



Welcome to PAX!

PAX = Peace • Productivity • Health • Happiness



What does “PAX” mean?

Peace

- Reduce stress and anxiety while improving climate.

Productivity

- Increase intentional time, focus, and performance on tasks.

Health

- Reduce substance misuse, mental illness, and legal involvement.

Happiness

- Promote relationships with peers, adults, and other individuals within the community.

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What are Evidence-based Kernels?

- ❖ Evidence-based Kernels make up the PAX Good Behavior Game and PAX Tools.
- ❖ They are fundamental units of behavioral influence.
- ❖ Evidence-based Kernels are
 - ❖ proven.
 - ❖ culturally responsive.
 - ❖ trauma-informed.



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Evidence-based Kernels: Fundamental Units of Behavioral Influence

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Abstract This paper describes evidence-based kernels, fundamental units of behavioral influence that appear to underlie effective prevention and treatment for children, adults, and families. A kernel is a behavior-influence procedure shown through experimental analysis to affect a specific behavior and that is indivisible in the sense that removing any of its components would render it inert. Existing evidence shows that a variety of kernels can influence behavior in context, and some evidence suggests that frequent use or sufficient use of some kernels may produce longer lasting behavioral shifts. The analysis of kernels could contribute to an empirically based theory of behavioral influence, augment existing prevention or treatment efforts, facilitate the dissemination of effective prevention and treatment practices, clarify the active ingredients in existing interventions, and contribute to efficiently developing interventions that are more effective. Kernels involve one or more of the following mechanisms of behavior influence: reinforcement, altering antecedents, changing verbal relational responding, or changing physiological states directly. The paper describes 52 of these kernels, and details practical, theoretical, and research implications, including calling for a national database of kernels that influence human behavior.

Keywords Evidence-based kernels · Public-health benefits · Prevention · Treatment

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This paper presents an analysis of fundamental units of behavioral influence that underlie effective prevention and treatment. We call these units *kernels*. They have two defining features. First, in experimental analysis, researchers have found them to have a reliable effect on one or more specific behaviors. Second, they are fundamental units of behavior influence in the sense that deleting any component of a kernel would render it inert. Understanding kernels could contribute to an empirically based theory of behavioral influence, facilitate dissemination of effective prevention and treatment practices, clarify the active ingredients in existing interventions, and contribute to developing interventions that are more efficient and effective. Subsequent sections of this paper expand on the two essential features of evidence-based kernels, as well as the origins of the idea and terminology.

The ultimate goals of treatment and prevention research are a reduction of the prevalence of the most common and costly problems of behavior and an increase in the prevalence of wellbeing. Current thinking about how to accomplish this assumes that we will identify empirically supported programs and, to a lesser extent, policies, and will disseminate them widely and effectively. Although substantial progress is occurring through this strategy, there are at least four limitations to it that point to the value of kernels as a complementary strategy.

First, it is difficult to implement a program's efficacy widely with fidelity or effectiveness. Ringwalt et al. (2003) surveyed a sample of 1,795 school staff members who were in charge of teaching substance-use prevention programs. Nearly two-thirds reported teaching content that meta-analyses showed was effective. However, only 17% used effective delivery and only 14% used both effective delivery and content. In a second study, Ringwalt et al. (2003) found that about one-fifth of teachers of substance-



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PROVEN

Prevention

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How does PAX GBG work?

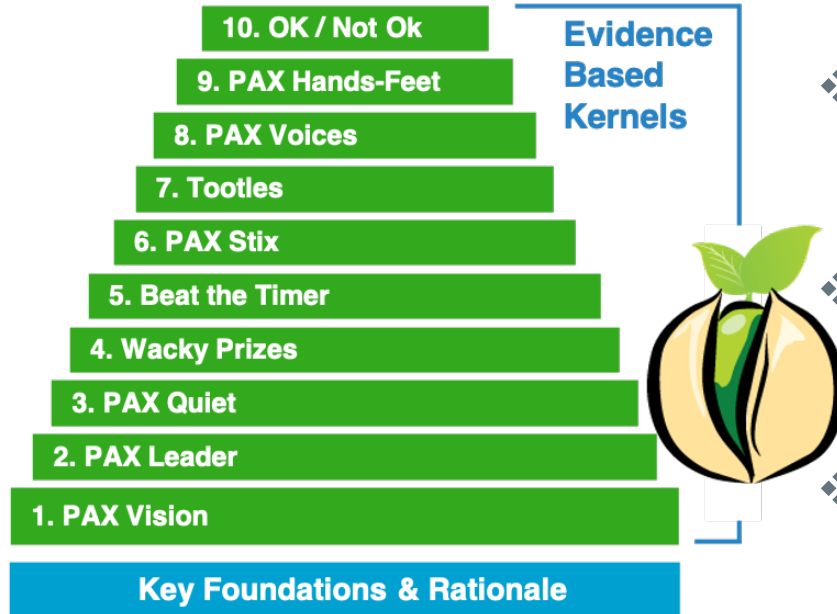
Unit 4: Strengthening PAX

Unit 3: Living PAX

Unit 2: Launching PAX

Unit 1: Learning PAX

More Strategies for PAX



- ❖ Teachers attend 6 hours of training from the PAXIS Institute to learn and understand PAX GBG.
- ❖ Teachers implement 10 research-based strategies during typical instruction.
- ❖ Teachers play the evidence-based PAX Good Behavior Game several times each day.
- ❖ Teachers receive guidance and ongoing assistance from internal and/or external supports.

How does PAX GBG work?

The **Nurturing Environment** created using these **trauma-informed strategies** in the classroom teaches behavior and self-regulation as a skillset – *producing lasting change.*



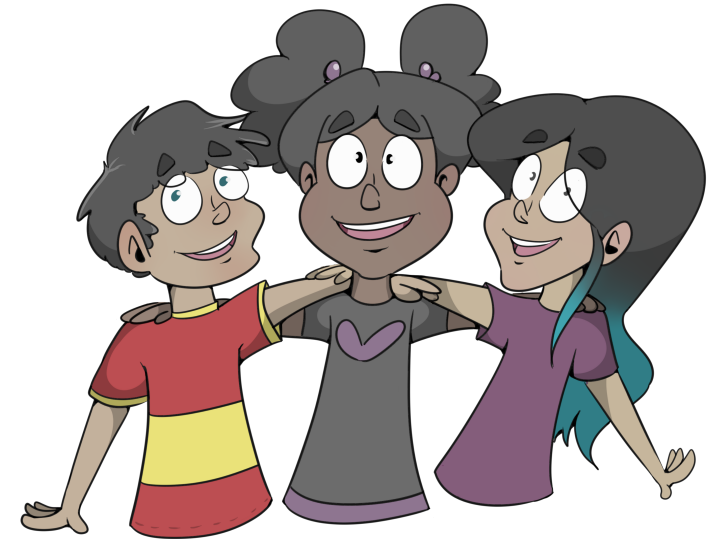
PAX fosters meaningful relationships

- ❖ **PAX GBG** purposefully arranges for teamwork and mutual goals for students throughout the day.
- ❖ Collaboration builds positive relationships among peers and adults and also expand peer networks - proven protective factors against suicide.



PAX GBG decreases suicidality

- ❖ Though not specifically *designed* to prevent suicidality, PAX GBG is one of only 2 classroom-based interventions proven to reduce both attempts and ideation.*
- ❖ PAX GBG also reduces an array of other outcomes including mental, emotional, & behavioral disorders and drug misuse disorder.



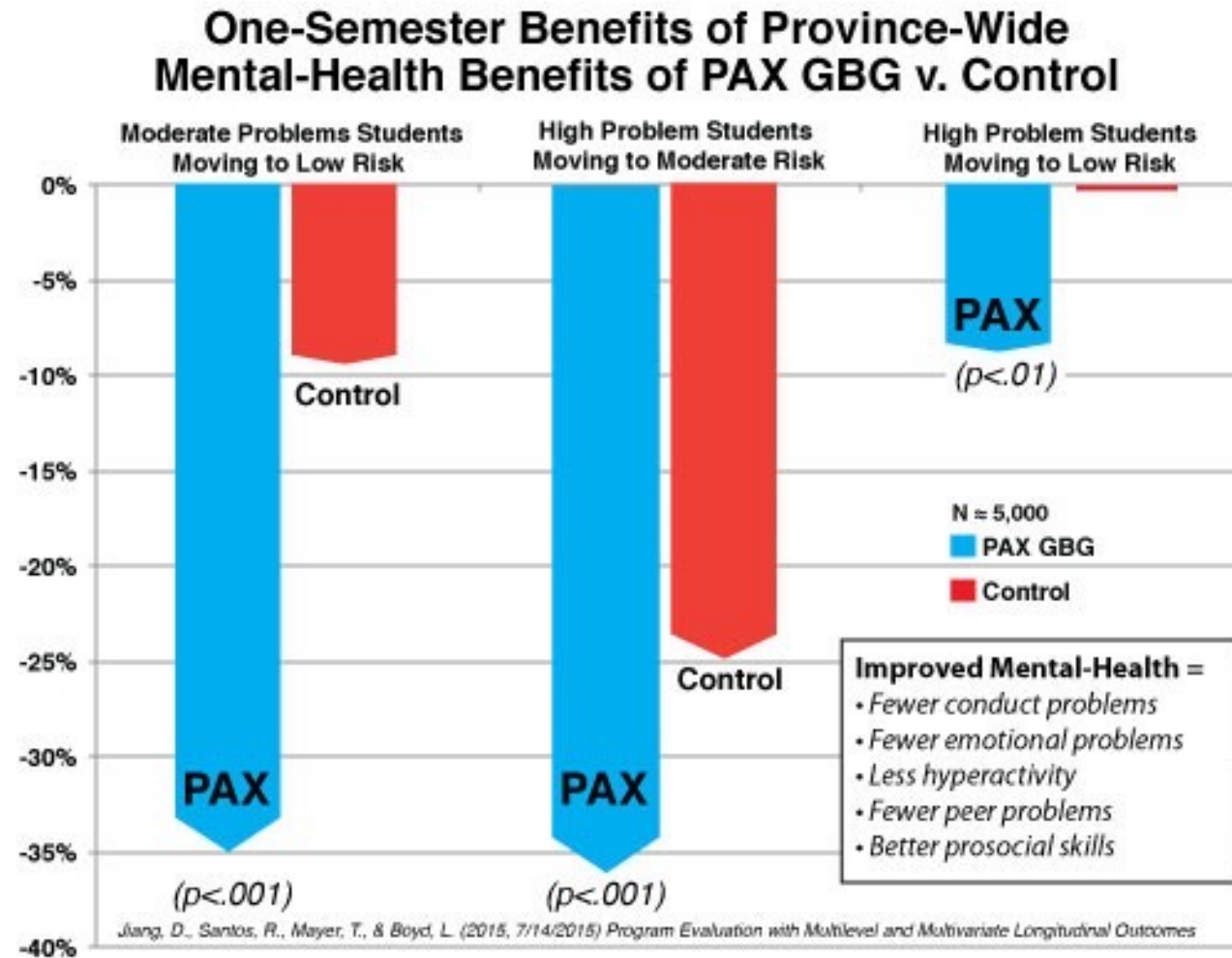
*Katz, C., Bolton, S. L., Katz, L. Y., Isaak, C., Tilston-Jones, T., Sareen, J., & Swampy Cree Suicide Prevention Team. (2013). A systematic review of school-based suicide prevention programs. *Depress Anxiety*. 30(10). 1030-1045.



What does PAX do?

PAX Improves Student Mental Health

PAX GBG reduced the risk of mental, behavioral, and emotional disorders.

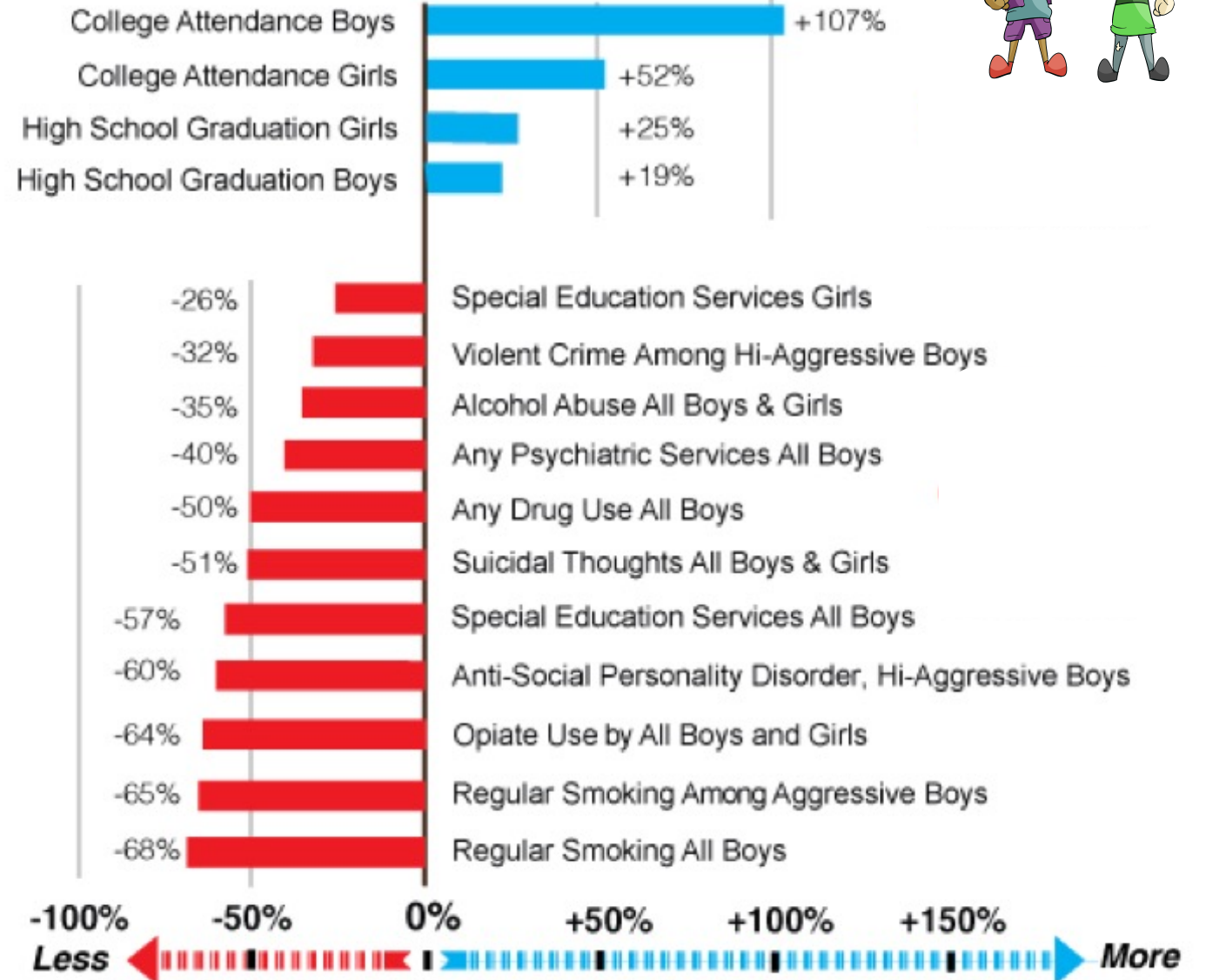


What does PAX do?

PAX Improves Lifetime Outcomes

Longitudinal data from Johns Hopkins studies

Computation of Relative Difference = (GBG/Control)-1



PAX creates a shared approach across systems



What is paxtools?

- ❖ A collection of evidence-based strategies to improve cooperation and self-regulation with children.
- ❖ Is trauma-informed.
- ❖ Creates nurturing environments.
- ❖ Supports **parents** and **caregivers**, and other **caring adults** who interact with children in settings outside of a classroom.



**WE BUILD
GREAT KIDS!**

Carmen Irving, MA, CFLE; Kathryn Tummino, BA, OCPS;
Erin Roepcke, MSW & Dennis Embry, Ph.D.

PAXIS trainings are available virtually!

- ❖ **Blackboard Collaborate** provides for live synchronous training with participants at work or home.
- ❖ Multiple session options provide *flexibility* for limited professional development time.



Learn more about PAX!



❖ Visit www.paxis.org

❖ Watch videos on our YouTube channels:

- ❖ PAX Good Behavior Game
- ❖ PAX Tools

❖ Follow us on Facebook:

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For more information about PAX or our research base,
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