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## What Type of Pressure is Worse for Math Anxiety and Math Performance - Accuracy or Time Pressure

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## **Which type of pressure is worse for math anxiety and math performance – accuracy or time pressure?**

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I have previously participated in the RCEU program.

Project summary: Students taking tests are often faced with pressure to answer questions correctly and to do so under time constraints. Standardized tests (e.g., SAT, GRE) often test basic math, but under speed conditions, with test takers knowing that each answer will critically affect their score (and future educational career)! Thus, the goal of this project will be to examine how instructions that stress the need to answer questions quickly (i.e., speed conditions), instructions that stress the need to answer questions correctly (i.e., accuracy conditions), or instructions that stress both (i.e., speed + accuracy) affect participants' math anxiety ratings and math performance. Math anxiety is detrimental to math performance because it ties up cognitive processes that individuals would otherwise be able to allocate to the task at hand. Identifying which type(s) of pressure have the greatest impact on anxiety and performance will set the stage for interventions to address math anxiety, and in turn, improve math performance.

Student Prerequisites: Students should be either a Junior or Senior with at least a 3.00 GPA. Ideally students will have already taken PY 102 and PY 300. Students who have also taken PY 302 will be given priority.

Student Duties: The student will be asked to read background articles about mathematics, instructional design, and memory processes so as to become familiar with the literature and the format style used in all psychology publications. The student and I will meet to discuss these articles to ensure an understanding of the research methods other researchers have used. The student will be asked to contribute to discussions about design decisions so that the student may become familiar with the many steps that go into planning a new experiment. The student will also be asked to help select math materials to be used in this project. Finally, I will personally train the student how to collect data with younger adult participants before the student runs experimental sessions on their own. I will provide the student with additional training in statistics. The goal will be to cement topics addressed in the statistics class by allowing the student to run analyses on data with which they are familiar, having helped plan the experiment and collect the data. In addition, I would train the student in more advanced statistical techniques (e.g., repeated measures analyses of variance) that are necessary for analyzing the types of data produced in my research, but to which undergraduates are rarely exposed. Thus, students will get additional experience using SPSS. Reading published articles will help familiarize the student with how psychological research is written. Finally, the student will gain experience presenting this work in public forums in order to fulfill the obligation to The University of Alabama in Huntsville. All of these things would strengthen the student's skill set while increasing the likelihood of being admitted to a graduate program in Psychology.

