



# Exploring How Feelings Towards Math Change Among High School Students Depending on Math Course

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## INTRODUCTION

- How math anxiety changes depending on math lane
- Self-doubt and anxiety about math can lead to avoidance of math, ultimately leading to lower performance in math
- Panic, confusion, and helplessness felt when working on math tasks can exacerbate this effect

## RESEARCH METHODOLOGIES



- I conducted a study of how feelings toward math, specifically math anxiety, change throughout different math courses.
- I asked Ms. Thomas, the librarian, to send out my survey to all Paly students through Schoology.
- Collected qualitative data from the survey
- Code and summarize data into themes

Figure 1. Graphic on research methodologies.

## DATA AND FINDINGS

### WHEN IN A MATH CLASS, HOW DO YOU FEEL?

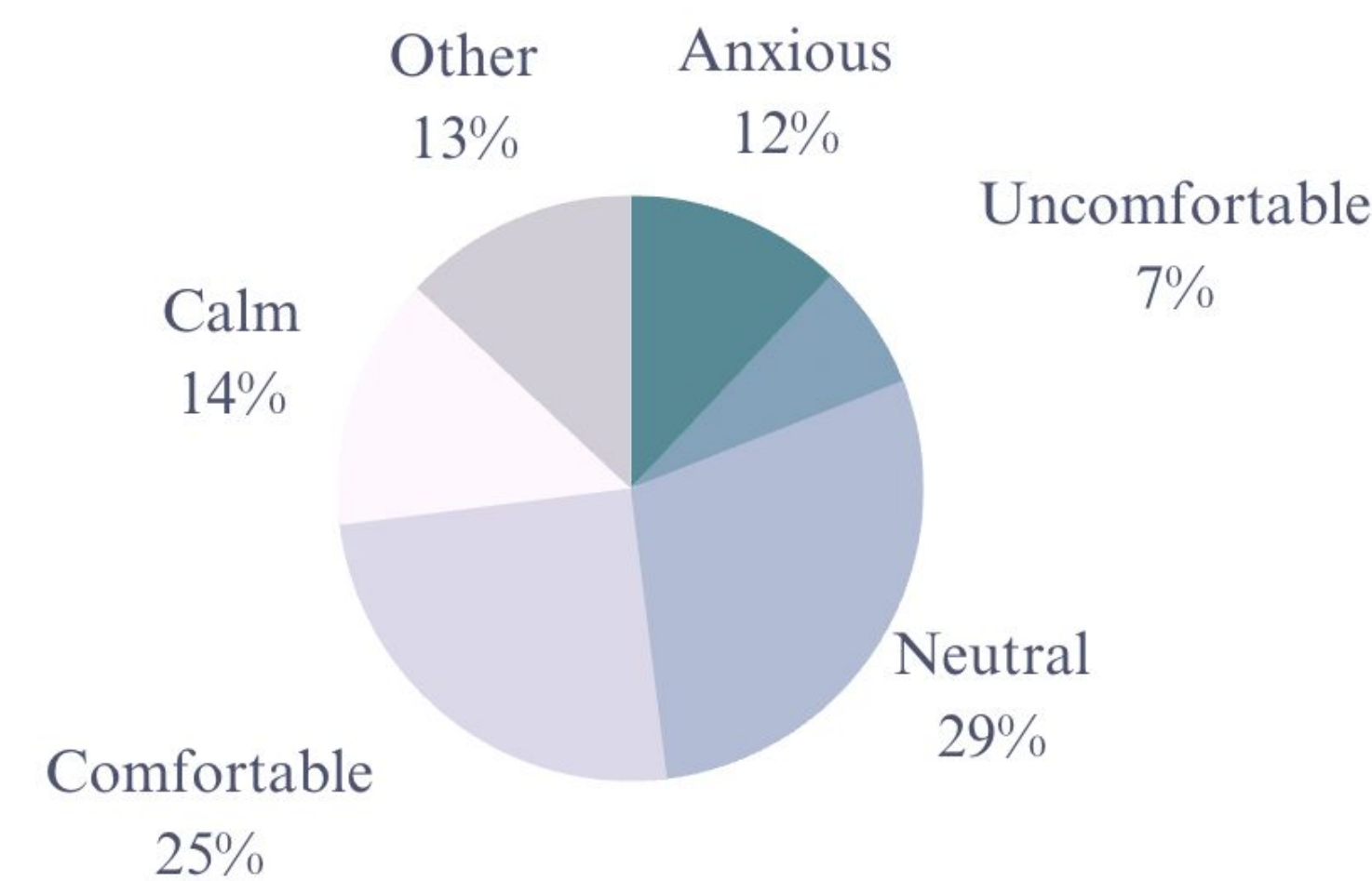


Figure 2: This pie chart shows the different feelings students experience in math class.

### Factors affecting math relationships

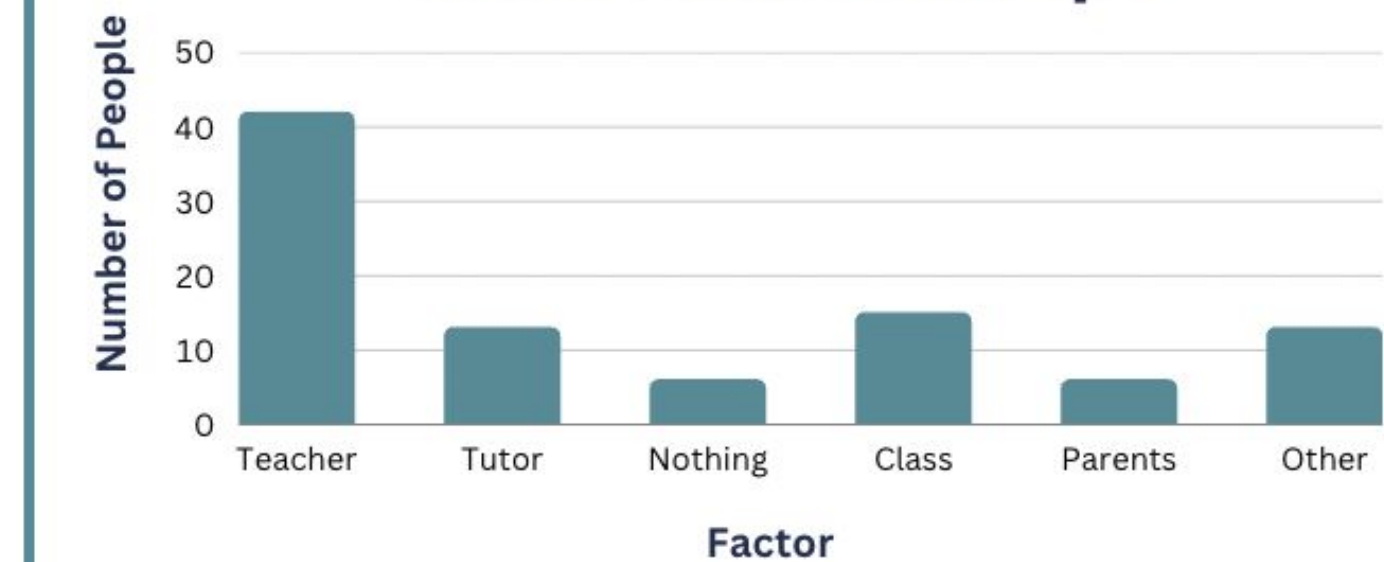


Figure 3: This chart shows the various factors students called out for changing their relationship with math.

- **100** students filled out survey
- Most respondents in various algebra and geometry level courses (fewer calc)
- Students' opinions of math in school were **heavily based upon personal successes and achievements in class**
- Relationships with math have more often than not grown **worse** or moved in a **negative direction** as respondents moved through school
- Many students utilize **tutors, friends, or parents** for math help

### If you are struggling with math, do you address it?

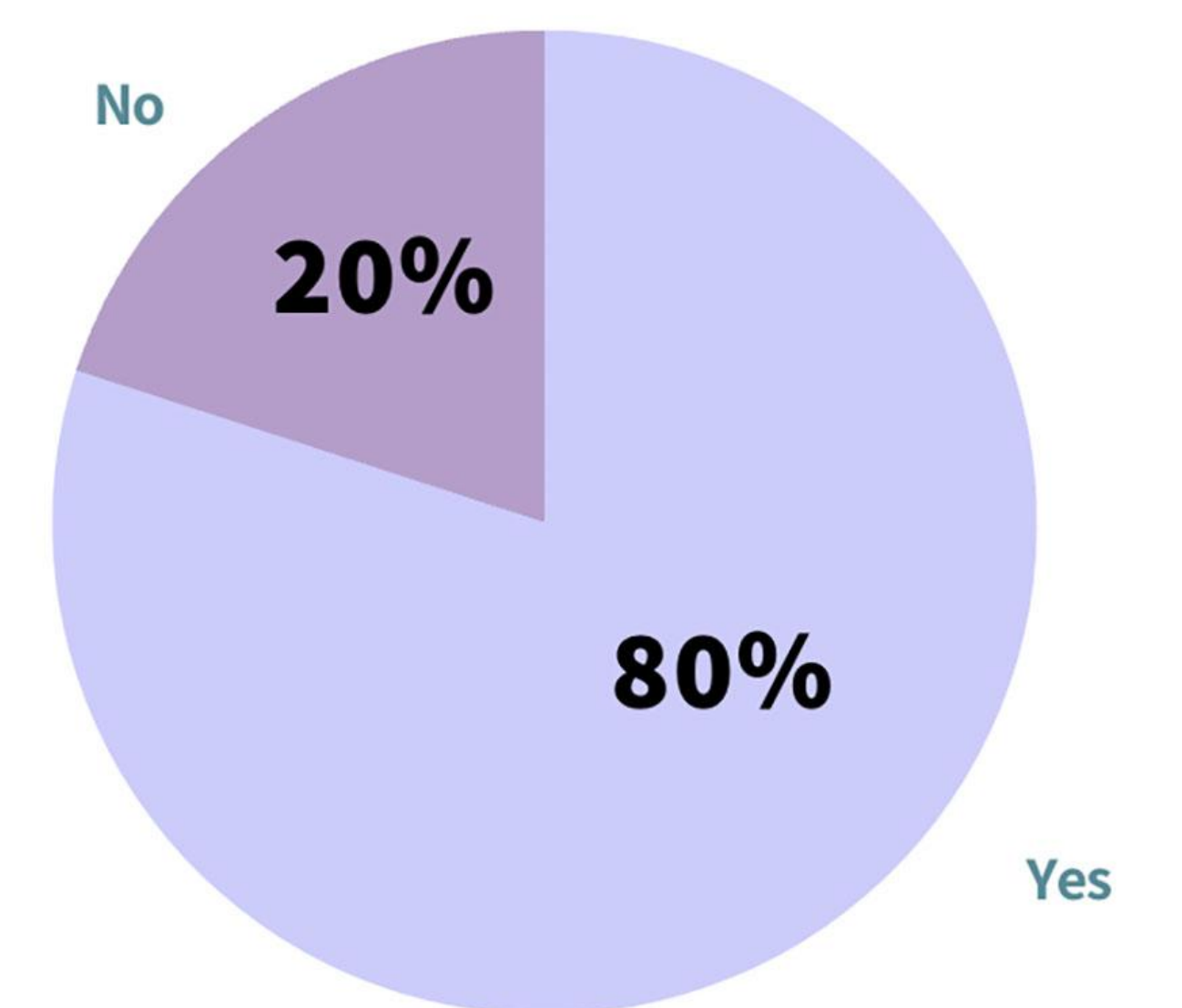


Figure 4: This pie chart displays the percentage of students that choose to address their struggles in math.

## CONCLUSIONS AND ANALYSIS

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I Feelings towards math classes change as the difficulty of the course changes. As the course material becomes increasingly difficult to understand, students become doubtful of their math abilities leading to a negative view on their classes.

II Based on the gathered data, there are several factors affecting students' views on math, however, the top factor is their teacher. Teachers are the driving force of any class, and math classes are no different. Students and teachers should communicate more often to make sure they are on the same page.

Figure 5. Graphic on conclusions and analysis.

## IMPLICATIONS AND NEXT STEPS

### IMPLICATIONS

- People's relationship with math changes throughout their math career
- Greater the math difficulty, typically more negative the relationship

### NEXT STEPS

- Find ways to reduce negative feelings in math courses
- Have all math teachers implement an anonymous student feedback form

Figure 6 and 7. Graphics on Implications and Next Steps.

## ACKNOWLEDGEMENTS / REFERENCES

Special thanks to Ms. McDaniel for helping make this project possible.

### Works Cited:

- Luttenberger, S., Wimmer, S., & Paechter, M. (2018). Spotlight on math anxiety. *Psychology Research and Behavior Management*, 11, 311-322. <https://doi.org/10.2147/PRBM.S141421>
- Wahid, S. N. S., Yusof, Y., & Razak, M. R. (2014). Math anxiety among students in higher education level. *Procedia - Social and Behavioral Sciences*, 123, 232-237. <https://doi.org/10.1016/j.sbspro.2014.01.1419>