



A floor equals resilience

The impact of concrete floors on the lives of families
in Latin America and the Caribbean

2025





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for Humanity®

Production notes **A floor** equals resilience

Cover:

In September 2023, the 100,000 Floors to Play on initiative was piloted in Sítio Pau Ferro, Brazil. Twenty floors were installed in the municipality of Riacho das Almas, situated in Pernambuco's semi-arid region. Elinelma and José Raimundo were among the partnering families. Their son, Gabriel, appears in the photo.
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This publication was prepared by Habitat for Humanity Latin America and the Caribbean based on the following evaluations of the 100,000 Floors to Play On initiative: an impact evaluation in the Dominican Republic, published in October 2024; a qualitative evaluation to measure the initiative's contribution in Nicaragua, published in August 2024; and a qualitative evaluation in Guatemala, published in October 2024.

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In San Juan Sacatepéquez, Guatemala, María's daughter now has a safe and healthy place to play: her new floor.
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In Rancho al Medio, San Cristobal, Dominican Republic, Soraini and Yariani play on their new floor. Thanks to the 100,000 Floors to Play on initiative, their lives have changed. Their parents, Sylvia and Manuel, are happy to see their young ones grow up in a clean and adequate space. "The girls put a blanket down and play with their toys. My life is so much simpler, and now I can have a cleaner home," says Sylvia. © Habitat for Humanity Dominican Republic / Media Crew

PROLOGUE

All families deserve a safe home in which to build a better future. With more than 45 years of experience, we at Habitat for Humanity want every person to have a decent place to live. We are a non-government organization that works in more than seventy countries throughout the world. Seventeen of these are in Latin America and the Caribbean, where we serve as an ally for low-income families who hope to build or improve their homes.

Access to housing is a basic human right that can have a ripple effect on the education, economy and wellbeing of families. This has been shown by various studies, including an evaluation produced in the Dominican Republic under the framework of the 100,000 Floors to Play On initiative. As the study shows, homes that receive a concrete floor improve their quality of life.

At Habitat for Humanity, we view housing as a fundamental pillar for sustainable development in our communities. Floors are one part of it. In addition to building or improving homes for the most vulnerable people, we also work in other housing-related areas: advocacy to positively influence public policy and market systems; disaster response and resilience; trainings; volunteer mobilization; and more.

We must continue to intensify our efforts to prevent and respond to current crises with measures that support climate change adaptation and promote housing and human settlements that are safer and more resilient than ever.

We cannot accomplish this alone. Eliminating dirt floors in the region

requires a collaborative and progressive approach through public-private partnerships between diverse actors: private enterprises, cement suppliers, governments, banks, non-government organizations, international organisms, communities, universities, volunteers, and individual donors.

Our experience implementing this initiative has shown that building new floors can become a basis from which to explore new ways to collaborate with strategic partners. Even more importantly, it can be a take-off point for additional projects that progressively improve housing in ways that contribute to the Sustainable Development Goals, such as ending poverty (SDG1), improving health and wellbeing (SDG3), securing clean and healthy water (SDG6), and working through partnerships to achieve these goals (SDG17).

Finally, we are excited to share that as of December 2024 the 100,000 Floors to Play On initiative has improved the health and quality of life of 87,255 people through the installation of 17,451 new concrete floors. This would not have been possible without the support of key partners in each country, to whom we would like to share our deepest thanks.

Providing opportunities for people to access housing while we work to create a more just, equitable, sustainable and resilient society is our number one priority. For this reason, we continue to seek new allies and partners willing to commit their support to these types of programs in Latin America and the Caribbean.

Learn more about how you can join the effort at www.100kfloors.org!



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Ernesto Castro García

Area Vice President
Habitat for Humanity
Latin America and the Caribbean



Mariana (55) is a single mother of ten children, four of which are young women. Tree roots had broken up what little floor the family had, and the rain and moisture that seeped into the home was making them sick. Now, Mariana feels grateful to God and to Habitat for her new floor.

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Dominican Republic /
Media Crew

EXECUTIVE SUMMARY

According to the Inter-American Development Bank (IDB),¹ the current housing deficit affects nearly half of Latin American and Caribbean homes. It is in this context that Habitat for Humanity, in partnership with the Inter-American Cement Federation (FICEM), created **100,000 Floors to Play On**. Conceived in 2022, the initiative aims to replace 100,000 dirt or poor-condition floors with concrete ones in vulnerable homes throughout the region by 2028.

With the goal of generating additional evidence to show the benefits that concrete floors can have on people's quality of life, we compiled a report based on the outcomes of three evaluations in our region: a quantitative impact study from the Dominican Republic, and qualitative studies from Nicaragua and Guatemala, respectively.

Relying on the difference-in-differences (DiD) method of quantitative evaluation, we designed a methodology to show the impact that installing concrete floors has had on the areas of economic development, health and wellbeing, academic attendance, and time spent playing in the home.



"Our floor used to be full of cracks. A hole had formed and the entire floor was damaged. We'd add cement to fill in the holes but it would just happen again. Now, we're so happy and grateful that our floor has been replaced. Thanks to Habitat, it's very thick and clean."

Juana, Dominican Republic

In the Dominican Republic, for example, families who received a concrete floor showed considerable improvements to their wellbeing, which translated into higher savings and greater spending power. Families' perception of the quality of their housing infrastructure also increased by 4%, and satisfaction with the house in general and the flooring in particular increased by 25% and 239%, respectively. This was also supported by the personal stories of beneficiary families in both Nicaragua and Guatemala.

Having measured the impact of **100,000 Floors to Play On**, we

can confidently say that installing a concrete floor leads to greater resilience and an improved ability to face the challenges of adverse situations—from flooding to tropical storms, to dengue outbreaks, to inflation—compared to those who do not receive one.

Without a doubt, the results presented here are key to highlighting the importance of continuing this initiative in other geographic areas and countries throughout the region. Additionally, it allows us to share with the donors and partners involved with the initiative the impact that replacing dirt floors with concrete can have.

¹This statistic has been cited by various IDB representatives during the IDB Group Housing Forum. See : "Forty five percent of Latin American homes lack adequate housing" (in Spanish), "How to reduce the housing deficit in Latin America and the Caribbean with inclusive and resilient solutions" (in Spanish), and "Nearly half of Latin America's population lacks adequate housing" (in Spanish).



100,000 floors to play on

With 100,000 Floors to Play On, businesses have the opportunity to translate their commitment to social impact into tangible and transformative results.

Beyond just building concrete floors, we give thousands of children in the Latin America and Caribbean region the opportunity to more safely play at home.

Each floor represents a direct improvement to quality of life, a bolstered path of resilience, and a vital step in building a safer and more promising tomorrow.

By joining this initiative, businesses not only strengthen their reputation as leaders in social responsibility but also become part of a powerful and humanizing story.



A concrete floor gives kids a safe and healthy place to play.
© Habitat for Humanity Guatemala

What is 100,000 Floors to Play On?

A regional initiative by Habitat for Humanity in partnership with the Inter-American Cement Federation (FICEM).

Our goal

To replace 100,000 floors made of dirt or in otherwise poor condition with concrete ones in vulnerable households throughout Latin America and the Caribbean between 2022 and 2028.

We want all children to have a house that is safe and hygienic, supports cognitive development, and is a place where they can healthily play, study and grow.

17,451

floors installed



**Results
achieved**

(as of December 2024)



87,255

people served

Expected results

(by June 2028)

**100,000
children
served**



**100,000
concrete floors
in LAC**



**500,000
people served
in five years**



**at least
10 participating
countries**



**at least 200,000
people trained
in healthy and
hygienic housing**



**100,000
families
served**



**+100,000
people employed
in the construction
sector**



Who do we serve?

Families in the region who live in homes with floors made of dirt or in poor condition.

We focus on:

- Women heads of household
- Children younger than six years of age
- Older adults
- People with disabilities



There is still much work to do

For this reason, we're seeking **additional countries in the region** where we can carry out this initiative.



How to get involved

**100,000 floors
to play on**

Contact us at
lac@habitat.org,
or learn more at
www.100kfloors.org.

Habitat for Humanity installing a concrete floor in the Dominican Republic.
© Habitat for Humanity Dominican Republic / Media Crew

100,000 floors to play on

From our partners

Latin America

"At Whirlpool Corporation, we are celebrating more than 25 years of working with Habitat for Humanity and are proud to have commemorated this milestone by participating in **100,000 Floors to Play On**. Whirlpool Colombia's first experience volunteering with Habitat for Humanity was a complete success. Our volunteers worked together as a team to improve the homes of three families, sharing time with them and making a positive difference in our community."

Juan Pablo Gutiérrez Berrueta,
Community Relations Sr. Analyst
at Whirlpool Corporation



Nicaragua

"At Holcim Nicaragua, we are thrilled to be supporting Nicaraguan families in vulnerable conditions by helping them replace their dirt floors with concrete through the **100,000 Floors to Play On** program. We are grateful that Habitat for Humanity invited us to join this regional initiative. Together, we can build progress for people and the planet."

Marcelo Arrieta, CEO of Holcim Nicaragua and Holcim El Salvador

Guatemala

“For CBC (The Central America Bottling Corporation), the success of transforming dirt floors into concrete floors in our customers’ homes centers on providing integrated wellbeing, improving people’s living conditions, and bringing prosperity to each and every family we touch. This project, for us, was both a challenge and a catalyst for more families to access better and more dignified housing conditions. The feeling of seeing children, fathers and mothers happy and in a renovated environment motivates us to continue working to transform more and more homes.”

Diego A. Ramazzini, Head of SSO for CBC and Captain of Housing Division at Creciendo Juntos



Colombia

*“Since its inception nearly 70 years ago, El Minuto de Dios has viewed housing as a fundamental part of the integrated and sustainable development of people and communities. Faithful to this vision, in the last three years we have reached 950 households as partners with **100,000 Floors to Play On**, benefiting vulnerable households across the country and implementing actions that ensure dignified housing and improve the living conditions of each home in which we intervene. There is still ground to cover to reach 100,000 but working side-by-side with the various partners, we’re confident we will achieve it.”*

Raúl Buitrago, General Manager for El Minuto de Dios

Dominican Republic

*“I have been able to witness how, by replacing dirt floors with concrete, the **100,000 Floors to Play On** project brings health and wellbeing to beneficiary families, sparking an interest in continuing to make housing improvements and transforming their house into a home. I urge you to join this noble initiative, which not only changes the lives of those who benefit from it directly, but also those who contribute to the vision of access to decent and dignified housing for all.”*

Clara Reid, member of the Habitat Development Council for Latin America and the Caribbean



Whirlpool volunteers participate in an event organized by Corporación Organización El Minuto de Dios in Bogotá, Colombia to replace dirt floors with concrete.
© El Minuto de Dios / Habitat for Humanity

An initiative that furthers the Sustainable Development Goals (SDGs)

100,000 floors to play on



SUSTAINABLE DEVELOPMENT GOALS



- Reduces qualitative deficit in terms of adequate flooring.
- Increases access to progressive housing improvements.
- Increases families' capacity to save.



- Reduces rates of gastrointestinal, respiratory, and skin diseases.
- Improves living conditions.
- Improves cognitive, psychological, and motor development thanks to more hours of play and fewer school absences.



- Reduces time spent on domestic and caregiving tasks typically carried out by women.
- Improves quality of life for women heads of household who care for children.



- Prevents water accumulation and mold growth, along with the adequate management of moisture and reduced risks associated with slips and falls.
- Provides greater resistance to the effects of floods by ensuring safe, healthy, and adequate housing.



- Improves quality of housing, contributing to the sustainability of cities.



- Achieves goal of reducing the number of dirt floors by working in partnership with the public and private sector.

The 17 Sustainable Development Goals (SDGs) of the 2030 Agenda—approved by world leaders in September of 2015 in an historic United Nations summit—aim to intensify efforts to put an end to poverty, reduce inequality and combat climate change, ensuring that no one gets left behind.

In this context, the **100,000 Floors to Play On** initiative helps business, along with local and national governments, to help achieve the SDGs of the 2030 Agenda for Sustainable Development.

In Latin America and the Caribbean, the housing deficit affects nearly 50% of households.

Source: III Regional Housing Forum (IDB, 2024).

INTRODUCTION

In 2022, Habitat for Humanity Latin America and the Caribbean took up the task of helping families who lack adequate and healthy flooring. To build an initiative capable of confronting this challenge, we first reviewed data on the housing deficit in the region, along with studies that highlighted the importance of this vital home improvement.

With respect to the housing deficit, according to the IDB (2024), almost 50% of the population in Latin America and the Caribbean lack decent housing. Many of these live in homes with dirt floors that provide a welcome environment for parasites, bacteria and insects that cause chronic diarrhea, respiratory illnesses, anemia, immune deficiencies, malnutrition, Chagas, rashes, and more.

Figure 1 shows the total number of households with dirt floors per country—a steep flooring deficit that we at Habitat for Humanity aim to combat.

Homes with dirt floors

- 2,500,000 - 500,000
- 500,000 - 200,000
- 200,000 - 10,000

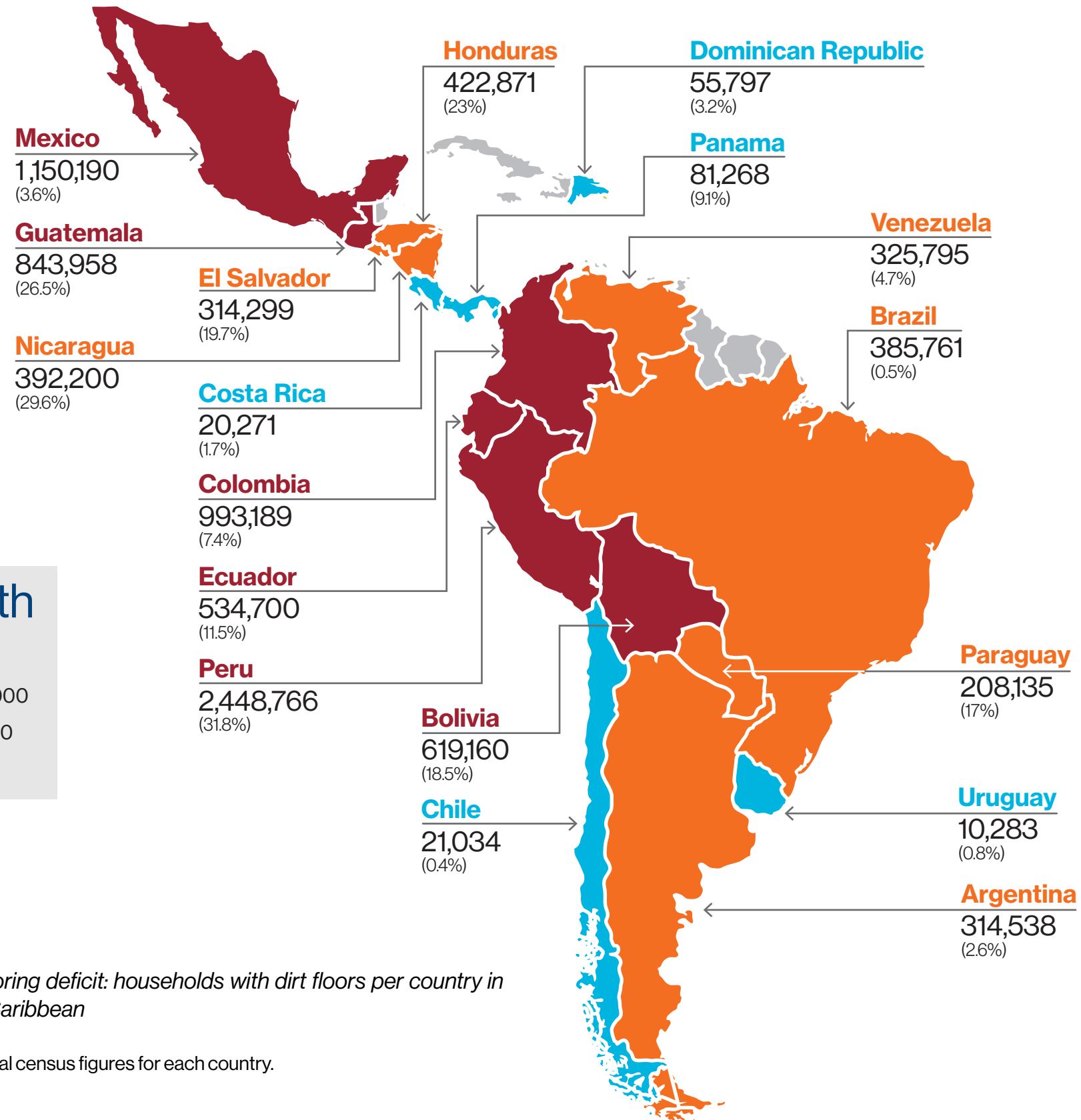


Figure 1. Adequate flooring deficit: households with dirt floors per country in Latin America and the Caribbean

Source: Based on the official census figures for each country.

Our challenge in numbers

6%

of the flooring deficit

10

million homes with dirt floors

50

million people in poverty conditions with dirt floors

In addition to the data on the housing deficit, we wanted to understand the impact that simple housing improvements can have, particularly concrete floors. Few studies have deeply explored how housing influences the subjective wellbeing of those who live there. This research gap highlights the need for more detailed investigations that can help us better understand the impact that a concrete floor can have on how families perceive their quality of life (Aminian, 2019).

In 2015, Pontificia Universidad Católica Argentina published the study *Vivienda y bienestar: Evidencia de los asentamientos de Buenos Aires* (Housing and Wellbeing: Evidence from the settlements of Buenos Aires), which shows that poor housing conditions have a negative impact on the academic development of school-age children because they lack an appropriate space in which to study.

The World Happiness Report (2024), published by the University of Oxford in collaboration with the United Nations Sustainable Development Solutions Network, argues that satisfaction with the accessibility and quality of one's home is linked to greater enjoyment of life. This shows that home improvements not only affect people's quality of life but also their wellbeing and social development.

According to Díaz-Serrano (2006), a greater satisfaction with housing is linked to greater emotional stability and economic security, due to less uncertainty and a reduced need for residential mobility. This strengthens social cohesion and bolsters the stability of communities. In addition, it helps reduce stress by providing a safer and more predictable environment. Finally, it affects long-term economic decisions, allowing families to plan for a more secure financial future.

Studies such as those by the University of California and the World Bank in Mexico have also shown that replacing a dirt floor with concrete has direct benefits on health. These detailed studies were able to assess the areas mentioned above in greater detail.

Figure 2 summarizes the main benefits of a concrete floor. In this context, Habitat for Humanity, in partnership with the Inter-American Cement Federation (FICEM), created the 100,000 Floors to Play On initiative with the goal of transforming the health and quality of life of 100,000 families in Latin America and the Caribbean by 2028. But we didn't want to stop there; we also wanted to evaluate the impact that these floors would have so we could share the importance of this effort with potential partners. On the next page, we summarize our findings.

Figure 2. The impact of replacing a dirt floor on a family's health

Adult mental health

Depression decreased by

52%

Stress decreased by

45%



Childhood cognitive development

Improved by

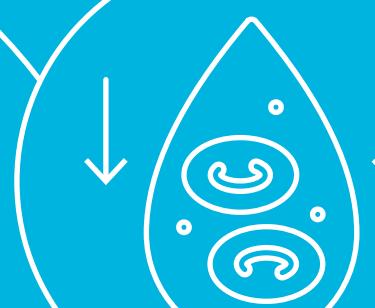
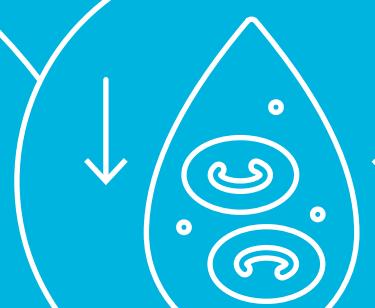
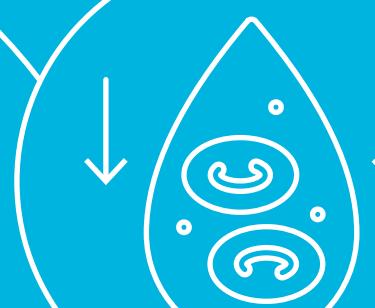
36%

or more



Pediatric diarrheal diseases

Decreased by
49%



Source: Joint elaboration between Habitat for Humanity and the Inter-American Cement Federation (FICEM), based on the study Housing, health and happiness by the University of California, Berkeley, in partnership with the IDB.

Pediatric anemia

Decreased by
81%



Pediatric parasitic infections

Decreased by
78%

EVALUATING THE IMPACT OF A CONCRETE FLOOR

This summary is based on three studies: a quantitative impact evaluation in the Dominican Republic and a qualitative impact evaluation in Guatemala and Nicaragua. Each study focuses on three areas: health and wellbeing, economic development, and education.

Scan the QR code to download each study.



**Qualitative impact evaluation in
Guatemala**



**Quantitative impact evaluation in
Dominican Republic**



**Qualitative impact evaluation in
Nicaragua**





To show how concrete floors have impacted the quality of life of families in the **Dominican Republic**, we conducted a study from May to October 2023 in the communities of Miches and San Cristóbal. The objective was to evaluate impact in the areas of economic development, wellbeing, school absences, and hours of play in the home.

Using a **quantitative methodology**, we sought to understand how people perceived changes in these areas. During the study period, the country was affected by floods, hurricanes, and dengue outbreaks. Additionally, more women fell into poverty than ever before (Gender Equality Observatory, 2024). Any analysis of the results of this study must therefore consider these **adverse events**.

We first conducted an **analysis of differences** with respect to the contribution that concrete floors made on the lives of those who received them. In other words, we compared data from before and after people received a concrete floor. We then used the **difference-in-differences (DiD)**² method to measure the impact, comparing the difference between those who received a concrete floor and those who did not.

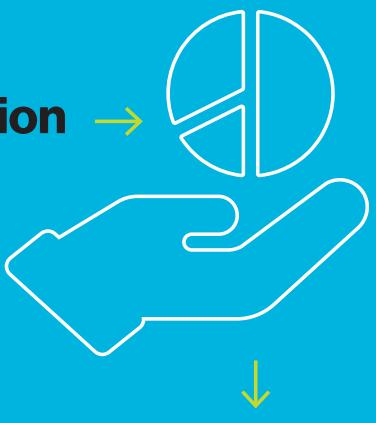
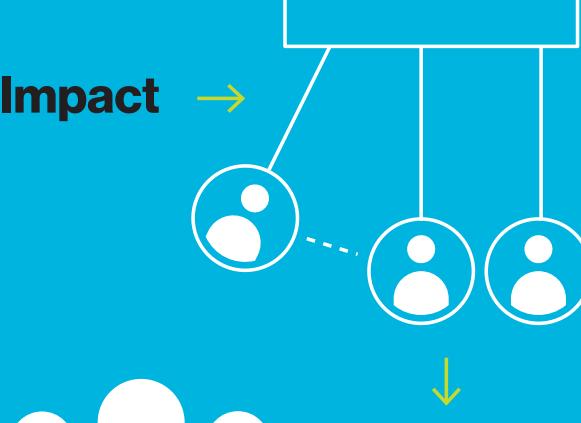
While quantitative data can provide robust information about the importance of flooring, how a family perceives their floor is just as important. We therefore expanded our study, also compiling stories and testimonies about the changes that new floors inspired.



Habitat for Humanity representatives visited beneficiary families in the Dominican Republic to learn how their quality of life improved with the construction of a new concrete floor.
© Habitat for Humanity Dominican Republic / Media Crew

²To learn more about the “difference-in-differences” methodology, see the publication Impact Evaluation in Practice by the Inter-American Development Bank and the World Bank (2017). Available at: <https://publications.iadb.org/en/impact-evaluation-practice-second-edition>.

Measuring results based on both quantitative and qualitative data is an ethical, viable, and rigorous option to show the impact that installing a concrete floor can have on a family's quality of life.

What did this evaluation measure	Who and where was the target population	How we measured our data
<p>Economic development Self-reported perception of:</p> <ul style="list-style-type: none"> → Amount of resources people have to support themselves → Quality of the housing infrastructure → Investments in housing and health-related expenses <p>Wellbeing Satisfaction with housing and flooring and its contribution to self-esteem and perceived safety</p> <p>Academic development School absences Hours of play in the home</p>   	<p>Who and where was the target population</p>  <p>We studied 170 houses like Railini's:</p> <ul style="list-style-type: none"> → 43 years old, 2 kids, cares for her mother → Did not complete primary school → Informally employed with an income of approximately 170 US dollars per month <p>Typical characteristics of vulnerable households with dirt floors</p>  <p>Vulnerability context Affected by a sever dengue crisis, flooding, hurricanes and economic hardship that disproportionately impacts women</p>	<p>Contribution →</p>  <p>Compared data between before and after people received a concrete floor</p> <p>Impact →</p>  <p>Compared data between those who received a concrete floor and those who did not</p>



In **Guatemala**, a qualitative evaluation of the 100,000 Floors to Play On initiative was carried out in May of 2023 in the communities of El Molino and Tonanyaju. First, a **survey** was used to characterize beneficiary families with respect to their conditions, needs, and attributes. Next, **focus groups** were held with representatives of beneficiary families, in which we talked with women and men to better understand the contribution that the new floors had respectively made on their health, education and economic development.

Characteristics of beneficiary families in Guatemala:

- 18–38 years of age
- Informally employed
- Average income of 160 US dollars per month



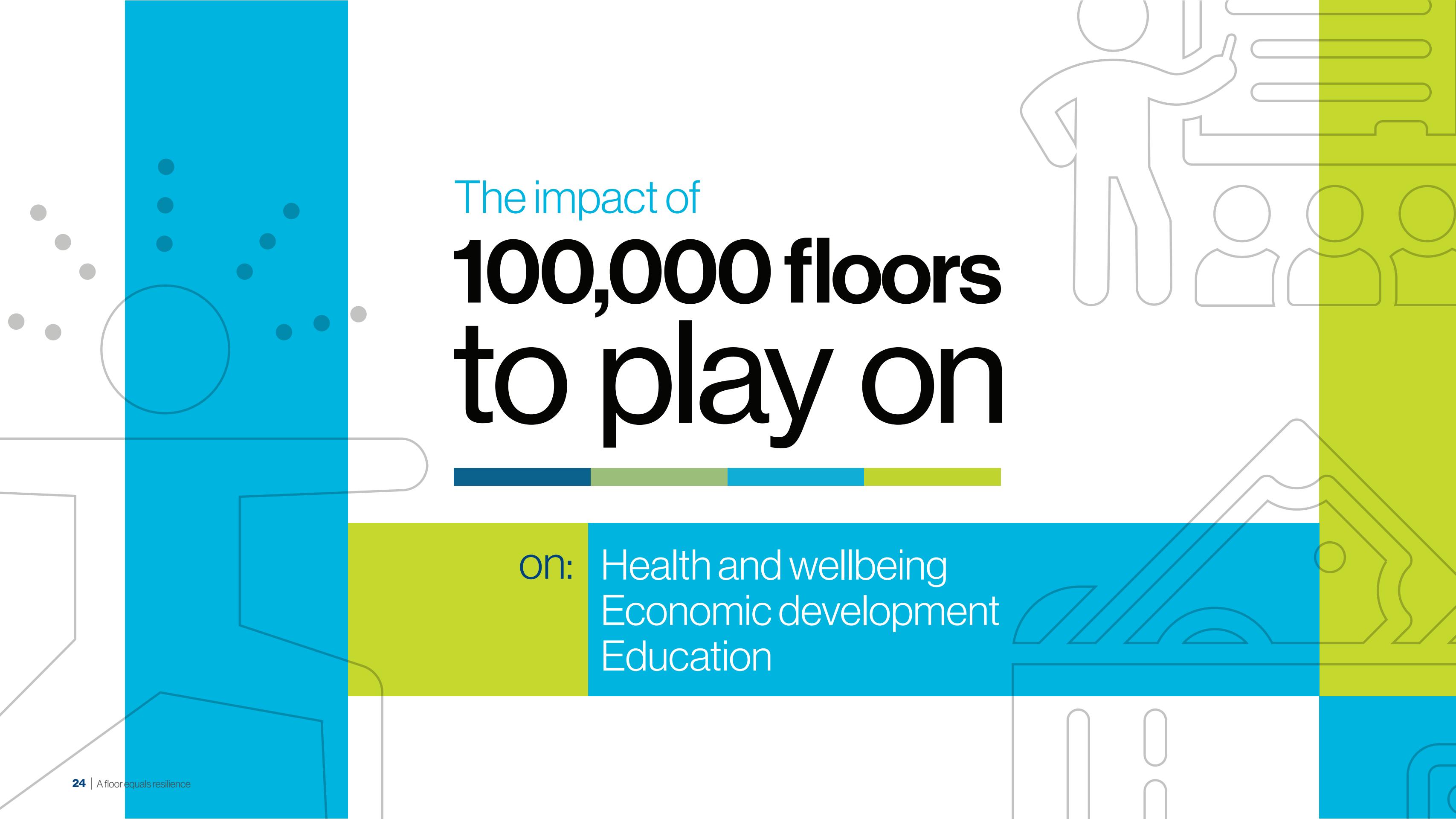
In **Nicaragua**, a similar qualitative evaluation was carried out, in this case focused on projects in Estelí and Nagarote, with the study period from July to December of 2023.

Characteristics of beneficiary families in Nicaragua:

- Mainly women heads of household who did not complete primary school
- Informally employed
- Average income of 246 US dollars per month



Isabel and her three grandchildren, whom she cares for in her home. Isabel's was one of the first sixty houses in Nicaragua to receive a concrete floor, with support from Holcim Nicaragua and in collaboration with Estelí Institute of Human Promotion (INPRHU-Estelí).
© Habitat for Humanity Nicaragua / Jessly Obando



The impact of **100,000 floors to play on**



on: Health and wellbeing
Economic development
Education



HEALTH AND WELLBEING



With the new concrete floor, Magdalena (Dominican Republic) can walk more confidently in her home.
© Habitat for Humanity Dominican Republic / Media Crew

By providing access to concrete floors, Habitat for Humanity seeks to impact the health and wellbeing of people. Given that concrete is easier to clean, replacing a dirt floor has the greatest impact on the children who play there, with secondary effects for the entire family.

Several sources support this idea. According to the World Health Organization's Housing and Health Guidelines (WHO, 2018), an adequate floor is fundamental to preventing accidents in the home, particularly in households where children and older adults reside. Stable, non-slip surfaces help prevent accidents from fires or burns in areas where combustible materials are used for cooking

or heating the home. Likewise, the adequate management of moisture prevents water accumulation and mold growth, further reducing the risk of slips and falls (Kanare, 2007).

Adequate floors are also essential for improving families' resilience in the face of natural disasters, as they can mitigate the effects of adverse climatic events like earthquakes and floods (WHO, 2018).

A research by Cataneo et al (2007) has shown that those with decent quality floors have a lower risk of contracting respiratory and gastrointestinal illnesses.

Impact of the 100,000 Floors to Play On program

Our evaluation confirmed that the wellbeing of families improved considerably in the Dominican Republic, which translated into more savings and greater spending power. The quality that families perceived in the infrastructure of their homes increased by 4%, and their satisfaction with their house in general, and their floor in particular, increased by 25% and 239%, respectively.

During this period, the Dominican Republic experienced a major

dengue crisis, as well as severe floods, hurricanes and economic hardship, particularly among women. Despite that all families had to cover extraordinary health expenses, however, our evaluation showed that those who received a concrete floor saved 79% on medical expenses, had 20% more financial stability, and had a 12% increase in investments in the home, all of which supported greater resilience in the face of these catastrophic events.



Melany, Silvia's daughter, draws in her home in Guatemala.
© Habitat for Humanity Guatemala

"Before, the house would get so wet that my daughter was always sick. She had a lot of diarrhea and would often cough. She was sick every ten to fifteen days. Now, with the concrete floor, she almost never gets sick," says Silvia, from Guatemala.

Silvia's was among the households selected to replace a dirt floor with a concrete one. This simple home improvement contributed to a better quality of life and greater health for the whole family. ***"When I received my floor, my daughter got so much better. She no longer coughs or has diarrhea. What I most like about my new floor is that my house is cleaner, and better. I can clean it more quickly,"*** Silvia said.

Thanks to a concrete floor, vulnerable people living in adverse contexts and **impacted by difficulties and tensions...**

...experience improved wellbeing, with a:

239%
greater satisfaction with their floor

25%
greater satisfaction with their home in general



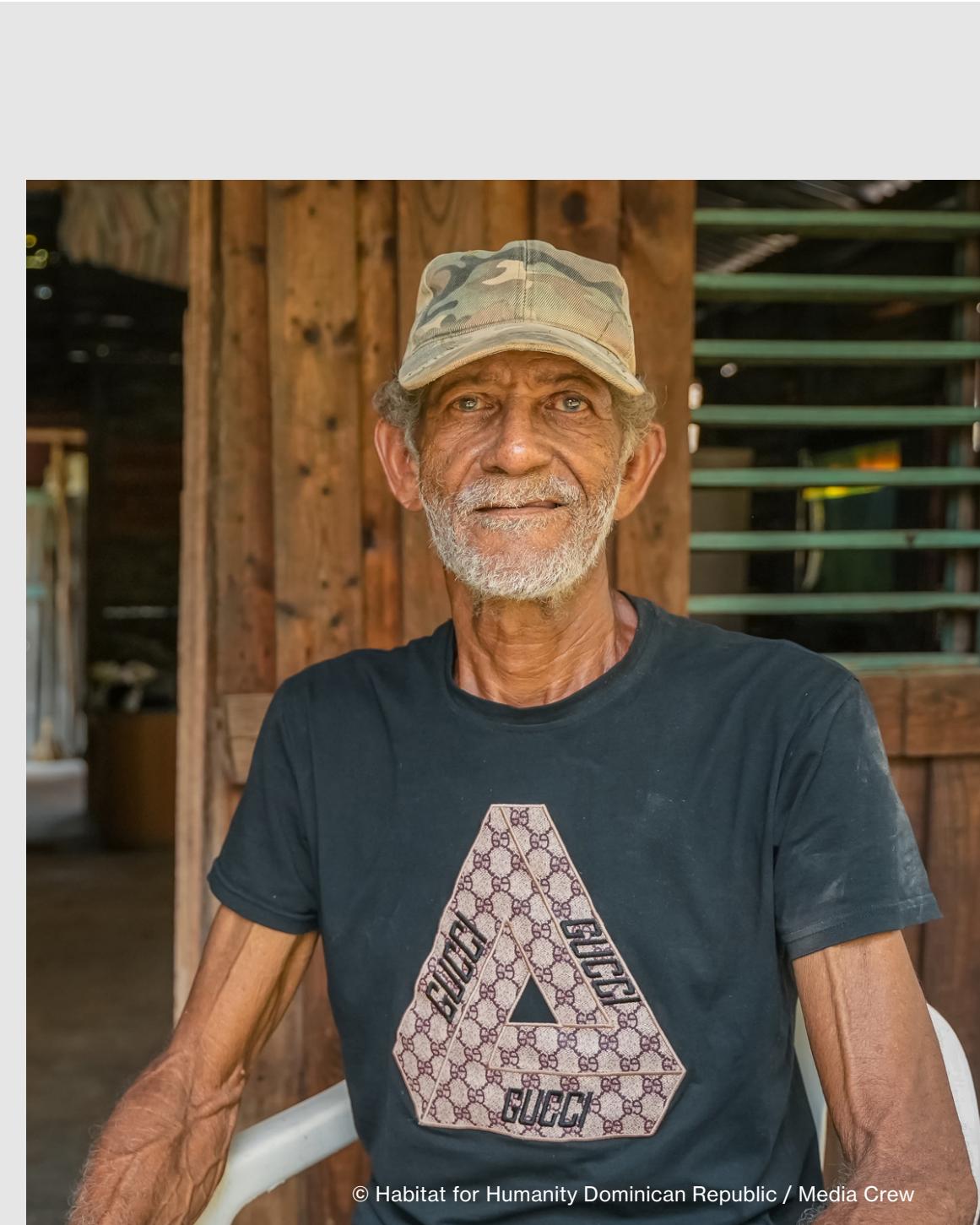


In Guatemala, beneficiary families affirmed that installing a concrete floor made their home environment cleaner and more comfortable. There was less accumulation of dirt and mud, particularly during the rainy season, and food storage and preparation areas had more adequate conditions to prevent contamination.

In the months following the initiative, families observed a lower occurrence of coughs, allergies, lung infections, diarrheas and other illnesses. Having fewer illnesses was mainly due to the reduced contamination of toys, furniture, and food.

The initiative also made a significant contribution to beneficiaries' sense of wellbeing and self-esteem. These changes are evident in a more positive perception of the appearance and comfort of their home, which in turn inspires greater motivation to spend more time there. People also reported a greater sense of comfort with inviting others into their home.

In general, families reported that their emotional wellbeing had improved. This was particularly true for women with caregiving roles inside the home, as they could now tend to their children with even greater care.





© Habitat for Humanity Nicaragua / Jessly Obando

NICARAGUA

Ángel can now do physical therapy at home.

Diana is a single mom of two, who is unable to work outside the home due to the care that her son Ángel requires for his physical disability. The father, who is visually impaired, provides a monthly pension. This is the family's sole income, which has made it impossible for them

to invest in their home. With the support of the 100,000 Floors to Play On initiative, the family now has a concrete floor, along with a ramp, allowing Ángel to receive treatment in a clean and safe environment.

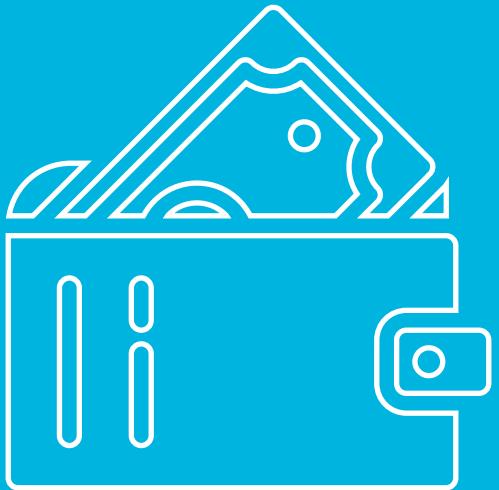


© Habitat for Humanity Nicaragua / Jessly Obando

"My daughter suffered from pneumonia and allergies caused by moisture. The problem is that when it rained the water would come in through the walls and then the floor would stay wet. This would lead to more mosquitos and allergy problems. It's been a while since this has happened, and she no longer has issues breathing. They don't get dirty when they play, and all of this has improved their health."

María, Nicaragua

ECONOMIC DEVELOPMENT



Yocasta is a young single mother whose previous home burned down. She lives with her two daughters, Yocarlin and Yomaris. With the help of Banco Popular and Habitat for Humanity, the family installed a new floor in a wood and zinc home their neighbors and local government helped them build.

© Habitat for Humanity Dominican Republic / Media Crew

In our experience, a decent, dignified home can become a driving force for families. For example, homeowners with concrete floors have a better chance of obtaining a loan from a financial institution, as many require the house to serve as collateral. Knowing this, we collected stories and data related to the changes beneficiaries experienced in their economic conditions after installing a concrete floor, particularly in terms of savings and new opportunities.

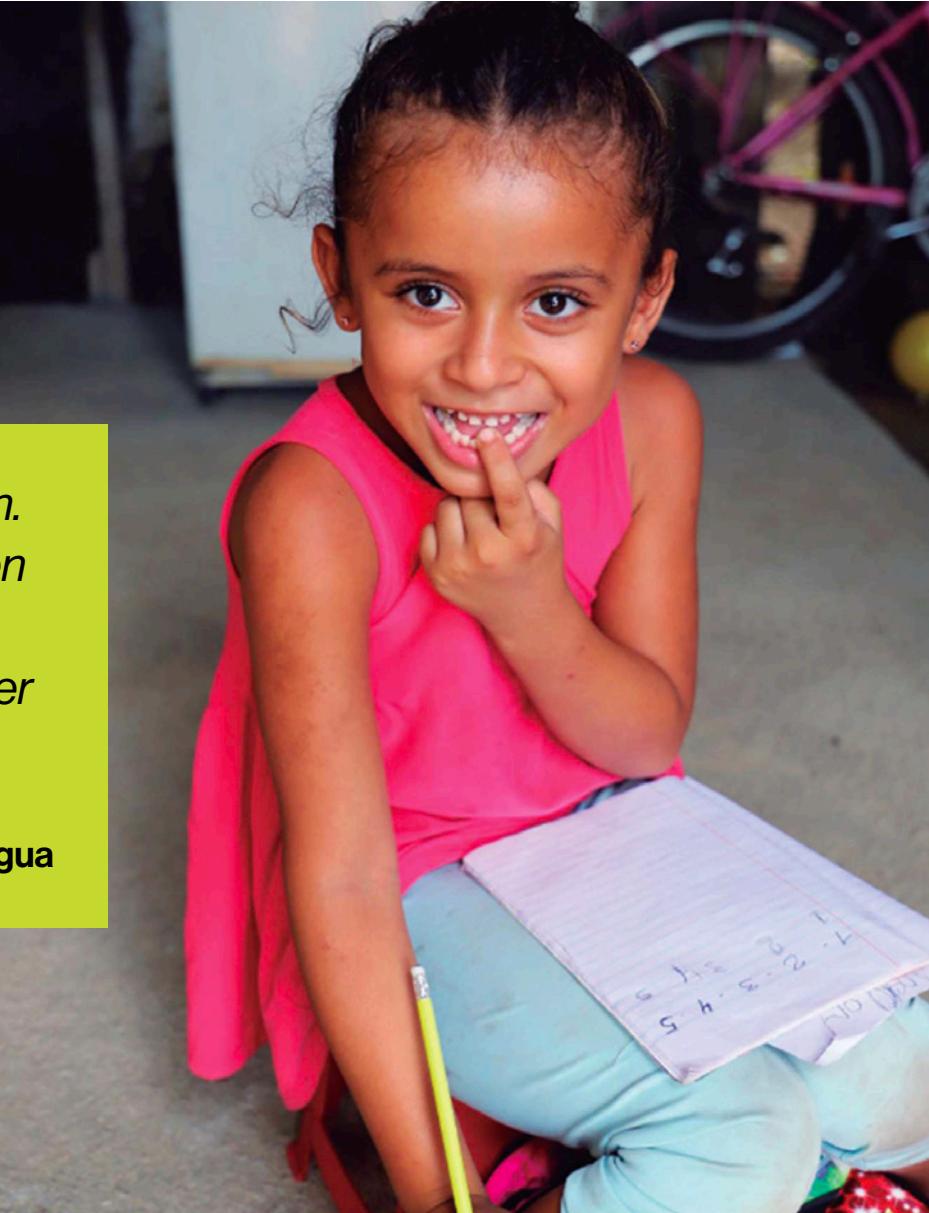
Satisfaction with housing is a solid predictor of economic behavior, as it can forecast changes in housing demand. Discomfort

with one's home acts as a deterrent from seeking new options, affecting both financial sustainability and long-term consumption decisions (Díaz-Serrano, 2006).

Likewise, our study in the Dominican Republic showed that families with a concrete floor saved 79% on health expenses. By improving the hygiene conditions in their home, they were sick less often compared with those with a dirt floor. Consequently, they had a greater capacity to save. Our research also suggests that people with higher quality floors have better mental health and a greater level of satisfaction with life.

“Being part of this project is a blessing from heaven. It made our dream come true because we had been waiting to receive our bonus so we could install a concrete floor; now we can use that money for other home improvements.”

Kenia, Josselyn's mother, Nicaragua



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More savings and greater investments in the home

In Guatemala, families with dirt floors were spending significant economic resources on cleaning products (soap, brooms, paper, water, etc.) as well as a substantial amount of time cleaning due to the constant presence of dirt and mud inside the home. This was especially true during the rainy season. Furniture and clothing would constantly deteriorate due to excessive dirt and moisture, translating into additional expenses. These conditions also caused frequent illnesses, particularly for children, meaning extra medical costs.

In the Dominican Republic, despite the adverse circumstances the country experienced during our study period (floods, hurricanes, dengue outbreaks and economic depression), we found that having a concrete floor made families more resilient to these challenges. The ability to cover their basic needs, save, invest and access new sources of financing improved by 20% for families who had received an adequate floor compared with those who still had a dirt one.

Thanks to a concrete floor, vulnerable people living in adverse contexts and impacted by difficulties and tensions...

...have improved economic wellbeing thanks to a:

79%
savings in medical expenses, or \$17.70 per month



20%
greater financial stability to meet household needs, resulting in a

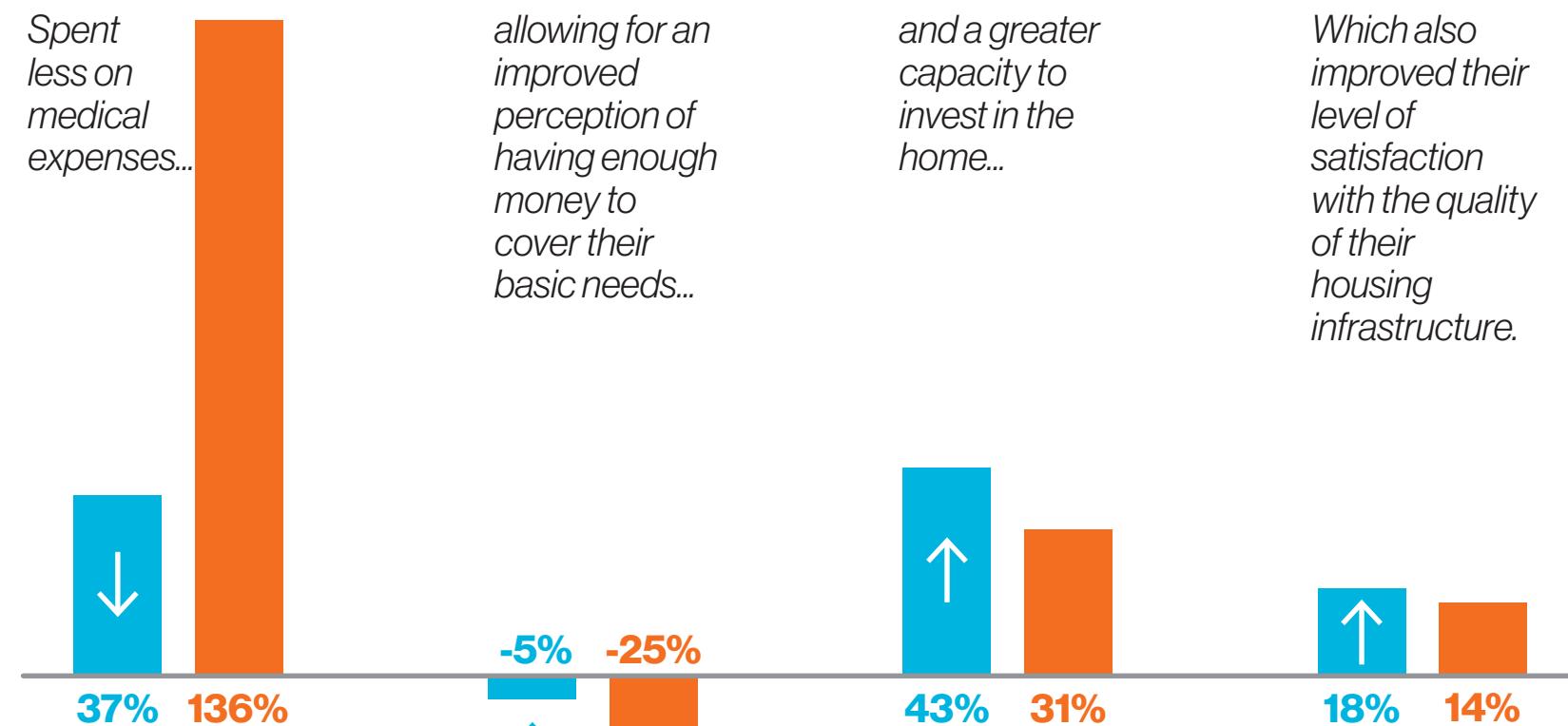


12%
Increase in investments in the home, or \$222 in three months



So, what happens to economic development when people receive a concrete floor?

Percentage difference per indicator before and after beneficiaries received a floor and comparison with those who did not



Medical expenses

Financial capital

Investments in home improvements

Housing and infrastructure

Beneficiary group

Comparison group



Having a concrete floor creates **more favorable conditions**



for **all economic development indicators** compared to not having one.

The greatest contributions a new floor made to economic development were:

Greater financial **stability** despite unfavorable conditions



Lower health-related **expenses**



More **investments** in the home





Since receiving a concrete floor, Natalia (San Juan Sacatepéquez, Guatemala) spends more time weaving, which means more financial resources for her family.
© Habitat for Humanity Guatemala.

“The money we’ve saved on things like brooms and medicine, and the fact that now we spend less time cleaning, means that we can focus more on making and selling our weavings.”

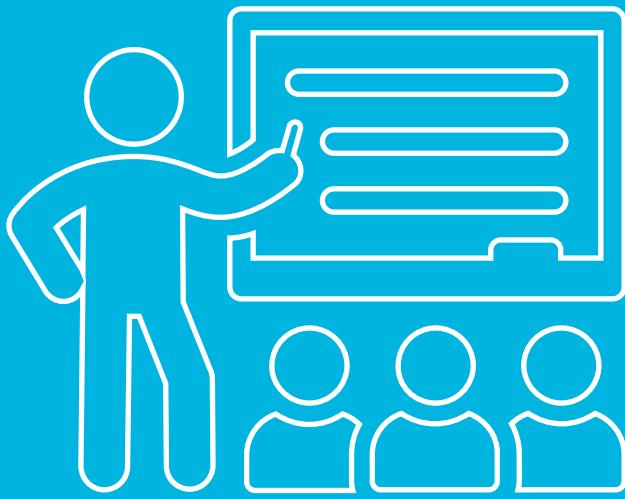
María, Guatemala

After their concrete floor was received, families said their homes were more hygienic, allowing them to save on cleaning products. They were also spending less on health-related expenses such as medicines to treat respiratory and skin diseases.

Families also shared that the intervention had an impact on the durability of their furniture and clothing, which had less day-to-day contact with moisture so deteriorated less quickly. This, in turn, meant that families could replace these items less often.

Finally, by spending less time cleaning and maintaining the home, women were able to spend more time on weaving projects. This meant increased productivity and more money to spend. The conditions that a concrete floor enabled gave families an opportunity to do more inside their homes and invest in new areas of wellbeing.

EDUCATION



One of the benefits of a concrete floor is the safety and comfort it gives children to play and do their schoolwork.
© Habitat for Humanity Dominican Republic / Media Crew

In every home across the Latin America and the Caribbean region, children tend to play, draw and do their schoolwork on the floor. We want them to have the greatest possible quality and cleanliness so they can grow up healthier, play more and succeed in their studies.

With this vision in mind, we gathered data and stories from families who benefited from the 100,000 Floors to Play On initiative to see if their situation improved. In the Dominican Republic, children with a concrete floor missed 15% fewer days of school than their classmates who did not receive a floor. Various academic studies

and international organizations highlight the relevance of this difference.

The World Bank (2018), for example, states that school absences significantly affects academic performance, particularly in contexts of poverty, which in turn hinders learning outcomes in core subjects. In fact, students with chronic school absences score as much as six points lower in math and reading (Gottfried, 2014). This shows that, regardless of the cause of absences, school attendance is crucial for learning (OECD, 2023).

Prolonged absences considerably increase school dropout rates

According to a report by the World Bank, UNESCO and UNICEF (2021), the risk of dropping out of school increased by more than three-fold in regions like São Paulo (Brazil). This trend has also been observed in the United States and across Latin America, especially in rural areas and among students with fewer financial resources, where continuity in education is key to mitigating inequalities and building future opportunities (Espíndola & León, 2002; Balfanz & Byrnes, 2012).

In other words, reducing school absences is key to improving not only academic performance but also other aspects of the quality of life, wellbeing, and future of students. Regular attendance allows children to acquire the fundamental social and occupational skills they need to one day join the workforce. Likewise, it reduces the risk that children will experience disciplinary issues or engage in juvenile crime.

Playing inside the home favors the cognitive, emotional, social and physical development of children

In the Dominican Republic, the children living in homes with a concrete floor spent an average of two more hours playing in the home than those who have not yet received this improvement. This is relevant, as playing in the home promotes key cognitive, emotional and social abilities.

“The children spend less time in the street now; they play inside, gathering up blankets to make forts inside the house. The advantage is that I can be there to watch them and care for their needs.”
Ivania, Nicaragua

Activities like playing with blocks or puzzles stimulates critical thinking and problem solving, which are essential to learning (UNICEF & The LEGO Foundation, 2018; American Academy of Pediatrics, 2007; Tamis-LeMonda et al., 2004). Playing also allows children to express their emotions and develop resilience and self-regulation,

fundamental to their emotional wellbeing (Goldstein, 2012). Through symbolic play, children face challenges and achieve goals, which reinforces their confidence and autonomy (UNICEF & The LEGO Foundation, 2018).

Fearn and Howard (2011) have shown that in contexts with limited resources, play becomes a vital tool for emotional development and self-regulation. Children living in extreme circumstances like the streets of Rio and Cali use play to create connections and adapt to their surroundings, fostering skills that are essential to coping with their environment. This, in turn, supports their emotional wellbeing and reinforces their sense of autonomy and belonging.

In the right-hand column, we summarize the education-related results for the Dominican Republic.

“I feel good because now my grandkids can play with their toys on the floor. Before, they couldn’t because they would get sick; rats and other animals would come in because there was space between the floor and the walls.”

Ana Berkis, Dominican Republic

“This floor was in a very bad state. Before we installed the concrete, we didn’t want to be inside. But now, my family wants to be at home. My son Jake plays ball. He likes to spend more time playing on the floor now; he has more freedom at home and can do all of his schoolwork.”

Mayelin, Dominican Republic

Thanks to a concrete floor,

vulnerable people living in adverse contexts and impacted by

difficulties and tensions....

...have a better learning environment for children, thanks to:

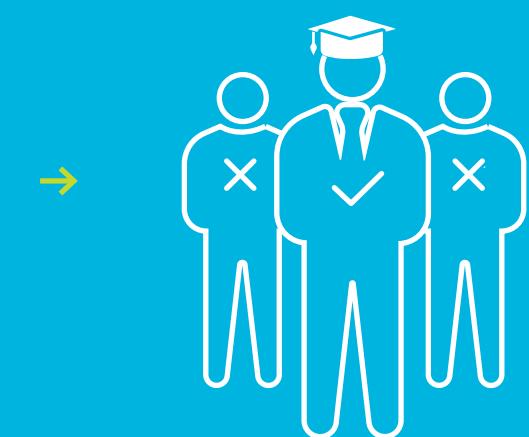
80%

more hours of play in the home
Or an average of 2 hours per day



15%

fewer school absences



More motivation to play and study in the home

In Guatemala, the children of beneficiary families didn't have an adequate space inside the home to play and do their schoolwork. This was mainly because of the dirt and mud that would collect in the house, especially during the rainy season. Because of this, their academic performance suffered. Their school supplies were always full of dirt, making the students less motivated to complete their school-related tasks.

Once their families installed a concrete floor, however, the children had a more comfortable place to study. When they sat down to complete their academic assignments, their notebooks and other materials were cleaner and less full of dust and dirt. By turning in cleaner assignments, their academic performance improved.

Finally, by having a more adequate space to study and increasing their academic achievement, children began to show greater motivation and interest in completing their school-related tasks. Children also showed an increased willingness to share their study space with their peers, which facilitated group study and collaboration.

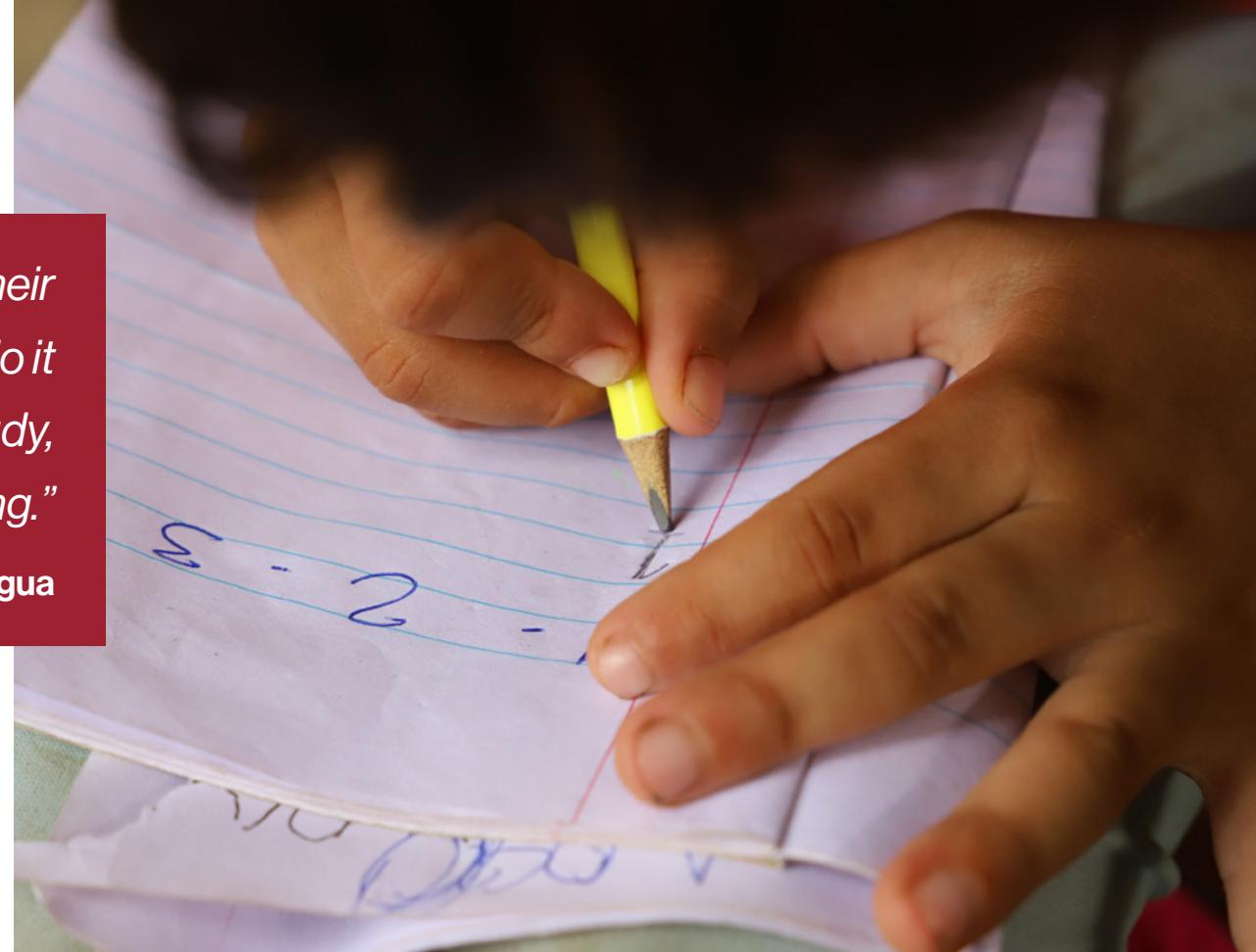
"The toys and school supplies are no longer full of dirt, and the kids have a more comfortable and spacious area to do their work. They can even play with marbles and spinning tops inside the house."

Carmen, Guatemala

In terms of recreation and spaces to relax, various studies on childhood psychology show that increasing hours of play inside the home has favorable results on children's cognitive, emotional, social and physical development. It also strengthens family connections, particularly in vulnerable contexts.

They're more motivated to do their schoolwork because now they can do it on the new floor in our home. They study, they play, and they finish everything."

Blanca, Nicaragua



Illustrative images. © Habitat for Humanity Nicaragua / Jessly Obando

"In my case, my kids didn't like to bring their friends over before. They said it made them feel bad because their houses were really nice and ours wasn't. Now, they bring their friends over, they play, they do schoolwork together, and they feel different—happier and more motivated."

Marta, Nicaragua



Now that they have a concrete floor, Natali Arias (Dominican Republic) and her children spend more time playing in the home and creating with paint.

© Habitat for Humanity Dominican Republic / Media Crew

In this sense, Habitat for Humanity found that children increased the amount of time spent playing inside the home. Prior to receiving a concrete floor, the dirt and discomfort inside their house meant they would mainly do these things outdoors.

The American Academy of Pediatrics (AAP, 2012) states that being able to play inside the home is of even greater importance in contexts of poverty, as these tend to lack access to adequate educational resources and outdoor recreation areas. Providing a safe space in which children can learn therefore enriches their academic potential and provides greater opportunities for growth and wellbeing.

Having a concrete floor gives children a greater variety of ways to entertain themselves inside the home. They can play with marbles or spin wooden tops—games that don't work as well on a dirt floor. Crawling also benefits from replacing a dirt floor with a concrete one. On a poor-quality floor, children quickly become dirty, making crawling an activity that depletes rather than strengthens the family. On a concrete floor, toddlers can crawl safely and freely, furthering their development. Toys also deteriorate less quickly, allowing families to keep them for longer and spend less on replacements.



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NICARAGUA

Gabrielito now has a floor to play on

Like many grandparents, Cándida Rosa cares for her grandson while his mother works to earn money for the family.

"My husband installed this little store, we restock it, little by little. Now that we have a floor, things are better, because the shelves are cleaner, more stable. And we'll keep moving forward like this—improving one day at a time," she told us.

Between tending to the business and caring for Gabriel (2), Cándida could barely keep up as her little one crawled on the floor. Now, this is less of a concern because their concrete floor is easier to keep clean. Gabriel can play safely, and Cándida feels more relaxed.

CONCLUSIONS

By measuring the contributions and impacts that the 100,000 Floors to Play On initiative has had on families, our study showed that those who received a concrete floor had **greater resilience and a higher capacity to face the challenges of adverse contexts** (floods, tropical storms, dengue and inflation) compared to those who had not yet received one.

In the area of **economic development**, a concrete floor had favorable results for every indicator measured. In 2023, despite the economic hardship caused by floods, hurricanes, dengue outbreaks, and the increased feminization of poverty, Dominican families who received a new floor still showed greater financial stability than those who had not yet received one.

At the same time, we found a lower incidence of health-related expenses and an increase in investments in making improvements to the home. Tangibly speaking, people who received a concrete floor showed a 79% improvement to their health, translating into a 20% improvement in how they viewed their financial capacity to cover their basic needs. Additionally, they invested 12% more in their homes, generating a 4% increase in how they perceived the quality of their housing infrastructure.

+ RESISTANCE towards challenges and stressors

+ TIME playing safely in the home

+ financial STABILITY

+ INVESTMENTS in home improvements

FLOORS

+ CLEANLINESS

- EXPENSES on health

+ SATISFACTION with their house and floor

+ CONTROL over school absences

+ LEVEL of satisfaction with housing infrastructure



With respect to **wellbeing**, the most evident improvements were a greater satisfaction with flooring (239%) and the home in general (25%). In terms of school absences and hours of play inside the home, having a concrete floor meant that school-aged children missed 15% fewer classes and spent an average of two additional hours each day playing inside the home.

Based on the results of each area, we can therefore say that a **concrete floor contributes to resilience** by enabling families to better resist the effects of adverse contexts, including climatic events, economic crises and illness outbreaks. It provides greater financial stability and fewer health-related expenses, while also allowing families to invest more in the home and experience an improved satisfaction with the quality of their housing infrastructure. Finally, it combats school absences and allows children to spend more time playing safely inside the home.

In Nicaragua and Guatemala, the people we talked with said that this simple home improvement increased their ability to save; their houses and personal effects deteriorated less quickly and the new floor meant less money spent on healthcare and medicines. After receiving a new concrete floor, families noticed substantially fewer gastrointestinal and respiratory illnesses, particularly among children, thanks to cleaner and more hygienic conditions. Emotional wellbeing also improved, with beneficiaries expressing lower levels of stress and greater satisfaction with their home environment.



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NICARAGUA

Let's go play!

When we first visited Isabel María's home in November of 2022, the house was very wet from the rain and we found a sweet and distinctive scene: Isabel's three grandchildren, Aylis (8), Gadiel (4) and Marcelli (4) were watching cartoons in what we can only describe as improvised beds. At that time, Isabel explained that this was the solution she had

devised to protect them from the moisture from the dirt floor and keep them from contracting respiratory illnesses.

In early March, we returned to Isabel's home in the neighborhood of Gerardo Brook de Esteli to find a very different panorama. The house looked cleaner and more spacious. They no longer had to arrange a hard "bed" of plastic chairs so that the little ones could watch television; now they could snuggle up on the sofa, safe and comfortable.

In the area of academic achievement, children in both countries felt more motivated to complete their schoolwork because they had a more adequate space in which to study. Additionally, children spent more time playing comfortably inside the home, and their toys lasted longer. In Nicaragua, families reported a substantially lower number of absences from educational centers.

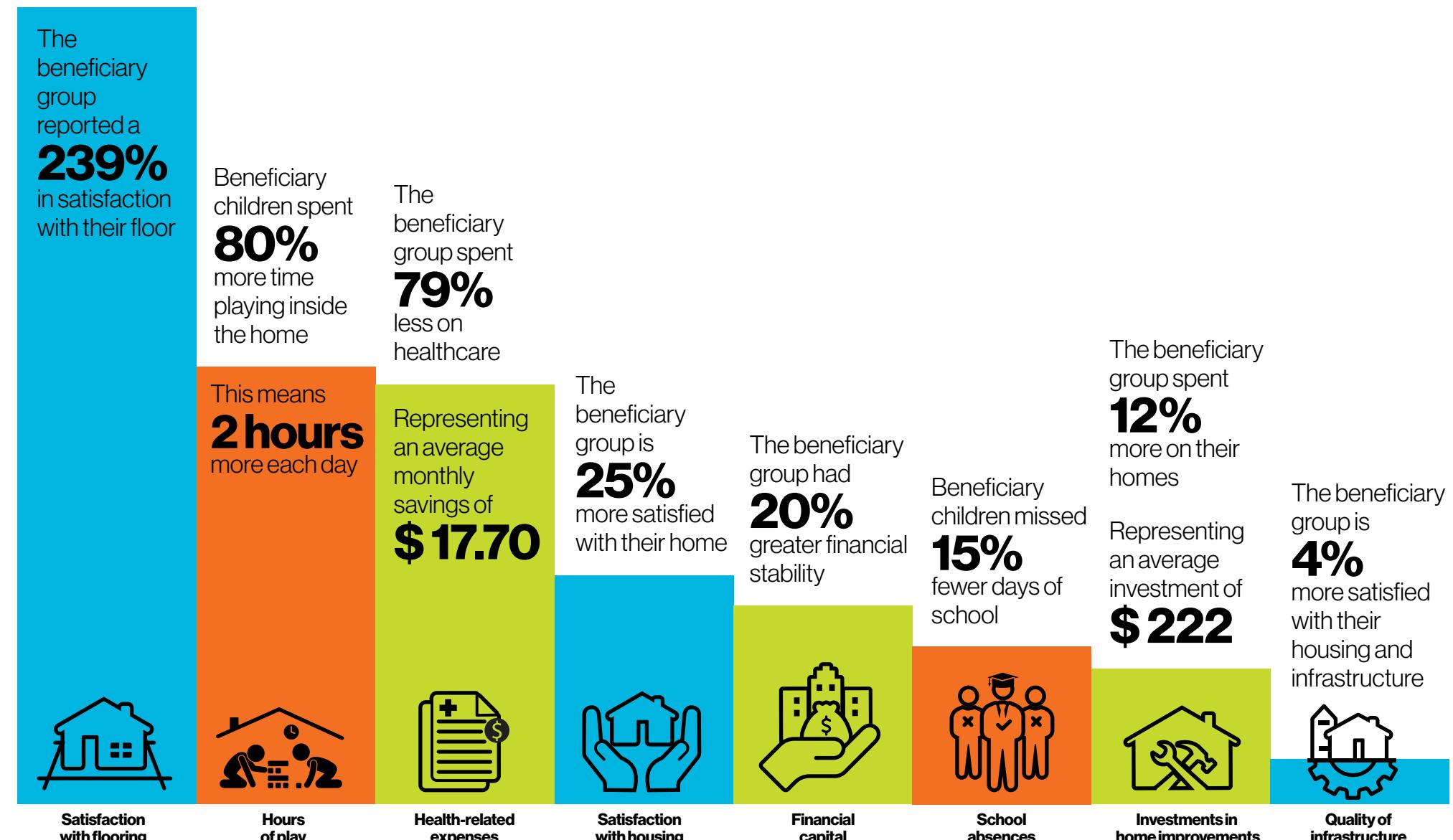
Considering these results, we can confidently say that the 100,000 Floors to Play On initiative had a fundamental impact on the quality of life of families in Latin America and the Caribbean living in conditions of vulnerability and exclusion, particularly women heads of household, people with disabilities, and children. The initiative also helped further the advancement of multiple SDGs from the 2030 Agenda for Sustainable Development, including eradicating poverty; ensuring health, wellbeing and universal and equitable access to potable water and adequate health and hygiene services; and empowering women and children.

The results of these evaluations confirm that concrete floors do, in fact, make a difference on the quality of life of families, highlighting the need to replicate this initiative in other territories and countries of the Latin America and Caribbean region. We want our future and current donors and partners to have the confidence that **100,000 Floors to Play On** is a program that not only replaces dirt floors with concrete, but has measurable impacts on the health, economy, and education of children and their families.

Our search for additional resources to eradicate dirt floors from every home in the region continues. Learn more about how you can join this effort at www.100kfloors.org.

Results according to level of impact.

Compared with those who have not yet received one, families with a concrete floor:



Results from the Dominican Republic



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A concrete floor was life changing for the Wilkin Matos family in the Dominican Republic; the happiness is evident on their faces, and their little one now has a healthy place to play.
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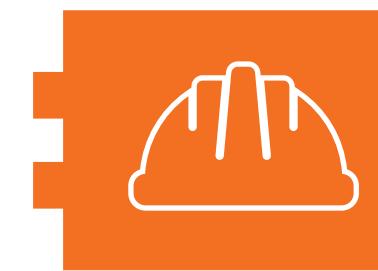
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