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Evidence in Action

A K20 Center Research Brief

Strategies for Remediating the Impact of Math Anxiety on High School Math Performance

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Introduction

This intervention brief explores the strategies for remediating the impact of math anxiety on high school math performance as detailed by Rachel G. Pizzie and David J. M. Kraemer (2023). The authors highlight that math anxiety significantly impairs students' ability to perform well in math because of excessive negative emotions and intrusive thoughts. This anxiety leads to avoidance behaviors and poor study habits, which further exacerbate the problem. The research aims to identify effective interventions to mitigate these effects and improve academic outcomes for high school students.

Methodology

Research Design:

The study employed a quasi-experimental design with two classroom-based interventions aimed at reducing math anxiety and improving performance.

Sample:

The sample consisted of high school students from two different schools. Based on the intervention they received, they were divided into two groups.

Data Analysis:

Data were analyzed using statistical methods to compare the performance and anxiety levels of students before and after the interventions.

Results

The study found that the intervention focused on improving study skills (SS) was more effective in increasing grades for highly anxious students compared to the emotion regulation (ER) intervention. The SS intervention encouraged self-testing and overcoming avoidant behaviors, leading to better academic performance and reduced anxiety. The benefits of the SS intervention persisted even after the intervention period, suggesting long-term positive effects.

Application into Practice

To replicate this intervention in a school setting, educators should:

1. **Identify Students with Math Anxiety:** Use surveys or assessments to identify students who experience high levels of math anxiety.
2. **Implement Study Skills Workshops:** Conduct workshops that teach effective study strategies, such as self-testing and time management.
3. **Encourage Regular Practice:** Motivate students to engage regularly with math problems and resources to build familiarity and reduce anxiety.
4. **Monitor Progress:** Regularly assess students' performance and anxiety levels to adjust the intervention as needed.

By following these steps, schools can help students overcome math anxiety and improve their math performance, resulting in better academic outcomes and increased confidence in their math abilities.

Work Cited

Pizzie, R. G., & Kraemer, D. J. (2023). Strategies for remediating the impact of math anxiety on high school math performance. Science of Learning, 8(1), 44; https://doi.org/10.1038/s41539-023-00188-5