



BIO Girls 2022 Outcome Based Research Youth Program

The BIO Girls Youth Program serves girls in grades 2 through 6 and is a program focused on both prevention and intervention to help participants before problems arise as well as during the crux of problem behaviors. A primary goal of BIO Girls is to improve girls' self-esteem. Self-esteem and mental health go hand-in-hand. In fact, high self-esteem offers protection against many mental health problems. In contrast, research shows that having low self-esteem is strongly associated with an increased risk of developing depression, anxiety, eating disorders, substance use, risky sexual behaviors, and suicidal ideation.

Research Methodology

Participants in BIO Girls completed surveys on self-esteem (including global, academic, body, family, and social) and mental health (specifically anxiety) at the beginning and completion of the program. Preseason and postseason scores on each survey were compared to determine whether participants experienced changes in self-esteem and mental health as a result of participating in BIO Girls.

Research Results

Proven Outcomes

Results from these analyses showed that by the end of the BIO Girls program **7 of 10 participants experienced increased overall self-esteem and 50% of participants experienced decreased anxiety by the end of the program**. Results were similar across all age ranges, which shows that BIO Girls programming is both preventative and interventive.

While 7 out of 10 participants experienced increased overall self-esteem by the end of the program, the biggest change in self-esteem was evident in participants who had the lowest total self-esteem scores at the beginning of the program. Over 90% of those scoring in the lowest quartile of self-esteem scores at the start of the program increased their overall self-esteem scores by an average of 10 points (on a scale of 0-100). This suggests that while BIO Girls programming benefits all participants, it is particularly influential for at-risk youth.

Participating in BIO Girls increases self-esteem.

In fact, it increases participants' self-esteem in all 5 domains (global, academic, body, family, and social). 9 out of 10 participants experienced an increase in at least one type of self-esteem (global, academic, body, family, or social esteem)



From program start to finish, participants increased on:

- Liking their looks
- Believing they are a good person
- Believing they are good at things
- Thinking their report cards are good enough
- Believing they are an important person

The number of participants who reported always feeling these ways increased by 5-10% from program start to finish.

From program start to finish, participants decreased on:

- Having a low opinion of themselves
- Being lonely
- Believing their family is disappointed in them
- Feeling bad about the way they look
- Wishing they were a better student

The number of participants who reported never feeling these ways increased by 5-10% from program start to finish.

Overall, by the end of the program, 82% of participants reported always thinking that they are a good person, with only 7% stating low opinions of themselves.

Participating in BIO Girls decreases anxiety symptoms.

Half of the BIO Girls participants experienced a decrease in anxiety.

By the end of the program, participants were less likely to believe that they could not stop or control worrying. In fact, only 7% of participants reported being unable to stop worrying every day, a percentage that was cut in half from the start of the program.

Participants were also less likely to feel afraid that something awful might happen and less likely to worry about many different things. The number of participants who reported feeling these ways every day decreased by 5% from program start to finish.

547 participants completed the preseason research surveys. 483 participants completed the postseason research surveys. Comparisons were conducted using 2-tailed t-test analyses with a significance level of $p < .05$. Percentages were obtained through frequency analysis.