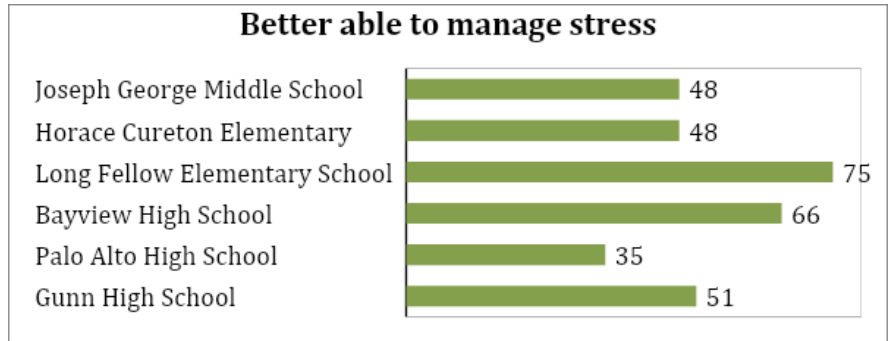


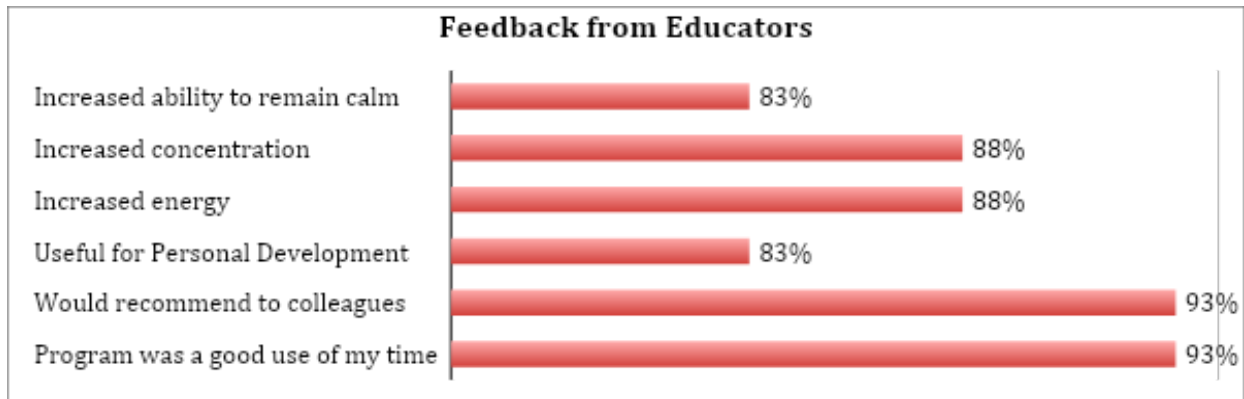
## IMPACT ON STUDENTS AND SCHOOLS

### PROGRAM EXPERIENCE

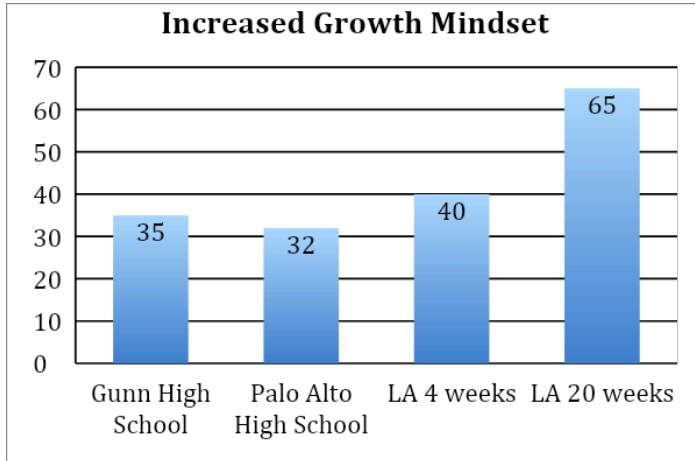
When SKY students at 5 geographically distinct schools were asked about their experience 48-79% of students reported feeling more calm and relaxed, 41-78% reported overall feeling better and happier, 48-75% felt better able to manage stress, 41-75% felt better able to manage emotions, 41-81% felt better able to focus, and 42-64% reported a better quality of sleep. In a post-course assessment of 18 SKY schools nationwide in 2017, 76-85% of the 7,333 students surveyed showed significant improvement in six focus areas: mood and feelings, calm state of mind, focus and concentration, anger and frustration, ability to sleep, stress and worry. Schools with higher indicators are those with the highest dosage of programming hours.



Similarly, surveys of students, staff, educators and teachers from 4 schools found that 82% felt an increased ability to remain calm, 88% experienced increased concentration, and 88% felt increased energy. When asked about the program itself 83% found it useful for personal development, 93% would recommend it to a colleague, and 93% found that it was a good use of their time. These results are echoed by parents. After the course: 80% felt an increase of energy, focus, and ability to remain calm; 100% felt that it was a good investment of their time; and 80% intended to be practicing SKY techniques at home.



## SOCIAL EMOTIONAL LEARNING COMPETENCIES

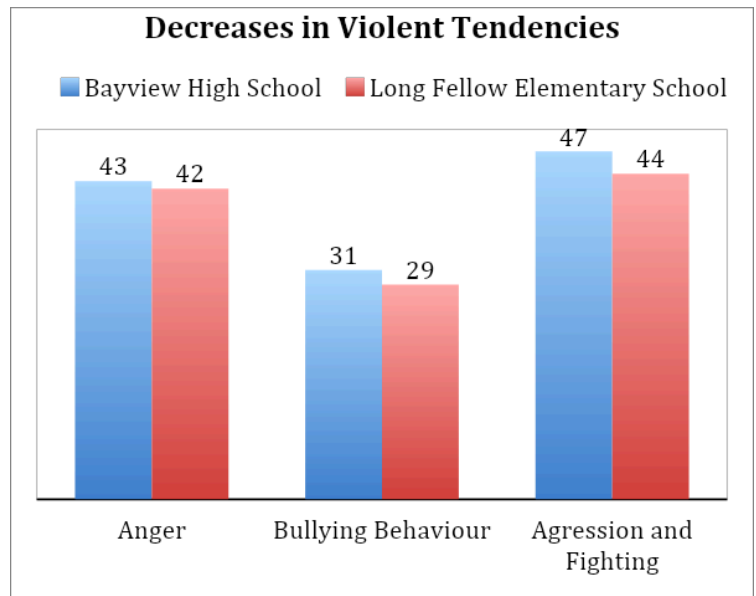


In terms of the development of SEL competencies the first half of the current (2018-2019) school year SKY found that at Gunn High School and Los Angeles High School 61% and 77% of students showed increased resilience, 35% and 65% showed increased growth mindset, and 46% and 51% showed increased emotional regulation. In Los Angeles, 69% of students demonstrated increased social awareness, 46% showed an increase in self-management and 62%

demonstrated increased self-efficacy all of which are related to better responding to challenges responsibly. In Milwaukee, a study of an elementary and high school found that after SKY 42% and 43% of students showed decreased anger, 29% and 31% showed decreased bullying behaviors, and 44% and 47% showed decreased aggression and fighting. The same study found a 41% and 58% increase in caring and cooperative behavior. In high school, this translated into a 60% decrease in disciplinary infractions.

## CHANGES IN BEHAVIOUR

In terms of how the development of SEL competencies translates into changes in behavior SKY has a consistent record of decreased violence and increased academic performance. In Eastside High School in Newark the number of students achieving adequate yearly performance increased from 20% to 90%, the number of students on the honor roll increased from 100 to 800 and there was a 90% decrease in formal disciplinary actions. Similarly, Dodd Middle School in New York saw a drop in suspensions of 44% and a decrease in formal disciplinary actions of 64% over two years of



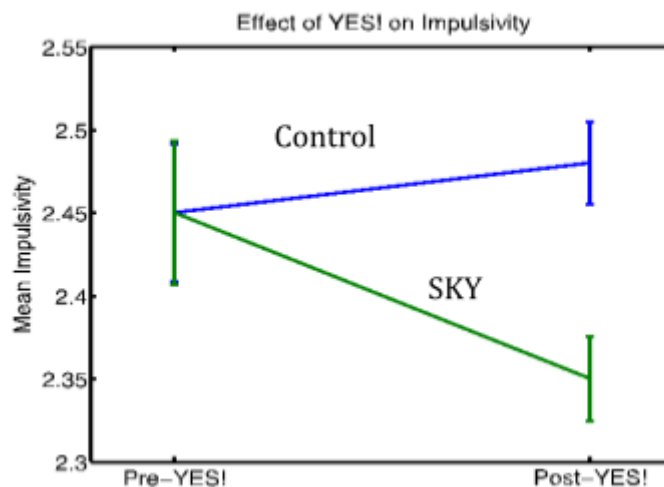
implementing SKY. A California school provided data showing 38% reduction in violent incidents, 28% reduction in disruptive behavior, 45% reduction in drug and alcohol use, and 45% reduction in suspension hours over a two year period of offering SKY for Schools. Similarly, in Wetaskiwin (Alberta, Canada), a community with very high youth homicide rates due to gang violence, 66% of students reported a decrease in perceived stress, a 26% decrease in substance use, a 22% increase in healthy coping, and 100% decrease in violence, and a 10% increase in staff perceived ability to be positive role models for students. At Los Angeles High School 73% of students felt an increase in connection and belonging and 40% felt an increase in safety. At Joseph George Middle School, ARUSD, suspensions went down from 76 in 2017-18, to 15 in 2018-19 when SKY was brought in.

It is very difficult to change your thought pattern with your thoughts, particularly when stressed, thoughts can spiral and it can be difficult to see alternatives and options. SKY is one of the few programs that offers tools that allow you to shift your thoughts from a physiological level. Through the use of breathing techniques, individuals can increase vagal tone, increasing self-control, and switch back from the sympathetic (fight or flight) to the parasympathetic (relaxed and ready) nervous system, bringing the brain back to optimal conditions where cognitive tools can then be applied. The power of the breath is deeply ingrained in us, when someone is angry or upset we often intuitively tell them to take a breath and calm down. SKY takes this intuitive knowledge and provides a host of tools that can be used both in the moment to calm down and as a daily practice to increase energy levels, and awareness. The SKY Breathing technique, taught in SKY, has been the focus of over 60 published studies. Studies show that it reduces cortisol, improves the immune system, relieves mild, moderate, and severe anxiety and depression, enhances brain and autonomic nervous system function, enhances emotional regulation, reduces impulsivity, and effectively relieves Post Traumatic Stress Disorder (PTSD) symptoms (Ghahremani et al., 2013; Janakiramaiah et al., 2000; Kjellgren et al., 2007; Kochupillai et al., 2005; Vedamurthachar et al., 2006; Seppala et al., 2014).



## THIRD PARTY RESEARCH

The Semel Institute for Neuroscience and Human Behaviour at University of California, Los Angeles, using a combination of interactive computer simulation, surveys, and neuroimaging have found that SKY reduces impulsive behavior, fear and anxiety, and increases empathy, self-motivation, self-efficacy, self-control, learning, and executive functions such as attentional focus (Gharemani et al., 2013). Further research from UCLA has also found that SKY substantially improves students' ability to emotionally regulate,

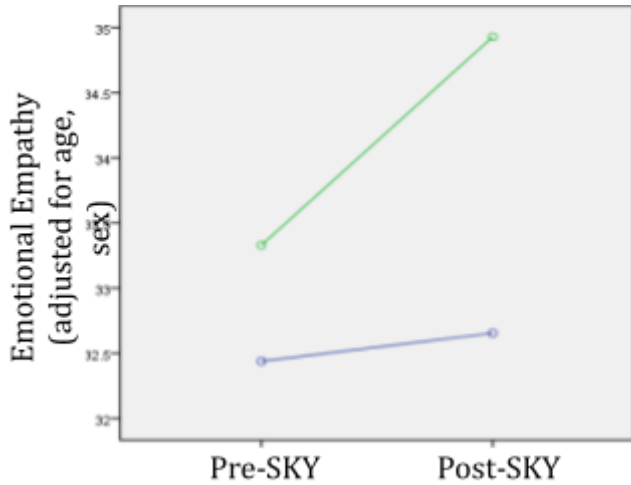


enhances self-awareness, improves interpersonal relationships, and student agency (Gharemani et al., 2013). Through the use of neuroimaging in a study using control groups the SKY breathing practice used in SKY was found to acutely enhance the neural processes that are important for emotional regulation evidenced by increased prefrontal cortex activation. (Gharemani et al., 2013). This study concluded that the effectiveness of SKY arises from improved integration of emotion regulation strategies when autonomic nervous system balance is restored through the breathing techniques.

The Centre for Social and Early Emotional Development at the School of Psychology at Deakin University in Australia conducted an evaluation of SKY using pre and post psychometric testing combined with analysis of school based data. The study found that there was a statistically significant reduction in bullying with a 7% decrease in the number of students reporting experiences of bullying. The study also found a statistically significant reduction in depressive symptoms and improvement in coping skills, problem solving, and emotional regulation (Toumbourou, 2016).

A study of New York high school students assessed improvements among SKY graduates on 4 of the 5 major Core Competencies of Social Emotional Learning. These included: self-awareness, self-management, relationship skills, and responsible decision-making. All four Core Competencies investigated significantly improved in SKY Graduates. Importantly the data was then sub-analyzed and it was found that all genders (male/female) and ethnicities (Hispanic, African-American, Caucasian) studied, demonstrated equivalent



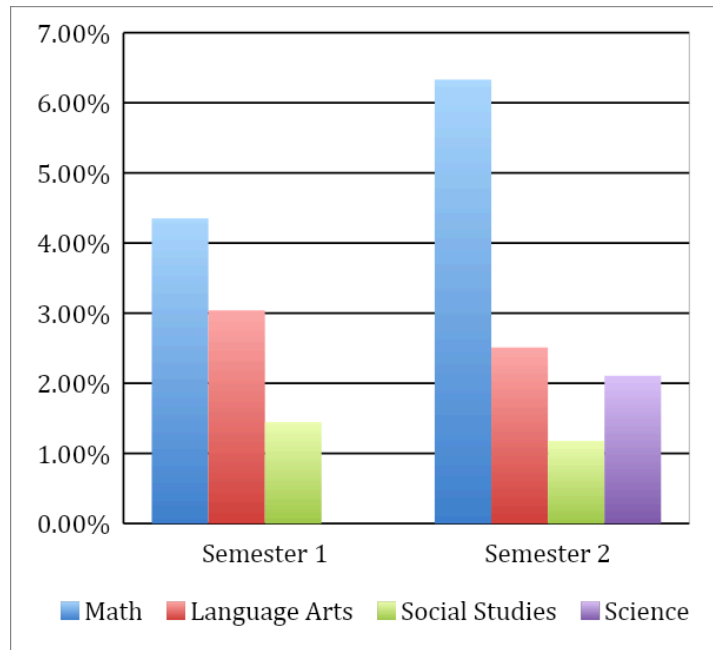


improvement. This suggests that SKY Program participation may be universally associated with improvements across these genders and ethnicities. (Newman, Yim, Shaenfeld, under review).

A second randomized control trial of a 12 week SKY program offered to a group of predominantly Hispanic 13 - 15 year olds in Miami under the 'Safe Schools, Healthy Students Initiative' evaluated the impact of SKY on reducing risk factors and increasing protective factors associated with academic

failure/academic success, substance use, aggression and well-being. The study found significant improvement in the areas of identity, emotion regulation, planning and concentration, and attitudes toward aggression (Newman, Yim, Stewart. In preparation).

A PhD dissertation from St. John's University in New York conducted a delayed start randomized control trial where one cohort of students received SKY. Through an analysis of student grades, this study found that in Math, ELA, and Social studies SKY students received higher grades and in science SKY students received slightly lower grades (Ballard, 2017). The difference was statistically significant in all subjects except for science where SKY students were lower (Ballard, 2017). In analyzing standardized testing results this study found that SKY produced significant improvements in reading and math (Ballard, 2017). This study also found that SKY was responsible for a 17.94% decrease in disciplinary infractions (Ballard, 2017).



## **Encouraging news for the Adolescent Mental Health crisis.**

A new study published in the highly respected Journal of Adolescence found that a comprehensive breath based social emotional learning program significantly increased positive youth development/psychological thriving. The same program also significantly reduced the

drivers of risk behaviors including substance use, violence, self-harm, eating disorders and risky sexual behavior.

Funded by the US Department of Education, this randomized controlled trial of the SKY Schools program in middle school students found significant improvements in the students ability to regulate their emotions, form a clear identity/sense of self, and to focus in as little as 2 weeks. These results persisted at three month follow-up. The study further found that the student's attitudes toward aggression significantly improved.

In the real world setting of public school, school administration also reported reductions in acting out, bullying, substance use and absenteeism by the end of 12 week program.

The school Principal reported:

“In the last 2 weeks we have had more problems with violent episodes and drug use than during the rest of the year combined, probably due to FCAT [state achievement test] pressure. Although there were a lot of problem students in the YES! Program [former name of SKY Schools], not one of them has gotten involved with this. That says a lot! My observation is that students [who took YES!] handle anger and other issues differently. YES! teaches a solid tool that the students use. It gives them a concrete tool to calm their mind and find alternative solutions in times of stress and conflict that they may not have been aware of before”.

This is the latest of several published studies showing similar benefits of the SKY Schools program across multiple genders, ethnicities, and SES. On a landscape clouded by enhanced stress, anxiety, depression, and isolation, good news like this good news is a cause for celebration.



## SKY Campus Happiness Research (The SKY College and University Program)

In a recent study by Yale University, evaluating three University mental health programs, SKY Campus Happiness was found to be most effective in comparison to two other college skill building programs including Mindfulness Based Stress Reduction, and Foundations of Emotional Intelligence, and a group that received no programming. SKY Campus Happiness has demonstrated benefits in reducing depression and stress, and improving mental health, positive affect, mindfulness, and social connectedness.

A second study by Harvard University that compared SKY Campus Happiness to Wisdom on Wellness. It found that SKY Campus Happiness demonstrated improvement in reducing perceived stress, distress, anxiety, depression and improving social connectedness, sleep quality, conscientiousness, self-esteem, and life satisfaction.

