

ADVANCING THE FIELD

A Necessary Catalyst: Dismantling the School-to-Prison Pipeline with Yoga

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The school-to-prison pipeline is disproportionately populated with youth of color, many of whom have grown up with chronic stress and trauma from abuse or neglect at home and are surrounded by crime, violence, and drugs in their communities. Stress-induced academic failure often leads to quitting school, substance abuse, homelessness, and juvenile delinquency. Yoga-based prevention strategies could help dismantle this vicious cycle. Niroga Institute provides a model of evidence-based yoga programming in underserved schools throughout the San Francisco Bay Area. The fiscal return on investment for yoga training is tremendous: up to 2,600 percent compared to the lifetime cost of a single high school dropout. It also yields returns academically by closing the achievement gap and raising graduation rates, and psychologically/socially by lowering stress, cultivating self-control, enhancing resilience, and fostering interpersonal success. Niroga's yoga-based Transformative Life/Leadership Skills program benefits educators, mental health professionals, social workers, and violence prevention officials who are committed to working with these students in an integrated development framework. The vision of the Niroga Institute is to design an approach that is scalable, replicable, sustainable, and designed to achieve generational transformation.

“Wow! If everyone did yoga, there would not be so much violence in the world.” These words were uttered by an incarcerated youth after attending a few yoga sessions at Alameda County Juvenile Hall. Another detained youth said, “I learned a lot from it—whenever I get mad and angry, I just start breathing. And I actually *like* yoga.” Speaking of the participants in the program, Janice Thomas, PhD, senior clinical psychologist at the Guidance Clinic in Alameda County Juvenile Hall said, “They are really starting to internalize the practices and beginning to understand how they can use them to increase self-control. It’s really true. When someone is having difficulty in group, I’ve heard girls spontaneously say to the troubled person, ‘now breathe. . .’ It’s so cool!” (J. Thomas, personal communication, February 7, 2011).

Youth are going from school to prison due to a host of individual and environmental conditions, involving numerous participants. These include youth, parents, educators, health care officials, police, probation officers, judges, and attorneys. As explained below, yoga cost-effectively addresses many of these internal conditions and has been validated by scientific research as well as the experiences of participants (Frank, 2012).

The Problem: High Levels of Stress and Trauma Impact Youth

Many vulnerable children come to school not ready to learn. Many children are dealing with chronic stress and trauma from abuse or neglect at home, crime and violence, guns, gangs, drugs, and killings in their communities. Responsible parties often rush to teach them before attempting to help them heal. When children are unable to focus and engage in school resulting from dysfunction at home or in the community, repeated discipline, or being suspended and expelled, why is it a surprise if they drop out and end up in a juvenile hall or jail? When a child drops out of school, there is high probability that substance abuse, homelessness, and juvenile delinquency will follow (Grady, 2012).

The school-to-prison pipeline is populated with a disproportionately high number of youth of color. And in communities with disproportionate minority populations, there is disproportionately higher stress and trauma (PBS, 2008). Let us examine the tentacles of stress—whether chronic stress, primary (direct) or secondary (indirect/vicarious) traumatic stress, or post-traumatic stress. Epidemiological data reveal that stress is a risk factor for most common chronic conditions (Potts, 2007). Epigenetics tells us that stress affects us down to our DNA and that our gene maps have chemical markers called tags, which respond to chronic stress (UCSF, 2011). Public health data show that stress is the single common effect of every major social determinant of health, such as income inequality, institutionalized racism, and the breakdown of traditional family structures (PBS, 2008).

The latest research in neuroscience (Davidson et al., 2012; Jha, Krompinger, & Baime, 2007) tells us that the brain is the organ most responsive to the environment; the brain is plastic and malleable, abiding by the principles of neuroplasticity and neurogenesis. Environmental stressors affect our brains and thereby our behaviors—our thoughts, words, and actions—which in turn affect our environment. The effects of chronic stress on our brains include (a) attention control, (b) emotion regulation, (c) healthy coping, and (d) empathy (Liston, McEwen, & Casey, 2009). Learning and creative thinking cannot happen if there is lack of attention. Our ability to regulate emotions affects everything we do—what we read and watch, who we hang out with, what we discuss, what we eat, and so on. When overwhelmed by chronic stress, individuals are often tempted to reach for self-destructive means for coping and survival (Casey, Jones, & Hare, 2008). Finally, what is an individual without

empathy for self, what is a family or community without empathy for each other? As we examine these effects, we quickly realize that chronic stress has a devastating impact on brain and behavior. Is there no way out of this vicious cycle?

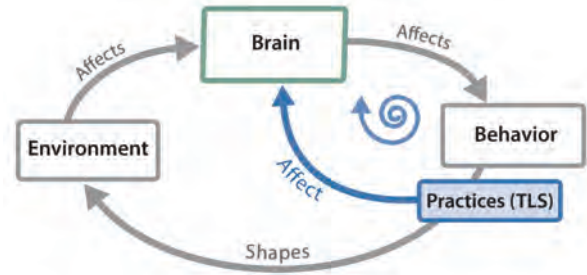


Figure 1: The Brain-Behavior Connection

The Solution: A Prevention and Intervention Model for Resolving Stress and Trauma

Neuroscience tells us what happens to the brain when subjected to chronic stress and also suggests a powerful solution. Neuroscience indicates that mindfulness practices mitigate every one of these effects ([a] to [d] enumerated above; see Figure 1). The essence of mindfulness is present-moment awareness. This can be defined as being aware of what we are doing as we are doing it, aware of what we are feeling as we are feeling it, and aware of what we are thinking just as we are thinking it. Raja Yoga, developed thousands of years ago, is a science of mindfulness. The essence of asana (physical postures) and pranayama (breathing exercises) is mindfulness in motion, which is connecting with breath and emerging in movement. The latest trauma research shows that our bodies hold trauma in our tissues and that physical movement is essential for dissolving trauma (*Integral Yoga Magazine*, 2009; van der Kolk, 2013). The latest somatic psychology research (Ogden, Minton, & Pain, 2006) suggests an integrated approach to information processing, including the kinesthetic, emotional, and cognitive, is an optimal treatment response to trauma. These fields of research point toward the critical importance of an integrated whole-person approach to managing chronic stress and healing from trauma past or present, whether primary or secondary.

Just as we need to brush and floss our teeth every day to avoid the build-up of plaque, in the same way we need to regularly wash away our stress; otherwise, it accumulates and leads to devastating consequences for ourselves and for those around us. The essence of yoga is nothing other than moving meditation (Vivekananda,

1898). It is dynamic mindfulness, a synthesis of the findings from neuroscience, epigenetics, trauma research, and somatic psychology, systematically helping develop self-awareness that leads to self-mastery (Davidson et al., 2012; Jha et al., 2007; Ogden et al., 2006; van der Kolk, 2013). Providing skills for managing chronic stress and healing from trauma, especially among low-income communities of color, has to be an integral part of systems change aimed at correcting racial and ethnic disparity, catalyzing racial healing and enabling community health and well-being.

As an example model, the probation, health care, and education departments in Alameda County, California, have jointly supported Niroga Institute's cost-effective, evidence-based, and trauma-informed yoga program in Juvenile Hall for the past eight years. School districts throughout the San Francisco Bay Area are funding yoga programs in schools, both inside and outside of academic time. Although yoga is often viewed as socially elite and culturally incongruent, it is a time-tested, secular, universal practice that has been validated by multiple scientific disciplines. Niroga brings yoga to over 2,000 children in schools, alternative schools, juvenile halls, and jails throughout the San Francisco Bay Area each week. The primary focus has been at-risk youth, mostly of color, at high risk of school failure and juvenile delinquency.

In addition to direct service, Niroga Institute conducts Transformative Life/Leadership Skills (TLS) trainings for hundreds of educators, mental health professionals, social workers, criminal justice and violence prevention officials, parents, adult allies, and community partners serving vulnerable youth. TLS is a multi-modality intervention including yoga postures, breathing techniques, and meditation, and provides a dual advantage:

- Personal sustainability (stress management, self-care, and healing from vicarious/secondary trauma) for the adults caring for vulnerable youth
- Professional application of yoga programs by these adults for children and youth, in schools and alternative schools, juvenile halls and jails, rehabilitation centers, homeless shelters, and foster homes

Scientific Research Provides a Growing Evidence Base for Yoga

A recent independent research report summarized three studies, including a randomized control trial of in-class TLS in a challenging urban alternative high school. The report showed compelling findings and implications, spanning three interconnected domains of social func-

tion: education, health care, and violence prevention. Jennifer Frank, PhD, research scientist at the Prevention Research Center at Pennsylvania State University, said, "Students showed lower levels of perceived stress and greater levels of self-control, school engagement, emotional awareness, distress tolerance and altered attitude towards violence" (Frank, 2012).

Social psychologists have shown that "high self-control predicts good adjustment, less pathology, better grades and interpersonal success," and that "low self-control is a significant risk factor for a broad range of personal and interpersonal problems" (Tangney, Baumeister, & Boone, 2004). Research suggests that self-control is a better predictor of academic achievement than IQ and concludes, "A major reason for students falling short of their intellectual potential is their failure to exercise self-discipline" (Duckworth & Seligman, 2005). This presents a strong inductive connection. If self-control improves academic achievement and yoga increases self-control, it stands to reason that yoga must enhance academic achievement. When a police chief heard that yoga could increase self-control, he said, "Do you know what that means on my streets? It is literally a matter of life and death!"

Participants Support the Effectiveness of Yoga

A recent TLS training in Delaware was conducted upon the request of Chandlee Kuhn, the chief judge of family court for about 60 staff and leadership of the Brandywine School District, Delaware, and Youth Rehabilitative Services (YRS). Below are comments from post-training from the participants that include the school-to-prison perspective :

- You should know that lives were changed yesterday! After the training, I debriefed with our staff from Claymont Elementary and the energy that they shared was amazing. They got so much out the experience and they are committed to implementing this in their school. As I continue to process and formulate ideas in my mind, I get excited about the possibilities and opportunities to incorporate mindfulness teaching practices in the Brandywine School District, especially as it relates to disciplining our children. This is a journey and as we continue to build this coalition, good things will happen for Brandywine School District, Niroga, and YRS, but more importantly for the students, staff and communities we serve (D. Green, personal communication, November 14, 2012).
- From my perspective, the training was an overwhelming success! I definitely had a few staff who were skeptical...

and everyone walked away with a very positive outlook and a new enthusiasm for the work that they do. Who could ask for more! Thank you for spending time with our group. It is amazing to see the transformation (A. McGonigal, personal communication, November 18 2012).

This is what Judge Kuhn, also a member of the Council of State Governments School Discipline Consensus Project, had to say: "I believe that a yoga-based prevention model could help dismantle the school-to-prison pipeline. Niroga Institute recently came to Delaware and trained a group of teachers, school administrators, youth detention staff, and leaders in the juvenile justice community on the Transformative Life Skills (TLS) curriculum. The program was embraced by all. It is programming such as TLS that I would like to see in schools across the country" (C. Kuhn, personal communication, November 19, 2012).

Yoga Is a Cost-Effective Approach

I posit that not only is teaching yoga in schools good policy and a moral imperative, it is also an economic imperative. About a million youth drop out of school each year, and about a million youth are detained in juvenile halls across the country. The dropout rate is over 50 percent in our inner-city schools, and the recidivism rate for juveniles with criminal justice system involvement is approximately 75 percent; these high percentages are major signs of system failure (Dillon, 2009). The lifetime cost of a high-school dropout is \$260,000, and the annual cost of school failure is estimated at \$260 billion (Rouse, 2005). It costs \$1,000 per year to saturate a youth's life with yoga (\$10 per yoga session x 2 hour-long sessions per week x 50 weeks). With \$260,000, we could comprehensively provide yoga to 260 youth for a year. If even one more youth stayed in school and out of trouble, the program would break even. If 10 percent or 26 more youth changed the course of their lives in a positive direction, the return on investment (ROI) would be 26-fold. We would get our money back 26 times over, with a rate of return of 2,600 percent!

The principal of an alternative high school gave us a 90-minute period, five days a week for an entire semester. The principal requested us to provide a TLS program for the 15 students in the school with the most trauma. The Mental Health Department of the City of Berkeley collaborated with us on the program and administered a questionnaire to measure the prevalence of trauma among the students. Ninety-eight percent of all the students in the school qualified for a diagnosis of post-traumatic

stress disorder (PTSD). The semester-long program was completed, and a TLS training for countywide school-based behavioral health professionals was completed a few months later. One of the participants in that training was Dr. Micheline Beam, a clinical supervisor in the Mental Health Department of the City of Berkeley, who excitedly stated, "Did you hear? Did you hear? Every single student in that program graduated from high school. Every one of them!" (M. Beam, personal communication, October 21, 2010). In a school where the graduation rate is historically deplorable, this outcome was unimaginable.

Policy Implications and Actionable Steps

I believe these findings have direct multidimensional impact on the school-to-prison pipeline, education equity, and the academic achievement gap. In a presentation at the annual meeting of the Academy of Criminal Justice Science (ACJS) in the Rehabilitation and Treatment track in March 2013, in Dallas, Texas, first author Dr. Lynette Lee, professor of criminal justice at California State University, Sacramento, wrote,

Current rehabilitation and treatment models such as Cognitive Behavioral Therapy (CBT) have transitioned from an exclusive focus on cognition, to include affect and relational influences on behavior. Connections have been established between anti-social behavior and traumatic stress. The latest research in neuroscience suggests that mindful movement is an optimal treatment response to traumatic stress (van der Kolk, 2013). This paper presents an Integral Developmental Practice (IDP) model that incorporates kinesthetics (a historically overlooked component) into existing cognitive, emotional, and relational treatment models. We will also discuss the implications of IDP for individual, institutional and community transformation.

(IDP is a class of transformative practices, and TLS [mindful yoga] is an example modality.)

Adding to the three Rs of reading, writing, and arithmetic, the fourth R of reflective capacity for enhancing resilience and self-reliance, self-awareness, and self-mastery is essential for mental training to prepare children for the twenty-first century. The pervasive application of yoga in schools nationally, especially in inner cities and low-income communities with disproportionate minority contact, will require infrastructural development and investment. We will need systematic yoga training for classroom teachers and school-based behavioral health professionals in our inner-city public schools across the

country, spanning preschools, early and late elementary schools, middle and high schools, alternative education, and special education. It will be essential to provide adequate follow-up in-person and online yoga supports to ensure fidelity and to address application-specific questions. Technology will need to be harnessed, including the Internet, social media, and mobile applications. Yoga training can be an important part of the education and educator training of mental health professionals, social workers, and violence-prevention officials who are committed to working in an integrated development framework with children and youth. That will ensure their personal sustainability (stress management, self-care, and healing from vicarious or secondary trauma), as well as the professional application for stress resilience and healing from primary/secondary trauma. This could lead to the development of an approach that is scalable, replicable, and sustainable in the long term, and designed to achieve generational transformation.

Conclusion

Martin Luther King reminds us from decades ago, “We have guided missiles and misguided men.” In an attempt to change systems, we put so much emphasis on our external environments, often neglecting the efforts needed on our internal environments. If even a fraction of the resources that we spend on incarceration could be spent on transforming our internal environments (stress management and healing from trauma), the social return would be substantial. Can we afford not to do it? How many generations of children are we going to waste? Let us dream of a world where most of us are acting with self-mastery, for the greater good, most of the time. 🌱

Note: Some of this material was submitted by the author as a statement to the Senate hearing on the School-to-Prison Pipeline in December, 2012, and expressed in an interview for the Huffington Post, with Rob Schware, executive director of the Give Back Yoga Foundation on December 12, 2012; http://www.huffingtonpost.com/rob-schware/service-yoga_b_2074338.html.

References

- Casey, B. J., Jones, R. M., & Hare, T. A. (2008). The adolescent brain. *Annals of the New York Academy of Sciences*, 1124, 111–126. doi: 10.1196/annals1440.010
- Davidson, R. J., Dunne, J., Eccles, J. S., Engle, A., Greenberg, M., Jennings, P., . . . Vago, D. (2012). Contemplative practices and mental training: Prospects for American education. *Child Development Perspectives*, 6(2), 146–153. doi:10.1111/j.1750-8606.2012.00240.x
- Dillon, S. (2009, April 22). Large urban-suburban gap seen in graduation rates. *The New York Times*. Retrieved from <http://www.nytimes.com/2009/04/22/education/22dropout.html>
- Duckworth, A. L., Seligman, M. E. P. (2005). Self-discipline outdoes IQ in predicting academic performances of adolescents. *Psychological Science*, 16(12), 939–944. doi: 10.1111/j.1467-9280.2005.01641.x
- Frank, J. (2012). “Results of TLS Evaluation,” Research Report, October 2012. www.niroga.org/research/papers.php.
- Grady, B. (2012, July 05). Beating the school-to-prison pipeline. Oakland Local. Retrieved from <http://archive.oaklandlocal.com/article/beating-school-prison-pipeline>
- Integral Yoga Magazine. (2009). Yoga and post-traumatic stress disorder: An interview with Bessel van der Kolk, M.D. *Integral Yoga Magazine*, Summer, 12–13.
- Jha, A. P., Krompinger, J., & Baime, M. J. (2007). Mindfulness training modifies subsystems of attention. *Cognitive, Affective, and Behavioral Neuroscience*, 7(2), 109–119.
- Liston, C., McEwen, B., & Casey, B. (2009). Psychosocial stress reversibly disrupts prefrontal processing and attentional control. *Proceedings of the National Academy of Science*, 106(3), 912–917. doi: 10.1073/pnas.0807041106
- Ogden, P., Minton, K., & Pain, C. (2006). *Trauma and the body: A sensorimotor approach to psychotherapy*. New York, NY: W.W. Norton & Co.
- PBS (2009) *Unnatural Causes*. Documentary series.
- Potts, J. (2007). Stress contributes to range of chronic diseases, Carnegie Mellon psychologist says. Retrieved from http://www.cmu.edu/news/archive/2007/October/oct10_cohenjama.shtml
- Rouse, C.E. (2005) *Labor market consequences of inadequate education*. As quoted in Alliance for Excellent Education Issue Brief. Teachers College, Columbia University.

- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72(2), 271-322. doi: 10.1111/j.0022-3506.2004.00263.x
- UCSF (2011). The New Science of Stress: Can We Turn Back the Biological Clock? Retrieved from University of California San Francisco, The Chancellor Priorities, Discovery in Action. Retrieved from <http://ucsf-chancellor.ucsf.edu/priorities/new-science-stress-can-we-turn-back-biological-clock>
- van der Kolk, B. (2013). What Neuroscience teaches us about the Treatment of Trauma. [Webinar]. Conducted on April 24, 2013, by the National Institute for the Clinical Application of Behavioral Medicine. www.nicabm.com.
- Vivekananda (1898). *The Yogas and Other Works*. Ramakrishna Vivekananda Center. Fourth Printing 1996.