

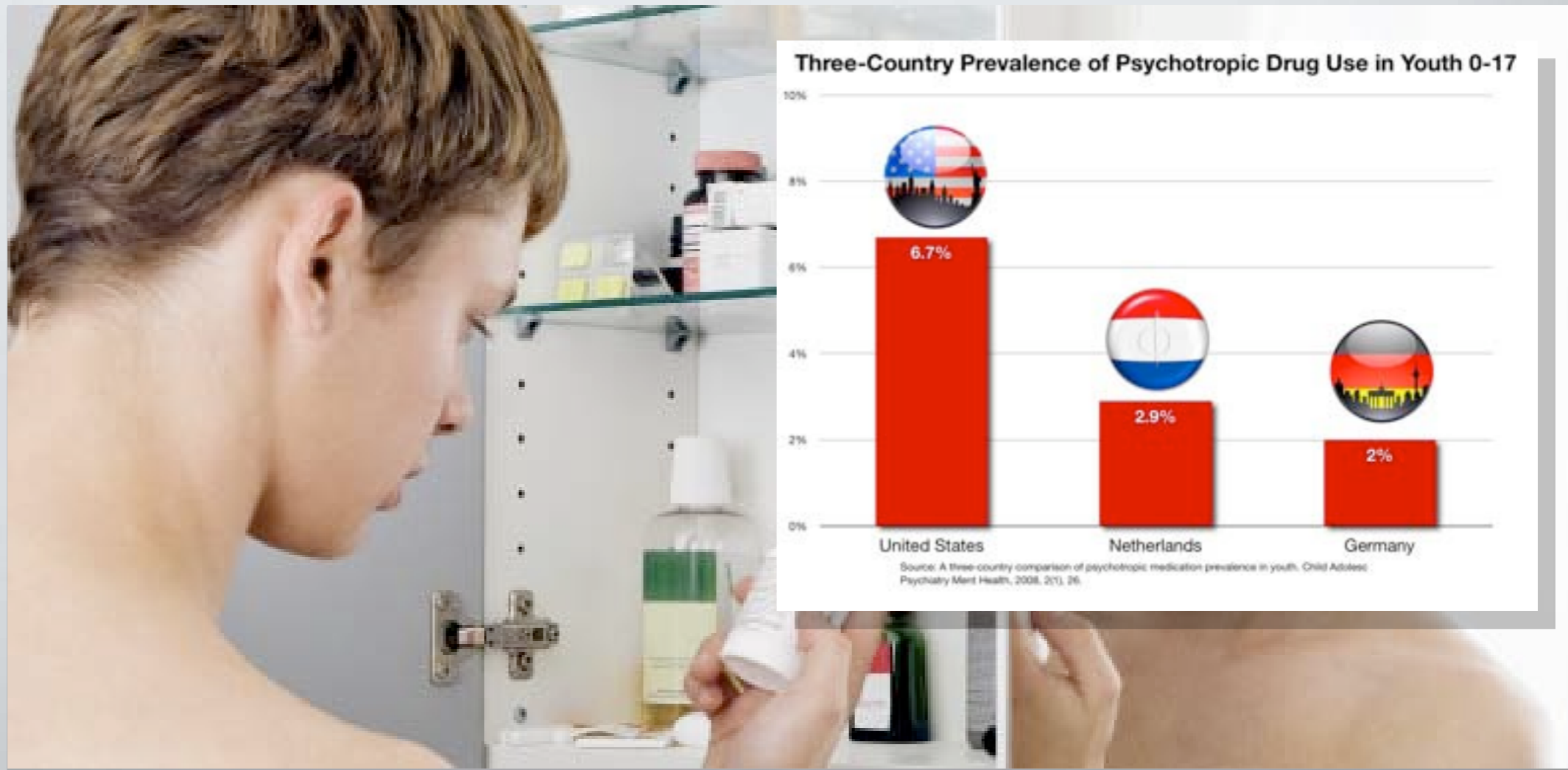


Serious addictions are happening younger.





More US children using meds





How we can provide support

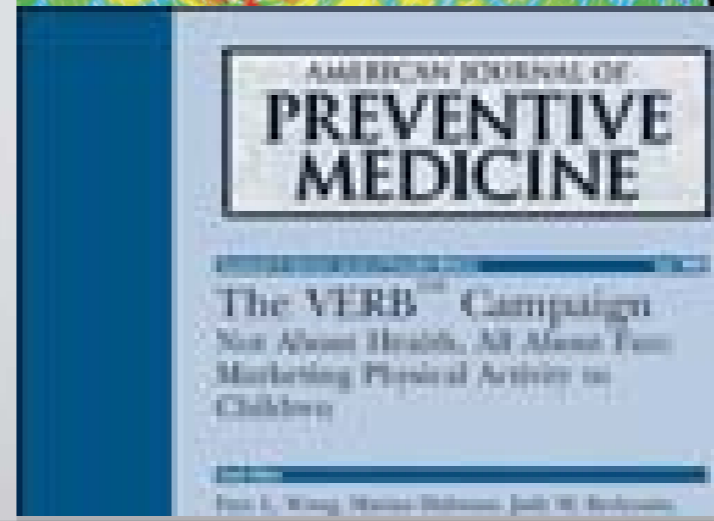
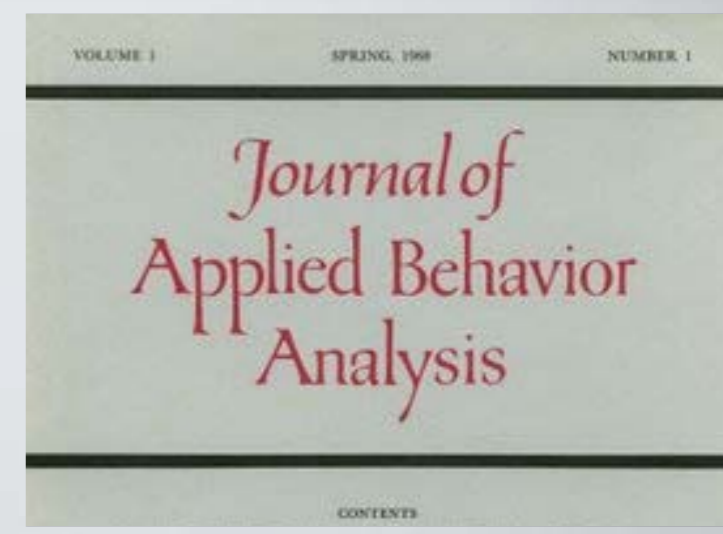
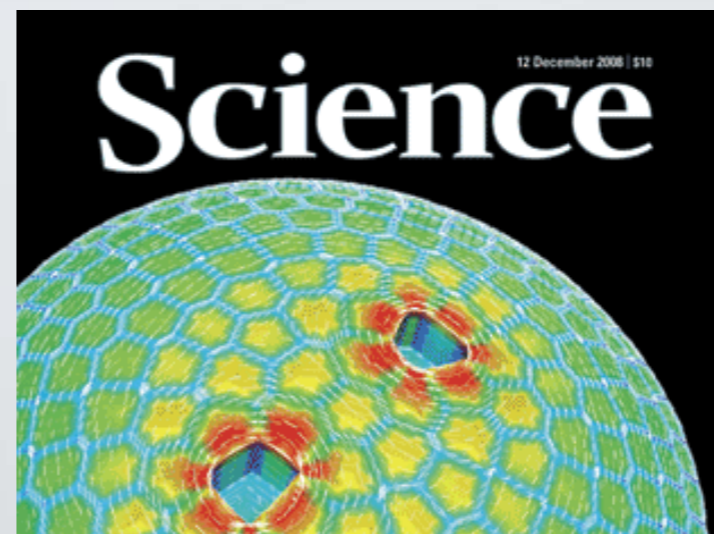
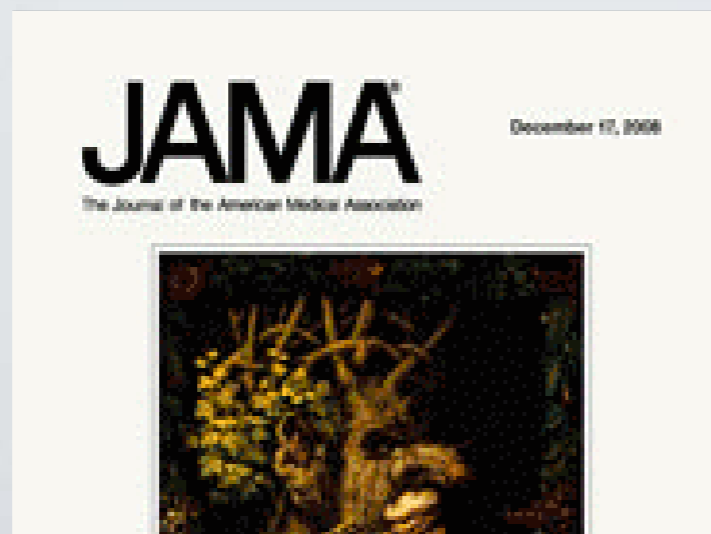


Evidence-based kernels are the smallest unit of proven behavioral influence



Embry DD, Biglan A. Evidence-Based Kernels: Fundamental Units of Behavioral Influence. *Clinical Child & Family Psychology Review* 2008:39.

Where can kernels be found? In mainstream scientific journals



What is a kernel?



Is the smallest unit of scientifically proven unit of behavioral influence.



Are the active ingredients of evidence-based programs.



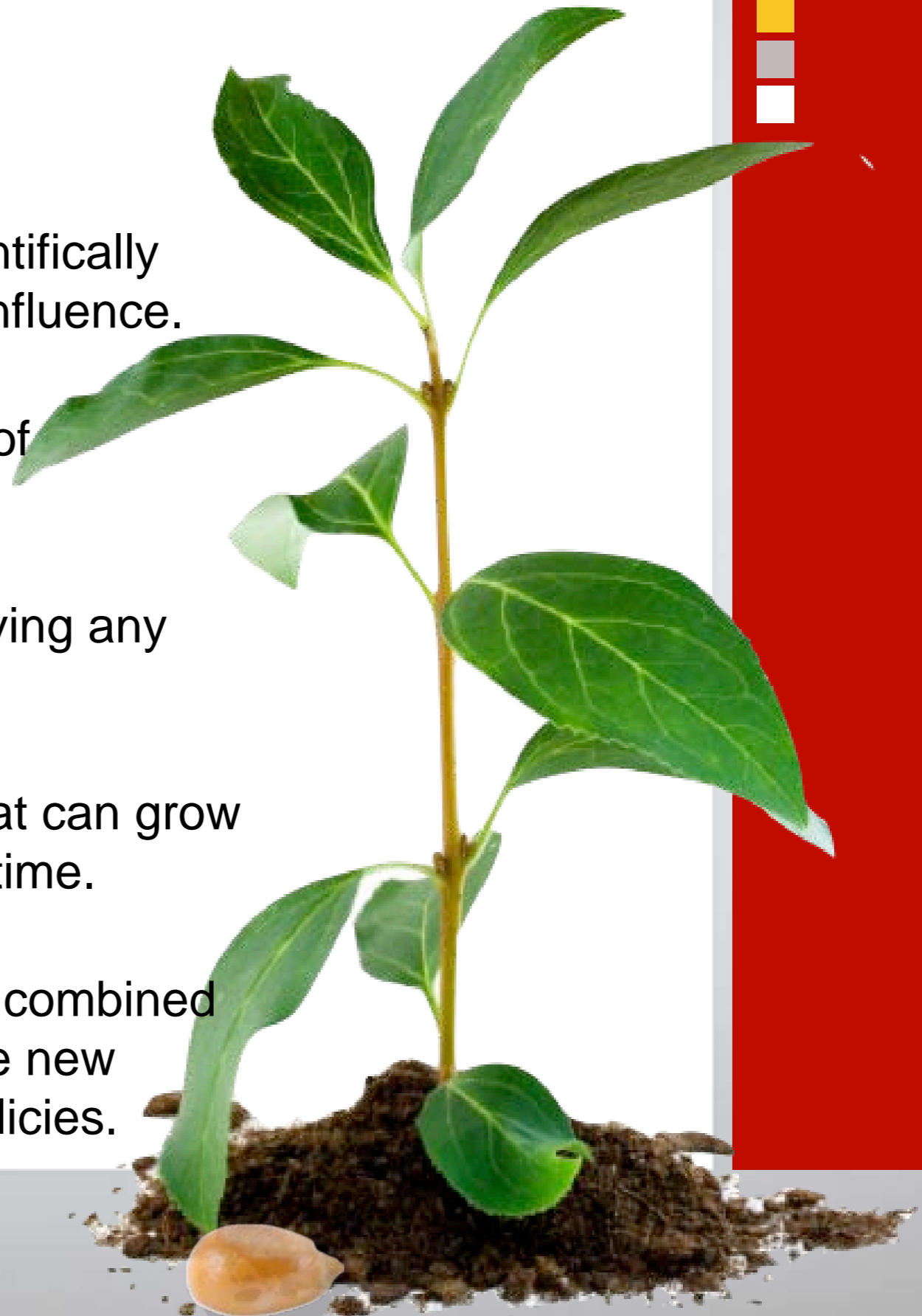
Is indivisible; that is, removing any part makes it inactive.

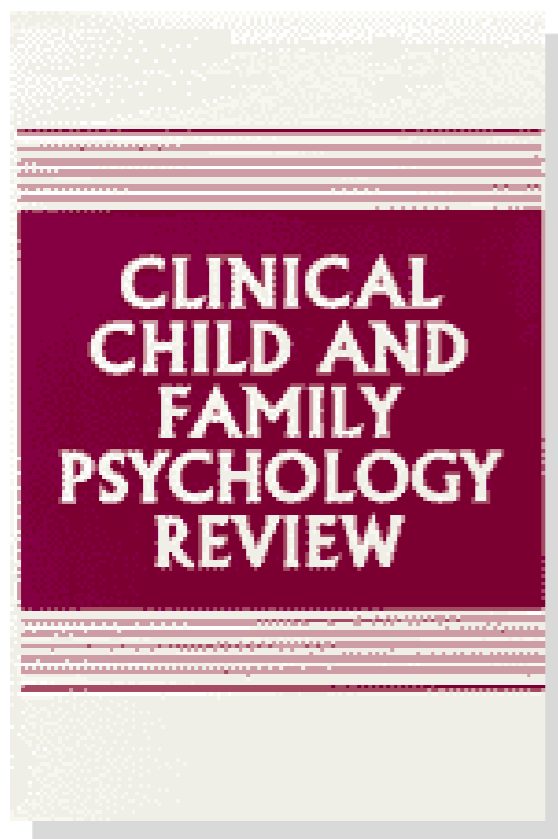


Produces quick change that can grow much bigger change over time.



Can be used alone OR combined with other kernels to create new programs, strategies or policies.





Evidence-based Kernels: Fundamental Units of Behavioral Influence

Dennis D. Embry • Anthony Biglan

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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

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

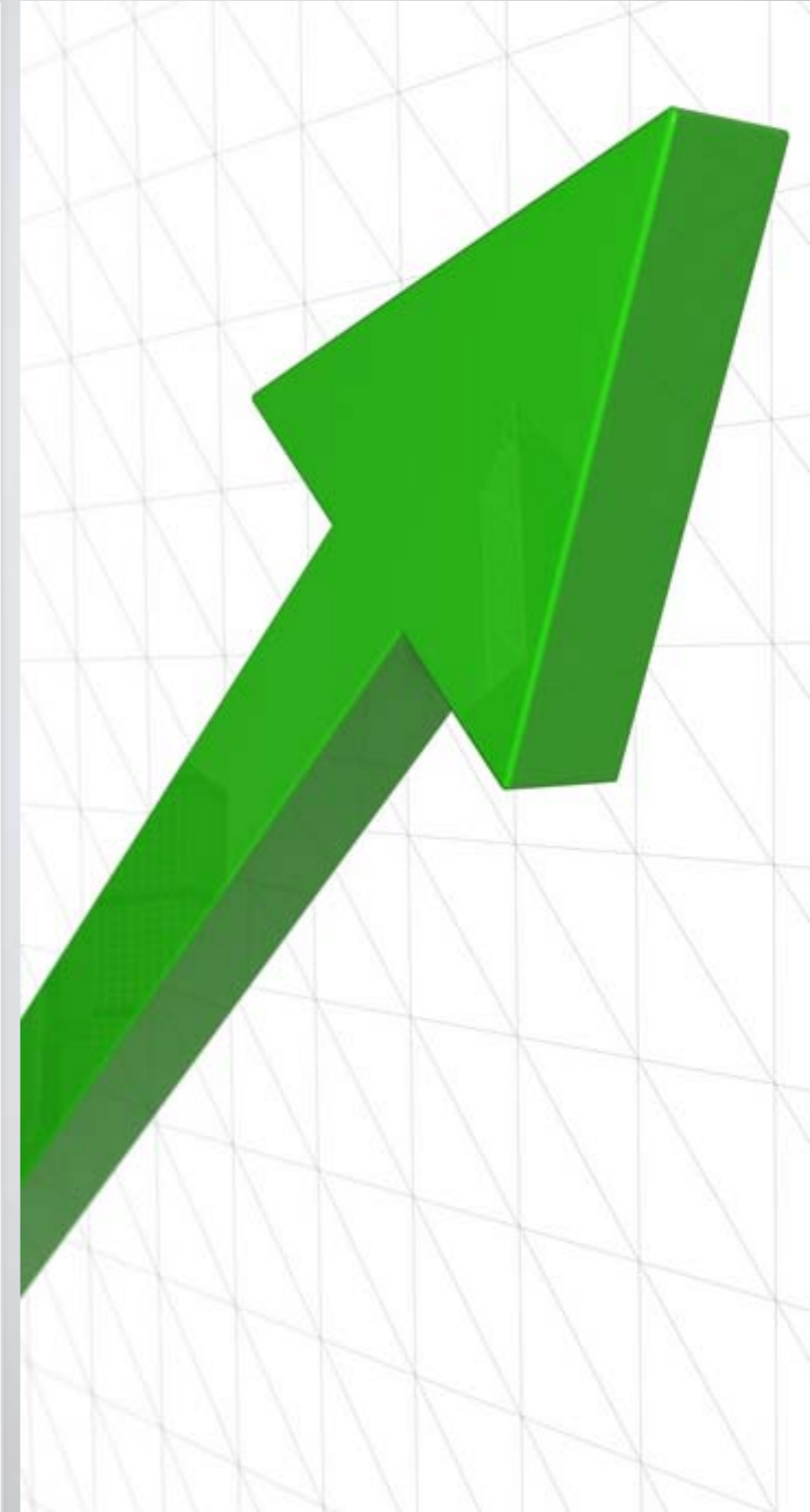
Embry, D. D., & Biglan, A. (2008). Evidence-Based Kernels: Fundamental Units of Behavioral Influence. *Clinical Child & Family Psychology Review*, 39.

Download at:

<http://www.paxis.org>

Kernels can increase...

- ❑ Children's and youth academic success
- ❑ Positive behaviors
- ❑ Resiliency skills
- ❑ Emotional regulation
- ❑ Self-discipline
- ❑ Goal setting and keeping
- ❑ Cooperation and teamwork
- ❑ Entrepreneurial skills
- ❑ Nurturing families and parenting
- ❑ Better schools
- ❑ And more...



Kernels can decrease...

- ❑ Academic failure
- ❑ Dropping out of school
- ❑ Learning disabilities
- ❑ ADHD
- ❑ Oppositional defiance/conduct disorders
- ❑ Depression/bipolar disorder
- ❑ Violence, aggression, and bullying
- ❑ Delinquency and crime
- ❑ Tobacco, alcohol and drug use
- ❑ Harsh, negative parenting
- ❑ And more...





Beat the timer for families...

Antecedent
Kernel

- To make daily routines run smoother, reduce parent child conflict and reduce harsh parent-child interactions.
- For all families with children age 3 thru teens

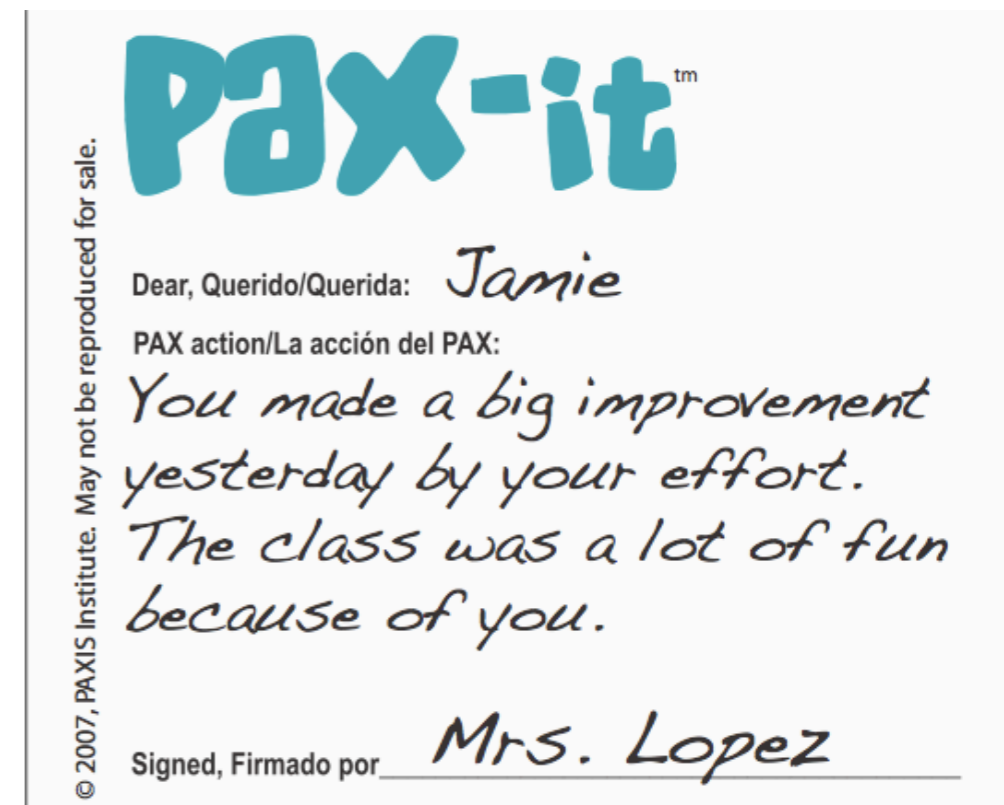


McGrath, M.L., et al., "Beat-the-buzzer": A method for decreasing parent^child morning conflicts. *Child & Family Behavior Therapy*, 1987. 9(3-4): p. 35-48; Hudson, A., et al., "Beat the Buzzer" for early morning dawdling: Two case illustrations. *Behaviour Change*, 1985. 2(2): p. 136-142.



Adult-to-child praise notes kernel...

- To increase positive behavior and decrease negative behaviors clearly measured by risk & protective surveys and other data.
- For families with children ages 4 to 18
- For schools and community settings.



Reinforcement
Kernel



Peer-to-peer praise notes kernel

- ❑ To increase positive behavior and decrease negative behaviors clearly measured by risk & protective surveys and other data.
- ❑ For families with children ages 5 to 18
- ❑ For schools and community settings.

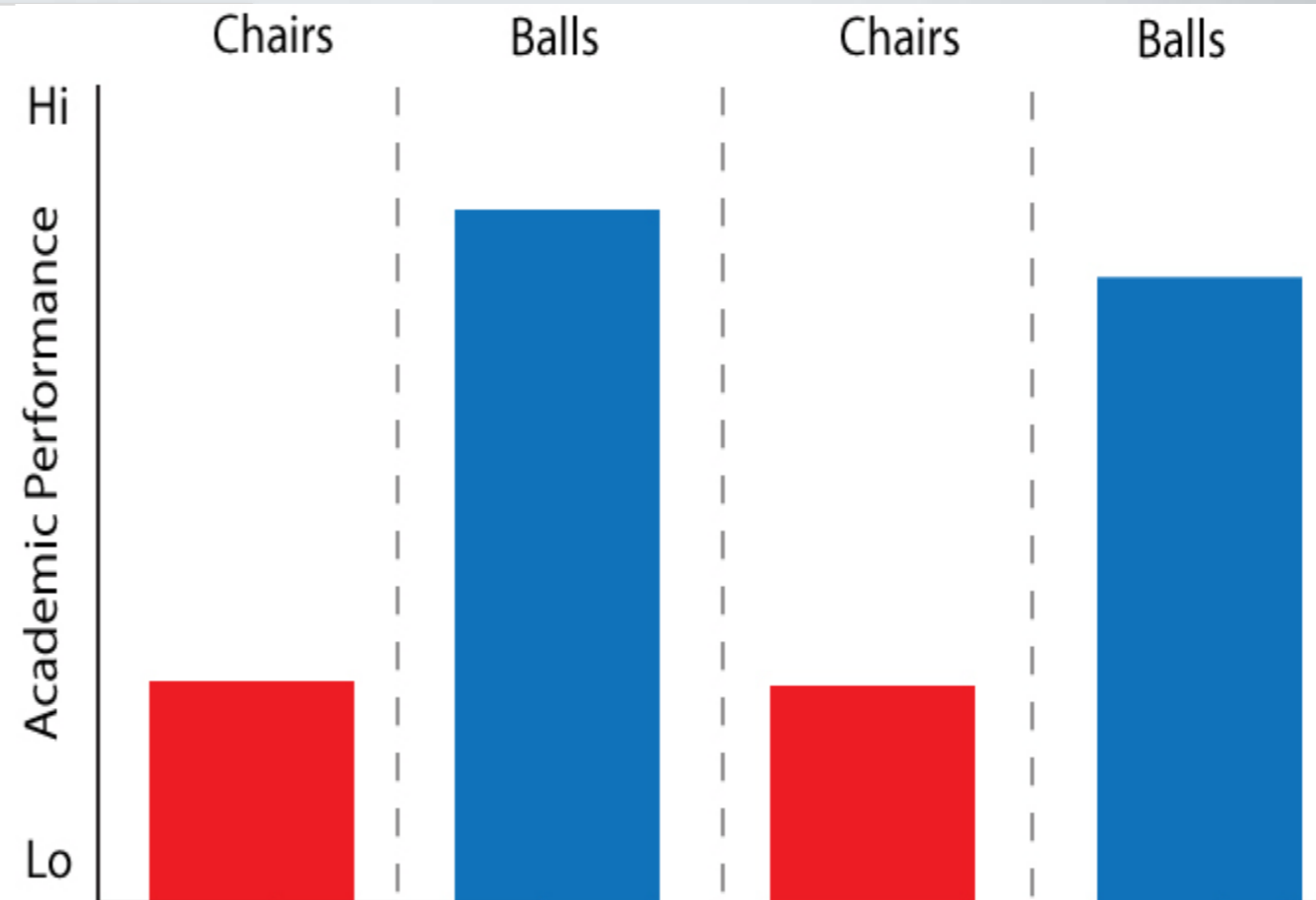


Reinforcement
Kernel

For bibliography on this kernel, see: Embry DD, Biglan A. Evidence-Based Kernels: Fundamental Units of Behavioral Influence. *Clinical Child & Family Psychology Review* 2008:39.

Alternative seating to reduce ADHD and improve academics

Antecedent
Kernel

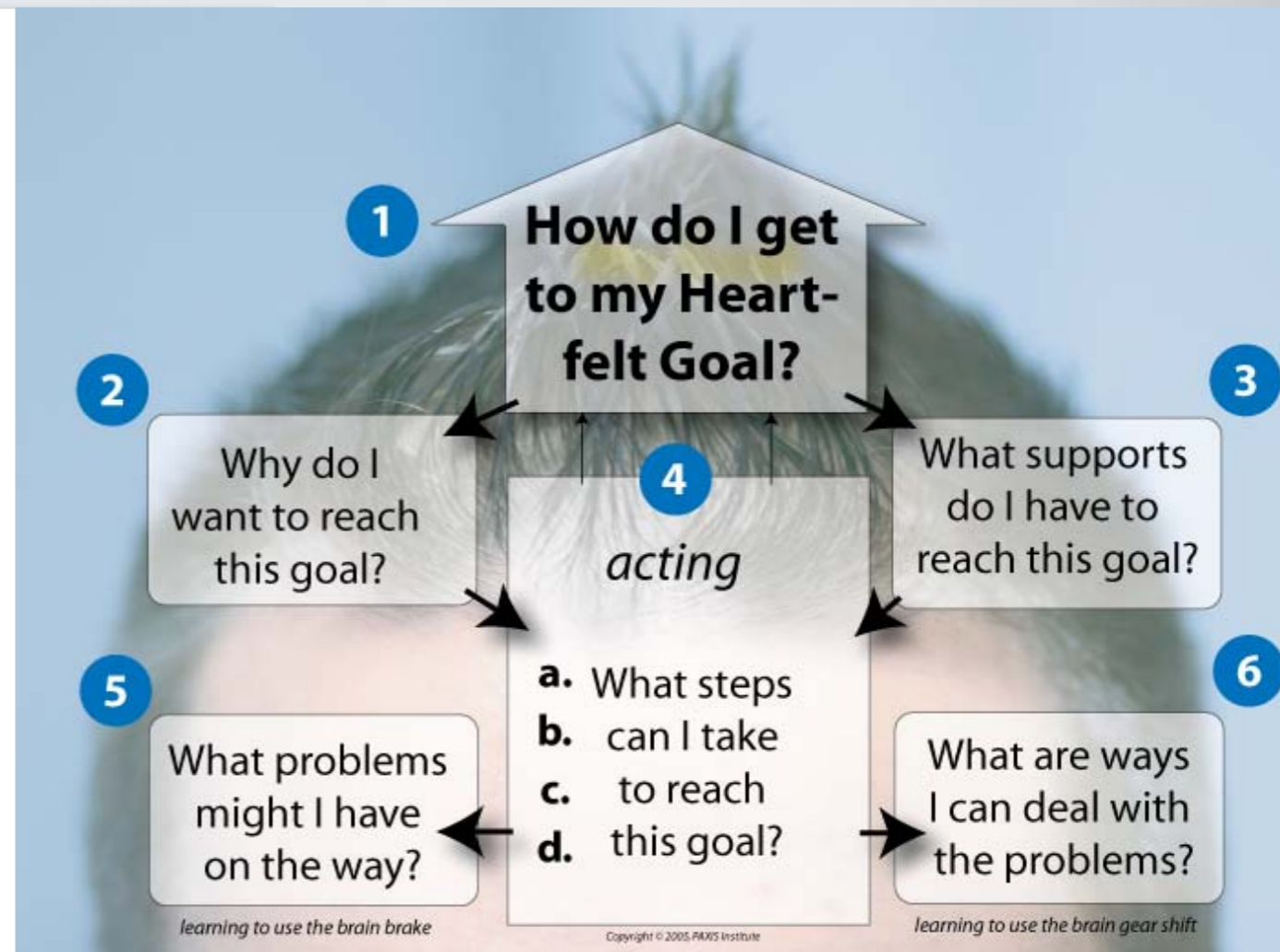


Schilling DL, Washington K, Billingsley FF, Deitz J. Classroom seating for children with attention deficit hyperactivity disorder: therapy balls versus chairs. *Am J Occup Ther* 2003;57(5):534-41

Brief motivational interview kernel...

Relational
Frame
Kernel

- ❖ To increase achieving meaningful goals, to reduce substance abuse, illness behavior, and deviant behavior.
- ❖ For ages 7 thru adult
- ❖ Home, school and community settings



McCambridge J, Strang J. The efficacy of single-session motivational interviewing in reducing drug consumption and perceptions of drug-related risk and harm among young people: results from a multi-site cluster randomized trial. *Addiction* 2004;99(1):39-52.



Relational-Frame Example: Motivational goal map for addictions

Relational
Frame
Kernel

