Protecting America’s Educational, Economic, and Public Safety Through Increasing Teacher and Student Skillsets

Every day, the headline news carries stories of costly and widespread threats to the educational, economic, public safety, and health of the nation's seed capital: our young people. These stories are well beyond tabloid news of events in Ferguson, Missouri or Newton, Connecticut. Just below the tabloid headline, one learns of much larger threats on a mass scale:

- “SAT Scores Fall to Lowest Level in 10 Years”— www.entrepreneur.com/article/250293
- “3 out of 4 of America’s 17-24 year olds not-qualified for military service”—Army Times, 2009
- “40.4 million young people out of 75 million received at least one psychotropic medication in 2009”—Wall Street Journal, December 28, 2010. One-third of America’s children received scripts just for ADHD medication that, according to the WSJ.
- “Children’s mental-health costs are the largest single expense for Medicaid and S-CHIP, rising $1 billion per year”—Agency for Healthcare Research and Quality[1].

All of these imply an epidemic affecting the brains and behaviors of America’s young people, when the numbers of children likely affected are 1 out of 2 by age 18 [2-5]. This “epidemic” is across all social classes, races, ethnicities, and communities. It affects Republican, Democratic and Independent families; it affects religious families and atheist families. It affects small towns in Wyoming or New Mexico; it affects big cities in Red States and Blue States. The “epidemic” dwarfs the polio epidemic in terms of scale, severity, and spread, and it can completely bankrupt the country economically and educationally as well as endanger our national security.

In the 1950s, America faced an epidemic among its young people, affecting people across every community and social class. In 1954, more than 28,000 young people died from polio, and 60,000 young people were infected—often with lifetime disabilities. The epidemic paralyzed the country with fear. Yet every state, county and community rose up to protect every child from the scourge of polio, and we have better American practical, protective science to end the epidemic this time than America had at the height of the polio epidemic.

**Historical Precedent for National Action to Save Future Generations of Americans**

In 1954, the early success of the Salk Vaccine was announced showing that it caused the expression of polio antibodies of 7,000 young people [6], but it had not yet shown to prevent polio per se. During 1955, the US, Canada, Great Britain and Finland mobilized to protect some 1.8 young people against actual polio infection, and it worked [7]. Thus every child in America was protected with the polio vaccine, and the number of polio cases fell to just 168 by 1963 [8].

The rate of return (ROI) for eradicating polio was 3-to-1. American ingenuity coupled with the mobilization of America by citizens, agencies, and Institutions of Higher Education resulted in the eradication to terrifying threat to the country's future.
**American Prevention Science Can Again Protect America’s Future**

As American prevention science triumphed against polio, modern American prevention science has the ability to begin preventing the epidemic of mental, emotional, and behavioral disorders that compromise the educational success of our future generations. Many policymakers, agencies, and IHEs are not yet taking advantage of this powerful science highlighted by the 2009 *Institute of Medicine Report on the Prevention of Mental, Emotional, and Behavioral Disorders Among Young People* [9].

Essentially, the most authoritative medical entity of the United States, signed into law in 1863 by President Lincoln, announced the mental, emotional, and behavioral disorders—including the most serious ones—were in many cases preventable. This discovery and announcement largely flew under the radar.

These underlying mental, emotional, and behavioral disorders are among the real reasons for poor academic and lifetime achievement of many of America’s young people. No math or reading curriculum is proven to reduce depression, ADHD, anxiety, or other disorders that so compromise academic success. School vouchers do not prevent the epidemic of children’s illnesses, nor do teacher incentives. The steady rise of these disorders over the last several decades of these problems is having profound impact on educational outcomes and incomes of current and future generations [10]:

“...Large effects are found on the ability of affected children to work and earn as adults. Educational accomplishments are diminished, and adult family incomes are reduced by 20% or $10,400 per year with $18,000 less family household assets. Lost income is partly a consequence of seven fewer weeks worked per year...The long-term economic damages of childhood psychological problems are large, and lifetime cost in lost family income of approximately $300,000, and total lifetime economic cost for all those affected of 2.1 trillion dollars.”

But there are powerful, universal approaches to protection and prevention that can and do prevent, mental, and emotional and behavioral disorders. One early year strategy can be delivered universally during first grade with powerful lifetime impact on multiple mental, emotional, and behavioral disorders. It also dramatically improves immediate and long-term educational outcomes such a high-school graduation and university entry. The strategy was first tested in Ottawa, KS in 1969 [11], with more than 20 replications across all manner of school settings in just a few years [12-17]. The strategy was called, the good behavior game.

Then, starting in the late 1980s, a team of scientists at Johns Hopkins University started what would become a series of world-class, randomized comparative effectiveness trials to improve students’ lifetime behaviors and academics using variations of the Good Behavior Game [18-20]. The strategy is now seen as a universal, daily behavioral vaccine (like brush teeth, using seatbelts, or washing hands) with powerful, preventive, and protective benefits for academic success and reduction in costly mental, emotional, and behavioral disorders [21, 22]. The IOM Report press releases and publicity explicitly named this 1st grade strategy something that could be scaled up to protect children, and that is precisely what the Substance Abuse and Mental Health Services Administration (SAMHSA) decided to demonstrate quickly across America by awarded an initial 18 school districts across America to implement the successful commercial version called, the PAX Good Behavior Game® (http://bit.ly/NREPP). Never before had SAMSHA been able to demonstrate rapid prevention benefits, but did so with PAX GBG[23]. With these practical results and further
implementations funded by SAMSHA, that led to more research grants and contracts being awarded under different auspices both private and by governments. More replications across the United States, Canada, and Europe have occurred underscoring the ability of this simple procedure to improve both indicators and predictors of mental health as well as academics in a very short period.

In 2014, more than 8,000 teachers were trained, affecting about 160,000 to 200,000 young children—a remarkable feat for something that has grown by local demand across the country, because of immediate, measureable benefits as well as the long-term benefits. Unlike many research based studies, this evidence-based practice is rapidly scalable and produces easily measured benefits, with an economic rate of return that is not less than 50-to-1 [24].

The recent SAMSHA site data [23] from eight school districts across the United State in a 3-month rapid deployment demonstration reveal why PAX GBG is contagious in more and more states. A total of 186 teachers were trained, implemented and had measurable results on both the predictors of academic success and mental, mental, and emotional behavioral disorders in schools: moment-by-moment disturbing, disruptive, and off-task/inattentive behaviors. These Title I schools had 150 such problematic behaviors per 15 minutes before starting in those classroom on average, which feel about 35 after three months of the intervention as shown.

These results are achieved by implementing the strategies of PAX GBG that have proven to collectively enhance self-regulation and social and emotional scaffolding that then translate into electrical, neurochemical, neural connectivity, and epigenetic-driven changes in the brain. What does this mean for the students and society from these immediate changes in ability for self-regulation, voluntary control over attention, and ability to cooperate successfully with peers and adult for the lifetime of students? These immediate changes predict some of the following from multiple randomized, longitudinal trials [19, 25-43] in the U.S.

By reaching 4,000,000 first graders at the start of each school year, key indicators can change dramatically. How would local, state, and national indicators change across the United States if each of those children received the benefits of the GBG? Here are the estimates based on previous research findings:

350,306 fewer young people will need any form of special education services
226,668 more boys will likely graduate from high school
272,002 more boys will likely attend college
361,444 more girls will likely graduate from high school (because of reduced pregnancy)
282,440 more girls will likely attend college
39,564 fewer young people will commit and be convicted of serious violent crimes
391,518 fewer young people will develop serious drug addictions
Wright State is working to increase student academic efficacy, among teacher candidates, classroom management strategies, student in middle childhood, and intervention specialist. State has developed and infused PAX GBG into its teacher training programs alone, Wright State University trained more than 700 new in-service classroom teachers in PAX GBG and found a distinct improvement in reading and behavioral outcomes. Additionally, Wright State has developed and infused PAX GBG into its teacher training programs at the early childhood, middle childhood, and intervention specialist levels. This infusion has resulted in significant increases in efficacy in instructional strategies, student engagement, and classroom management among teacher candidates. With these dramatic increases in efficacy, Wright State is ensuring greater student academic performance and greater teacher retention within the state of Ohio. Further, Wright State is working to decrease high-risk sexual behavior by 36%, would dramatically change the lives of thousands in our community in the areas we need it most. Moreover, PAX GBG actually has lifetime effects on virtually every domain of a child’s educational, social, and medical outcomes that never become obsolete.

Using the Washington State Institute for Public Policy’s cost effectiveness study [24], the economic benefits can be extrapolated when those young people reach age 21 after having PAX GBG just in first grade. With each cohort of first graders being protected and promoted by PAX GBG, American families, schools communities, cities, counties, and the state will have $53 billion more in their pockets to start businesses, improve communities, invent new knowledge to meet the challenges of the future, create infrastructure, as well as engage in more peaceful, productive, healthy, and happy lives. This gift for the present and the future of each first grader will cost about the price of 20 reams of copy paper (two boxes), which is $50-$70 at an office supply store, plus staffing supports for a total of about $100 to $150 per child protected from both academic failure, mental illnesses, serious addictions, related medical problems, and violent crime. The cost of the preventative/protective strategy is less than an iPad, does not break or wear out. PAX GBG actually has lifetime effects on virtually every domain of a child’s educational, social, and medical outcomes that never become obsolete.

These domains all have common origins for predictive success that center on one skillset: self-regulation. By embedding self-regulation through universal prevention, we can replicate what has already been proven through decades of longitudinal research to impact those outcomes that are hitting our community the hardest. Trends such as the opiate epidemic and the alarming infant mortality rate can only be reversed through increasing the self-regulation of our young people. The longitudinal evidence from randomized control trials bear that out. To decrease the chance of future drug dependence in our young people by 50% [19], delay initial sexual behavior by two years and decrease high-risk sexual behavior by 36% [44], would dramatically change the lives of thousands in our community in the areas we need it most.

Is this actually replicable in the real world? Absolutely, and visits to thousands of classrooms in Ohio alone demonstrate that by observations of the classrooms, interviews with teachers, parents, administrators, and community leaders. Within the state of Ohio, Wright State University has worked to further the research, scalability, and sustainability of this prevention. For instance, in 2014-2015 alone, Wright State University trained more than 700 new in-service classroom teachers in PAX GBG and found a distinct improvement in reading and behavioral outcomes [45]. Additionally, Wright State has developed and infused PAX GBG into its teacher training programs at the early childhood, middle childhood, and intervention specialist levels. This infusion has resulted in significant increases in efficacy in instructional strategies, student engagement, and classroom management among teacher candidates [46]. With these dramatic increases in efficacy, Wright State is ensuring greater student academic performance and greater teacher retention within the state of Ohio. Further, Wright State is working to decrease high-risk sexual behavior by 36%, would dramatically change the lives of thousands in our community in the areas we need it most.

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ensure universal statewide availability of these prevention practices through replication partnerships with the state’s Department of Mental Health and Addiction Services and other IHEs.

Waiting for superman is not necessary. The agents of change for our children’s futures are already in our children’s schools. They merely need this additional instructional skillset as a part of their teaching repertoire to pair with their content area background. By providing current and future teachers with trauma-informed prevention strategies to use in their daily instruction, we can ensure they can teach children the skillset of behavior and self-regulation. Helping children learn self-regulation and voluntary control over attention among their peers in virtually every educational activity with PAX Good Behavior Game will help set our children on a trajectory of performance, giving America some practical hope for our children’s futures instead of more blame of families, children, teachers, and schools, in these politically charged times.

References


