

HOLD ON TO YOUR KIDS

by Gordon Neufeld, PhD and Gabor Mate, MD

Chapter 21 on peer orientation and mental health

Hold On To Your Kids was re-released on March 19, 2024 by Random House USA and on April 9, 2024 by Knopf Canada with this added chapter.

Copyright © 2024 Gordon Neufeld, Ph.D. and Gabor Maté, M.D.
All rights reserved. This document is the intellectual property of Gordon Neufeld, Ph.D. and Gabor Mate, M.D. and is protected by copyright law. Forwarding, reproduction and/or distribution in whole or in part without prior written permission is prohibited.

Chapter 21

IN WAKE OF THE PANDEMIC: PEER ORIENTATION AND THE YOUTH MENTAL HEALTH CRISIS

The mental and emotional health of children and youth is deteriorating internationally, as many studies and reports indicate. Increasing number of mental health professionals are referring to this as a mental health crisis of unprecedented proportions. This crisis was brewing even before the Covid-19 outbreak and has only been exacerbated since the social isolation imposed in response to it.¹ School violence, including assaults on teachers, is reported to be rising in the U.S. and Canada, while British educators have noted significant decreases in students' capacity to pay attention or even to sit still. Self-cutting is on the upsurge as, is, tragically, youth suicide.² During the pandemic, adolescent psych wards filled, children's call-in help lines were overwhelmed, self-reports of anxiety and depression were unprecedented.³ One centre for pandemic studies found that school-aged children suffered an approximate 40% increase in depression, anxiety, irritability and attention problems over the span of the pandemic.⁴ Some studies reported that a majority of children and youth (a whopping 70% according to some) experienced harm to their mental health when sent home from school during the first wave of the pandemic.^{5 6}

Many experts identified the social isolation caused by the school and other closures during the pandemic as the culprit—some even recommended the breaking of public health rules as a way of restoring young people to some mental balance. While superficially such a view seems plausible, it misses two essential points: it cannot possibly account for trends already well in motion before the pandemic and, crucially, it mistakes effects for causes. In

truth, the devastating impact of social isolation was fueled by the unhealthy dependence of our young on the peer group in the first place. The separation from peers would not have been such a severe threat if children and adolescents were not *already* orienting around their peers. The adversely affected majority suffered from not seeing their friends when kept home from school precisely because often their chief motivation for wanting to go to school *was* to be with their friends. There was, however, another group of children, about 20% or so, that thrived when kept home from school.⁷ Both the authors of this book heard of many examples of children who blossomed as a result spending more time with their parents and families, away from their peers. And of parents who relished the opportunity to be around their children. “I wouldn’t have imagined it,” one delighted father said, “but here I am, watching my children grow, reach new milestones, seeing how they learn, engaging with them in play. When viewed through the lens of attachment, the students who benefitted were arguably the adult-oriented and family-oriented ones. Their relationships with adults kept them under the warm cover of nurturing attachments, sheltered from the losses peer-oriented children had to endure. From the point of view of mental health the underlying issue then is not whether kids go to school or not but whether they are peer oriented or parent oriented.

The dilemma is that peer orientation is now so taken for granted as to go unnoticed, considered so normal that it doesn’t register on our radar screens as anything out of the ordinary. We see its impacts but not its underlying dynamics. We don’t question it—don’t

even realize there is anything to question. Yet, as Gabor Maté points out in his recent book, what is normal in our society is neither healthy nor natural.ⁱ

To understand what is happening now, how to confront effectively the challenges posed by our postpandemic and increasingly digitalized world, let us, briefly, go back to basics.

To discern what is "normal" for our kids in a society so far removed from our evolutionary human background is like attempting to study the nature of a zebra by observing its behavior while it is confined in a zoo. We are sure to come to false conclusions, since creatures raised in denatured environments generally develop and behave in aberrant ways. Recall our fundamental thesis: according to evolutionary design, children were meant to be brought up in a community of nurturing adults, their peer contacts occurring in a context of benign adult leadership, guidance and protection. In those ancient cultures which had remained in sync with the evolutionary developmental design, this is how children would have been reared since prehistoric times until a mere blink of an eye before our current time. Here is a description, for example, of Indigenous North American parenting as observed by European colonists only a few hundred years ago: "Pilgrim writers universally reported that Wampanoangⁱⁱ families were close and loving—more so than English families, some thought. European families in those days tended to view children as moving straight from infancy to adulthood around the age of seven, and often thereupon sent them out to

ⁱ *The Myth of Normal: Trauma, Illness and Healing in a Toxic Culture*

ⁱⁱ A clan in what is now New England

work. [Indigenous] parents, by contrast, regarded the years before puberty as a time of playful development, and kept their offspring close by until marriage."⁸ (Note the emphasis on play, a theme to which we will return). Prof. Darcia Narvaez,ⁱⁱⁱ scholar of human development, has called such arrangements our *evolved nest*. "Evolved nests," Dr. Narvaez tells us in her recent book, "are developmental systems tailored to nurture psychological, social, physical and neurobiological needs in a species-unique manner." For humans, she elucidates, it is "the set of processes and structures that provide children with the social and ecological micro-environment perfectly tailored for optimal growth and health."⁹ To put it bluntly, we have lost the plot in the pursuit of economic and technological advancement. Think of this absurdity: we have left our evolutionary design so far behind, that now--as during the pandemic--we even consider it a disaster if children have to spend time away from the peers, in the company of their parents!

The erosion of child/adult attachments has been a traumatic development in the history of our species, ramifications of which we are experiencing all too keenly in the epidemic of mental disturbances, anxieties, aggression, behavioral and developmental and other problems that plague present-day youth. No doubt many factors are involved, all centering around the intolerable stresses modern culture is imposing on parents, communities, family life and child development. Peer orientation only contributes to these societal stresses. It's just not how human beings were engineered by evolution to be raised.

ⁱⁱⁱ Prof. Emerita, Psychology, Notre Dame University

Why not? To answer this question, we need to look at the underlying dynamics that support mental health and emotional well-being. They may be summed up in two words: CARE and FEELING. Let's begin with care.

The flourishing of any living organism happens when that being is adequately cared for. This would be true of a plant, a pet, any animal--we as humans included. So it makes sense that mental health would somehow be rooted in caring. Caring in this case means much more than the intentions of the caregiver but refers to the quality of care the developing organism actually receives. To a rose bush, for example, it does not matter that the gardener may have the best of goodwill if it, the plant, is not supplied with the necessary soil conditions, nutrients, sunlight, and irrigation. It is the same with children. Many children are deeply loved, so far as the emotions of the parents are concerned, but they remain parched for caring because the necessary conditions for them to receive that love are lacking, having been undermined by a culture that no longer understands, values or supports the attachment relationships needed to convey love and care. Indeed, we may say that attachment is the hidden delivery system for the giving and receiving of care.

Nature gave us instincts to attach to each other so that we would take care of each other. In other words, Nature takes care of us by setting the stage for us to take care of each other. But, as we have noted, instincts do not work automatically and on their own--they have to be evoked by the environment. That is the job of a culture--and our culture fails us by eroding the healthy contexts for attachment to do its work. Caring is most natural when it is energized by, and in the context of, attachment. Only then is there the patience required to endure the irritations and foster the generosity of spirit needed to make the

work bearable. Universities may be able to teach *how* to care, but they certainly cannot *make* anyone care. The impulse to care is a function of attachment, not of education or exhortation.

Unlike with a plant which will passively receive the irrigation and sunlight bestowed on it, receptivity to care should never be taken for granted in the case of humans. Just as the umbilical cord needs to be attached for the fetus to receive care, a child must be attached in the dependent or receptive mode for care to be delivered. Especially the case for children, this is even true in marriage and friendship, where we ideally take turns with the giving and receiving of care. The ancient dance of attachment requires a *lead* in the act of caring, and a *follow* in order to receive it. But what if our kids are no longer following us because they have become entranced by the digitally and culturally magnified siren song of the peer world? It means they are no longer in receptive mode for the care we long so wholeheartedly to offer, that receptivity to care being essential for the healthy development of the brain circuits and the emotional dynamics that support mental health. We know, for example, that the so-named Adverse Childhood Experiences-- each of which refers to a loss or lack of care--are powerful contributors to mental suffering in adolescence and adulthood. As the British psychologist and academic Richard Bentall has noted, "The evidence of a link between childhood misfortune and future psychiatric disorder is about as strong statistically as the link between smoking and lung cancer."¹⁰ Among these misfortunates, we may today count the erosion of the attachment relationship which is the natural conduit for children to absorb the care emanating from adults. As it turns out, troubled parenting even fuels peer orientation: the poorer the relationship of the child to the parents, the more likely the child is to seek solace in the peer group. According to one

report, "Researchers found that students who were parented harshly in the seventh grade were more likely in the ninth grade to say their peer group was a higher priority than their other responsibilities, including following parents' rules. This in turn led them to engage in riskier behaviors in eleventh grade, including more frequent early sexual behavior in females and greater delinquency (e.g., hitting, stealing) in males." Educational outcomes also deteriorated.¹¹

Since peer-oriented kids are not looking to their parents to answer their attachment needs, including their needs for company, sameness, belonging, significance, love, or being known, there is no way for them to receive the care that may be there for them. Their attachment umbilical cords are not hooked, up as it were. When this is the case, it doesn't really matter how much love we have to give. It cannot get through.

But why should attachment and the care it facilitates be necessary for mental health and why is its loss so harmful? This is where *feeling* comes in. Care must be actually felt to do its best work. The child must *feel* the caring that is there for them: to feel cared for and to feel cared about. The problem is that there is vulnerability in this feeling, a vulnerability that may be too much to bear. To feel cared for is also to feel its opposite. To feel cared about is to also sense its lack. As discussed previously in this book, the peer-oriented cannot afford to live with such vulnerability, not when they exist in a world of constant wounding. The brain has emotional defenses to deal with this vulnerability, cutting out feelings that would interfere with our being able to cope. The loss of the ability to feel caring is part of the collateral damage of the brain's flight from vulnerability. A peer-oriented child will be suffering from a lack of care, often quite severely, even if care is

available to them. This lack of received care hinders their thriving and renders them at risk for all manner of mental health problems, including anxiety and depression. The challenge and the solution, then, is to help our children return to feeling. Rather than addressing feelings, however, we need to offer the proper context of safe attachment where feeling will naturally emerge.

Contrary to what is commonly believed these days, it is only on a healthy emotional scaffolding that children's psychological well-being can rest. It's not about behavior, or the right thoughts, or the right teaching, or the right self-regulation—it's about emotional development. That's the basis of the salutary sense of self which can guide healthy socialization. Once more, the master blueprint of development has socialization coming as the final outcome. What precedes socialization is the process of individuation which includes a healthy relationship with one's feelings. In turn, undergirding individuation is children's healthy and fulfilling attachments with the adults who are responsible for them. By putting socialization first, we subvert the whole process. Children's sense of security, trust in the world and, above all, connection to their authentic emotions, hinge on the consistent availability of attuned and emotionally reliable caregivers with whom the child maintains the primary attachment. Modern life has made that connection less and less available for many children. As preeminent developmental child psychiatrist Stanley Greenspan observed, "While charting [the] earliest stages of the growth of the mind, we have been confronted with mounting evidence that such growth is becoming seriously endangered by modern institutions and social patterns. There exists a growing disregard for the importance of mind-building emotional experiences in almost every aspect of daily life including childcare, education, and family life."¹²

In the late 1960's researchers at the University of Tübingen in Germany noted what they called "the new indifference," a measurable drop in the sensory perception and general awareness of students. Young people, they found, were simply not roused to either excitement or pleasure or alarm that would have registered much more strongly with previous generations. As a report on this project noted, what the researchers found is concerning. "Apparently our ability to process subtle stimuli is decreasing at a rate of about 1 percent per year."¹³ Young people's brains are being progressively desensitized--and this was before the emergence of digital media. I believe what these scientists were describing was the protective emotional shutdown we have called the flight from vulnerability engendered by the rising influence of peer orientation that reached its first crescendo precisely in the 1960's. To that we may now add the more recent but related and equally ominous impact of digital media discussed in the previous two chapters. Together and very literally, both peer orientation and excessive screen use—phenomena highly linked, as we saw in the preceding two chapters--disrupt our children's healthy development and therefore mental health. One more word, then, about children and screens.

A 2019 study published in the journal JAMA ^{iv}Pediatrics was among the first to investigate the neurobiological effects of screen watching on children. "In a single generation," the authors wrote, "through what has been described as a vast 'uncontrolled experiment,' the landscape of childhood has been digitalized, affecting how children play, learn and form relationships...Use begins in infancy and increases with age, and it was recently estimated at more than 2 hours per day in children younger than 9 years, aside from use during childcare and school...[The] risks include language delay, poor sleep,

^{iv} Journal of the American Medical Association

impaired executive function and general cognition, and decreased parent-child engagement, including reading together.” The study, conducted in preschoolers by means of advanced brain imaging, found increased screen time associated with poorer white brain matter functioning “in major fiber tracts supporting core language and emergent literary skills.”¹⁴

The neuropsychologist Mari Swingle treats many youths with troubled behavior, attention issues, and addictive patterns. She is the author of perhaps the most comprehensive book on the brain and the digital culture, *i-Minds: How and Why Constant Connectivity is Rewiring our Brains and What to Do About It*. Dr. Swingle well understands the relief i-media provides for parents in a world characterized by “significantly more running around, less parent-child interaction, and higher stress and fatigue of parents.” What has filled the gap, she asks? “The simple answer is that i-media is acting as a stress and fatigue mediator for parents. We embrace it because it is filling a need, and now a void. Engagement with digital media requires little or no pre-planning, is instantly available, and provides parents, caretakers, and even educators with much-needed moments of respite and solace.” Here we have a case of the solution to one dilemma fueling another. These forms of stress relief, understandable as they are in these wickedly stressful times, have a cost— and it is our children who pay the lion's share of it.

“We’re seeing autistic-like characteristics in children without autism,” Mari Swingle said in an interview. “Lack of smile response, delayed verbal skills, what I used to affectionately call, busy children: now these are just kids that are kind of running around aimlessly or conversely zombified when they’re not on the tech...You have kids, for that matter, adults now that are used to being on the tech for extensive periods of time--a walk won’t do it, canoeing won’t do it, even speed skateboarding, a lot of things, skiing, even

those are now challenged.” Dr. Swingle is also concerned with the impacts of relentless screen exposure on brain development: “Less ability to focus on the normal, the baseline, including states of observation, contemplation, and transitions from which ideas spark—what many under the age of 20 now consider a void, proclaiming boredom...On the biological as well as cultural levels, such brain state changes affect learning, socialization, recreation, partnering, and creativity—in essence all factors that make a society and a culture. The neurophysiological processes that regulate mood and behavior are deregulating.”¹⁵

Where do we look for relief? Once more, back to the safe harbor of attachment.

In the evolved nest, there was a whole network of adult attachments in which the child was ensconced, a context in which feelings were held safely and vulnerability was not a threat, where "mind-building emotional experiences" could unfold. We must establish in our families and in all institutions of child rearing, from preschool to secondary school, a system of care and connection and emotional contact along lines we have been suggesting in this book. I call this a "cascade of care," in which each healthy adult attachment of the child begets and fosters another—from parent to preschool to kindergarten to elementary school. We either have to return the responsibility of care to the adults the child is already depending upon, or take care first and foremost to cultivate the kind of relationships that will enable us to deliver our care.

Yet again, the village, in a modern form.^v In sum, our proposed solution to the problems both uncovered and exacerbated by the pandemic is not to unthinkingly throw our kids back into the peer milieu, hoping thereby to restore some "normal" that was never normal to begin with, not in the sense of being natural and healthy. Rather, it is to create a new normal truly in line with the evolutionary requirements that eons of mammalian and human development have made our birthright. The old normal, we might say, under new conditions. Attachment that protects vulnerability and allows health-giving feelings to flow. These necessary feelings include the difficult ones the flight from vulnerability^{vi} forbids: sadness when things don't work and the sense of futility that allows young humans to recognize that sometimes there is nothing they can *do* to make things work ; to make others like them, to accept them, to admire them. That sadness, that sense of futility fully felt and fully accepted, is essential for emotional maturation and mental health. These feelings require safety--emotional safety above all. Children's safety, we must emphasize, is not just about the absence of threat: it's also about being in the right relationship with caring adults. I believe great headway could be made if schools simply focused on the matchmaking aspect of what needs to happen for emotional well-being. The first challenge is to make sure that every child is embedded in cascading care with nurturing adults. Any activities, initiatives, or programs that serve this purpose would be transformative for students.

^v See Chapter 18, on the Attachment Village

^{vi} For our discussion of the flight from vulnerability peer orientation foments, see Chapter 8

When schools in the Canadian province of Quebec reopened after the COVID-19 lockdown in May 2020, omitted from the curriculum were the supposed nonessentials of music, drama, art, and physical education. The assumption was that academic subjects were more important—raising the question, more important for what? Prioritizing “job readiness” is a far cry from foregrounding healthy development, which ought to be the primary agenda of the educational system, and of child-rearing in general. Even with a narrow focus on “skill building”, our prevailing educational ideologies miss the boat, since cognitive skills in fact depend on firm emotional architecture. “Emotional rather than intellectual interaction serves as the mind’s primary architect,” wrote Dr. Greenspan. Of that architecture, contrary to what the Quebec educational authorities believed, play and creativity are indispensable builders.

“We used to think that schools build brains,” I once said to a meeting of the European Parliament in Brussels. “Now we know that it is play that builds the brains that school can then use . . . It’s where growth most happens.”

Those subjects deemed superfluous by Quebec school authorities tap into essential cerebral circuitry. All young mammals play, and for critical reasons. As the renowned neuroscientist Jaak Panksepp identified, we have a designated “PLAY” system in our brains in common with other mammals. Play is a primary engine of brain development and is also essential to the emotional maturation process. “As a species, we have evolved culturally in a large part because of our playfulness and all that it produces by way of intelligence and productivity,” the psychologist James Garbarino writes.¹⁶ And true play, I insist, is not outcome-based: the fun is in the activity, not the end result. Free play is one of the

irreducible needs of childhood, and it's being sacrificed to both consumerism and the digital vortex our kids are caught up in.

When I speak of play, I mean that not only in the narrow physical sense, nor do I mean "play" with devices, cell phones or screens. A primary role of play is taking care of emotions. Playfulness amongst couples, for example, provides an excellent "sabbatical" from the sometimes arduous labor of maintaining attachments. Play, as in "peek-a-boo" is among the first activities babies engage in. Later, play can take many forms--there is a reason we call theatrical performances "plays." In theater all kinds of emotions can be portrayed that in real life may be too vulnerable to experience. Any school could provide the spaces that are needed for students to express emotions, through art, writing poetry music, theater. The therapeutic literature is full of examples of the transformative impact of theater, for example, in the emotional health of even prison inmates.¹⁷ If it can melt their hearts, how much more would it serve our students. Music rooms could be opened for off-curriculum play-based activity. Art studios could become, once again, centres of emotional expression. I think it is rather revealing, in this context, that in one of the studies concerning the mental health of students, it was accidentally discovered that the schools with a choir had the best indicators of well-being.¹⁸ There is certainly a growing body of research revealing the relationship between adult involvement in choirs and their mental health.¹⁹ Again, if this is true of adults, how much more would it be true of our children. In our homes, daycares, preschools, we must foster environments for creative expression, emotional playgrounds where true feelings can be manifested and welcomed.

The challenges of the post pandemic world impel me all the more to "double down" on this book's essential message: build, rebuild, reclaim, vouchsafe, and

honor the attachment relationship. The good news is that there is hope. Although the symptoms of children not being in right relationship with the adults who care for them are becoming ever more concerning, the answer remains the same - for us to restore our connection with our kids. Let's unplug our families and ourselves as much as possible from the digital world. Invite our children's dependence on us. Get back to nature, taking our kids outdoors and as much as our circumstances allow. Let's celebrate our children's creativity, encourage their endeavors in art, music, crafts, theater not for the sake of achievement but as modes of self-expression necessary for mental health and well-being. Invite their sadness, their sense of futility when the world disappoints them, as it will. That will help them find the deep restorative rest their brains need and develop resilience at the same time. And let us stop the multitasking when around our kids. For our children to feel our invitation to exist in our presence, we need first to be present ourselves. The stakes are high, the dangers looming, the problems accumulating and already taking a great toll. We are the solution.

ENDNOTES

¹ Lebrun, Lydia Al et al. Five-Year Trends in US Children's Health and Well-being, 2016-2020 *JAMA Pediatrics* July 2022 Volume 176, Number 7 *JAMA Pediatr.* 2022;176(7):e220056. doi:10.1001/jamapediatrics.2022.0056

² Richtel, Matt It's Life or Death: The Mental Health Crisis Among U.S. Teens. *New York Times*, April 23, 2022 www.nytimes.com/2022/04/23/health/mental-health-crisis-teens.html

³ Kwai, Isabella and Peltier, Elian. 'What's the Point?' Young People's Despair Deepens as Covid-19 Crisis Drags On. *New York Times*. February 24, 2021

⁴ The largest review of relevant research to date synthesized the findings of over 60 studies involving 55,000 children and adolescents involved in the lockdown. Findings confirmed increases in anxiety, depression, irritability and anger after the lockdown. The reference for this review is *The impact of COVID-19 lockdown on child and adolescent mental health: systematic review, European Child and Adolescent Psychiatry*, 2023; 32(7): pp 1151–1177.

The particular numbers referred to here came from Canadian study undertaken by a wide coalition of researchers commissioned specifically to study the impact of the pandemic on the mental health of children and adolescents in Canada and organized by Sick Children's Hospital in Toronto. Their research was also published in *Journal of European Child and Adolescent Psychiatry* (Cost, K.T., Crosbie, J., Anagnostou, E. et al. Mostly worse, occasionally better: impact of COVID-19 pandemic on the mental health of Canadian children and adolescents. 2022: Volume 31, pp 671–684).

This Canadian coalition of researchers was supported by the Canadian Institutes for Health Research (CIHR), the Ontario Ministry of Health, the SickKids Centre for Brain and Mental Health, the Edwin S.H. Leong Centre for Healthy Children, the Miner's Lamp Innovation Fund in Prevention and Early Detection of Severe Mental Illness at the University of Toronto and SickKids Foundation

Child Helpline International is a collective organization with 159 members from 135 countries and territories around the world that coordinate information, viewpoints, knowledge and data from helpline members, partners and external sources. From their 2023 international report (<https://childhelplineinternational.org/>), there was an across-the-board 38% increase in calls during the pandemic.

⁵ This was also a finding of the Canadian studies cited above.

⁶ <https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-43-no-5-2023/suicidal-ideation-young-adults-canada-during-covid-19-pandemic-evidence-population-based-cross-sectional-study.html>

⁷ This finding of a reverse effect of the lockdown was not as widely reported and often took the form of anecdotal experiences. The most reliable finding of this phenomenon was once again, the Canadian study referred to in #1. These numbers come from their report.

⁸ Mann, C. *1491: New Revelations of the Americas Before Columbus*. Vintage Books, 2011, p. 47

⁹ Narvaez, Darcia and Bradshaw, Gay. *The Evolved Nest: The Nature Way of Raising Our Children*. North Atlantic Books, 2023, Introduction

¹⁰ Bentall, Richard. Mental illness is a result of misery, yet still we stigmatise it. *The Guardian*, February 26, 2016

¹¹ ScienceDaily, 8 February 2017. www.sciencedaily.com/releases/2017/02/170208094450.html. Original article: Rochelle F. Hentges, Ming-Te Wang. Gender Differences in the Developmental Cascade From Harsh Parenting to Educational Attainment: An Evolutionary Perspective. *Child Development*, 2017; DOI: [10.1111/cdev.12719](https://doi.org/10.1111/cdev.12719)

¹² Greenspan, Stanley I. et al. The Emotional Architecture of the Mind, Chapter 1 in in Raffi Cavoukian et al., *Child Honoring: How To Turn This World Around*. Homeland Press, 2006 (pb. 2010), p. 5

¹³ Amaral, John. The New Indifference: Why Your New Brain Needs Old Tricks to Thrive in Our Modern World. <http://wellbeingcenter.com/the-new-indifference-why-your-new-brain-needs-old-tricks-to-thrive-in-our-modern-world/>

¹⁴ Sutton, John S. MS, MD et al., Associations Between Screen-Based Media Use and Brain White Matter Integrity in Preschool-Aged Children, *JAMA Pediatr* 2020; 174(1)

¹⁵ Swingle, Mari Ph.D., *i-Minds: How and Why Constant Connectivity is Rewiring our brains and What to Do About It*. new society Publishers, 2019 p. 185

¹⁶ Garbarino, J. *Children and Families in the Social Environment*. New York, Routledge, 1992, p 11

¹⁷ For example, a 2011 John Jay College of Criminal Justice study found that those in RTA's theatre program had fewer and less severe infractions and demonstrated better behavior and anger management than a control group: "Theatre may be unique in facilitating institutional adjustment and well-being through the expression of emotions, the rehearsal of life roles and the gratification of public performance." (Moller, Lorraine. 2011. "Project Slam: Rehabilitation through Theatre at Sing Sing Correctional Facility." *International Journal of the Arts* 5(5): 9-29.) One of many such studies,

¹⁸ The role of choral singing in mental health has been studied primarily with adults only, and for the most part in the UK only. One such survey of findings is found in the 2010 *Journal of Applied Arts and Health*, Volume 1, Number 1, pp 19-34. The study is entitled '*Choral singing and psychological well-being*'. Given these findings, it was not surprising to hear a well-known mental health researcher – Dr. Stanley Kutcher – share about a rather serendipitous finding during an investigation of contributing factors to the mental health of students within the school system. What the researchers realized was that the schools with the best mental health ratings also happened to have school choirs. This accidental finding was shared during a keynote at a 2014 national conference on Schools & Mental Health in Winnipeg, Canada. Dr. Stanley Kutcher is Director of the World Health Organization Collaborating Centre at Dalhousie University.

¹⁹ Choir singers report higher quality of life, better relationships than non-singers, and, among cancer patients and their caregivers, reduced anxiety and improved immunity. <https://www.psychologytoday.com/ca/blog/evidence-based-living/202307/the-mental-health-benefits-of-singing-in-a-choir#>