Evidence-based Kernels for Life

Prevention Strategies for the Home & Community

www.Wright.edu/Prevention-Science/Community
Wright.edu/Prevention-Science
Kids these days...

季后 BASELINE problematic, disruptive, and violent behavior has increased 20% in 10 years
Humans are the only species with bi-directional wealth and wellbeing transfer across generations.

Youth return the favor as adults.

Adults and elders invest in children.
Nurturing Environments

Toxic Influences

No Pro-social Reinforcement

No Limits on Problematic Behavior

No Psychological Flexibility

Early Sex

Mental Illness

Substance Abuse

Violence

Work Problems

Obesity, etc

Cancer

School Failure

STD’s

Poor Motor Skills

Mood Instability

Inattention

Lo Reward Delay

Lo Executive Function

Lo Behavioral Competencies

Immune-Healing Dysfunction

Multi-Inflammatory Brain & Body Response

Evidence-based Kernels for Life
Nurturing Environments

Richly Reinforce Pro-social Behaviors
Reduce Toxic Influences

Creating Nurturing Environments

Limit Problematic Behaviors
Increase Psychological Flexibility

Evidence-based Kernels for Life
Evidence-Based Kernels

- Low or no cost
- Produce immediate benefits
- Easily teachable/replicable
- Easy promotion or marketing
- Alter either risk or protective factors
- Fill gaps in skillset or social training
- The heart or Active Ingredient of an Evidence-based Program
Evidence-Based Kernels

- **Antecedent Kernel**: Happens BEFORE the behavior
- **Reinforcement Kernel**: Happens AFTER the behavior
- **Physiological Kernel**: Changes biochemistry of behavior
- **Relational Frame Kernel**: Creates verbal relations for the behavior
Integrating Knowledge

Epigenetics

Applied Behavior Analysis

Anthropological Wisdom

Education

Neuroscience

Developmental Psychology
When you teach behavior:

- Are the methods working?
- What about when they don’t?
- How quickly should they catch on?
- How is misbehavior making you feel?
Teaching Skillsets

Teaching through Error Response?
Teaching through Retribution?

...or

Teaching through 4 year-old logic.
Teaching Skillsets

When you teach new skills:
- You use methods shown to work
- You have a back-up plan
- You have patience
- You don’t get emotional about mistakes
Evidence-based Kernels

Richly Reinforce Pro-social Behaviors

Create Nurturing Environments

Reduce Toxic Influences

Limit Problematic Behaviors

Increase Psychological Flexibility
Positive Reinforcement and Premack Principle – increasing wanted and decreasing unwanted behavior through schedules of reinforcement
Limit Problematic Behavior

Reduced Allocated Time – increasing focus while decreasing distraction, procrastination, and blocking unwanted behavior
Limit Problematic Behavior

Beat the Timer
EVIDENCE-BASED KERNELS FOR LIFE

Evidence-based Kernels for Life
Reduce Toxic Influences

*Random Calling* and *Restorative Practices* – increasing focus and adherence to expectations while increasing perception of fairness.
Reduce Toxic Influences
Teach Psychological Flexibility

Shared Relational Frames – increasing fluency and understanding of expectations between parties
Teach Psychological Flexibility
Statistically significant increase in behavior management efficacy for Non-usual care providers after evidence-based kernel training.

*Statistically Significant Growth After Paired Samples t-Test*
Creating Nurturing Environments & Engaging Populations with Evidence-based Kernels
Dr. Jason Fruth – Dr. Greta Mayer – Elizabeth Finnegan
Journal of Instructional Psychology

## Background
This study examined the impact of delivering a training and curriculum involving a framework for understanding environments and training in evidence-based behavioral kernels, entitled Creating Nurturing Environments (CNE), as a precursor for universal prevention. These evidence-based strategies have shown their merit through contemporary study as well as their origins in cultural anthropology and have already demonstrated tremendous impact when combined together in the form of classroom-based prevention in schools known as the PAX Good Behavior Game. However, little is known about the impact of training community members as non-usual care providers who come into contact with youth on these strategies. In this quasi-experimental study, participants reported significantly higher levels of self-efficacy in behavior management after receiving CNE training.

## Evidence-based Kernels

<table>
<thead>
<tr>
<th>Evidence-based Kernel Type</th>
<th>Description</th>
<th>Practical Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforcement Kernel</td>
<td>Encourage positive behavior or change to increase the likelihood of appropriate behavior.</td>
<td>Giving a reward for good behavior.</td>
</tr>
<tr>
<td>Antecedent Kernel</td>
<td>Manipulate the environment or context to prevent the occurrence of inappropriate behavior.</td>
<td>Providing a quiet room for students who need to focus.</td>
</tr>
<tr>
<td>Behavioral Contract</td>
<td>Establish rules and consequences for behavior.</td>
<td>A contract where students agree to follow certain rules in exchange for rewards.</td>
</tr>
<tr>
<td>Social Skills</td>
<td>Develop social skills and communication skills.</td>
<td>Teaching students how to ask for help.</td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>Teach students how to solve problems.</td>
<td>Brainstorming sessions to find solutions to conflicts.</td>
</tr>
</tbody>
</table>

## Methods
Participants (46) from various backgrounds including agency administrators, after school care providers, faith-based providers, and behavioral health workers took part in the CNE training as a part of the Community Alliance for Youth – Summer Training Institute. Here they learned how to apply the Nurturing Environments framework to their own setting and also received training on eight evidence-based kernels. Participants took part in a pre/post behavior management scale derived from the Teachers’ Sense of Efficacy Scale. This scale measures respondents’ confidence in dealing with different areas of behavior management.

## Results
Paired-samples t-tests showed a significant increase in the participants’ sense of efficacy in regard to behavior management after receiving the CNE training. A significant increase in the participants’ sense of efficacy in regard to behavior management after receiving the CNE training was observed.

## Discussion
This growth in sense of efficacy in behavior management for non-usual service providers has vital implications in developing a public health approach to behavioral health with universal prevention strategies. These results were significant in that they showed that non-usual service providers could be trained with a framework and evidence-based kernels to deliver preventive interventions with a sense of efficacy. This expanded group of providers will be necessary to carry out true universal prevention.

## Conclusion
The behavioral health field has seen a growth in indicated and selected risk prevention since the 2009 Institute of Medicine report indicating that mental, emotional, and behavioral disorders are preventable. However, changes to field are necessary as the traditional team of therapists, counselors, and behavior specialists will be insufficient to achieve truly universal prevention under a public health model. This study proposes the addition of non-usual care providers to those disseminating evidence-based practices for universal prevention. The performance of these non-usual care providers in this study demonstrates the capacity possessed by the community to disseminate evidence-based practices.

www.WrightOFER.com

“What I love about kernels is that when you use them, you notice and feel their immediate impact...I hear more laughing and our workplace feels more energized and fun.”

- Dr. Greta Mayer, MHRS, of Clark, Greene & Madison Counties

“The ‘boots’ concept has taken off and appears to have an instant place in our program. I think it has made a difference in morale – maybe more than any other team-building activity that we have tried in the past. The avenues of communication and positive regard have become healthier.”

- Michael Higgins, Director, Miami Valley Juvenile Rehabilitation Center
Reduced Toxic Influences

Pro-social Reinforcement

Limits on Problematic Behavior

Psychological Flexibility
Evidence-based Kernels Create a Nurturing Environment for Adults and Young People
Evidence-based Kernels for Life

Ohio Mental Health & Addiction Services
The James A. Rhodes State Office Tower
30 East Broad Street, 8th Floor
Columbus, Ohio 43215-3430

(614) 466-2596
questions@mha.ohio.gov
mha.ohio.gov

College of Education and Human Services
Wright State University
415 Allyn Hall
3640 Colonel Glenn Hwy.
Dayton, OH 45435-0001

(937) 775-2821
cehs-info@wright.edu
wright.edu/prevention-science

www.Wright.edu/Prevention-Science/Community