

**“They call us *puercos* and *indios*”**  
**A mixed-methods intervention to reduce the stress perception of**  
**police officers**

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## **“They call us *puercos* and *indios*”**

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#### *Abstract*

In the Latin American context, undermined citizenship is closely related to the struggles of its police force. Interventions that address the stressors that police officers are exposed to, while reflecting critically on structural inequality, are scarce. The present study pretends to fill in this gap by proposing the integration of mixed-methodologies, a bioecological framework of interpretation, participatory research principles, and behavioral tools. The results of a pilot intervention, developed in San Cristóbal de Las Casas (South of Mexico) to reduce the stress perception of police officers, are discussed. The insights generated throughout this project signal relevant theoretical and methodological avenues to address the security needs of contexts riddled by oppression.

#### **Introduction**

Environmental stressors in violent and unequal contexts may influence police officers' performance. Either by becoming the enforcers of an authoritarian state, abusing the rights of citizens, suffering themselves the effects of burnout, or having their monopoly of the legitimate use of force contested by criminal groups, the corrosion of the police may undermine citizenship in meaningful ways (González, 2017). Moreover, the social perception of a police officer in unequal environments usually responds to negative stereotypes, thus over complicating the creation of trust between the agents and the members of a community (Goldsmith, 2005).

As protests and the uneven capacity of the state to address inequality and violence radicalize governability in regions such as Latin America, the challenge to enact police and social reforms is more urgent than ever. Nevertheless, there is a lack of interventions that employ evidence-based research insights and participatory principles, tailored towards both educating and supporting the police force in their duties (Patterson, Chung & Swang, 2012). In Mexico, for example, the few studies dedicated to this issue are mostly limited to diagnose but not to prevent or treat (e.g.,

Sánchez, 2012; Hyemin, Abundiz, Rodríguez, Serano & Avelar, 2013; Solís & González, 2015). Furthermore, in the poorest and most marginalized states of the country, such as Chiapas, the development of research and interventions is inexistent.

If organizational changes in the police force are unlikely given the lack of funding or structural social issues, what kind of low-cost interventions can support the officers to develop adaptive coping mechanisms? The present study represents an effort to advance the design of mixed-methods interventions that promote collective resiliency. During eight weeks, “Laboratorio en Movimiento”<sup>1</sup> developed a pilot intervention with police officers (n=24) in San Cristóbal de Las Casas (Chiapas, South of Mexico). The objective was to reduce their stress perception, and hence enhance their capacity of response to threats, by tackling two fronts: first, by providing officers with knowledge regarding the effects of chronic stress in their physical and mental health, and educate them in adaptive coping mechanisms; second, by problematizing issues of “social health”: discussing the historical causes of violence, different forms of discrimination, and its consequences to social welfare.

The first section of the paper contains a discussion of the theoretical framework that motivated the intervention design. A bio-ecological approach to violence and development allowed a critical consideration of the vulnerability of police officers in the face of the history of inequality and discrimination in the south of Mexico. The following sections consist of a description of the characteristics of the intervention. The quantitative and qualitative results are discussed, alongside policy recommendations and future research directions.

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<sup>1</sup> Social research lab funded in Chiapas.

## **1. Vulnerability and policing: risk and protective factors**

What are the effects of oppression on the vulnerability of human beings? The Phenomenological Variant of Ecological Systems Theory (PVEST) offers valuable tools to answer this question (Beale Spencer, 2008). A developing person is simultaneously exposed to protective and risk factors, i.e., in any developmental period, human beings possess some net level of vulnerability. The protective ones can moderate the risk factors—including, but not limited to, race/ethnicity, gender, class, age, social values, disease, and cognitive abilities. The coping mechanisms that individuals develop can be either adaptive or maladaptive, which in turn may produce negative or positive identities.

Nevertheless, life outcomes are not unmovable: changes in the net level of vulnerability may alter them. The PVEST theory has, as life, a recursive character. By considering reciprocal interactions, the observations made by researchers and policy-makers can change from a descriptive and deterministic stance of development to asking “how” and thus studying the mediating processes that shape resiliency and oppression.

The study of the human vulnerability requires emphasizing the intersections between the multiple protective and risk factors with biological and systemic processes, the micro and the macro, which are fundamental for the biopsychological development of human beings (Bronfenbrenner & Ceci, 1994). For example, to understand a police officer as both an agent of oppression and as being oppressed himself/herself, one must consider how the political and social values shape the

interactions between citizens and the security system, the demographics of the officers themselves, their relationships with their families and immediate context, and the challenges that stressors posit to their mental and physical health. To point the finger at security systems as sources of corruption, without considering ecological variables and historical processes that could explain how these institutions have eroded, will only perpetuate the problem.

Deterministic worldviews, alongside other numerous cognitive biases, do not only posit threats to daily interactions, in the form of prejudices and microaggressions, but also to the rationalization of suffering (“they suffer because they are weak, because they don’t work enough”), the perpetuation of the status quo, and the design of unjust policies (Rangel & Keller, 2011). Asking “how” regarding development is a complex task that eventually leads to challenging oppression—and hence, numerous sectors of a population may receive this critical mindset with resistance or contempt.

The PVEST theory emphasizes the importance of perception to understand human development: how do people perceive their feelings, their successes, and their exclusion? While developing the intervention with the police, the participants shared how society sees them: “They call us *puercos* and *indios*,” many of them repeatedly said. *Puercos* means “pigs,” a common insult to the police force, which refers to misconceptions of these animals as dirty, aggressive, and corrupt. Meanwhile, *indios* means “Indians,” a pejorative word connected to the colonial past in Mexico: an *indio* is someone seen as stupid, abusive, and wicked. It is noteworthy to mention that in the empirical site of this research (San Cristóbal de Las Casas, Chiapas), at least 90%

percent of the police officers belong to an indigenous group. These stereotypes are incredibly harmful, given that they promote social divides and lack of empathy, which can motivate the officers to cope with maladaptive mechanisms —such as addictions, a diet high in sugar and fats, becoming corrupt due to low wages and the normalization of devious practices, abusing the rights of citizens, or transferring violence to their families. As one of the leaders of the institution told me during an interview: “de tanto que les dicen puercos, empiezan a puerquear” (“they are called pigs so often that then they start doing pigs’ stuff”).

The stigmas of inequality can be inherited. Race/ethnicity, gender, and class play a role in how specific populations suffer intergenerational oppression, predisposing them to particular outcomes in economic success, education, and health. These outcomes are not unavoidable, but systemic conditions make them extremely hard to overcome (Gravlee, 2009). Mexico exemplifies these tensions, being a multicultural entity inhabited by more than 60 different indigenous communities, each with their particular languages. The official rhetoric refers to these groups (more than 10 million people) as a cohesive unit, ignoring their differences and even rivalries. The government celebrates diversity as a vibrant cultural inheritance. In practice, social divides are prevalent. Precarious conditions in impoverished states such as Chiapas remain untouched by the progress lauded by the federal government (Gall, 2004). For example, the officers I worked with belong to an indigenous group, lack formal education, most of them have to travel everyday from nearby villages to work, and they are the primary providers of their families —in some cases, having up to seven children. These factors, in tandem with their classification

as *puercos* and *indios*, and in the case of female officers adding yet another layer of discrimination due to gender dynamics, severely threatens the successful exercise of democracy.

The context in Chiapas is characterized by inequality, discrimination, and the uneven state capacity to address violence and poverty. Police are meant to provide a fundamental right of citizenship and a public good, but the low quality of the level and distribution of security usually leads to failures (González, 2017). Level means the actual capacity that the police have to provide security. In San Cristóbal de Las Casas, there are only around 250 officers (with only half of them active at each shift), out of approximately 200,000 habitants. There is a notable deficiency of training, weapons, and cars, and there are disabled officers due to accidents, such as lacking hands—in this latter example, it is not the case that the institution considers working disability rights, but rather an absence of people willing to enlist for this job.

Furthermore, distribution refers to how security evenly spreads in the different sections of a population. In this context, protection and repression are unequally diffused depending on urban and individual characteristics. The circumstances of the institution, “what citizens can see of the state,” mirrors the structural struggles of society. The monopoly of the legitimate use of violence becomes contested by both citizens that mistrust the institution, and gangs that are often better organized than the police force. The Chiapas’ case is not the exception to these trends in the Latin American context.

These considerations regarding ecological theory and vulnerability, the relevance of perception in development, and the level and distribution of security

motivated the design of the pilot intervention. The following sections consist of a description of the characteristics, measurements, and results of this project.

## **2. Methods**

### *2.1. Participant characteristics*

The sample included 24 police officers. The inclusion criteria were highly dependent on the possibilities of the institution. As noted in the previous section, the number of active officers is low, and it proved hard to be able to secure a regular group that could complete the intervention. The mean age of participants was 32.5 (SD = 9.403), with two particular outliers: one officer was 23 years old, and in the other extreme, another was 62. All participants signed consent forms. Table 1 provides additional information about relevant demographic characteristics.

### *2.2. Intervention structure and content*

The intervention consisted of a two-hour weekly workshop, for a total of eight weeks, in the facilities of the Crime Prevention Department. The content of the sessions was about issues regarding individual and social health. The goal was to reduce stress perception by helping cops to comprehend how stress represents both a biological and social phenomenon.



**Table 1**  
*Police officers' demographic characteristics at the beginning of the intervention*

	n = 24	Percentage
Age in years	32.5 (SD = 9.403)	
Female gender	6	25%
Male gender	18	75%
Ethnicity (minority, Mayan)	24	100%
Married	7	29.16%
Single	5	20.83%
Free-union	12	50%
<b>Education</b>		
High school or less	23	95.83%
Some college or bachelor's degree	1	4.16%
<b>Family</b>		
No children	3	12.5%
1-3 children	14	58.33%
4 children or more	7	29.16%

At the beginning of the intervention, participants were asked what they expected from the interactions, and specifically what they wanted to learn. 90% of the participants underscored their need for learning more about their health, how to implement adaptive coping mechanisms in their routines, and how to improve their relationships with their loved ones.

The content of the intervention followed a bioecological orientation: I explained to the participants the effects of stress in their bodies, minds, environments, and how these relate to historical processes of trauma and resiliency (Singh, 2012). Therefore, under the comprehensive banner of “social health,” we critically discussed topics related to gender, race/ethnicity, class, the monopoly of violence, structural inequality, family functioning, love and partnership, addictions, and healthier coping mechanisms, alongside basic notions of psychobiology, physiology, and the adaptive and maladaptive outcomes of the activation of the stress response (Sapolsky, 1994;

Sapolsky, 2003; Parker & Maestriperi, 2010; Sapolsky, 2017). Furthermore, the main interest of this research was about individual levels of stress, and from there, obtain insights to think about the organization of the institution and necessary reforms.

A pedagogical statement is necessary to understand the dynamics of the workshop. Given the value given to the perception and agency of participants in this study, I adopted a social semiotic theory of multimodality for teaching (Kress, 1997; Kress, 2009; Kress, 2013). This theory recognizes the value of different *modes* —the material resources, defined socially, which are available for the creation of meaning—in the learning process. Therefore, I employed speech, music, colors, games, dancing, gestures, food, videos, and images to not only maintain the attention of the audience but especially to stimulate their creative potential. One of the most salient features of the social semiotic theory of multimodality consists in how it relocates attention to the learner and the learning process as a whole, rather than the authority of the teacher. Learning is then “the result of the transformative engagement with an aspect of the world that is the focus of attention by an individual, on the basis of principles brought by them to that engagement; leading to a transformation of the individual’s semiotic/conceptual resources” (2009, p. 31).

Participants were randomly assigned either to a control or an experimental condition. The treatment consisted of sending behaviorally informed text messages (three to four messages on average per week) to motivate changes in cognition and behavior (Cole-Lewis & Kershaw, 2010). These messages varied in nature, from important conceptual definitions, motivational statements, and weekly challenges for changing certain habits —such as drinking less. The control group did not receive any

messages during the intervention, but once the eight weeks concluded, its members received the same messages provided to the experimental group.

Lastly, the intervention had another critical component: the staff members of the Crime Prevention Department, who served as research assistants during the development of the project, received training from me regarding research methodologies, public speaking skills, and theories about security, stress, and social justice. Adding this component to the intervention responded to the relevance of strengthening our public institutions.

### *2.3. Measures*

The intervention used mixed-methods for interpretation. Given the importance given to the participants' meanings and feelings, the measurements emphasized their perception. For quantitative analysis, the design consisted of a pre-post test. All the participants answered, at the beginning and the end of the intervention, the Perceived Stress Scale Score (PSS) in its 14-item variation (Cohen, Kamarck & Mermelstein, 1983). This scale is reliable, easy to answer, and culturally sensitive to the Mexican context (Ramírez & Hernández, 2007).

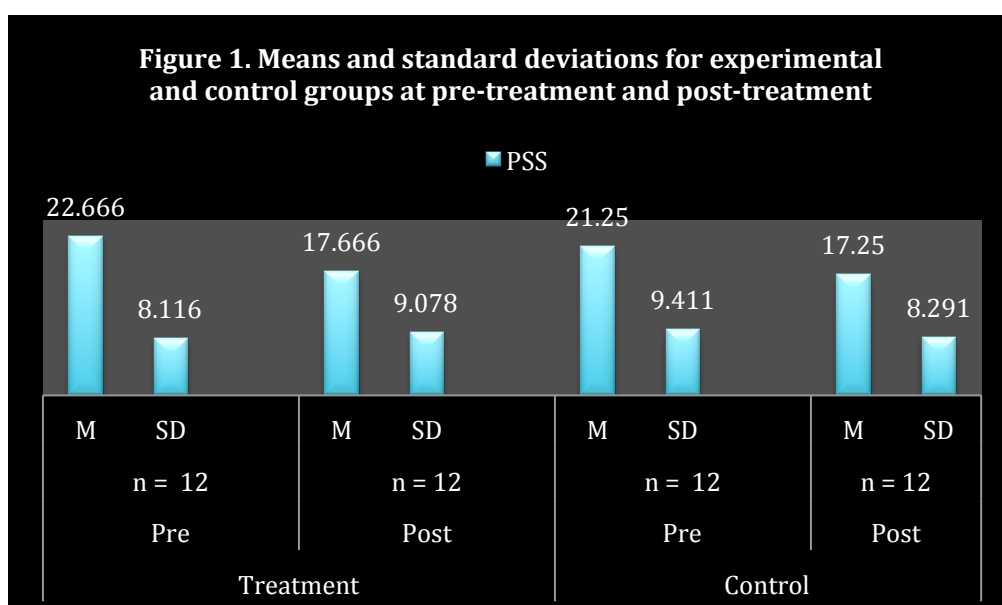
For qualitative analysis, I performed a series of focus groups with all participants asking them the following questions: 1) what were the most valuable ideas you learned during the workshop? 2) Did you notice any changes in your behavior/thought during these past eight weeks? 3) Is there anything you did not like or that you would improve about the intervention? 4) What did you think of the text messages that you received weekly? (Only asked the experimental group). 5) What

changes would you like to see in the organization of the police? Moreover, for those who agreed, interviews by phone with a family member were performed, asking them the following questions: 1) did you know about this stress management project? 2) Did you see any changes in the behavior or thinking process of your loved one? 3) What changes would you like to see in the working conditions of your relative?

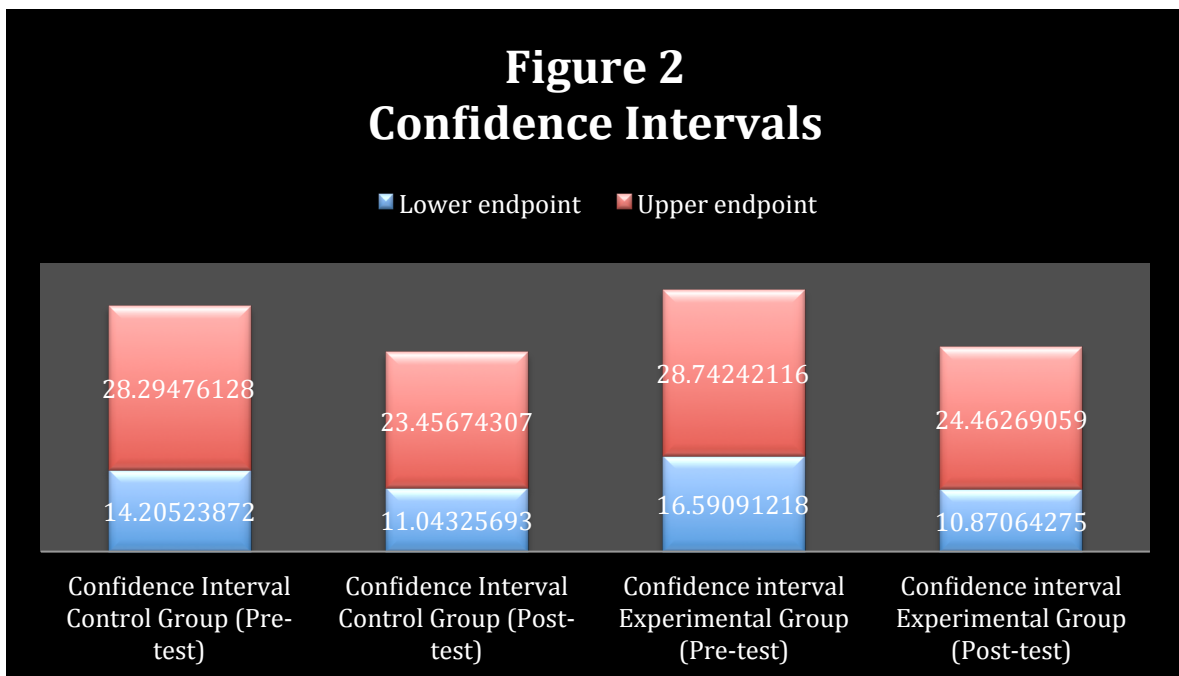
### 3. Results

#### 3.1. Stress perception in numbers

Analysis of the descriptive statistics from the PSS score provided evidence that the participants had positive and modest outcomes from the intervention (See Figure 1). The PSS score in its 14-item version can range from values 0 to 56. The control group, at the beginning of the intervention, had a mean of 21.25 (SD = 9.411) and a mean of 17.25 (SD = 8.291) once the project concluded. In the case of the experimental group, the average of the first measurement was 22.666 (SD = 8.116), whereas, in the second analysis, it was 17.666 (SD = 9.078).



Given that the sample size is less than 30 and the standard deviation of the population regarding stress perception is unknown, a two-tailed T-test was employed to calculate 95% confidence intervals,  $\alpha = 0.025$  (See Figure 2). For understanding the treatment effects, a one-way ANOVA test was performed, considering the differences of the scores between the control and experimental groups (see Table 2).



**Table 2. One-way ANOVA test results**

Data Summary				
Groups	N	Mean	Std. Dev.	Std. Error
Group 1	12	4.3333	5.0513	1.4582
Group 2	12	5	5.4772	1.5811

ANOVA Summary					
Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Stat	P-Value
	DF	SS	MS		
<b>Between Groups</b>	1	2.6669	2.6669	0.0961	0.7595
<b>Within Groups</b>	22	610.6689	27.7577		
<b>Total:</b>	23	613.3358			

### *3.2. Stress perception in words*

At the end of the intervention, I performed a series of focus groups, with three participants each, to learn more about their changes in perception. For analyzing the qualitative data, a modified version of the comparative methods for theme saturation (CoMeTS) was employed (Constantinou, Georgiou & Perdikogianni, 2017). Given that the ways in which participants talk about a phenomenon can take an endless number of shapes, what is saturated is the categorization made by the researcher. Saturation is not present when the data does not offer more novelties, but rather when the analytical categories needed to answer if the intervention promoted changes in stress perception were satisfied.

Inductive reasoning was followed: from the raw data, codes were generated, which in turn were grouped based on their regularities into themes. Given the small number of interviews and the fact that participants did not allow audio recordings, the coding was manual and had the support of the staff members from the Crime Prevention Department. Interviews were compared with each other, and at least one

staff member from the Crime Prevention Department was present alongside the primary researcher. The most prominent themes are in Table 3

**Table 3. Themes from the focus groups regarding the perception of the intervention by the participants**

**What were the most valuable ideas you learned during the workshop?**

1. How to control aggression
2. How to cope with anxiety/depression
3. How to control emotions
4. How to socialize better
5. Physiology of stress
6. Critical insights about sexism/classism/racism
7. Become aware of cognitive biases
8. Use music and other resources to calm down
9. How to stimulate the brain

**Did you notice any changes in your behavior/thought during these past eight weeks?**

1. Not taking insults from the citizens/coworkers/commanders seriously
2. Less fighting with their couples
3. Not being violent to their children
4. Differentiating the workplace issues with those of their homes
5. Patience
6. Higher self-esteem
7. Respect towards their coworkers
8. Better sleep patterns
9. Calmness to deal with the death of a family member

**Is there anything you did not like or that you would improve about the intervention?**

1. More time during the sessions
2. Longer intervention
3. More meditation during the sessions

**What did you think of the text messages that you received weekly? (Only asked the experimental group).**

1. Powerful phrases that make you think
2. Feeling accompanied ("it was as if you were listening to us")
3. Messages came at the right time (before a crisis)
4. Read them with their families

**What changes would you like to see in the organization of the police?**

1. The leaders should receive the same intervention
2. The coworkers should receive the same intervention
3. Equal treatment between men and women
4. Less punitive actions
5. Collaboration and friendship among officers
6. Psychological area
7. Improve the environment, so abuses are less constant
8. Better organization about schedules and training

### 3.3. Stress perception according family members

Once the intervention concluded, a series of phone interviews were performed with one family member (spouse in all cases) of the participants —only a quarter of the total sample allowed to conduct these interviews. The main themes are in Table 4.

**Table 4. Themes from the interviews with family members**

**Did you know about this stress management project?**

1. Awareness about the project
2. Topics discussed at home

**Did you see any changes in the behavior or thinking process of your loved one?**

1. Better rested
2. Better anger control
3. Happier

4. Dedicated more time to children
5. Still struggling with alcoholism, but in a slightly lesser degree

**What changes would you like to see in the working conditions of your relative?**

1. Better schedules
2. Respectful interactions with coworkers and commanders
3. Better salaries

## 4. Discussion

The present study addressed the following research question: if organizational changes in the police force are unlikely due to structural issues and an undermined citizenship, what kind of interventions can support the officers to develop adaptive coping mechanisms? The design of this pilot intervention followed recommendations from systematic reviews: a mixed-methods design, a clear distinction between personal and organizational stress, and the integration of the perception by officers' family members to the findings (Patterson, Chung & Swan, 2012).

The descriptive statistics regarding the quantitative measure (means and standard deviations) show at first glance that the intervention had modest and positive effects for both the control and the experimental group. In terms of the



treatment effects, since the p-value (0.7595) is higher than alpha (0.025), the difference between the averages of both groups is not big enough to be statistically significant. The test statistic F equals 0.09060700, which puts in the 97.5% critical value accepted range. Furthermore, in terms of the effect size, the observations showed it was small (0.066), a number that indicates that the magnitude of the difference between the averages is minimal.

There are several possible reasons why the results were not statistically significant. The most evident one is the sample size ( $n = 24$ ), which is beneath the recommended number of participants for statistical analysis. Another one is that, given the funding limitations and time constraints for this pilot project, only the PSS score served as a means to quantify changes in stress perception. Alongside other standardized measures, such as the Standard Stress Scale (SSS) or the Occupational Stress Indicator (OSI), the different scores could provide correlations that shed more light on the treatment effects. Moreover, there is a possibility of respondents' bias given their lack of formal education in Spanish. When applying the questionnaire, in spite of verbal explanations of each question, respondents were struggling to answer. A future research endeavor would be to translate the PSS and other relevant standardized scales to the *tzotzil* and *tzeltal* languages.

Despite these drawbacks, further interventions along the lines this study presented are necessary, given the positive changes in the mean scores at the pre and post-treatment stages for both groups. It would be beneficial to continue investigating if workshops with participatory principles and multimodal pedagogy are the main component of the modest success of this pilot intervention regarding the means. In

terms of the treatment, the potential benefits of behaviorally informed text messages are not discarded. The implementation of this practice was successful in programs that helped people to quit smoking, improve diet, and enhance parental involvement with children's development—all of these issues relevant to the participants of the present study (e.g., Cole-Lewis & Kershaw, 2010; Mayer, Kalil, Oreopoulos & Gallegos, 2015).

The qualitative results are more promising, as they allow a more in-depth exploration of the context of the participants during the intervention. Officers from both the control and experimental group reported positive changes, which can become effective coping mechanisms with the appropriate follow-up. Moreover, their answers provide insights into family conditions, e.g., the fact that violence against children and spouses exists and slightly declined. In the case of the treatment, there was a total acceptance of the text messages, which allowed building trust between the research team and the participants. Moreover, the texts provided further information and motivation with the right timing.

It is essential to underscore that even if the intervention was about personal levels of stress, the qualitative data also offers valuable information about the potential sources of organizational stress. The cultural context in which interviews happen, which includes ever-changing conventions, relationships, and stakes, is crucial for the rapport and the information disclosed by interviewees (Carr, 2011). It was plausible how, in the beginning, during the exercises I performed to get a better grasp of the context, there was mistrust from the cops to reveal aspects regarding the organization of the police. Thanks mainly to the participatory research principles,

cops started to open up as the weeks went by. At the end of the intervention, they were at ease with sharing crucial ideas for improving the institution, such as involving the leaders in the research project, addressing the abuses, punitive actions, and aggressions within the corporation, strengthening the collaboration among coworkers, and how the discrimination from the population diminishes their interest in performing their duties adequately.

The qualitative insights become favorable to the activism inherent to this research project: how to work alongside institutions to allow the flow of information and better practices, avoiding that the intervention only improves the image of the police —and thus necessary organizational reforms get ignored (González, 2016). Integrating these findings with the quantitative insights and the bioecological framework will have better chances to secure the approval of diverse social agents and disrupt oppression, as the context will be in perspective alongside the perception of research participants. Moreover, we can conclude that there is no homogeneity in risk and protective factors, crime patterns, and intervention needs, given the higher number of variables and perspectives considered (Gorman-Smith, Tolan & Henry, 2000).

## **5. Policy recommendations and future lines of research**

The context described in this paper has severe challenges to overcome. The research results signal some of the needs of the institution. The following recommendations take into account the fact that funding is scarce. Therefore, the call to action for policy-

makers and leaders of the police force is along the lines of low-cost, easily replicable strategies:

1. **Training for middle commanders:** the need to support and share knowledge with the leaders of the organization is vital. Nevertheless, the emphasis must be on the second-degree commanders. These officers will remain in the institution regardless of the changes of political administration, whereas the higher leaders will get replaced. This recommendation does not entail not to consider the director and his staff, but the training of those veterans that will likely continue their duties after political periods should be a priority. In some cases, these middle officers are sources of discontent and a loss of collegiality, given their lack of leadership skills. Therefore, their training should be invested in, considering them as relevant agents of change.
2. **Text messages as motivation tools:** with some weeks of training, managers can understand the basics of text messages as behavioral tools and implement them in their daily practices. All police officers from the sample have cellphones and use the software known as “Whatsapp.” This application allows sending unlimited text and voice messages for free with an Internet connection. Moreover, managers can create group chats, so they do not take extra time in sending personalized texts, while also monitoring if their staff read the messages.
3. **Training for administrative staff members regarding basic notions of data collection:** policy-makers can hire professionals for short periods to train

administrative staff. If these workers learn some basic procedures of data collection, they can establish protocols to monitor the perception of police officers periodically. The goal of this training would not be to promote them to do rigorous research, which requires years of practice, but rather have essential skills to collect, analyze, and present information that can be relevant for organizational decision-making. Moreover, there is a federal budget destined only for workers' capacitation, which could remunerate the assistance of professionals who will lead the training.

In terms of future research, not only further tests about the effects of multimodal pedagogy, participatory principles, and behavioral tools could be recommended. In previous projects by "Laboratorio en Movimiento," an ecological diagnosis was performed: qualitative data about teachers' perception regarding stress factors was collected and presented to the Ministry of Education, alongside policy recommendations (Suárez Rojas, 2019). These results indicated that in the city of San Cristóbal de Las Casas, security perception is hindering learning and teaching in public and private schools. Therefore, to incorporate security and education institutions, future interventions could contemplate improving the figure of the police by inviting them to schools. Promoting collective resiliency by integrating the experiences of students, teachers, and cops could be an avenue to establish protocols of collaboration and transforming the perception of citizens towards institutions.

## **6. Conclusion**

The present study had as its goal addressing the security crisis in the South of Mexico, by developing a pilot intervention to reduce the stress perception of police officers while sharing with them topics regarding individual and social health. The bioecological theoretical framework allowed us to consider the multiple intersections in human and social development, with a critical consideration of the history of inequality in the south of Mexico. The intervention itself relied on participatory principles, behavioral tools, and a multimodal pedagogical approach. The quantitative results were modest yet positive, and even if the treatment was not statistically significant, certain limitations of the present study and the qualitative data warrant further research on these topics.

Democracies that suffer from structural inequality and undermined citizenship have numerous intervention needs. Therefore, the social sciences have a crucial responsibility to promote strategies that adhere to participatory principles, can be implemented with low-costs, and reflect critically upon the power dynamics in the research setting. By establishing trust networks with the communities under study, accomplishing this task might not be impossible.

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