Calming Your Students’ Brewing Math Anxiety

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What is it?

“Math anxiety involves feelings of tension and anxiety that interfere with the manipulation of numbers and the solving of mathematical problems in a wide variety of ordinary life and academic situations.”

(Richardson & Suinn, 1972)
Recently In The News…

Prevalence

- Freshman year in college is starting point of math-related stress for 27% of students (Jackson & Leffingwell, 1999)
- 85% of students in introductory math classes claim to experience at least mild anxiety (Perry, 2004)
- Only 7% of subjects reported positive experiences in their math classes from kindergarten through college (Jackson & Leffingwell, 1999)
Physiological Symptoms

- Holding head on one side
- Head and chin jutted forward
- Tight jaw
- Raised/hunched shoulders
- Fists clenched
- Hands gripping pencil
- Stomach tightened
- Chest Tightened
- Difficulty Breathing
- Sweating
- Nausea
- Increased heart rate
- Headaches
- Passing out
Psychological Symptoms

- Confusion
- Uncontrollable Uneasiness
- Panic—Stricken Worry
- Preoccupation with negative thoughts
- Sudden Memory Loss
- Feeling of Complete Paralysis

“Mathophobia may be compared with the loss of one of the primary senses.” (Hilton, 1980)
Other Manifestations

- Poor Attendance/ Tardiness
- Math Avoidance
- Career Choice
Keeping a Math Journal

- Describe the first negative experience with mathematics that you can remember.
- Describe a positive experience with mathematics.
- Math Autobiography
- Keep a diary of the feelings you experience in a math class, while you study (or avoid studying) mathematics, and when you deal with numbers.
Reducing Math Anxiety

- Prepare
- Control what you can
- Mimic Testing situation when you study
- Have a test supply bag

- Receive Adequate Sleep
- Eat Healthy
- Walk around campus
- Relaxation Strategy
- Practice Positive thinking
Preparing for your Math Class

- Sneak preview
- Careful note taking
- Rework class examples
- Read text and work examples out
- Do all homework and check/correct your answers
- Get all questions answered
- Rework difficult problems again before the test
- Do some review problems as part of HW
“In my experience, fear comes from not knowing what to expect and not feeling you have any control over what’s about to happen. When you feel helpless, you’re far more afraid than you would be if you knew the facts. If you’re not sure what to be alarmed about, everything is alarming.” (Chris Hadfield, first Canadian to walk in space)

“Concentration is a fine anecdote to anxiety.”

Jack Nicklaus
Anxiety Busting Testing Kit

- #2 Pencils
- Pencil Sharpener that holds shavings
- Eraser that doesn’t eat through paper
- Colored Pencils
- Calculator
- Spare Batteries/Spare Calculator
- Sweater
- Cough Drops
- Ruler
- Scantron
- Graph Paper
- Scrap Paper
- Tissues
- Mints
- Watch
- Student ID
- Water/snack
- Earplugs
Food

- Blueberries
- Caffeine
- B Vitamins and Vitamin C
- Calcium
- Carbohydrates
Anxiety is A Biological Response

- Fight or flight Response
- Proper Breathing
- Proper Diet
- Levels of Panic
It’s all About Attitude

- Assess your attitude towards math
- Destructive thoughts accomplish nothing
- Turn a destructive thought into a constructive thought
- Math avoidance and Math anxiety
Celebrate Small Successes

- Set simple, realistic goals
- Be specific in your goals
- Set goals that you can control
- Construct goals that challenge your destructive thoughts
- Allow yourself small failures
You are Not Alone!

- Math Lab
- Online Resources
- Online Tutoring: Smarthinking
- Study Group
- Faculty Student Hours
Some Resources for Students

- List of resources: https://www.fau.edu/education/centersandprograms/mathitudes/links/
- Book: Conquering Math Anxiety by Cynthia Arem http://cc.pima.edu/~carem/MTHANXY.html
Pop Quiz

- Name one strategy that you will try for reducing your math anxiety.
Thank You for Coming!

Please send in evaluation.

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