

Andre Freeman, Ed.D.

Charter Oak State College





What is Math Anxiety

- Feelings of tension, apprehension, or fear related to mathematics or numerical information
- Adverse emotional responses to doing math or the prospect of doing math
- Feelings of worry about experiences with mathematics or the consequences of those experiences

(Beilock & Willingham, 2014; Beilock & Maloney, 2012)



In the United States, an estimated

25% of four- year college students and up to

80% of community college students

suffer from a moderate to high degree of math anxiety.

(Jones, 2001; Yeagar, 2012)

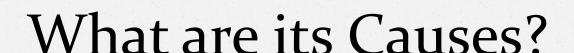




What are its implications?

- Compromises working memory contributing to less mathematical cognition
- Leads learners to choose speed over accuracy (i.e. limits mathematical reflection)
- Prevents students from taking mathematics courses and selecting mathematics-related majors and careers

(Beilock & Willingham, 2014; Beilock & Maloney, 2012; Ashcraft & Krause, 2007)



- Negative Mathematical Experiences
 - Poor Mathematical Performance
 - Behavior of Teachers
 - Teaching Style of Teachers
- Social Influences
- Deficits in Basic Mathematical Skills





Strategies to regulate negative emotions

Reappraisal (Reframing) Techniques

- Recognize that physiological responses (sweaty palms, rapid heartbeat) are appropriate and beneficial for learning.
- Think Positively: Believe that a test is a challenge, not a threat!





Strategies to regulate negative emotions

Expressive Writing

Write a short essay describing how you feel about taking the upcoming exam. How do your present feelings relate to previous experiences.





Strategies to reduce anxiety

Be Proactive

- Ask questions
- Read your mathematics text read the explanations, examples, hints
- Study math according to your learning style (visual, audio, kinesthetic)





Strategies to reduce anxiety

Study Effectively

- Don't try to memorize facts and procedures
 - focus instead on understanding concepts
- Study for periods, then take a break
- Study in relaxed, comfortable environments
- Don't procrastinate study regularly
- Use multiple resources



There are a lot of resources available to you.

- Books
- Websites
- Math Coaches
- Math Tutors
- Your Instructor

You Can Do It!

And Help Is Here!
- Professor Jody Tate, MS





Math Anxiety Bill of Rights

- I have the right to learn at my own pace and not feel put down or stupid if I am slower than someone else.
- I have the right to ask whatever questions I have.
- I have the right to need extra help.
- I have the right to ask a teacher or TA for Help.
- I have the right not to understand.





Math Anxiety Bill of Rights

- I have the right to feel good about myself regardless of my abilities in math.
- I have the right not to base my self-worth on my math skills.
- I have the right to view myself as capable of learning math.
- I have the right to evaluate my math instructors and how they teach.
- I have the right to relax.





Math Anxiety Bill of Rights

- I have the right to be treated as a competent adult.
- I have the right to dislike math.
- I have the right to define success in my own terms.
- ~ Sandra L. Davis





HELP IS HERE!

- 1) Your instructor is here to help you! Reach out as soon as you have a question or concern.
- 2) eTutoring (click on the e-tutoring link in Blackboard to access FREE help!)
 - Live Tutoring where you can meet with a tutor in one-on-one tutoring sessions via a fully interactive, virtual online environment.
 - Offline Questions where you can leave a specific question for an eTutor who will respond within 48 hours.



- 3) Your text and/or your courses learning resource (WebAssign, ALEKS, MyLogicLab, MyMathLab) are wonderful resources
 - Work the examples in the text—they are often VERY similar to the homework problems.
 - If you do not understand something you read or an example, ask your instructor or post your question to the discussion board.
 - Use all available resources (videos, instructor lectures, supplemental websites, etc.)
 - Practice is the KEY to success in mathematics!



- WEBSITES To Check Out:
- <u>www.khanacademy.org</u> (great videos!)
- <u>www.purplemath.com</u>
- <u>www.coolmath.com</u>
- www.mathisfun.com
- <u>www.wolframalpha.com</u>
- <u>www.youtube.com</u> (search for your topic)



http://youtu.be/JC82II2cjqA

Copy and paste this into your browser to watch a wonderful video on the art of believing in yourself!