“Free Mind” program aimed to decrease recidivism propensity among young people in conflict with the law.

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REDDUCING CRIMINAL RECIDIVISM AMONG YOUNG PEOPLE IN CONFLICT WITH THE LAW, BASED ON SCIENTIFIC EVIDENCE AND BIOMARKERS

1.- Most of the victims, as well as the aggressors, are young people.

Young people are the main actors exercising violence. This regarding the fact that they are the victims, the aggressors and the heirs of the social consequences of this scourge. Worldwide, 38% of homicide victims in the last decade were young people.¹ On the other hand, less than 1% of young people generate 80% of total violence²; and in Mexico, over 50% of crimes were committed by young people between 18 and 24 years old³. As a consequence of this, it’s necessary to implement strategies aimed at this sector of the population.

2.- PRISON IS NEITHER AN EFFECTIVE SOLUTION, NOR A SUSTAINABLE ONE TO PREVENT VIOLENCE.

Each year in Mexico, a total of 36,604 investigations are conducted for crimes committed by teenagers⁴. Derived from these processes, 7,785 adolescents are deprived of their freedom on detention facilities⁵. As a consequence of this, reclusion, a correct follow-up and sustainability of teenagers and young people in penitentiary centers cost million dollars to the State, as well as contributors.⁶ Besides the high costs, there isn’t scientific evidence that prison is an effective measure to decrease violence⁷ among teenagers.

In Mexico 99.3% of crimes go unpunished, this is to say, that only a small percentage of crimes get a sentence. The gradual improvement of the justice system and the rise of young people reclusion’s indexes does not guarantee the decrease of violence. As if this was not enough, we must raise the issue that 30% of these young people have children⁸, therefore, the reclusion rate rise impacts directly on the education of these boys and girls. The consequences of violence have a long-term effect on individuals and in their family environment.

3. IN MEXICO THERE ARE NOT MANY PROGRAMS DESIGNED TO DECREASE VIOLENCE BASED ON SCIENTIFIC EVIDENCE OR DIAGNOSE

It’s very common for people to think, from an ecological paradigm, that the only solution to violence in young people lies in providing access to education and a decent job. However, evidence suggests that other logics operate on this phenomenon; in Mexico: 94% of young people in prison had various jobs before being incarcerated and 64% of them contributed to family expenses, however, 52% of them attended at least one year of middle school⁹. If lack of education and unemployment were the cause of violence, young people from rural and indigenous communities would be more violent than those from big cities. But it’s exactly the opposite. Certainly, education and jobs are risk factors, but they’re not the ultimate cause and, therefore, neither the definite solution to violence. We must be careful not to criminalize poverty and

¹ World Bank (2012)
³ Índice de Seguridad Ciudadana y Violencia, 2010. (Public Safety and Violence Index)
⁴ INEGI, 2016.
⁵ Estatales por conductas asociadas a delitos del fuero común. Censo Nacional de Procuración de Justicia Estatal, 2015. (Statal by conducts associated with civil court crimes. National census of state law enforcement)
⁶ World Bank (2012)
⁸ CEDAT 2017,, INEGI.,2016
⁹ Azaola, 2015.
marginalization. Furthermore, we must stress the lack of government programs aimed at treating and preventing violence that rely on scientific evidence in regard to their impact. Many of the strategies and usual programs, even if good willed, lead to big human and economic investments. However, these programs and strategies are often inefficient due to the fact that they’re not oriented to practices based on evidence. When we mention “based on evidence” we refer to the implementation of a scientific method to ensure that, at least the interventions have methodological rigor and a minimum standard to diagnose, baseline, theory of change and impact evaluation.

It is required, therefore, to produce evidence that accounts for the possibilities and areas of opportunity that government agencies and civil society face in regards to the decrease of violence, as well as the reduction of the proclivity to get involved in criminal activities.

4. PREVENTING RECIDIVISM? IN MEXICO WE DON’T HAVE SCIENTIFIC EVIDENCE OF PROGRAMS DECREASING CRIME RECIDIVISM SUCCESSFULLY.

Generally speaking, a small percentage of preventing actions attend the population in risk of imprisonment and the prison population. This population, fully identified as violent, increases its violence complying with their sentences when they don’t receive real rehabilitation and reintegration. Consequently, it is known that second-time offenders conduct a high proportion of crime. Specifically, we may say that around 44% of young people that comply a sentence had committed similar crimes before detention and only in minor detention centers 11% of them were registered second-offenders.

In this sense, it is crucial to know precisely the degree and scope of recidivism of the population that leaves prison or detention centers.

5. SERIOUS CRIMES ARE RELATED TO ALTERATIONS OF THE IMPULSIVITY OF YOUNG PEOPLE.

A great part of violent crimes is related to the lack of neurological self-regulation capacities. Self-regulation is a cognitive and neurological process that mediates the environment influences and the personal response to them; at the same time, it is the cognitive base on which individuals develop the capacity to produce intentioned and meaningful actions. In essence, self-regulation on young people is based on their (cognitive and neurological) capacity to evaluate (risk/benefit) consequences of their behavior BEFORE acting on them.

In Mexico 49% of homicides are involuntary manslaughter, which is the equivalent to 14,007 homicides a year, as an example from the surveyed population by the Centro de Desarrollo y Atención Terapéutica CEDAT A. C., 79,1% of the perpetrators claim that the homicide was not planned.

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12 It is considered traditionally to have three sub functions (main skills): 1) Self monitoring of behavior; 2) judgement, like the comparison between self behavior with a “standard” to look up to and 3) self-response, as a consequence of the difference between standard and self behavior.
13 Bandura, 1991
14 Índice de Inseguridad Ciudadana y Violencia, 2010. (Public Safety and Violence Index)
15 INEGI, 2008.
16 CEDAT, 2017.
These neurological deficiencies in self-regulation that present young people in conflict with the law are crucial to the appearance and persistence of violent and criminal features\(^{17}\), and it has even been related to recidivism on criminal activities\(^{18}\). All the above opens a series of possibilities to construct attention models and intervention strategies aimed at the decrease of the proclivity to commit a crime.

**WE CAN DO SOMETHING!**

**THE REVOLUTION OF NEUROSCIENCES IN PREVENTION**

There’s wide scientific evidence that impulsivity and its antithesis, regulation, are capacities that generate physical structures in the brain. As a consequence, we can identify with biological markers,\(^{19}\) young people whose physical/neurological capacity of self-regulation is significantly diminished. This produces a predisposition to violence and other risk conducts like substance abuse, teenage pregnancy, health oversight, among others. On a scientific level, it’s been reported that deficiencies on the cognitive capacity and impulse inhibition are paramount triggering factors on criminal behavior.\(^{20}\) Besides this, they have found alterations of the executive function\(^{21}\) in young offenders, that could explain a violent/criminal behavior;\(^{22}\) as being the cause of recidivism in crime\(^{23}\).

Nowadays we have robust neuroscientific researches\(^{24}\) on the impact of the programs based on Mindfulness and Cognitive Behavioral Therapy among imprisoned young people that had favorable effects on nonviolent conduct, cerebral activity, self-control, and cognitive performance\(^{25}\). Besides this, these researches had also impact on the development of other elemental abilities to their growth, like improvements on the subjects capacity to control their emotions\(^{26}\) and to achieve attention and concentration,\(^{27}\) as well as the reduction of their anxiety levels.\(^{28}\)

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\(^{17}\) Blair, Mitchell & Blair, 2005; Séguin, Sylvers & Lilienfeld, 2007

\(^{18}\) Miura & Fuchigami, 2016.

\(^{19}\) Such as the electrical activity through, measures of the size of certain brain zones or stress related hormones.

\(^{20}\) Trujillo, Pineda & Door, 2007; Rodríguez, González & Herrera, 2006.

\(^{21}\) **The Executive Function (EF):** Refers to those neurological capacities that allow to organize, plan, set goals, perform activities, choose emotions and behaviors adequately, improve work and life skills.

\(^{22}\) Trujillo, Pineda & Door, 2007; Rodríguez, González & Herrera, 2006; Giancola et al., 1996; Blair, Mitchell & Blair, 2005; Séguiin, Sylvers & Lilienfeld, 2007

\(^{23}\) Miura & Fuchigami, 2016.

\(^{24}\) For example, it has been theorized that those trainings are associated to lower anxiety levels (Brown & Ryan, 2003; Chambers et al., 2008), an increased regulation of emotions (Robins et al., 2012) and more adaptive responses to stress (Davidson et al., 2003). It has even been reported that relatively short meditation training programs have had positive effects on people that were not used to meditate, like the increase on prosocial behavior. (Leiberg et al., 2011).

\(^{25}\) Understood as those skills that allow to organize, plan, set goals, perform activities, choose emotions and behavior adequately, improving work and life skills.

\(^{26}\) Himelstein, Hastings, Shapiro, & Heery, 2012a, 2012b.

\(^{27}\) Leonard et al., 2013.

\(^{28}\) For example, it has been theorized that those trainings are associated to lower anxiety levels (Brown & Ryan, 2003; Chambers et al., 2008), an increased regulation of emotions (Robins et al., 2012) and more adaptive responses to stress (Davidson et al., 2003). It has even been reported that relatively short meditation training programs have had positive effects on people that were not used to meditate, like the increase on prosocial behavior. (Leiberg et al., 2011).
The increasing evidence suggests that interventions based on Cognitive Behavioral Therapy (CBT) and Mindfulness have an impact on the decrease of automatic behaviors (that are often expressed in a violent manner and on risk behavior) in vulnerable young people. These programs reduce automatic behaviors and stimulate cognitive abilities to decrease violence among young people.

CONCLUSION

It is possible to have cost-efficient programs in Latin America to prevent violence in young people at risk or in detention centers that have demonstrated significant short-term changes in the brain and behavior. This is because the benefits of such programs can be observed and measured from the first 3 months of treatment, jointly it is possible to train different professionals (not just psychologists) for their implementation, they can be applied to groups, increasing their reach all this at a low cost, since after the facilitators receive training, the implementation costs reduce to the pay of the facilitator.

To do so, we require innovation in methodologies and research strategies that produce evidence that enriches the care models and intervention strategies aimed at decreasing the effects of violence.

Hereunder, we show a case of success in the implementation of these strategies:

PROGRAM FOR THE DECREASE OF CRIME RECIDIVISM AMONG YOUNG PEOPLE IN CONFLICT WITH THE LAW.

WHAT IS IT?

It’s a program of intervention with rigorous scientific evidence, cost-efficient designed to decrease crime recidivism and violent behavior in young people vulnerable to violence. This through a model of Mindfulness-Based Cognitive Therapy (MBCT), that affects the cognitive skills of emotional self-regulation, impulse control and management of emotions.

WHAT IS THE OBJECTIVE?

To decrease by 40% the violence and recidivism on young people in conflict with the law sentenced by minor offenses. Through scientific evaluation and collaboration with government agencies, universities and the private sector, we’ve consolidated a transferable program to organizations and local governments that work with vulnerable populations to affect the decrease of violence.

POPULATION

Adolescents and young people between 15 and 25 years in conflict with the law and with a record on administrative offenses or felonies like homicide, theft or kidnapping.

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29 These are some cases of success based on CBT: “Becoming a Man” BAM, (University of Chicago) reduced the amount of arrests in a 28-35%; violent crimes in a 45-50%; and increased graduation rates 12-19% (for more information: https://urbanlabs.uchicago.edu/projects/becoming-a-man). Sustainable Transformation of Youth in Liberia (STYL). ECrime, carrying of weapons, fights and arrests reduced on a 20 to 50% within a few weeks from therapy.

30 Mindfulness is a technique based on attention through detailed observation, total and non-judgmental presence of the sensations of the body, emotions and thoughts.
HOW DOES IT WORK?

It’s a workshop that provides young people with the tools to train the brain structures. The techniques center on enabling neurological capacity of teenagers in regards to decision-making processes; this in opposition to responding impulsively. 10 sessions (1 per week) of an hour. Supported by a management model and neuroscientific evidence to evaluate the physical impact of the protocol.

HOW IS IT ASSESSED?

On a scientific level, we can measure changes in the brain through physical, neurological, electrical, hormonal and neuropsychological means. For this project, a series of objective measures were selected (unlike the tests and trials easily manipulated by users) and they were internationally standardized. Among them, the electroencephalogram (EEG) and the neuropsychological tests (BANFE and STOP SIGNAL).31

EVIDENCE

There’s a 44% decrease in the amount of impulsive response and the violence associated with it in the first three months.

In general, the executive function regarding impulsive control, following rules and decision-making was benefited by the effects of the treatment.

The group of Mindfulness after treatment (and compared to the control group) showed a bigger capacity in behavior control, especially the one provoked by unpleasant or impulsive emotions.

31 The methodology and test selection to measure the executive function was coordinated by the Stress Department and Neurodevelopment of the Instituto de Neurociencias de la Universidad de Guadalajara (Neurosciences institute of the University of Guadalajara).
 Orbitomedial cortex is related to the executive function and associated closely to emotions. The treatment group, compared to the control group, increased significantly after treatment its results, therefore, the group that received treatment improved self-control of their behavior, made better decisions and decreased their impulsive behavior.

The stop-signal task allows measuring the capacity to inhibit a response affected by emotional stimuli. Such test takes into consideration the time to give a response and the number of errors made.

- The results indicated that the Mindfulness (treatment) group, increased significantly the time to respond to a stimulus affected by emotional conditions.
- At the same time, the treatment group, unlike the control group, after receiving treatment, decreased the errors made during the test.
- All of the above indicates that the responses of the treatment group were less impulsive and there was bigger control of the automatic responses on their behavior.
FURTHER APPLICATIONS

A. Violence decrease: With this methodology, it is possible to decrease impulsivity and reactive violence through intervention programs based on evidence, supported by international scientific tests.

B. Education: With this methodology, we have made adaptations and have developed the books of emotional skills for elementary and middle school for publishers like UNOi - Santillana

C. Stress decrease: There are protocols that use mindfulness to decrease stress and the “burnout” syndrome effects.32

D. Addictions: The programs that use the Mindfulness-Based Cognitive Therapy have accomplished the reduction of relapses in people with addictive behavior.

E. The decrease of Risk Behavior: it has been demonstrated that by developing self-regulation decreases the proclivity to risk behavior like violence, addictions, risky sexual behavior among others.33

WHAT IS THE SCOPE?

☐ It is possible to reduce reactive violence produced by young people and have scientific methods to demonstrate the change.

☐ It is possible to have public policies, that are effective, cost-efficient, and based on evidence in regards to prevention that are adequate to Latin America.

☐ Beyond prevention, applying biological markers, specifically those of neuroscience, is an effective tool to demonstrate the impact related to education, emotions, and self-regulation, among other central skills on the public policies for development.

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