

# Behavioral Health is Essential To Health



Prevention Works



Treatment is Effective



People Recover



# Early Universal, Public-Health Prevention and Treatment of Psychiatric Disorders:

*The Scientific and Practical Reality Is Here Now*

**Dennis D. Embry, Ph.D.**



# SAMHSA Disclaimer

*This webinar was developed (in part) under contract number*

*HHSS2832012000211/HHS28342003T from the Substance Abuse and Mental Health Service Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). The views, policies and opinions expressed are those of the authors and do not necessarily reflect those of SAMHSA or HHS*

# Early Universal, Public-Health Prevention and Treatment of Psychiatric Disorders:



*The Scientific  
and Practical  
Reality Is  
Here Now*

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**Dennis D. Embry, Ph.D., president/senior scientist**  
PAXIS Institute, PO 31205, Tucson, AZ 85751 • [www.paxis.org](http://www.paxis.org)



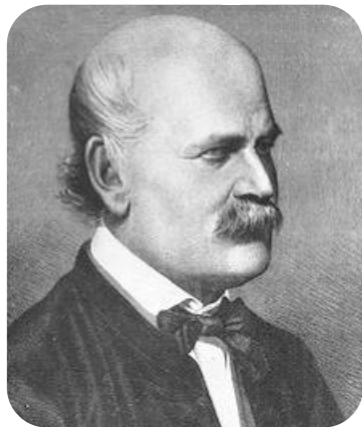
**EPIDEMIC**

Thinking about the  
history preventing  
human epidemics...



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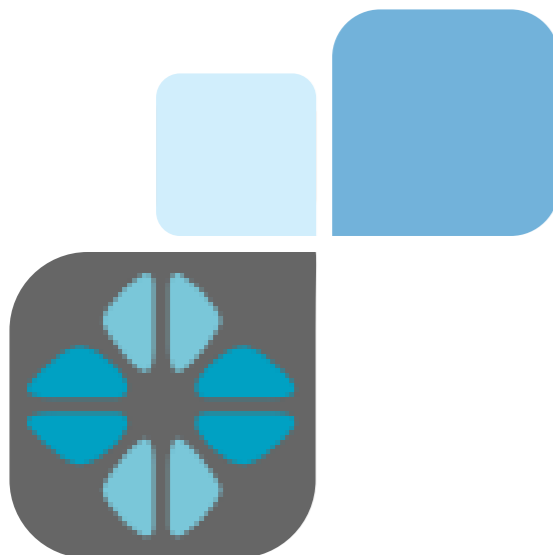
Challenging stigma and blame:  
The first low-cost, proven, evidence-based  
kernel for maternal and child health...



Ignaz Semmelweis  
Physician



The Experimental Observation and Test



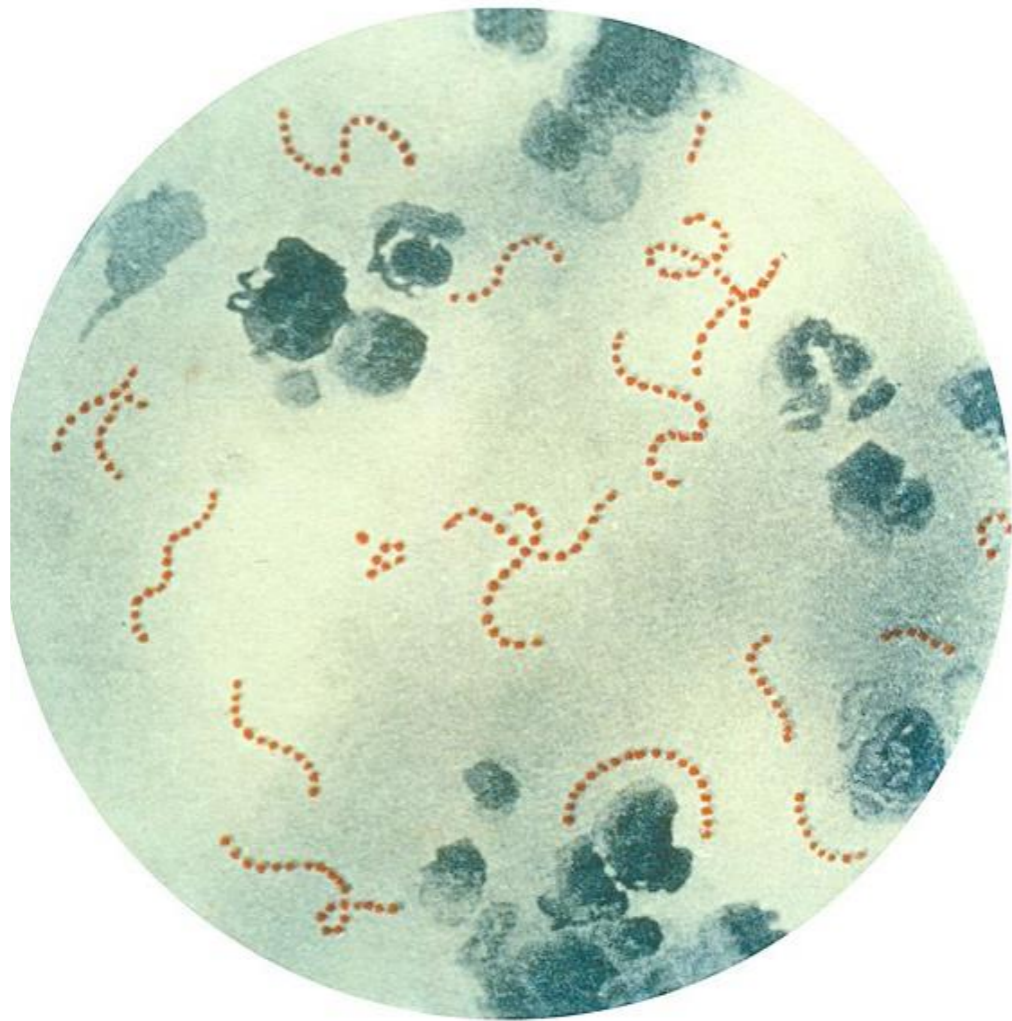


Image credit: CDC



# Streptococcus pyogenes

The culprit of massive morbidity and mortality of mothers and children.

But the discover caused an intellectual disease:

[Semmelweis reflex](#)



Semmelweis reflex or effect is a metaphor for the reflex-like tendency to reject new evidence or new knowledge, because it contradicts established norms, beliefs or paradigms.

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# A Powerful Metaphor for Scientific and Medical Public-Health Protection

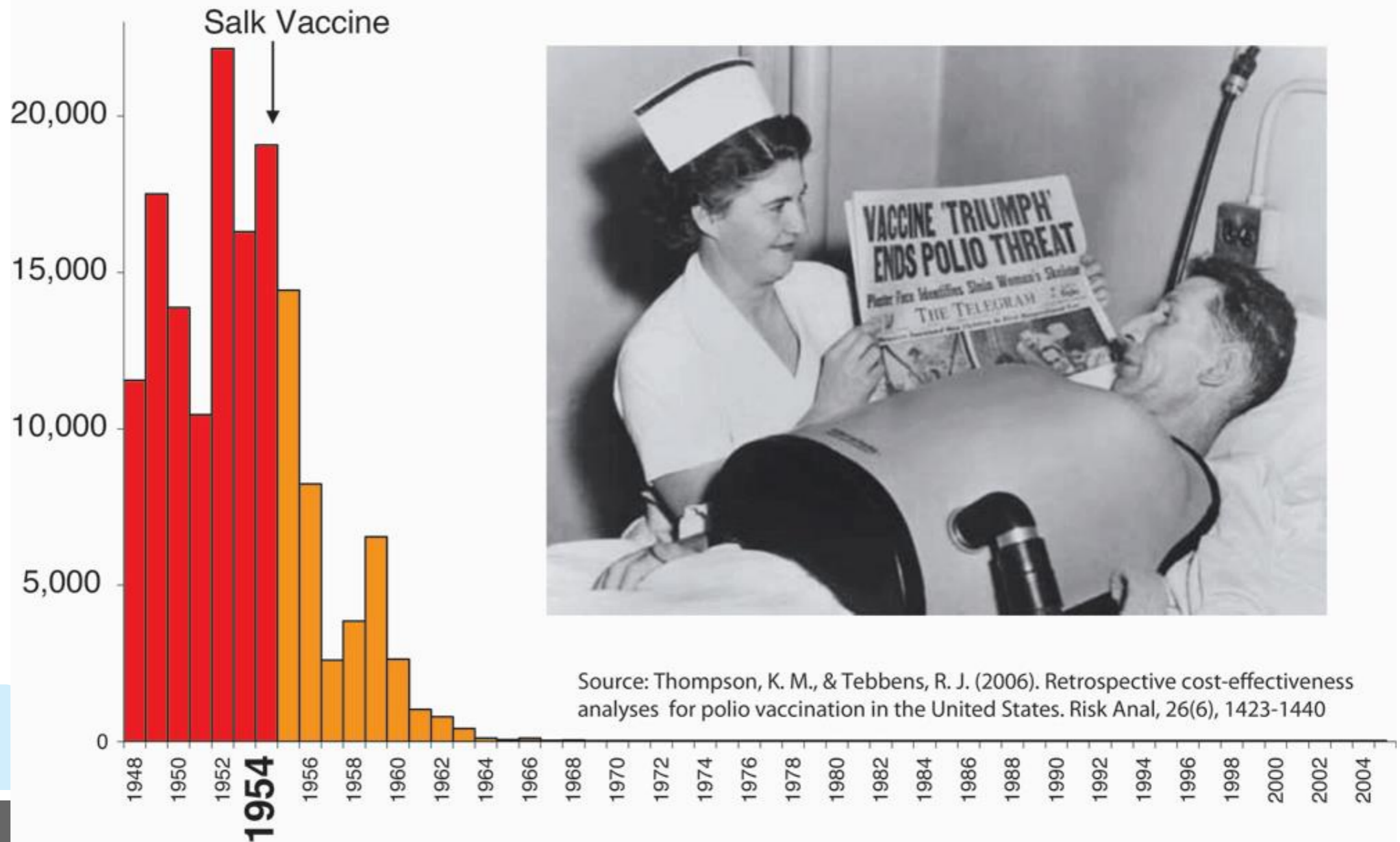


If Polio Epidemic happened *now*:  
6,000 deaths, 120,000 cases





# Cases of Paralytic Polio in the United States

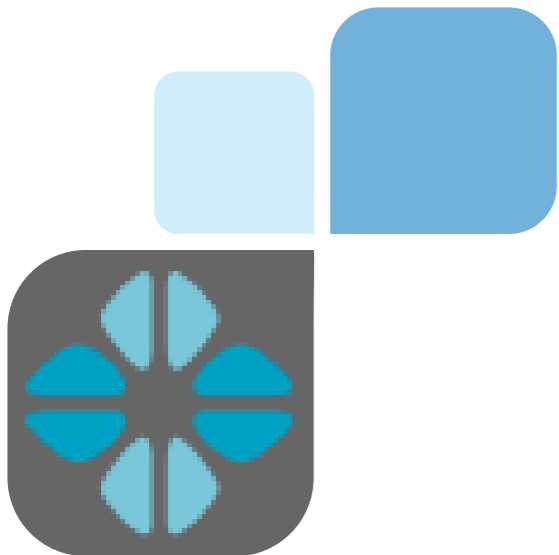


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# EPIDEMIC

Modern epidemic  
affecting the brain  
and behavior of  
young people....



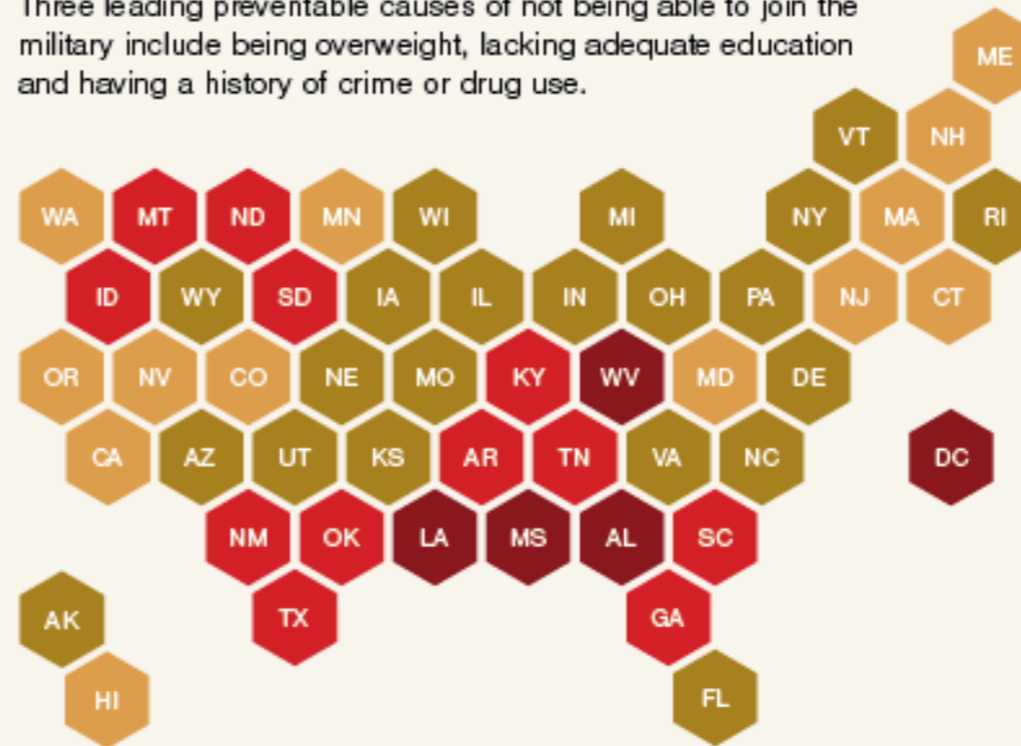
3/4's of America's Young People Do Not Meet Standards to Be in U.S. Armed Services,

Because of:

- \* Being overweight,
- \* Poor education,
- \* Criminal activities,
- \* Drug Use, and
- \* Mental illness

## MANY YOUNG AMERICANS ARE NOT ELIGIBLE TO JOIN THE MILITARY

Three leading preventable causes of not being able to join the military include being overweight, lacking adequate education and having a history of crime or drug use.



**71%**

of young Americans aged 17 to 24 are ineligible for military service

### PERCENT INELIGIBLE TO JOIN THE MILITARY (AGES 17-24)

75%-78%

**5**

Mississippi	78%
District of Columbia	78%
Louisiana	76%
Alabama	75%
West Virginia	75%

73%-74%

**12**

Arkansas	74%
South Carolina	74%
Tennessee	74%
North Dakota	73%
Montana	73%
South Dakota	73%
Kentucky	73%
New Mexico	73%
Oklahoma	73%
Texas	73%
Georgia	73%
Idaho	73%

71%-72%

**21**

Rhode Island	72%
North Carolina	72%
Missouri	72%
Indiana	72%
Arizona	72%
Pennsylvania	72%
Utah	72%
Ohio	72%
Michigan	71%
Florida	71%
Vermont	71%
Virginia	71%
Wisconsin	71%
Delaware	71%
Nebraska	71%
Wyoming	71%
New York	71%
Iowa	71%
Kansas	71%
Alaska	71%
Illinois	71%

62%-70%

**13**

Maine	70%
Nevada	70%
Oregon	70%
New Hampshire	70%
Maryland	70%
California	70%
Massachusetts	70%
Colorado	70%
Minnesota	69%
Connecticut	69%
Washington	69%
New Jersey	69%
Hawaii	62%



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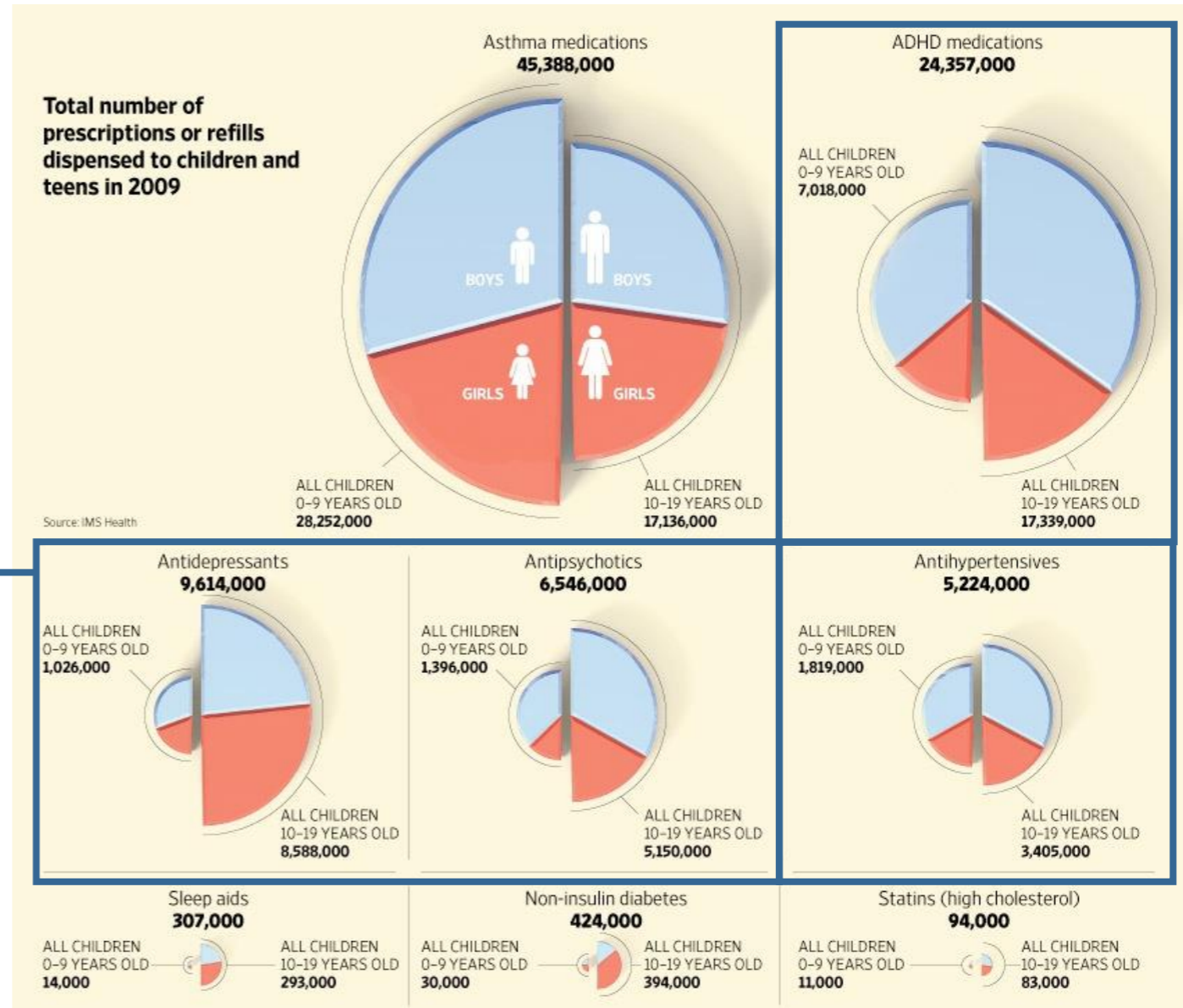


[StrongNation.org/MissionReadiness](http://StrongNation.org/MissionReadiness)

The US had 75 million children and teens in 2009...

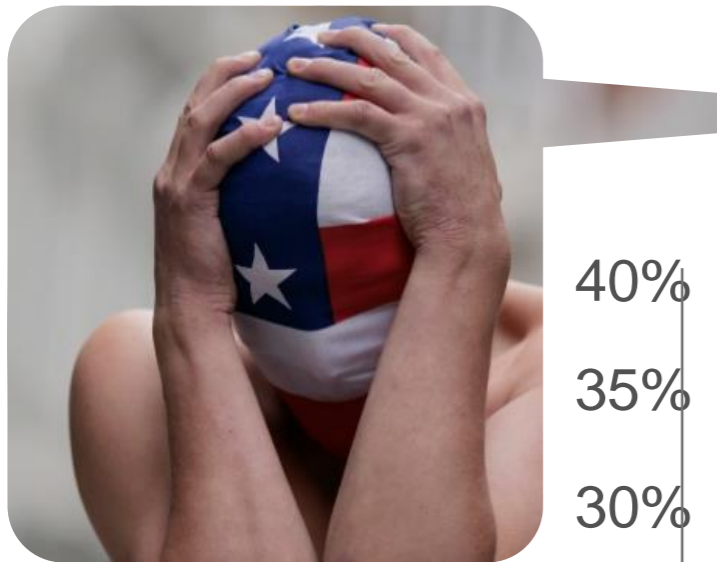
45.6 million kids had one psychotropic med in 2009

Wall Street Journal, 12-28-2010

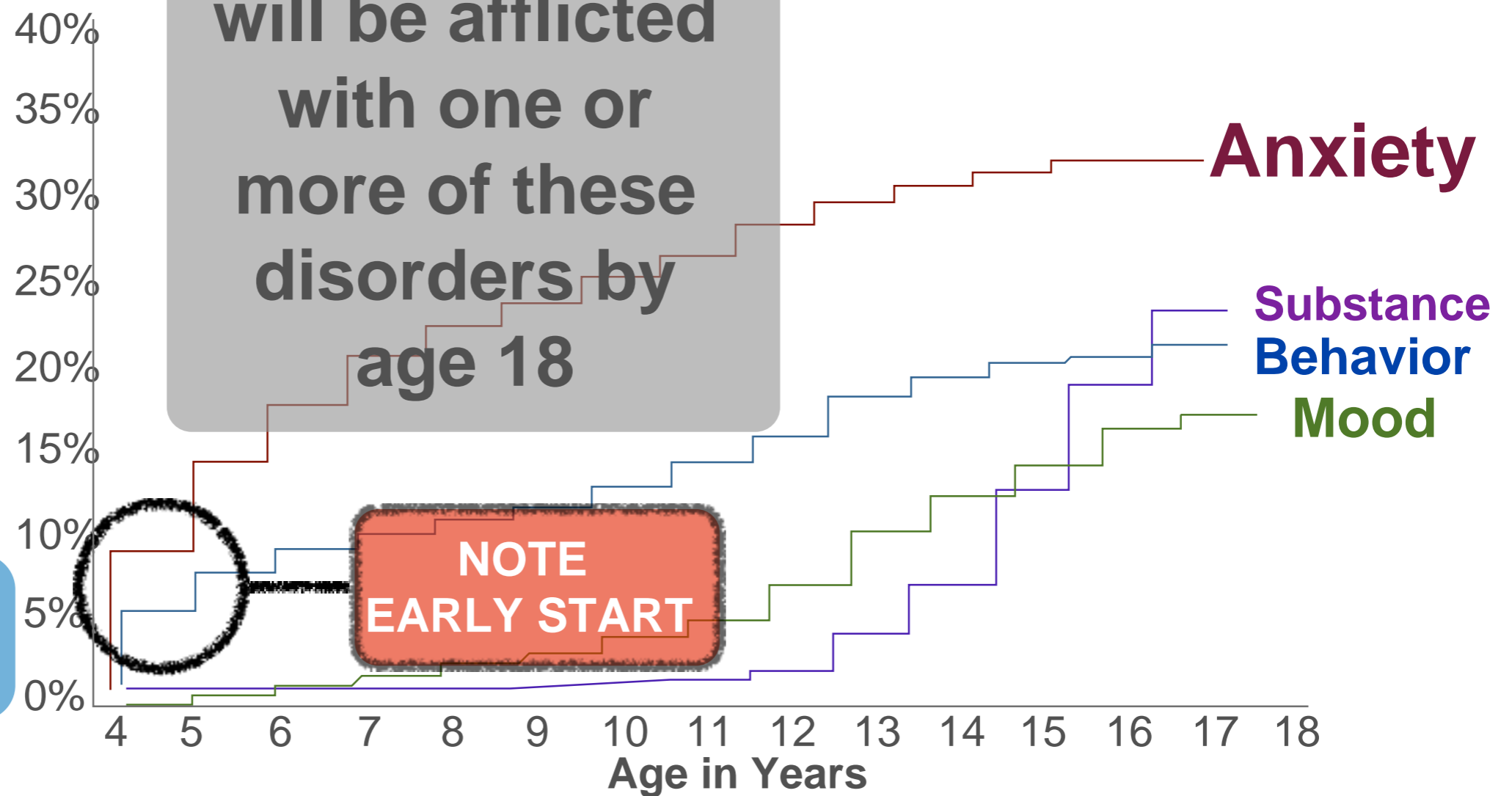


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# Cumulative *Lifetime* Prevalence of Disorders in US Adolescents (N=10,123) (Not time point prevalence)



**1-out-2 USA  
young adults  
will be afflicted  
with one or  
more of these  
disorders by  
age 18**



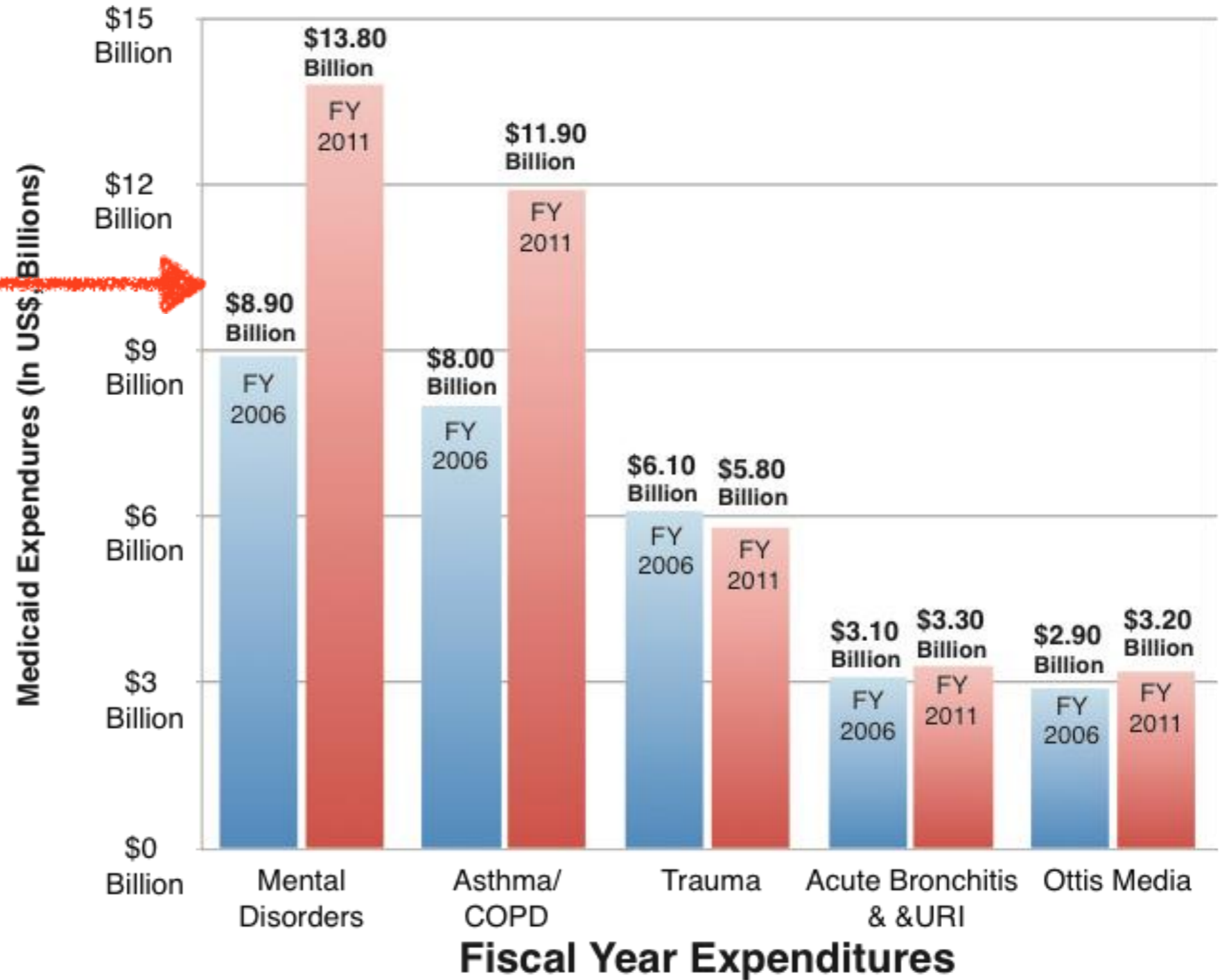
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Merikangas, K. R., et al. (2010). "Lifetime prevalence of mental disorders in U.S. adolescents: results from the National Comorbidity Survey Replication--Adolescent Supplement (NCS-A)." *J Am Acad Child Adolesc Psychiatry* 49(10): 980-989.



The cost of Mental Disorders is increasing \$1 billion per year

## Medicaid Expenditures for the Five Most Costly Conditions in Children



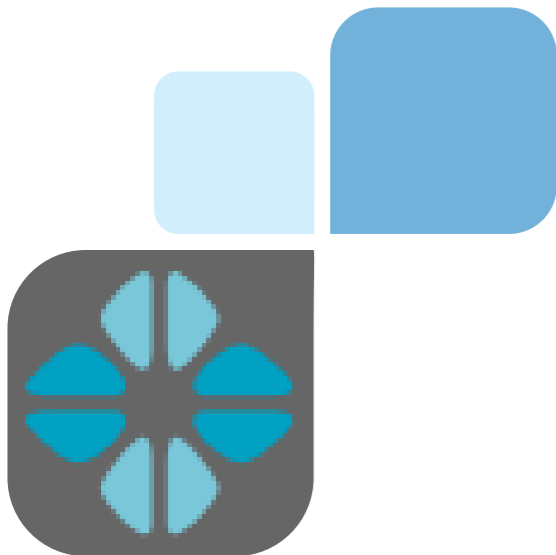
Source: Center for Financing, Access, and Cost Trends, Agency for HealthCare Research and Quality, 2006, 2011



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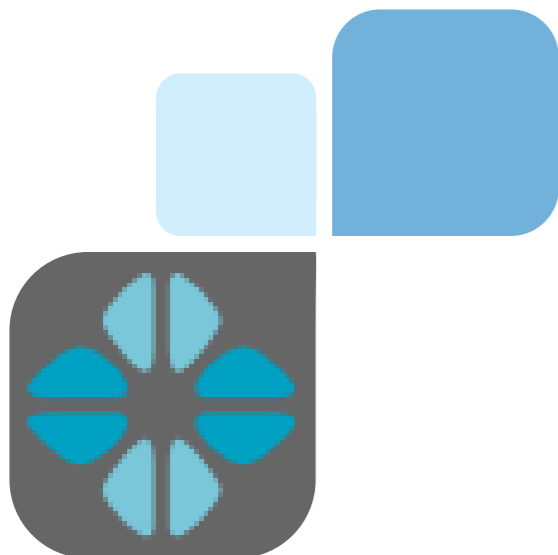
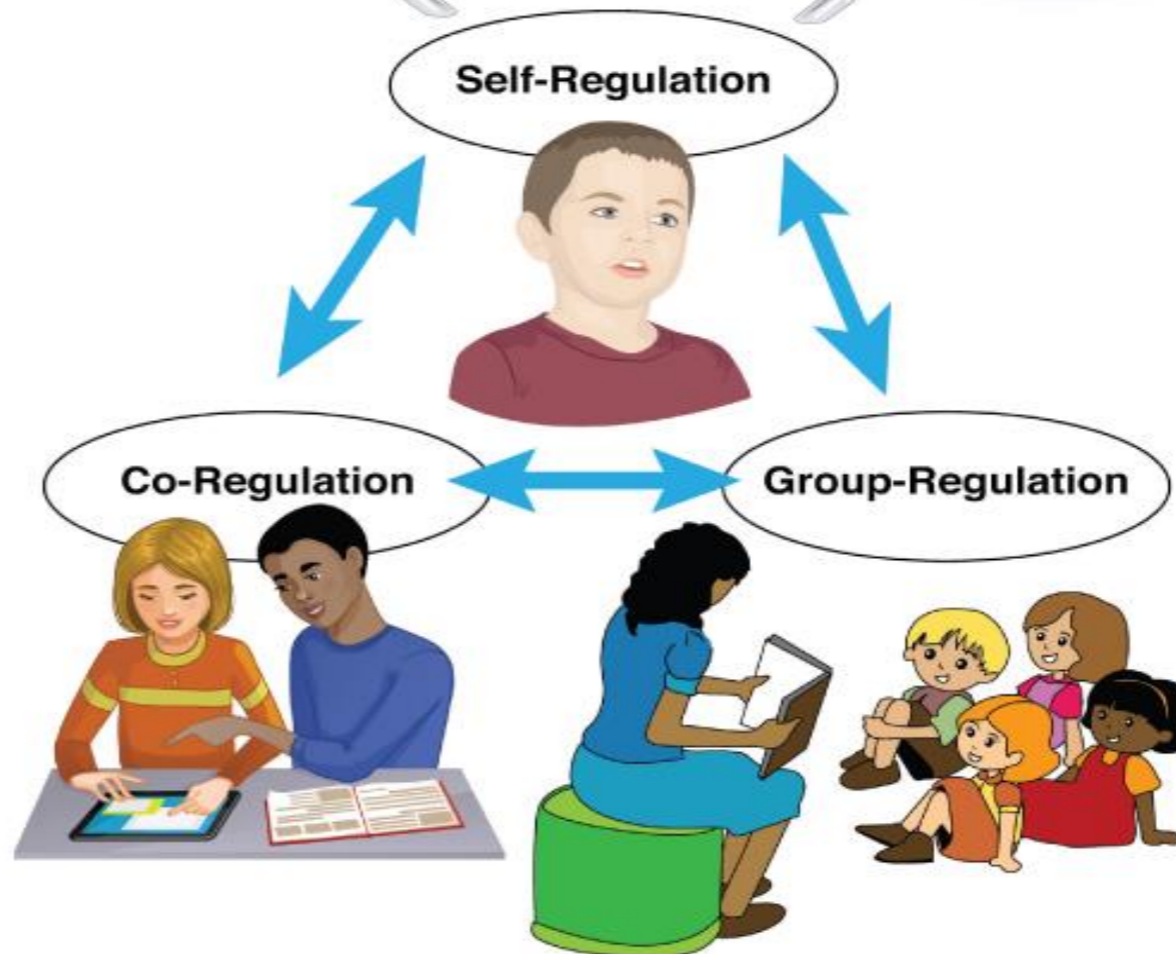
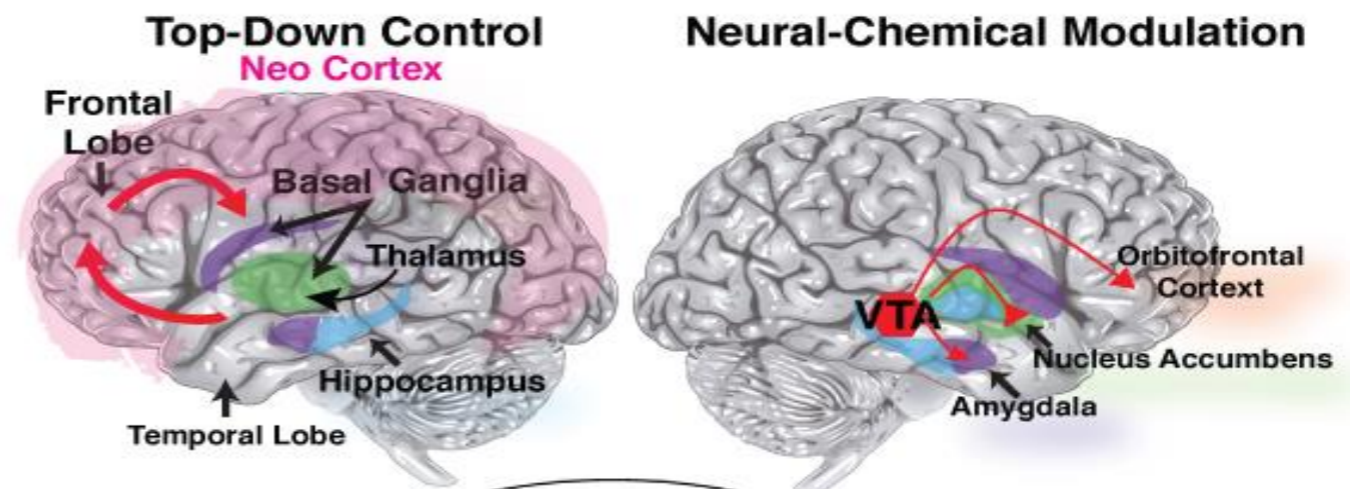
# Given the trends on children mental, emotional and physical health, what are the options?

- (A) Ignore the trends?
- (B) Blame over diagnoses?
- (C) Blame some group of people?
- (D) Or, maybe a public-health approach to the universal, primary prevention of these disorders?



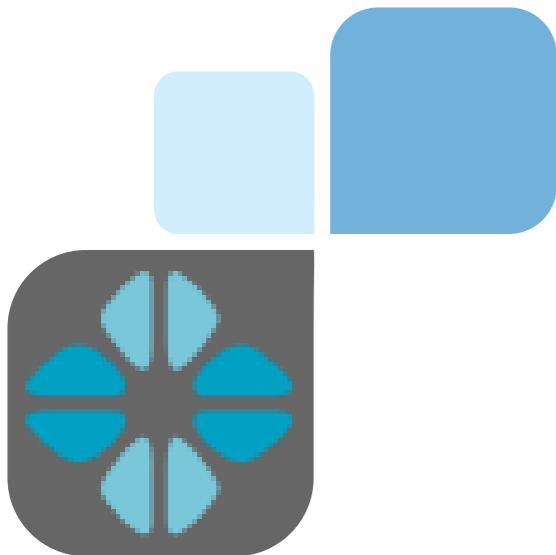
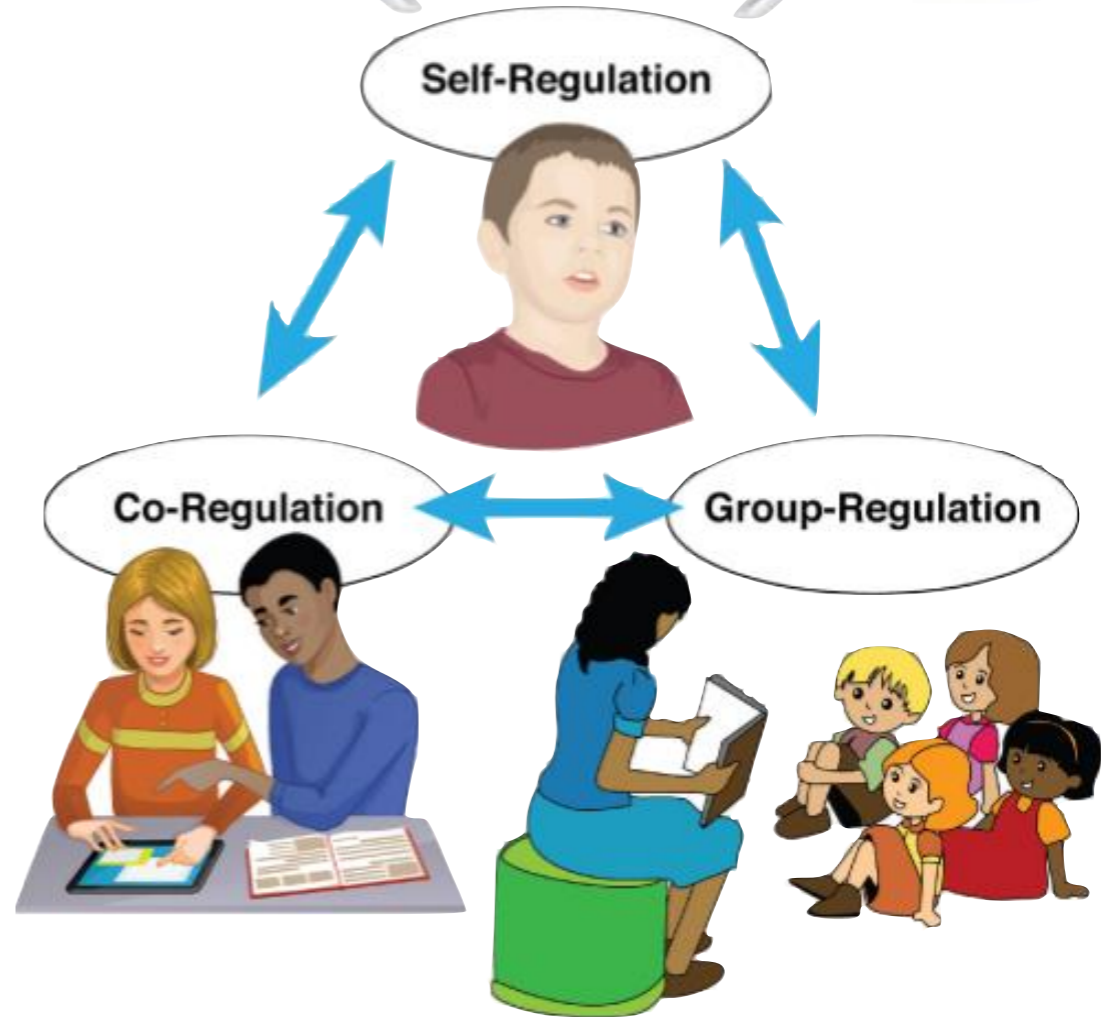
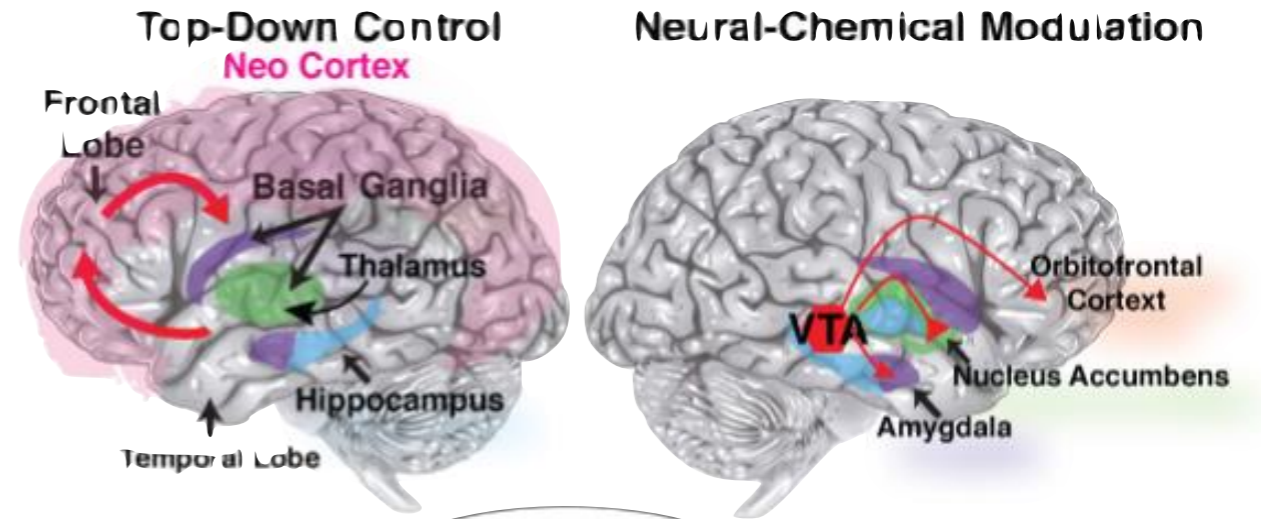
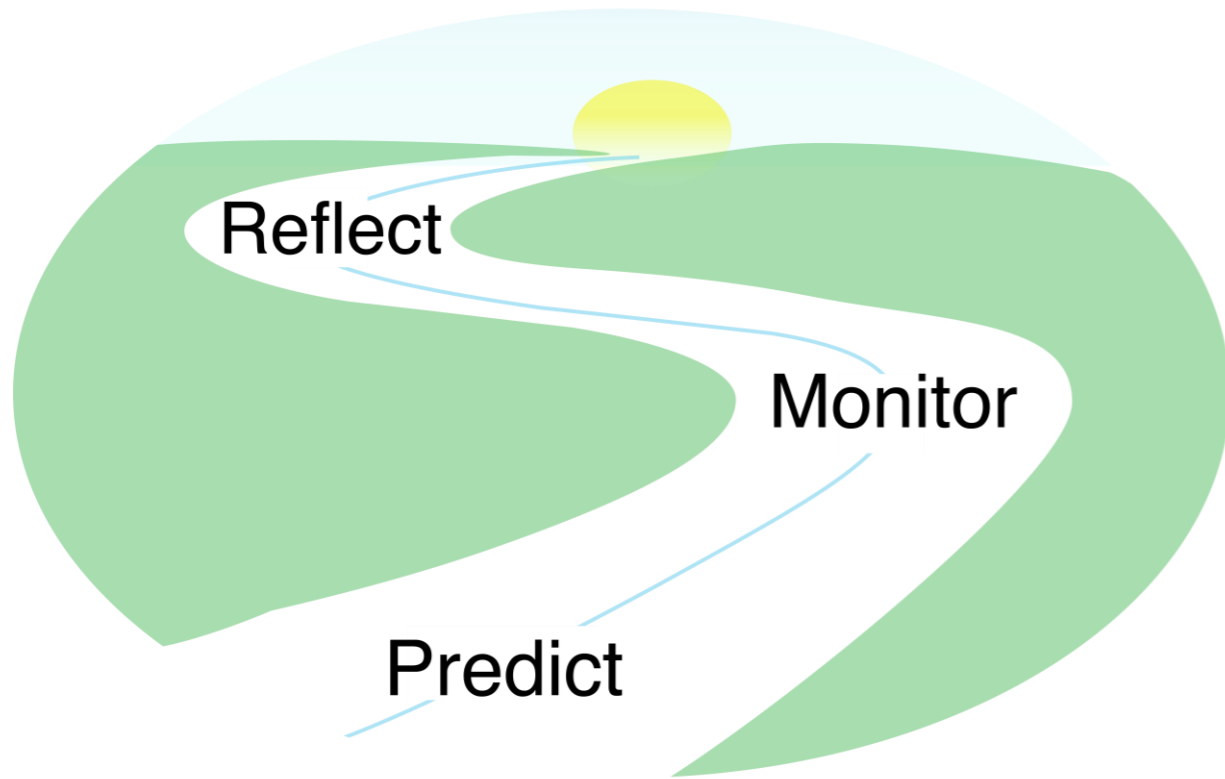
# The Good Behavior Game: A Best Practice Candidate as a Universal Behavioral Vaccine

Dennis D. Embry<sup>1</sup>

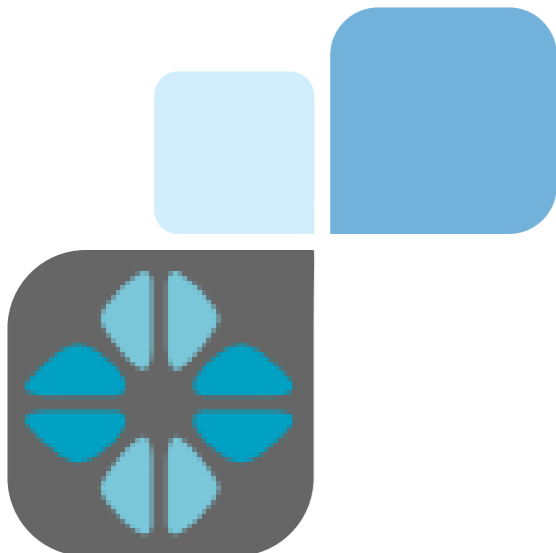
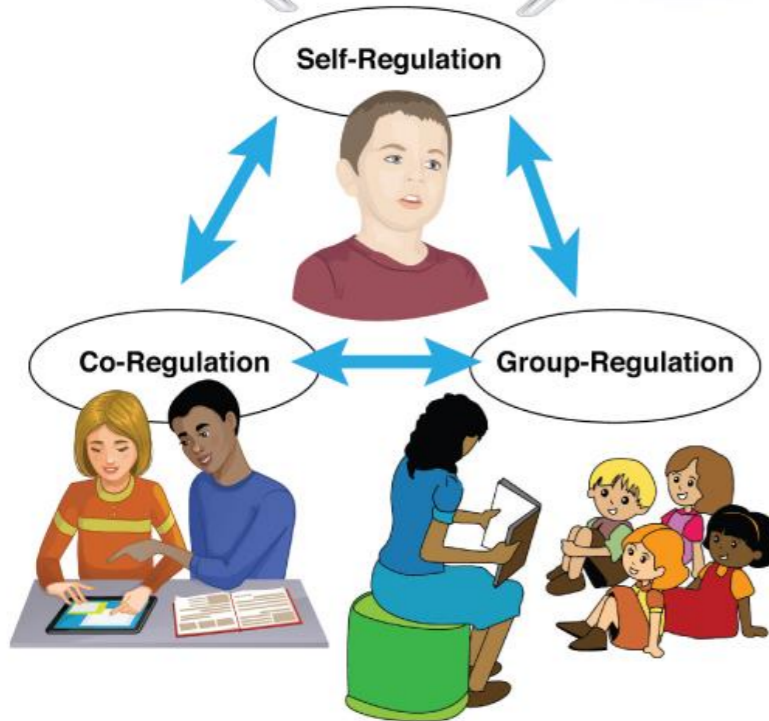
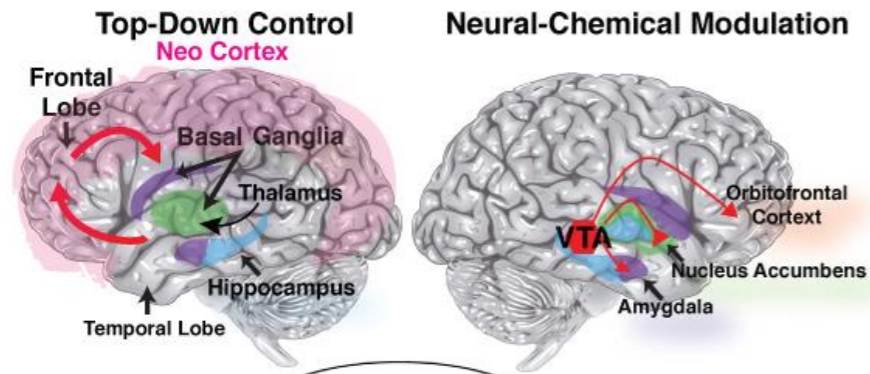




What are the key cognitive-behavioral skills required for the regulation triad?



# Nurturing Environments



**Increasing Psychological Safety & Flexibility**

PAX Vision  
I'm a PAX Leader  
PAX OK/  
Spleems Not OK  
Predict, Monitor, & Reflect

**Reducing or Minimizing Toxic Influences**

PAX Quiet  
PAX Hands  
PAX Breath  
PAX Stix

**PAX Good Behavior Game**



Tootles Notes  
PAX IT Notes  
PAX Roles  
Granny's Wacky  
Prizes  
PAX Minutes  
ABCD Pinch Slates

**Richly Reinforcing Prosocial Behaviors**

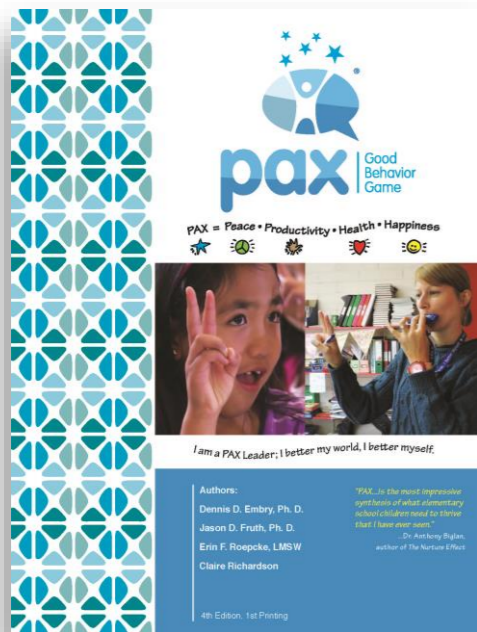
PAX Quiet  
PAX Hands  
PAX Voices  
PAX Roles  
PAX Feet

Spleem Observations

**Limiting Problematic Behaviors**

# Initial evidenced-based kernels for teaching and learning the regulation triad...

## Unit 2: Launching PAX



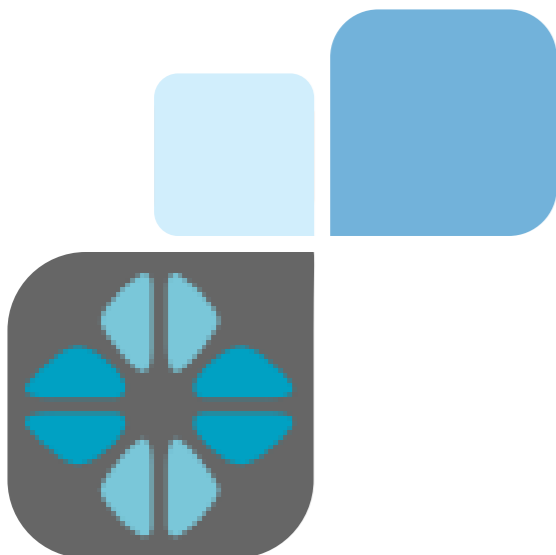
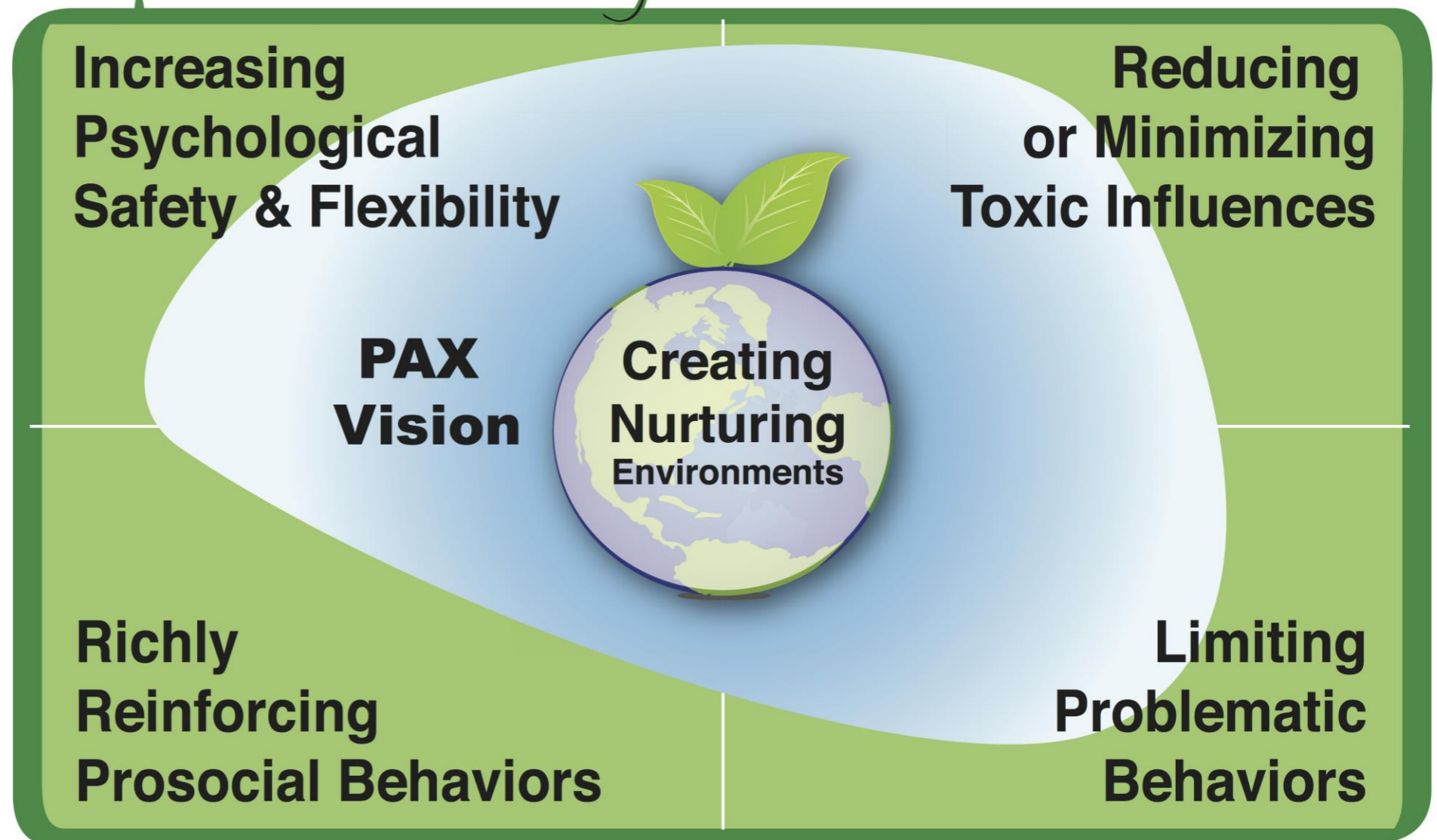
1. Lead the students in a PAX Vision (More & Less)
2. Create the relational frame identify & purpose of PAX Leader
3. Teach PAX Quiet for transitions
4. Introduce Granny's Wacky Prizes (Premack Principle)
5. Introduce and use Beat the Timer
6. Introduce and use PAX Sticks
7. Introduce and use Tootle Notes (peer & adult)
8. Introduce and use PAX Voices for activities
9. Introduce and use PAX Hands and Feet Cues
10. Introduce and use OK/Not OK cards

These 10 kernels take about 8 weeks for students and teachers to be proficient.

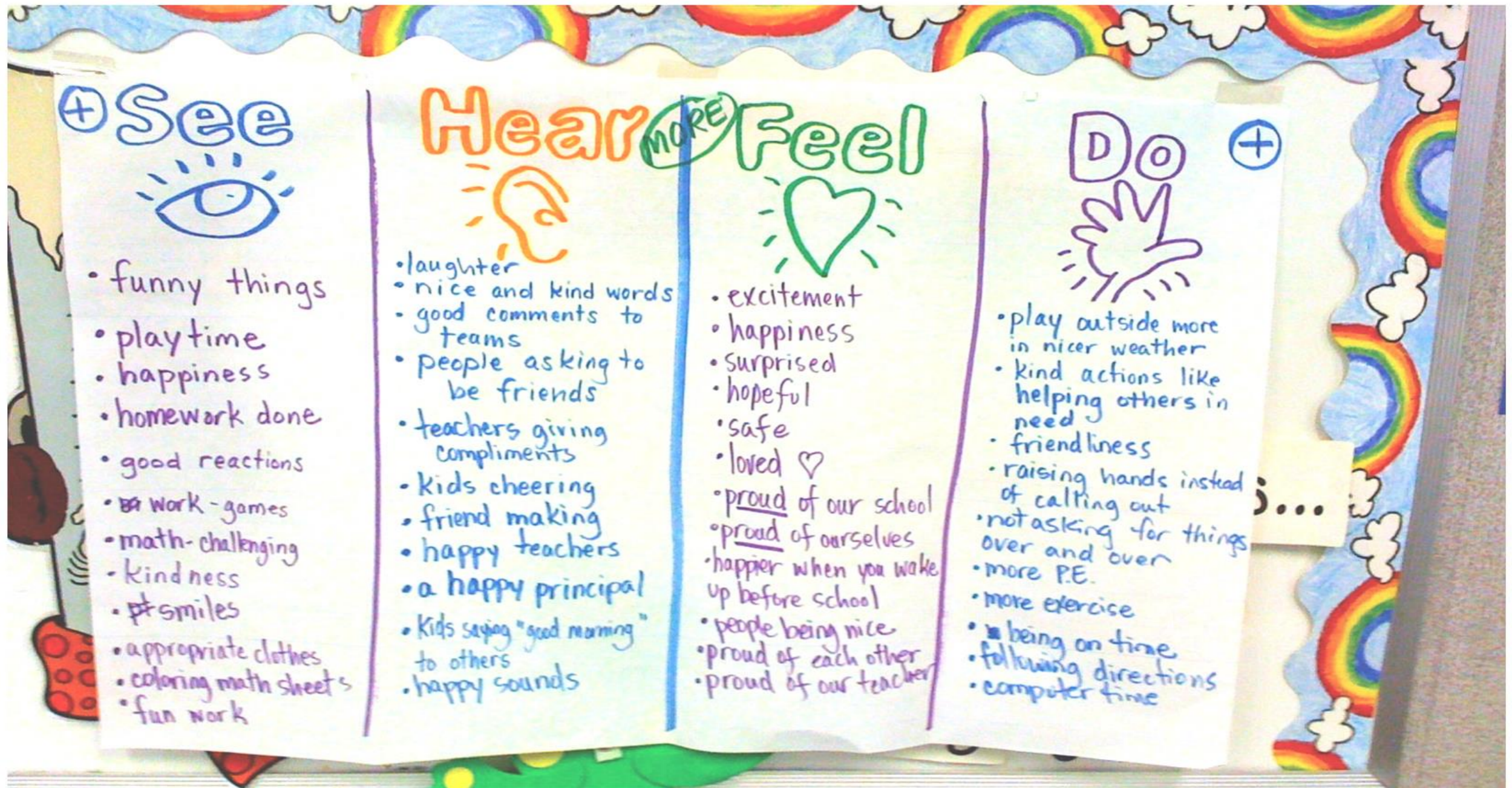


# Chapter 1: PAX Vision

## *Nurturing Environments*



# PAX Vision More



# PAX Vision LESS

**See** 

- bullying
- tantrumming
- threatening
- violence
- fighting
- people saying hateful words
- no's on the bus and contracts
- force
- spitting
- restrictions
- goofing around
- biting

**Hear**  **LESS**

- people saying "shut up"
- bad language
- paper planes on the bus
- arguing
- whining
- grunting & groaning
- stomping & kicking
- hitting
- crying
- bad reports
- screaming
- punch impacts
- things being thrown
- selfishness

**Feel** 

- angry
- pinching • punching
- kicking
- tired
- scared
- bullied
- HURT
- loneliness
- pushing & shoving
- danger
- sad, mad, shy
- jealous
- agitated
- nervous
- selfishness
- guilty

**Do**  **—**

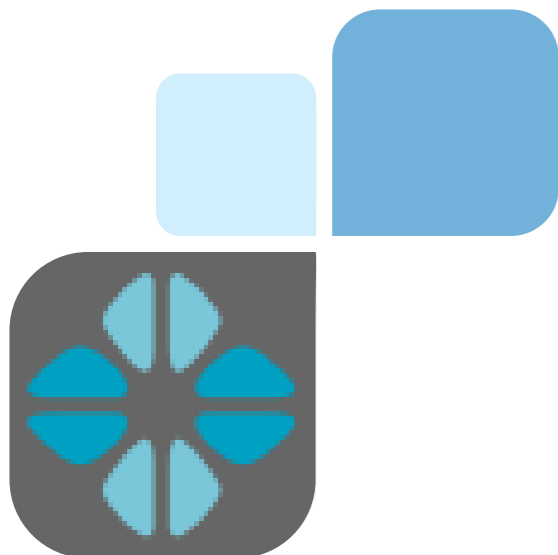
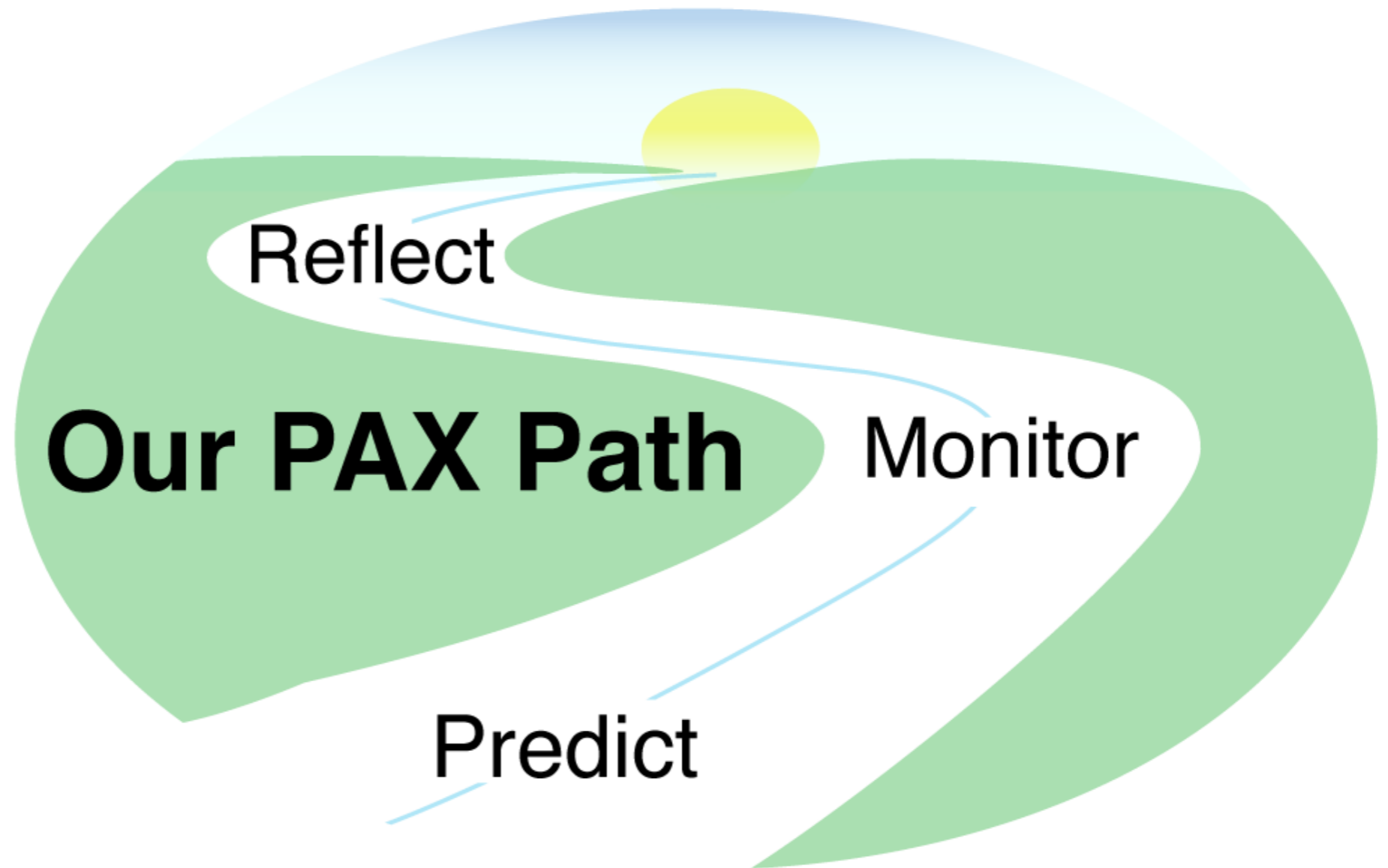
- kicking & hit
- scream
- fidgeting
- meanness
- name-calling
- not following directions
- noise-making
- messy/careless work
- getting mad or impatient
- being unfocused
- spitting
- free-time work
- angry



# PAX Vision and PAX Leader PATH



Ask How I Was  
a PAX Leader?



# *Nurturing Environments*

**Increasing  
Psychological  
Safety & Flexibility**

**Reducing  
or Minimizing  
Toxic Influences**



**Creating  
Nurturing  
Environments**

**PAX QUIET  
Nurturing  
Effects**

**Richly  
Reinforcing  
Prosocial Behaviors**

**Limiting  
Problematic  
Behaviors**





**PAX Tip:** Sometimes, you may draw a prize that cannot be done then. Draw another or say it's something else.

### **Chalk Doodles**

Winning teams get to go to the chalkboard or outside to the concrete and draw doodles of silly doodles. (Colored chalk makes this great).

**Suggested Time:** A minute or two inside; more outside

### **Dancing Stars**

Winning teams get to dance to a song, and pause mid-air when the music is stopped by the teacher, and then continue when it starts. (See PAX-to-the-MAX Music CD, which has short reward songs).

**Suggested Time:** 1 to 2 minutes

### **Hold Your Nose Singing**

Winning teams hold their noses and sing a common nursery song (twinkle-twinkle, wheels on the bus, Mary had little lamb, etc.). This sounds really silly.

**Suggested Time:** A minute or so

### **Who Let the Dogs Out?**

Winning teams get to chant or sing "who let the dogs out," then bark or howl, then chat it again, bark or howl, etc.

**Suggested Time:** 30 seconds

### **Air Guitar**

Winning teams get to pretend to be a rock star, playing an air guitar. (Better if there is some music).

**Suggested Time:** 30 seconds or a short song

### **Wadded Paper Toss**

Winning teams get to wad up a piece of scrap paper and toss it into the trash can.

**Suggested Time:** 15 to 30 seconds

### **Tip-Toe Tag**

Winning teams play tag on their tippy toes and hold their nose while doing it. You'll laugh your socks off.

**Suggested Time:** A minute or so.

### **Sit Under Desks**

Winning teams get to set under their desks while reading or doing some other tasks for a set time. Surely all adults will be completely shocked!!

**Suggested Time:** from 5 to 30 minutes, based on task

### **PAX, PAX, Tootle**

This is a variation of Duck, Duck, Goose—but spreads the PAX language. Winning teams form a big circle, and the play PAX, PAX, Tootle

**Suggested Time:** A couple of minutes.



A 30-second nap prize

# Nurturing Environments

Increasing Psychological Safety & Flexibility

Reducing or Minimizing Toxic Influences

Granny's Wacky Prizes

Creating Nurturing Environments

Richly Reinforcing Prosocial Behaviors

Limiting Problematic Behaviors



# *Nurturing Environments*

**Increasing  
Psychological  
Safety & Flexibility**

**Reducing  
or Minimizing  
Toxic Influences**

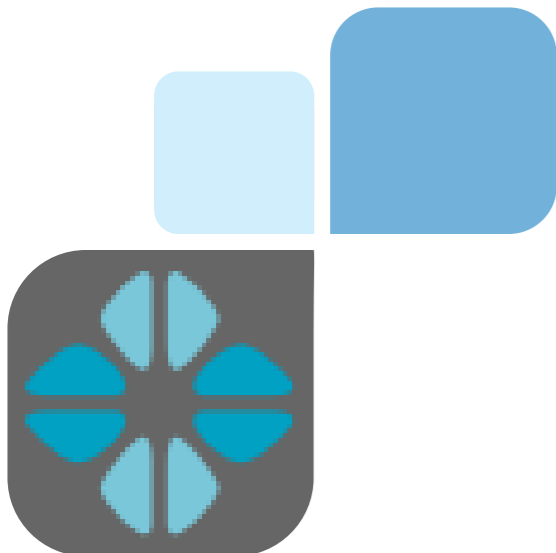
**Creating  
Nurturing  
Environments**



**Beat the  
Timer**

**Richly  
Reinforcing  
Prosocial Behaviors**

**Limiting  
Problematic  
Behaviors**



# Nurturing Environments

**Increasing  
Psychological  
Safety & Flexibility**

**Reducing  
or Minimizing  
Toxic Influences**

**PAX  
Stix**

**Creating  
Nurturing  
Environments**

**Richly  
Reinforcing  
Prosocial Behaviors**

**Limiting  
Problematic  
Behaviors**

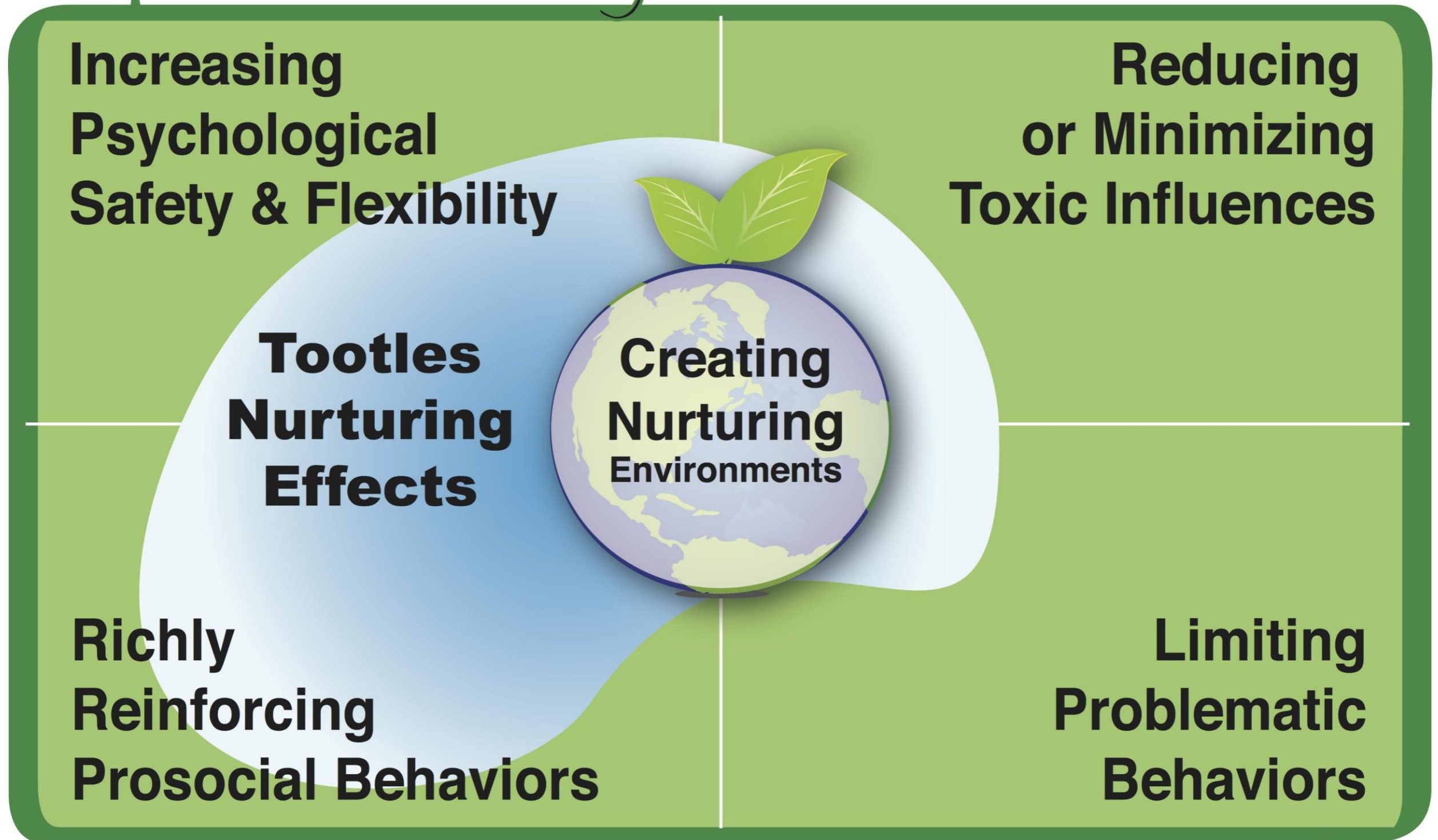


Jimmy Schultz  
Maria Indo  
Kenisha Wiggly  
Jesus Ramirez  
Natal Putu  
Kiara Aeoteroa  
William Green  
Tamiz Casto  
Miriam Willman  
Antonio Biglioni  
Xian HU





# Nurturing Environments



Number of disruptive behaviors in a third-grade classroom with and without the use of tootling

# *Nurturing Environments*

## **PAX Voices**

 is **0-inch voice**  
(no sound)

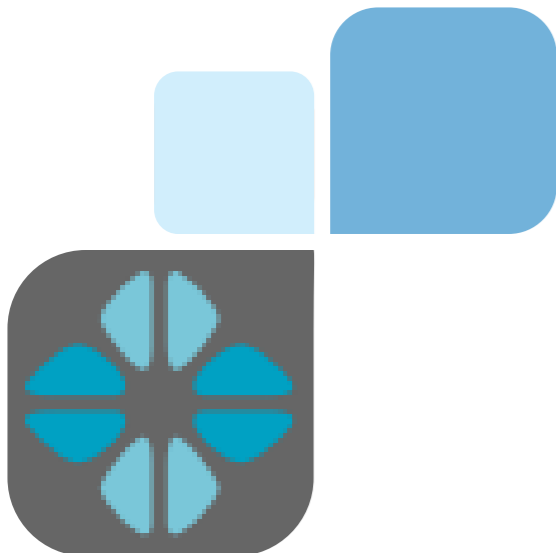
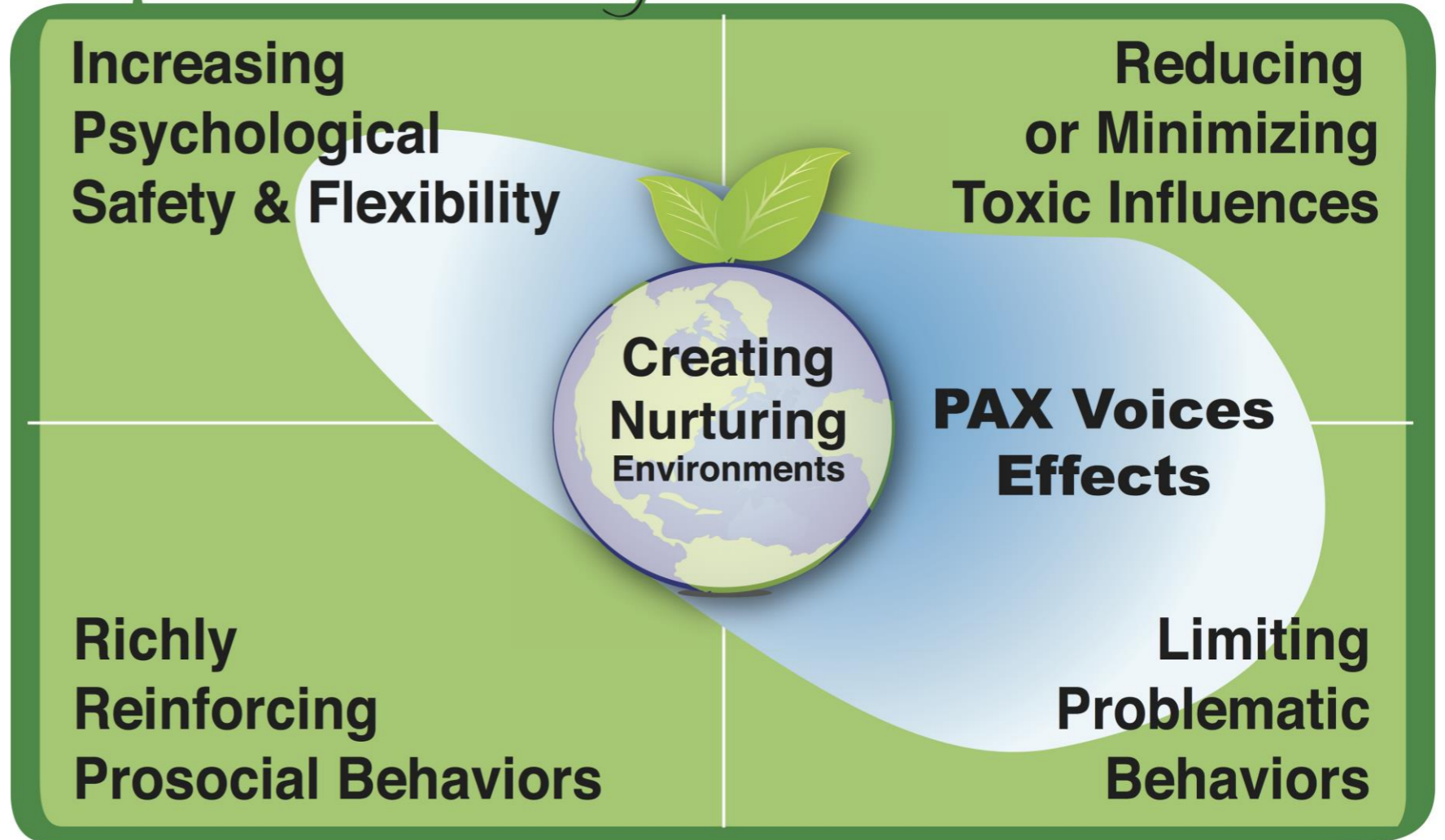
 is **3-inch voice**  
(whispering only)

 is **3-foot voice**  
(normal talking)

 is **10-foot voice**  
(louder talking)



© PAXIS Institute, 2002-2012. Reproducible with PAX GBG Kit.



# PAX Hands

make peace, productivity,  
health, & happiness for all.  
PAX Hands *never* hurt.



INSTRUCTIONS: Brainstorm with students what they can do to have helping hands at school, at home, and in the community every day. PAX Hands protect students, staff or visitors from hurt at school, and helps children and others be safer in the community. These ideas should be written either on the poster above or put sticky notes above to expand students' thinking about how to have PAX Hands and make more PAX and fewer Spleems.  
© PAX Institute, 2002-2015. All rights reserved. No reproduction allowed without written permission. PAX Good Behavior Game is a registered trademark. For more information about PAX GAG, please go to: [www.GoodBehaviorGame.org](http://www.GoodBehaviorGame.org) or call 1-877-GO-PAX.

## Nurturing Environments

Increasing  
Psychological  
Safety & Flexibility

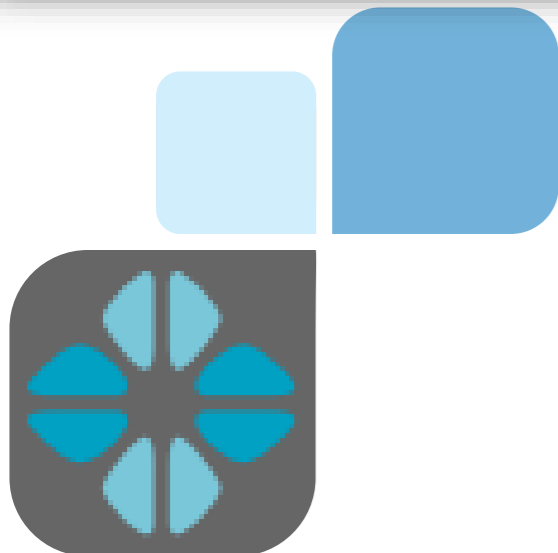
Reducing  
or Minimizing  
Toxic Influences

  
Creating  
Nurturing  
Environments

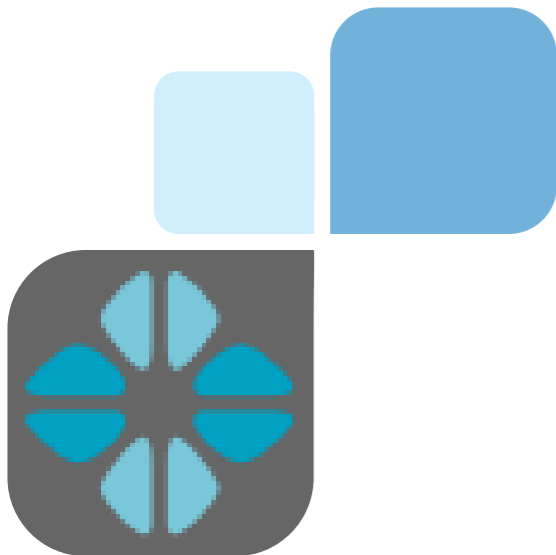
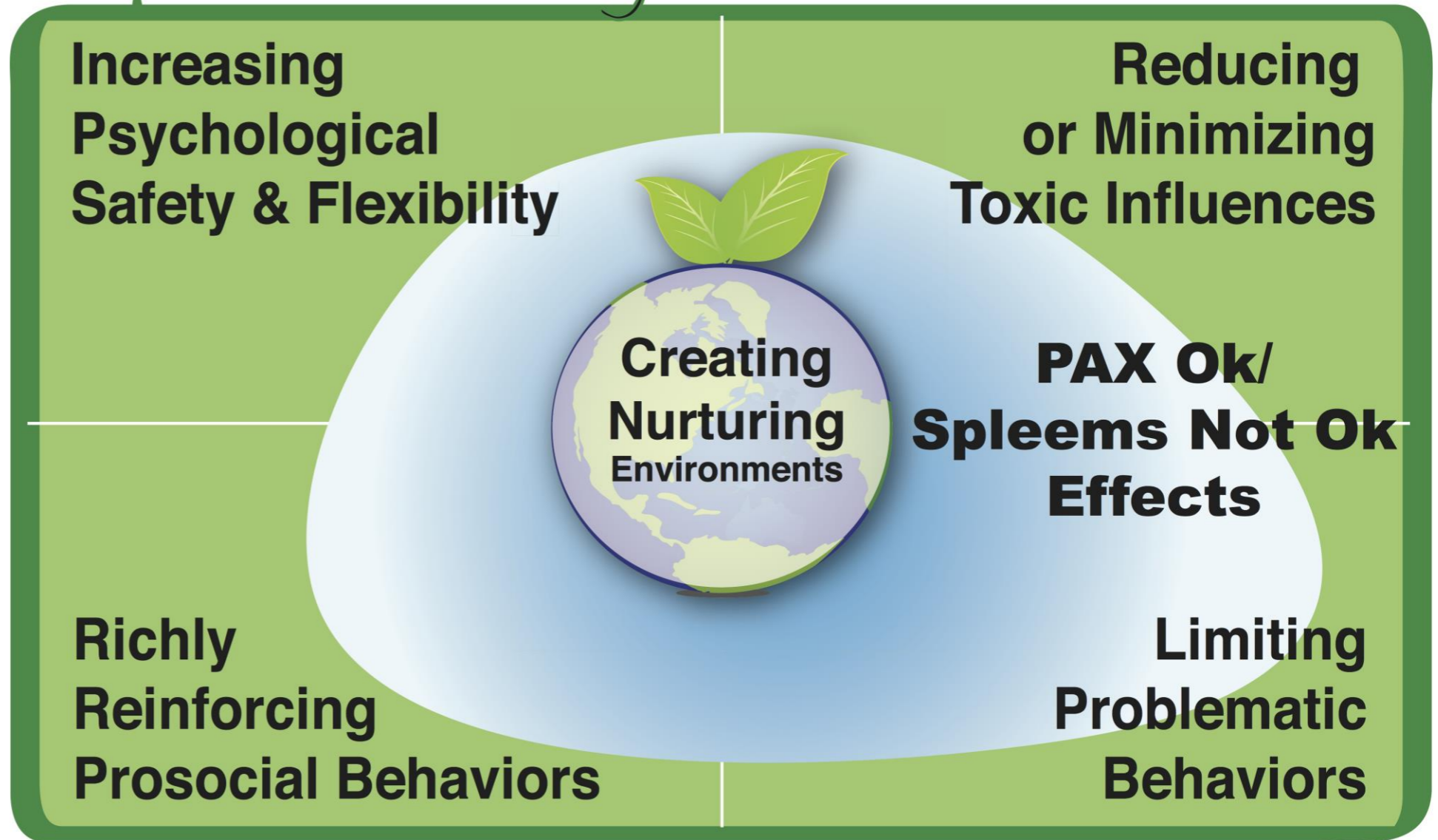
**PAX Hands,  
Feet & Lines**

Richly  
Reinforcing  
Prosocial Behaviors

Limiting  
Problematic  
Behaviors

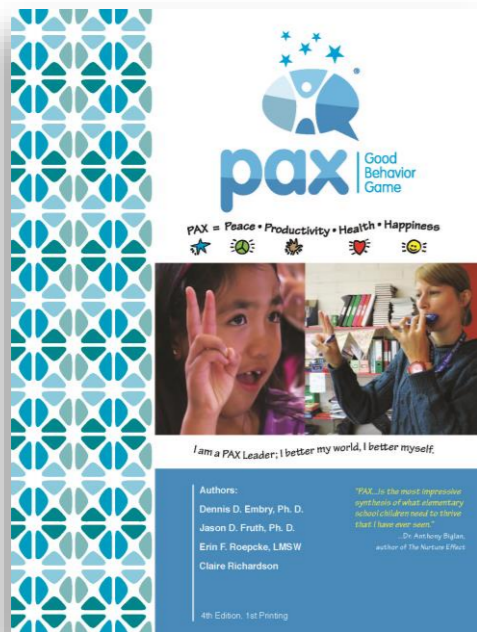


# Nurturing Environments



# Using PAX GBG as Behavioral Vaccine

## Unit 3: Living PAX



### Quick Start steps for using the PAX Good Behavior Game



1. Use *PAX Quiet* to get students' attention and announce the *PAX Game*.
  - Remember to wait until you have students' eye contact and attention, and to praise their quick response before giving instructions.



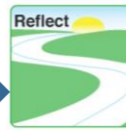
2. Introduce lesson/activity, identify teams, and inform students that you will be playing the game for \_\_\_ minutes.



3. Invite students to *predict* PAX as well as Spleems for this activity (use PAX Stix to increase participation, attention and focus).
  - Be sure to mention any specific behaviors that might be important for this activity or Spleems that have been recent problems.



4. Set the timer and announce that the game has begun. *"The game is on."*



5. Continue with regular instruction for the activity, *monitoring* PAX and Spleems.
  - Keep your *focus* on their PAX behaviors, but *do not* ignore any Spleems!
  - Do not call out the individual for Spleems – address the team as a whole.



6. When the timer goes off, announce that the game has ended.



7. Invite students to *reflect* on the PAX and Spleems they noticed during the game. Help them identify any they may have missed.



8. Announce the winning teams.
  - Compliment and congratulate winning teams and praise losing teams for "being good sports".
  - Remind all teams that they will have another opportunity to play the game soon.



9. Choose a *Granny's Wacky Prize*.
  - Remember to maintain the illusion that prizes are drawn at random, even if they are not.
  - Show enthusiasm for the winning teams and support for the losing teams.

10. Set the timer and engage in *Granny's Wacky Prize* with winning teams.
  - Use proximity to support students who did not win the prize.

11. Use *PAX Quiet* to get students' attention when the prize is completed.
  - Thank students for their performance in the game, the prize, and their attention.

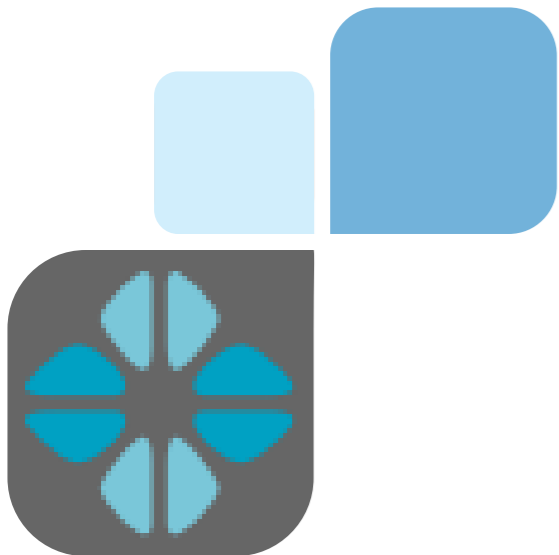
12. Update Scoreboard and PAX minutes charts to reflect outcome of the game.
  - Remember to praise the losing teams for what they did well and remind them that they will have another chance to play the game soon.
  - Keep it positive!! Everyone (teacher and students) should be having fun!



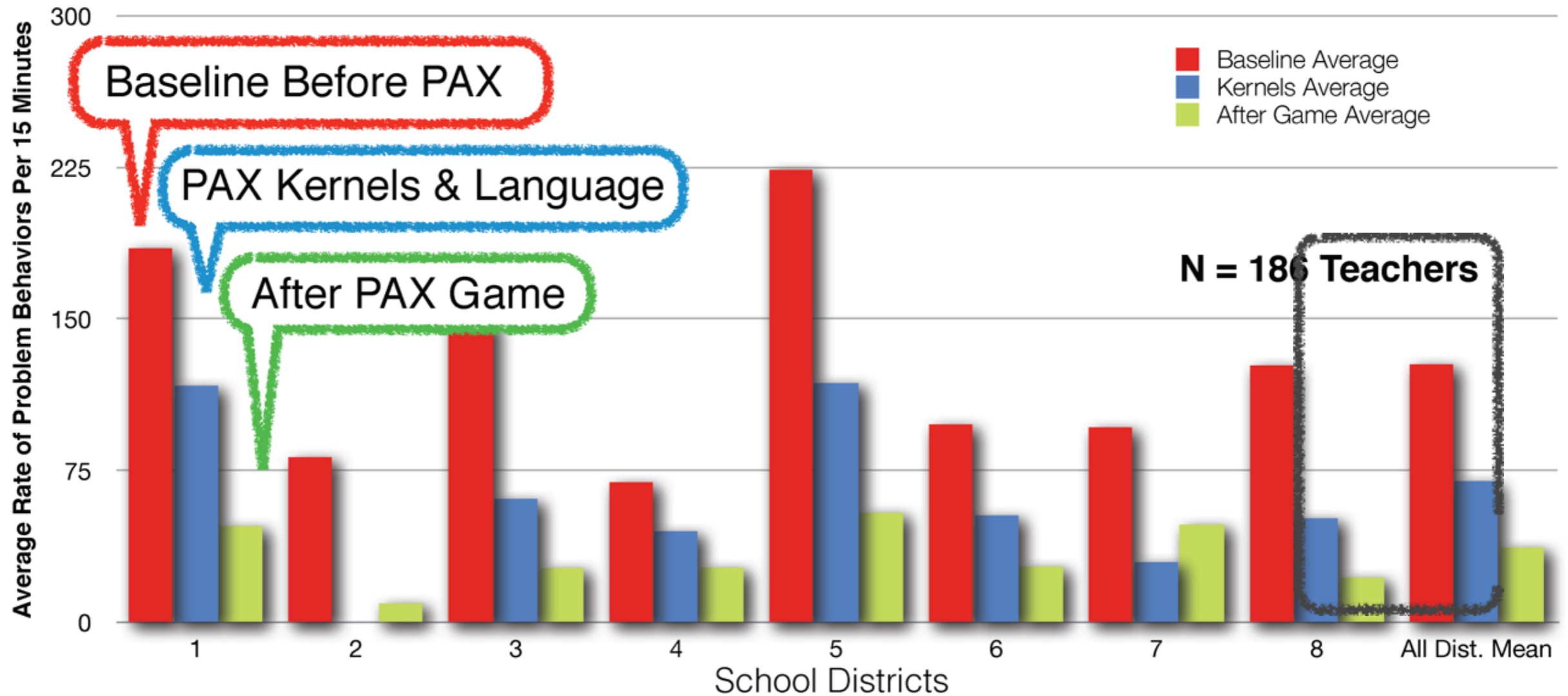




Mrs. Leis 3rd Grade  
Classroom Video of  
the PAX GBG,  
played 3-to-7 times  
a day

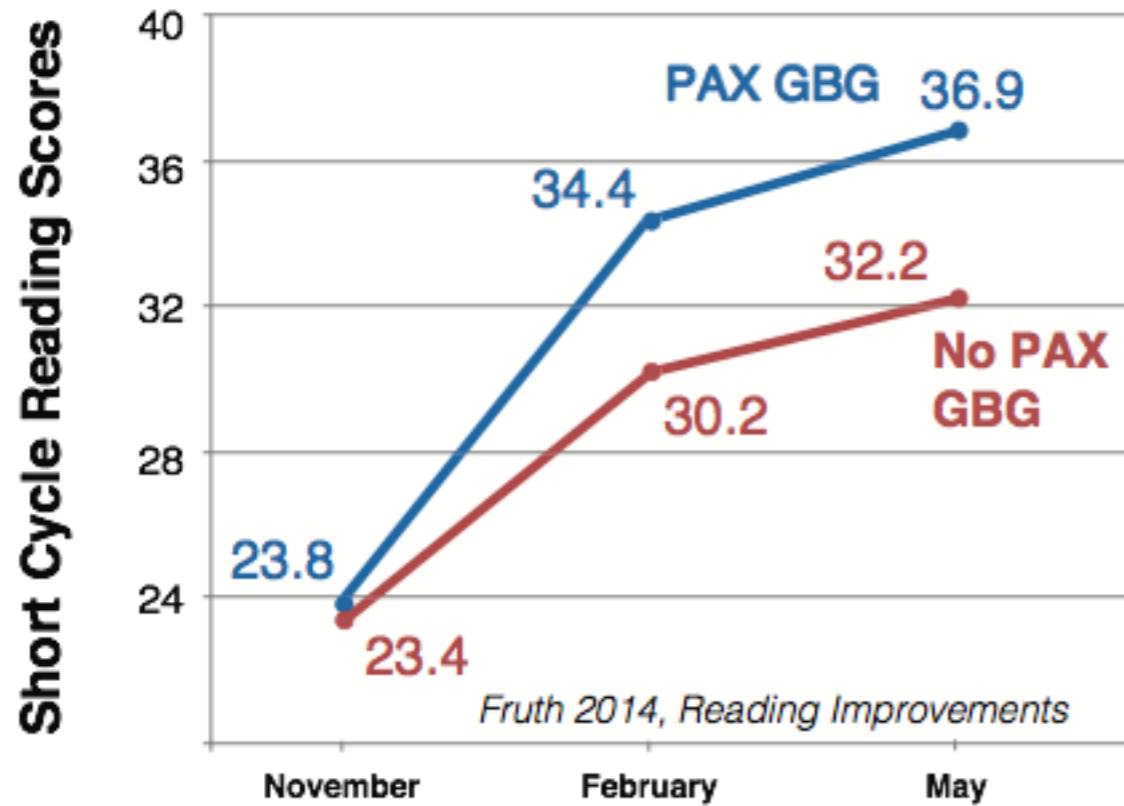


## 3-Month Impact of PAX in Eight US School Districts on Disturbing, Disruptive and Inattentive Behaviors Per 15 minutes

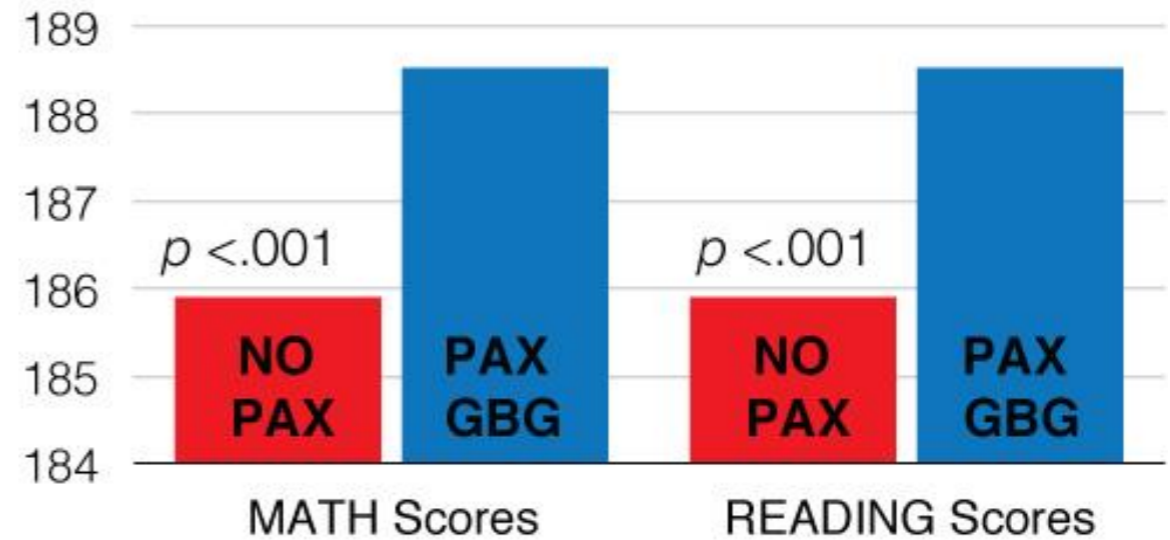


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## Randomly Assigned Students' Reading Scores



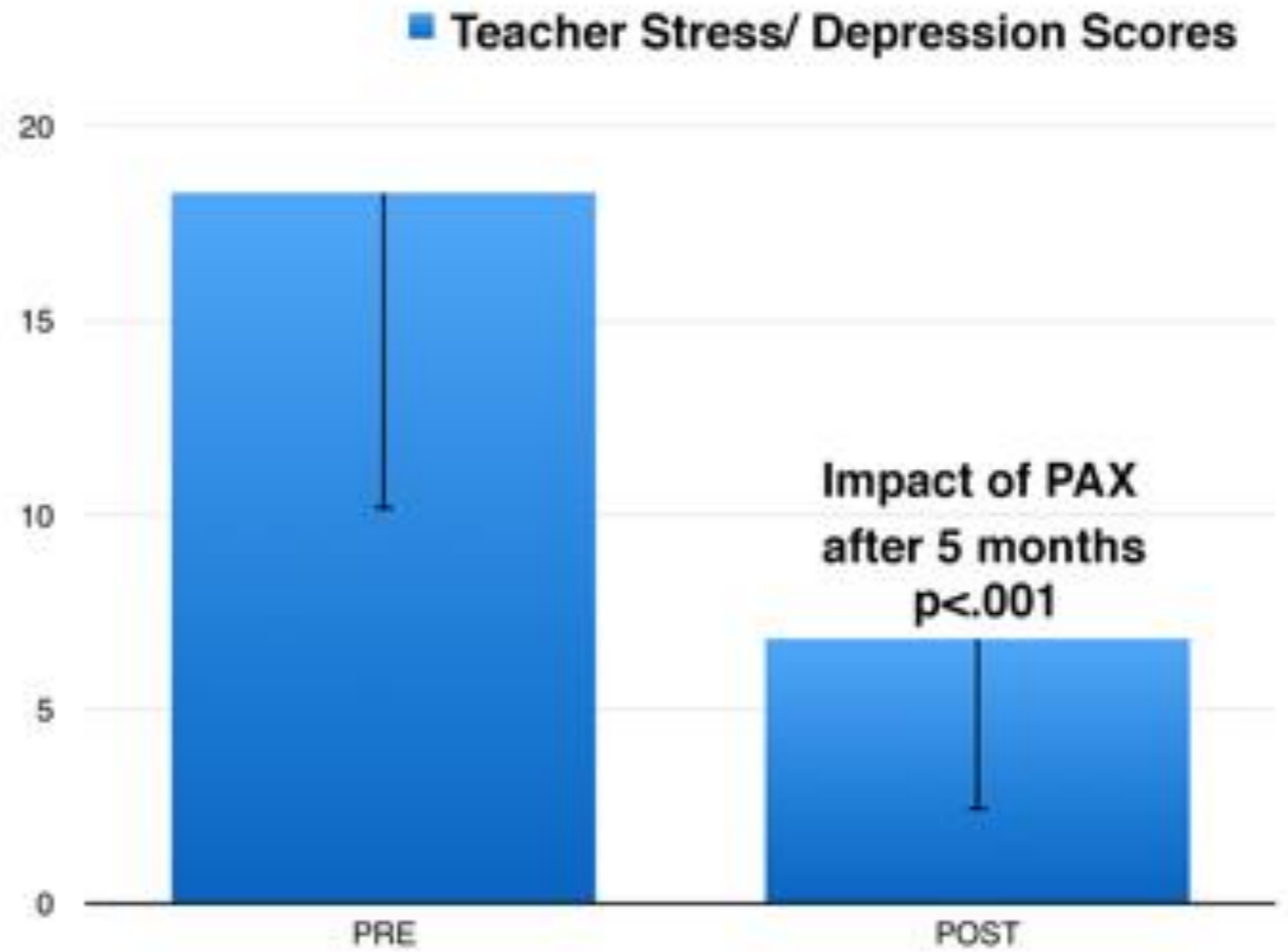
## Improvements on Standard Measures of Academic Progress in Six Districts in High Poverty Schools in Ohio



Source: Weis, R., Osborne, K. J., & Dean, E. L. (2015). Effectiveness of a universal, interdependent group contingency program on children's academic achievement: A countywide evaluation. *Journal of Applied School Psychology, 31*(3), 199-218.



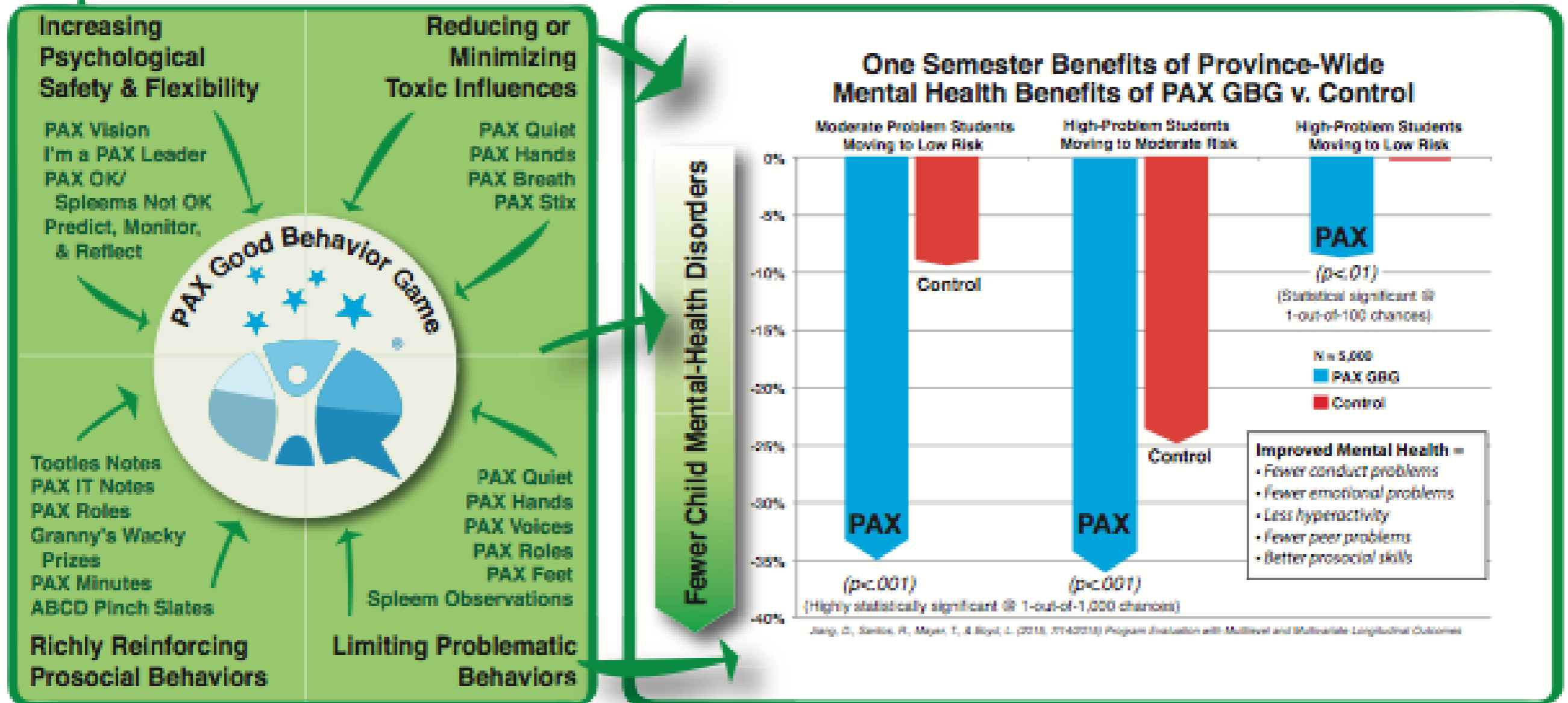
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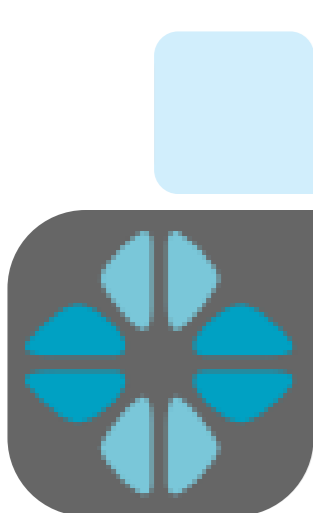
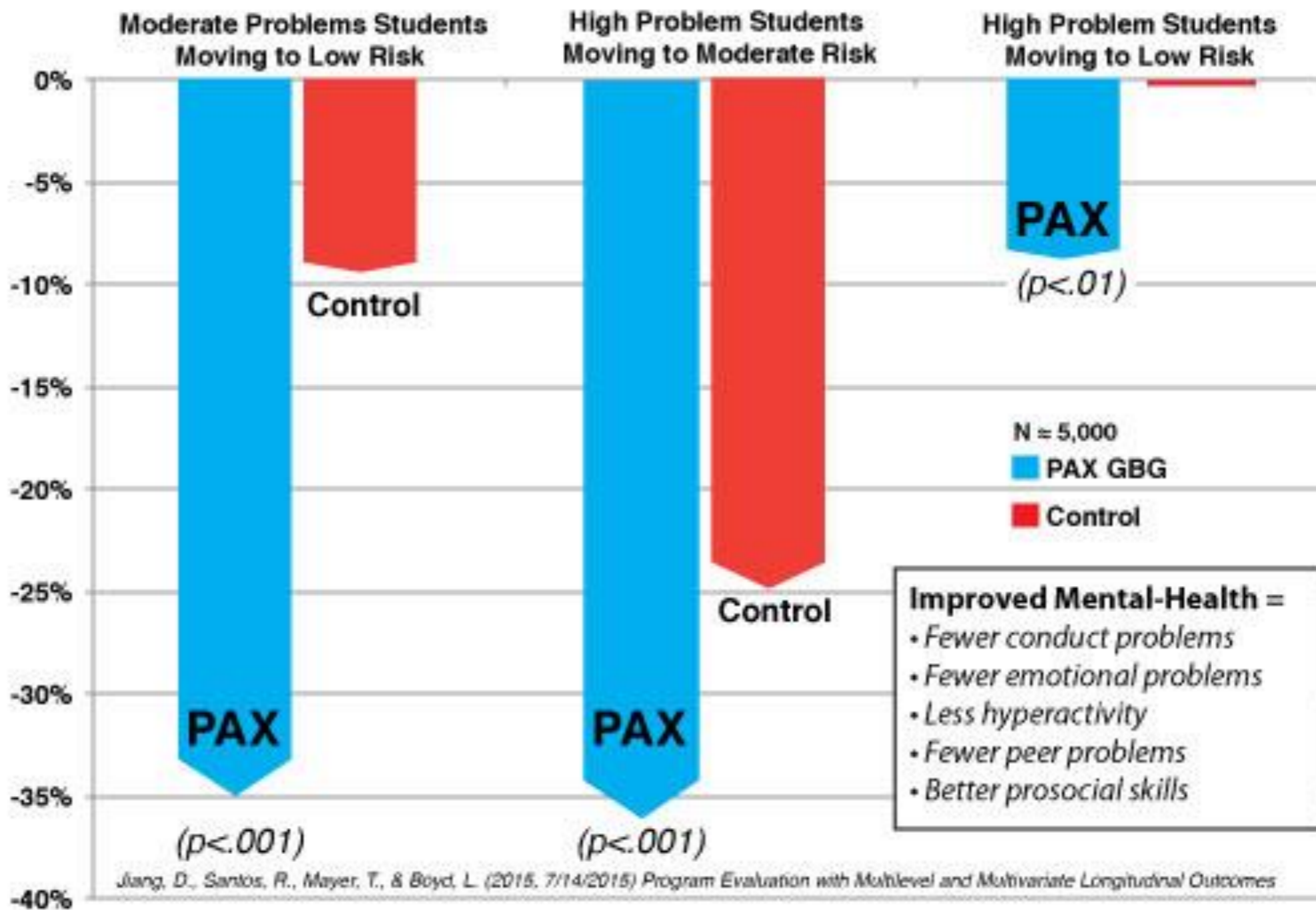
# Impact of the Nurturing Environment Created by PAX Good Behavior Game on Children



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Ce sont des données pour la province du Manitoba au Canada

## One-Semester Benefits of Province-Wide Mental-Health Benefits of PAX GBG v. Control



# Voices of PAX: Teachers, young students, older students—video



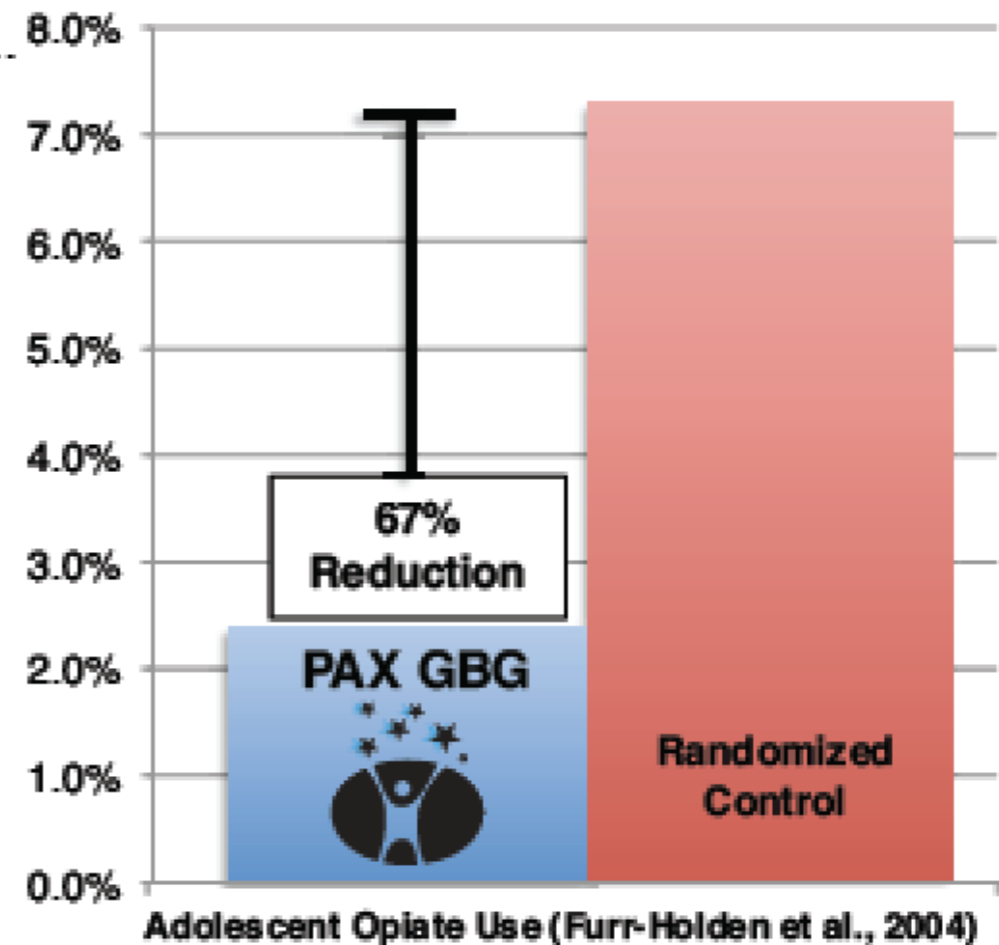
Thank You!



[www.GoodBehaviorGame.org](http://www.GoodBehaviorGame.org)

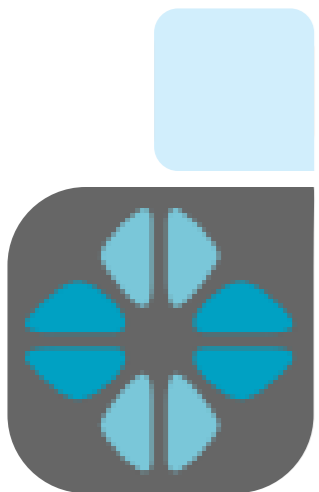
## What might happen if 10,000 students experience 2-years or more years of PAX GBG when they become young adults?

- 860** Fewer young people will need any form of special education services
- 557** More boys will likely graduate from high school.
- 668** More boys will likely enter university
- 888** More girls will likely graduate from high school (less teen pregnancy)
- 694** More girls will likely enter university
- 97** Fewer young people will commit and be convicted of major violent crimes
- 961** Fewer young people will likely develop drug addictions
- 658** Fewer young people will likely become regular smokers
- 354** Fewer young people will likely develop alcohol addictions
- 485** Fewer young people will likely contemplate suicide
- 658** Fewer young people will likely attempt suicide



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[www.GoodBehaviorGame.org](http://www.GoodBehaviorGame.org)



# Behavioral Health is Essential To Health



Prevention Works



Treatment is Effective



People Recover