet the needle has barely moved, and the American Association of University Women cite that media continually promotes science is not for girls. Albert Bandura’s Social Cognitive Theory states that individuals “learn cultural patterns of behavior through repeated observations of actual models, such as teachers, as well as from symbolic models, such as those in the media” (Long, Steinke, Applegate, Knight Lapinski, Johnson & Ghosh, 2010, p. 358). Hence, this experiment investigated, “Is there a relationship between exposure to entertainment TV’s portrayal of women in science, which may be negative, and the self-efficacy of female college students ages 18 to 24?”

The Independent variable was exposure to media, manipulated two ways, positive and negative, with clips from primetime television’s The Big Bang Theory and Bones. The Dependent variable was self-efficacy. Participants (N=124) were randomly assigned to one of the two treatments, then watched brief online video clips and answered an appraisal inventory. Character liking was tested as a moderator variable, but results were non-significant whether liking influenced either of the other variables under consideration. Also non-significant, no relationship was found between exposure to negative media and lower self-efficacy.

What was thought to be of interest, however, was that all the young women participants reported lower self-efficacy for STEM activities, regardless of treatment. Importance of the findings and future research opportunities are discussed.