



The Pontifical Catholic University of Chile conducts a rigorous study of Glasswing International's Community Schools

Reducing Violence and Improving Academic Outcomes in Children and Adolescents: Evidence of Impact of Extracurricular Clubs in El Salvador

Santiago, Chile, July 2017 - The Pontifical Catholic University of Chile completed a rigorous study of Glasswing International's Community Schools program. It was held in 2016 and has since been presented in various economic forums in places such as Stanford University, Antigua, Guatemala, Santiago de Chile, Holland and San Diego, in the United States. Glasswing International pioneered this program more than seven years ago to address the lack of opportunities and growing violence affecting young people in the Central American region. The organization's Community Schools program focuses on transforming public schools in marginalized areas into the center of their community, engaging youth, teachers, families, as well as community and corporate volunteers. The study focused on Glasswing's extra-curricular programming model.

The research team, led by Lelys Dinarte, conducted a randomized controlled trial (RCT) involving 1,056 students who received a minimum of two hours per week of extracurricular programming or who were part of the control group. Major findings showed a marked improvement in math and science compared to those not in the program, as well as reduced absenteeism, along with a greater likelihood that these students would pass the language and reading courses. Students also showed better behavior, and more students identified their schools as a safe and positive space.

"In analyzing our research, we found a statistically significant positive impact for students participating in Glasswing programs with increased student achievement as well as improved attitude toward their school," Dinarte said. "Although this intervention is of medium-low

intensity, these results are similar to those seen in intensive after-school programs implemented in developed countries, according to existing evidence."

The study was conducted in five public schools, located in communities with high levels of violence. These schools have been transformed into Community Schools with the aim of extending the school day, improving student performance and life skills, while fostering a greater sense of belonging, as well as more school and community pride through competitions and inter-school activities.

Community School teachers expressed improvements in their students' attitudes and behaviors. They consider that the program awakens young peoples' curiosity and helps to modify social behaviors. Young people learn in different ways by acquiring a new sense of pride in representing their schools in competitions and having adults who are actively involved in their lives. These factors are attributed to helping children and youth recognize their potential, set goals, look for opportunities to improve their livelihoods, and contribute to a more positive environment.

A Glasswing Community School is comprised of four main components: 1) *a safe, healthy, and stimulating environment*: infrastructure improvements, equipment donations, access to technology; 2) *academic and recreational enrichment programs*: focused on complementing school curricula including: computer, debate, English, glee, leadership, science, art and other subjects; 3) *life skills development*: leadership, self-esteem, teamwork, creativity, critical thinking, conflict-resolution,

problem-solving, and job readiness; and 4) *the creation of integrated communities*: teacher training on restorative practices, student-centered learning, as well as trauma education. Parents are also engaged through Community Cafes and workshops aimed at placing a higher value on education, goal-setting, and positive discipline. Regional and national competitions also take place throughout the year to motivate students and dedicated community and corporate volunteers who are trained and equipped to serve as positive role models contribute to their personal and professional growth. This active and continuous commitment is absolutely critical for youth and contribute to the program's sustainability.

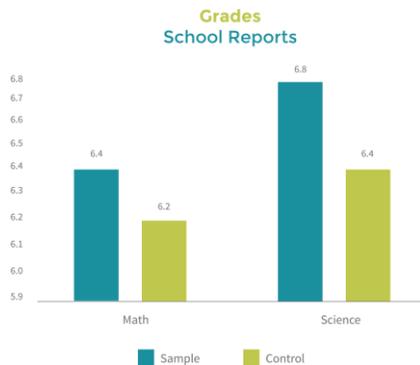
Summary of Impact

According to the study of the Catholic University of Chile, the results of the Extracurricular Clubs are divided into three areas.

- 1 Academic: grade improvement.
- 2 Behavior: change in student attitudes.
- 3 Resilience: the ability to positively adapt to adverse situations.

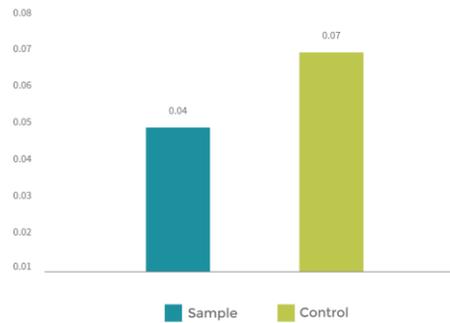
Impact of Extracurricular Clubs on Academic Performance

- Marked improvement in math and science grades

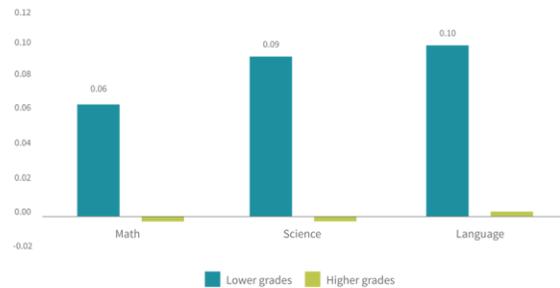


- Higher probability of passing language courses
- Lower likelihood of failing a math, science, or language course

Likelihood of failing a course



Likelihood of passing a course



- The most violent students participating in the clubs are those who experience the greatest increase in their grades (approximately 0.38 points)
- Students with lower grades prior to participating in the clubs saw a greater increase in grades

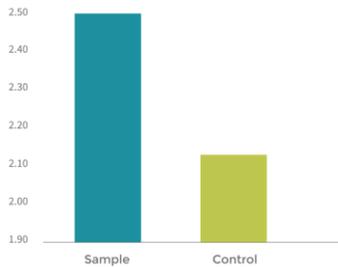
These results are very relevant, since they suggest that the intervention is generating positive effects on academic results on average, which are higher in more disadvantaged groups (more violent children and students with weaker school performance without intervention).

Impact of Extracurricular Clubs on Behavior

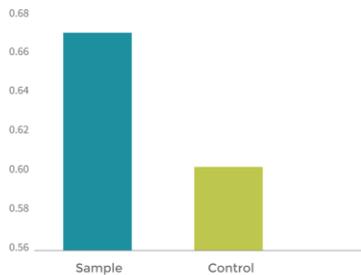
- Students see their school and the learning experience as more fun and have more

- Club participants report more time to complete homework (an average of 20 more minutes) and 8% of them pay more attention during class

Time dedicated to homework

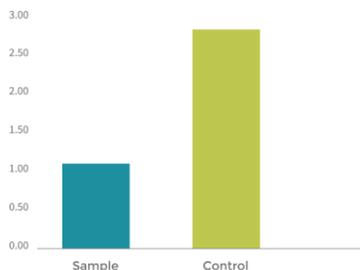


Attention paid in class



- Students reduce their school absenteeism rate by 1.6 days in comparison to students who do not attend clubs

Absenteeism



- Students reduce their crime and violence index, compared with the control group
- Students who attend clubs score higher in behavioral evaluations when compared with the control group
- Clubs offer students the opportunity to stay away from risky environments, such as their home or community for a few hours during the week, reducing their exposure to these domains
- Students become more conscious of risks within their communities, specifically in reference to gang-related risks, drug dealing, among others

Impact of Extracurricular Clubs on Emotional Resilience

- Club participants are better prepared to handle the positive stimuli to which they are exposed
- Clubs increase student's belief that they themselves can determine their fate or control their lives (increased self-control, not dependent on external forces) compared to the control group

In this type of results, differences were found in terms of gender and initial level of violence: **the effects were greater for the girls treated** (the effect was greater when compared with the girls in the control group and compared with the treated students) **and in the participants with higher levels of violence.**

About the Study

This study aims to measure the impact of Extracurricular Clubs on academic and violent outcomes using an experimental design. The study sample was 1,056 students who were enrolled in five public schools, located in highly violent communities in El Salvador. The students expressed interest in participating in extracurricular programs. Glasswing International implemented these clubs after the class period within the school between April-October 2016 (during the school year).

Seventy-five percent (75%) of the population sampled, randomly selected, could participate in a type of club, according to their preferences revealed during enrollment, and attended approximately two sessions per week. The control group (25%) were not enrolled in after-school

programming. Neither the intervention group nor the teachers were informed of the study process.

Using a regression of the likelihood of having committed a violent act and determinants of violence and criminal behavior, drawn from a unique database of violence and crime of youth from El Salvador (FUSADES, 2015), a Violence and Vulnerability Index (VVI) was developed for each registered student using estimated coefficients. The VVI identified low vulnerability and high vulnerability students within the treatment/intervention group; these students were then placed in either heterogeneous group (low and high VVI in clubs together) or homogenous groups (low VVI together in clubs; high VVI together in other clubs). The findings concluded that there is more impact when students are with peers in different conditions, meaning, for example, high VVI students do better when placed with low VVI students.

The follow-up survey included questions to measure the intervention's impact on behavioral and violence-related outcomes such as: rebelliousness, attitudes toward antisocial behavior, friends' delinquent behavior, self-perceived academic performance, and depression, using items from the Communities that Care Youth Survey and Delinquency and Violence from Self-Reported Delinquency Scale (SRD).

Rationale for the study

Violence and juvenile crime tend to reduce productivity, increase the economic costs of health services and justice (Krug E., et al., 2002), generate welfare losses and, like any type of violence, constitute a significant obstacle for growth and economic development (Soares and Naritomi, 2007). At the individual level, juvenile violence generates additional negative outcomes such as school absenteeism and school dropout, substance abuse, reckless driving, and high rates of sexually transmitted diseases (Krug, E., et al., 2002). On the other hand, exposure to any kind of violence during childhood and adolescence has a progressive effect, leading children and adolescents to engage in activities involving higher levels of violence in the future, including criminal activities such as homicide (Herrenkohl Et al, 2007). For example, the World Health Organization (WHO, 2016) estimates that 43

percent of total homicides in the world occur among young people aged 10-29 years living in low- or middle-income countries.

Children and young people's participation in violent or criminal activities is usually determined by individual risk factors or their exposure to these factors in three domains: school, family, and community (Arthur, 2002). The good news is that risk factors such as behavioral disorders, participation in crimes, alcohol, and drugs, weak educational performance, and association with delinquent peers may be managed through certain interventions, such as extracurricular (ASP) programs (Damm and Dustmann, 2016).

These programs have been widely used by developed countries and, more recently, by developing countries. Despite the increase in the number of programs implemented in recent years, evidence of the impact of these ASPs on social skills, crime, and violence is mixed and inconclusive in developed countries (Durlak and Pachan Weissberg, 2010; Kremer et al, 2015) and there is no evidence of their impact on developing countries.

About Glasswing International

Glasswing is a non-profit organization that works in 16 Latin American countries, implementing the "Community Schools" program to empower youth and community members. These initiatives are strengthened through corporate alliances and the dedication of its employees.

The clubs were organized by a school coordinator and implemented by volunteers. The program also trains, equips, and mobilizes parents, community and corporate volunteers to guide students, serving as role models and whose support is critical to youth development.

Pontifical Catholic University of Chile, Santiago, July 2017.