

The Impact of STEM Based Programs on Girls and Women

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Background/Objective:

Girls Inc. of Greater Indianapolis focuses on inspiring girls to be strong, smart, and bold through empowering programming that concentrates on underprivileged populations. Eureka!, a STEM based program through Girls Inc., serves to foster confidence and knowledge in STEM through its workshops with local collaborators and mentors. STEM programs for girls, especially underrepresented girls, are crucial due to the enduring gender gap, which refers to the lower rates of interest, pursuit, and employment of girls and women in STEM. This research serves to investigate the impact of STEM based extracurricular experiences for girls on their attitudes and knowledge surrounding STEM.

Methods:

Five STEM confidence related questions were chosen from the Outcome Measurement Activity survey conducted at Eureka! and a literature review was performed using PubMed sources.

Results:

With respect to the Eureka! survey, it was found that in less than one year there was an increase in confidence ratings for the five selected questions, ranging from a 22.7% to a 54.5% increase in confidence. The literature review identified STEM program reports and studies on STEM activities as beneficial to building girls' confidence, which often led to a stronger desire to pursue STEM related careers. Studies found that participating in STEM activities was associated with an increase in STEM major declarations in college compared to control groups and national averages.

Implications:

This review allows the significance of extracurricular STEM activities on girls to be seen and will hopefully encourage schools and organizations to create and support STEM based programming for girls. It will also benefit Girls Inc by conveying the importance of their new Eureka! program and begins their own research into their impact.