



# Does the professionalisation of community-based childcare improve school performance of disadvantaged children?

An impact evaluation  
of Vivamos Mejor in  
Colombia

**vivamos mejor**

Better living conditions for Latin America

# Executive Summary

In Colombia, timely school enrolment and long-term school attendance are not a matter of fact for all children, particularly not for those from marginalised or internally displaced backgrounds. Therefore, Vivamos Mejor has invested in the professionalisation and quality improvement of state-led community-based pre-schools for children from marginalised families. In collaboration with researchers from the University of Lausanne, we undertook an impact evaluation of our pre-school programme.

The study was designed to compare skills of children at quality-improved pre-schools with those of children in standard ones in the same neighbourhood. The results were compared with a control group. The evaluation focused on an immediate effect on the cognitive, psychomotor and psychosocial development of children after one year, as well as a medium-term impact on school performance, prosocial behaviour, patience, trust and

self-esteem of children, three and a half to four and a half years after the treatment. The evaluation concluded by looking at the possible programme effect on parents with respect to their parenting styles and prosocial behaviour.

Our intervention can be viewed in the context of the Sustainable Development Goals of the UN, i.e. that by 2030 all children should have access to quality early childhood development to prepare them for primary school.

The development of a child in the first five years of life is critical for its future, and the quality of its environment and the relationship it has to parents or other caregivers are very important. Children who grow up in a stimulating environment, in the company of responsive caregivers who interact with them frequently and affectionately, have the best basis for cognitive, social, and emotional development.

Following our intervention, the children treated soon displayed improved cognitive, psychosocial, and psychomotor skills. Moreover, the intervention led to consistent improvements up to four and a half years after its implementation. Children in the programme performed better in school, were more likely to be in the

right class for their age, and exhibited higher levels of social preferences compared to a control group.

## **Project Location: La Dorada**

La Dorada has approximately 100,000 inhabitants and consists of an urban centre and relatively extensive outlying districts settled by new arrivals, many of them internally displaced people.

# Introduction

In developing countries, children from marginalised families often face difficult circumstances. Many of them lack adequate cognitive and non-cognitive stimulation, do not have access to basic health and hygiene, or are malnourished. Their families have limited resources, and many children experience violence. As a result, a skill gap exists between children from disadvantaged families and children from more advantaged families<sup>1</sup>. Pre-school education provides children with the requisite environment and, therefore, has the potential to narrow this skill gap<sup>2</sup>.

Research on the effectiveness of pre-school education in Latin America has confirmed that early childcare programmes improve the skills of children in the short term. However, researchers have argued that the quality of care is low and the competencies of caregivers are insufficient<sup>3</sup>. With this impact evaluation, Vivamos Mejor provided evidence on possible policy solutions to improve the quality of pre-school programmes in Latin America at little additional cost.



Our study aimed to help establish the long-term impact of such a programme, which clearly depends on the quality of care provided in the respective institution. The analysis we undertook included a special focus on individual preferences (social preferences, trust, time preferences, self-esteem, and parenting style).

<sup>1</sup> Duncan, G. J., & Brooks-Gunn, J. (2000). Family poverty, welfare reform, and child development. *Child Development*, 71(1), 188–196.

<sup>2</sup> Shonkoff, J. P., & Phillips, D. A. (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academies Press.

<sup>3</sup> Bernal, R. (2015). The impact of a vocational education program for childcare providers on children's well-being. *Economics of Education Review*, 48, 165–183.  
Attanasio, O. P., Maro, V. D., & Vera-Hernández, M. (2013). Community and the nutritional status of poor children. Evidence from Colombia. *The Economic Journal*, 123(571), 1025–1058.

# Intervention

The main aim of our intervention was to improve the quality of care in public community-based pre-schools attended primarily by children from low social strata (called hogares comunitarios or simply HC) in Colombia. The Colombian state agency ICBF (Instituto Colombiano de Bienestar Familiar) introduced these HCs in the mid-1970s. An HC is run by a community mother (so-called madre comunitaria or MC) and targets children of pre-school age (from six months up to entering school). HCs exist only in neighbourhoods where families from the lowest socioeconomic stratum live.

The task of the community mother is to attend to children during the day, cook them lunch, and prepare the children for schooling. She may take care of up to 12 children in her own home. The state subsidises the HCs by paying the salary of the MCs and the food of the children. Parents need to make a small contribution as well. Today, this is the most widespread pre-school programme in the country, reaching almost 1 million children cared for by roughly 60,000 MCs.

Community mothers often have no more than primary education and no particular training in providing childcare services. In response to this quality issue, we implemented an intervention in Las Ferias in the city of La Dorada. Las Ferias is a densely populated neighbourhood with about 25,000 inhabitants and a high incidence of poverty and many internally displaced families. Children in this neighbourhood grow up in home environments with very limited learning opportunities. Moreover, children are frequently left unattended and often lack regular eating patterns. HCs therefore have the potential to improve the living conditions of the children considerably.

Our intervention comprised four main components:

- Vocational education training for community mothers, leading to official qualification
- On-the-job training to implement the national pedagogical model as part of the MCs' daily routine
- Monthly parental workshops related to care, education, and development of children
- Supervision of those children who had left the HC to attend regular school



# Evaluation and Methodology

Our analysis provided evidence on the following two evaluation questions:

- 1. Did the quality improvement of the HC affect the three indexes of cognitive, psychomotor, psychosocial development of children in the short term?**
- 2. Did the quality improvement of the HC affect the development and individual preferences of children in the long run?**

We compared the skills of children who had attended a quality-improved HC and compared them with the skills of children from a standard HC.

To answer the first question, we evaluated the intervention immediately after its implementation with existing data. During the programme implementation all children were evaluated with a scale developed by UNICEF consisting



of several items across the three indexes, sorted by ability for age. We rated all items on a binary scale: fulfilled or not fulfilled.

To answer the second question, we gathered new data from schoolchildren who had benefited from the programme three and a half to four and a half years previously. At the time of data collection, these children were attending years two to four of primary school.

We collected the children's grades in order to assess the affect on cognitive abilities, and conducted standardised behavioural experiments with the children in their school, as

well as a randomly selected sub-sample of parents, in order to elicit the measures of individual preference defined in the following broad areas: social preferences, trust, time preferences, self-esteem, parenting style. In both cases, the data was compared with a predefined control group. The study identified children who had been attending the HC pre-schools prior to the intervention of Vivamos Mejor. Thus the children in the control group were of the same age and from the same background as the children who benefited from the programme.

# Results

## Question 1:

### Immediate development outcomes

We observed that before the intervention, children from the control group displayed cognitive, psychosocial, and psychomotor levels of 77%, 75%, and 75% respectively, indicating that the average developmental status of the children was considerably lower than the Colombian national average according to the UNICEF scale<sup>4</sup>.

We found that the children treated scored an average 11 percentage points higher than the control group on the cognitive development index, 12 percentage points higher on the psychosocial index, and 13 percentage points higher on the psychomotor index. These results are all statistically significant. The intervention affected boys and girls to the same extent.

To conclude, we found that the programme led to large skill gains for the children attending quality-improved HCs. The averages of the treated group corresponded to the average of the children in Colombia. Hence, thanks

to the intervention, children were able to catch up with national averages.

## Question 2:

### Medium-term impact on school performance, prosocial behaviour

Our analysis indicated that children in the treatment group had higher school grades on average than children in the control group. In the control group, children reached on average a grade of 69.9 percentage points compared to a grade of 74.2 percentage points in the treatment group. This difference of roughly four percentage points is significant. The intervention therefore affected the grades of the children positively. Children in the treated group were on average 16 percentage points (64%) more likely than the control group (48%) to be in the right school class.



As for the individual preference measures, the statistical analysis showed that children from the treatment group behaved more altruistically than children from the control group. They allocated on average 2.5 rewards to an anonymous child, while in the control group they only allocated 1.9 rewards.

The analysis of trust behaviour showed elevated levels of trust in the treatment group, but the observed difference was just statistically insignificant, whereas time preferences (patience), and self-esteem did not seem to be affected by the treatment.

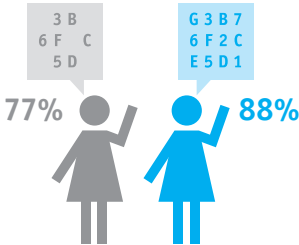
As far as parenting styles were concerned, we did not find that parents in the control and the treated group applied different parenting styles. However, the study found that altruism and trust of parents and their children correlated in the treated group, while they did not in the control group. This indicates that the intervention might have positively influenced the parent-child relationship and fostered the transmission of values and preferences.

<sup>4</sup> According to the *Tablas de normas para la población colombiana* (in Ortiz Pinilla, N. (1999). *Escala Abreviada de Desarrollo*. Ministerio de Salud.), the average for cognitive development in that age group is 85%, for psychomotor 87% and for psychosocial 88%.

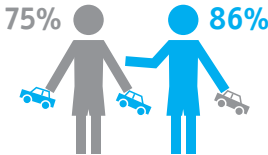
# Our Data at a Glimpse

 Treated Group     Control Group

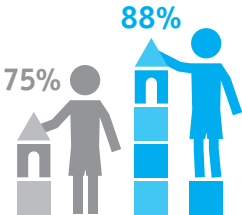
## Immediate development outcomes in pre-school children



Cognitive skills

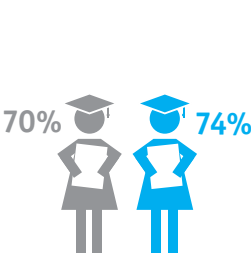


Psychosocial skills

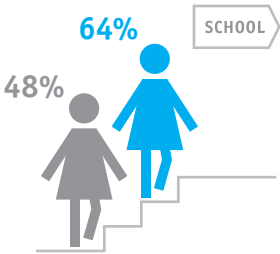


Psychomotor skills

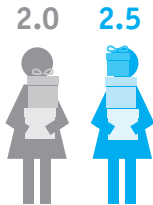
## Medium-term impact on school performance and prosocial behaviour



School grades



Probability of being in the right class



Altruism

# Conclusion

Research on pre-school education in Colombia revealed that the knowledge of many caregivers about infant development is insufficient and the quality of care is low.

We found that children attending quality-improved community-based pre-schools in the programme of Vivamos Mejor benefited on several levels. First, in the short run, children who visited a treated pre-school displayed improved cognitive, psychosocial, and psychomotor skills. Second, the effects of the intervention seemed to be persistent. Up to four and a half years after the treatment, children from treated pre-schools had on average higher grades, behaved in a more socially acceptable manner, and were more likely to be in the right class for their age.

The impact evaluation also provides evidence that investments in the qualification of the HC programme are effective. This conclusion holds true when looking at costs: The HC programme costs around USD 444 per child per year<sup>5</sup>. The quality improvement implies an additional cost of USD 455, with a potential to be reduced at

scale. These costs are relatively low compared to the USD 1,752 per child per year<sup>6</sup> of the centre-based modality (CDIs, centros de desarrollo infantil), which is another important pre-school programme in Colombia. Thus, while the quality improvement implies a doubling of the investment, the costs are still half compared to the costs of CDIs. Furthermore, based on numbers published in Chetty<sup>7</sup>, Bartik<sup>8</sup> and Flossmann<sup>9</sup>, the study estimated a four percent wage gain resulting from skills acquisition. This suggests that the investment breaks even 16–20 years after labour market entry.

In conclusion, the results show that enhancing the quality of pre-school education by providing community mothers with formal education, supporting them on the job in the implementation of a pedagogical model and age-specific stimulation methods, and involving the parents as well, is a promising policy option to improve the preparedness for school and thus further success in life of disadvantaged children in La Dorada.

5 Bernal, R., Fernández, C., Flórez, C. E., Gaviria, A., & others. (2009). Evaluación de Impacto del Programa Hogares Comunitarios de Bienestar del ICBF.

6 Bernal, R., Fernández, C., Flórez, C. E., Gaviria, A., & others. (2009). Evaluación de Impacto del Programa Hogares Comunitarios de Bienestar del ICBF.

7 Chetty, R., Friedman, J. N., Hilger, N., Saez, E., Schanzenbach, D. W., & Yagan, D. (2011). How does your kindergarten classroom affect your earnings? Evidence from Project STAR. *The Quarterly Journal of Economics*, 126(4), 1593–1660.

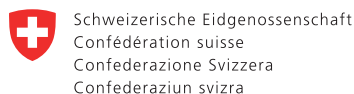
8 Bartik, T. J., Gormley, W., & Adelstein, S. (2012). Earnings benefits of Tulsa's pre-K program for different income groups. *Economics of Education Review*, 31(6), 1143–1161.

9 Flossmann, A. L., Piatek, R., & Wichert, L. (2007). Going beyond returns to education: The role of noncognitive skills on wages in Germany. Working Paper.





# About the Impact Award



**nadel**  
Center for Development and Cooperation



Impact evaluations are a tool for policymakers and development practitioners to promote evidence-based policymaking. Their aim is to inspire NGOs to integrate the resultant findings into their work. Since 2015, the Swiss Agency for Development and Cooperation (SDC) in collaboration with the Center for Development and Cooperation (ETH-NADEL) has awarded prizes to Swiss NGOs working in international development. Vivamos Mejor was one of the three winners in 2015. The prize allowed us to conduct an impact evaluation in close cooperation with PhD student Deborah Kistler and Professor Rafael Lalive of the University of Lausanne.

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6	Yelmy Paola	1030504002	08-04-9	Salud
6	Vilma Yanile	08394444	08-04-9	Salud
7	Vaquero Rodríguez	52384444	10-24	Salud
7	Yaguin Alvarado	1024756506	08-04-9	Salud
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Vivamos Mejor  
Thunstrasse 17  
CH-3005 Bern

info@vivamosmejor.ch  
www.vivamosmejor.ch

Vivamos Mejor is a charitable, politically neutral, non-denominational, non-profit organisation that has been helping to improve the living conditions of disadvantaged people in Latin America for 35 years by pursuing a targeted 'Help for Self-Help' approach. We strive to make improvements in the circumstances of underprivileged families and young people in particular and to help them to lead independent lives. We thereby make an important contribution to achieving the Sustainable Development Goals, education, gender equality, and the reduction of poverty in all its forms.



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Better living conditions for Latin America