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# Listening Through the Walls: How Qualitative Research Reveals the Human Impact of Better Housing

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# Listening Through the Walls: How Qualitative Research Reveals the Human Impact of Better Housing

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Urban housing inadequacy remains a silent driver of ill-health, stress, and fractured family relations in Latin America. We evaluate Hogares Saludables—a social innovation by Cementos Argos—across Medellín, Cali, and Barranquilla (2023–2024), combining a randomized controlled trial (N=1,200) with a qualitative module we term Home Biographies, which integrates Most Significant Change, photo-elicitation, and body mapping. This mixed-methods design moves beyond “what works” to show how and why physical upgrades to floors, kitchens, and bathrooms reconfigure daily practices, dignity, and agency. We document short-run gains in mental well-being, household harmony, and perceived safety; reductions in women’s unpaid domestic burden; and strengthened social capital through community participation and skills training. Improvements recalibrate residents’ temporal imaginaries—re-signifying past sacrifice and expanding credible futures—thus linking material change to symbolic belonging. We translate these insights into actionable guidance for scaling: align technical choices with lived preferences, embed participatory communication, and leverage on-site training to minimize dropout. By centering beneficiary voice within rigorous causal inference, this study contributes an evaluative blueprint for SDG-aligned housing programs and invites housing scholars to treat home not only as infrastructure, but as a platform for relational and temporal transformation.

**Keywords:** Qualitative research, Housing improvements, Qualitative housing deficit, The Most Significant Change

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## Introduction

Globally, around 55% of the population lived in urban settlements in 2021; this figure is projected to increase to approximately 1.6 billion people by 2030. An estimated 1.26 billion people live in inadequate housing, with limited access to essential services such as water and sanitation. (Behr, y otros, 2021). Access to adequate housing determines economic well-being, human dignity, physical/mental health, and overall quality of life. (Bah, 2018). Therefore, it is included as a key principle in the 2030 Agenda for Sustainable Development (UN), specifically in Sustainable Development Goal (SDG) 11, which seeks full access to adequate, safe, and affordable housing and basic services, as well as the improvement of slums. In Colombia, approximately one-third of families live in homes with inadequate floors or without access to water (DANE, 2021), which generates stress and tension in the home and diminishes the quality of life of its inhabitants. Evidence shows that inadequate housing can lead to domestic violence due to high levels of social stress. Therefore, home improvements have been shown to improve the family's overall mental well-being (Curl, y otros) (Devoto, Duflo, Dupas, Parienté, & Pons, 2012). , approximately one-third of families live in homes with inadequate floors or without access to water (DANE, 2021), generating stress and tension in households and diminishing their quality of life, and reflecting an urgent need for home improvements (Curl, y otros) (Devoto, Duflo, Dupas, Parienté, & Pons, 2012).

Our research examines how quality of life is affected by housing improvements based on Cementos Argos' Healthy Housing program, implemented in the Colombian cities of Barranquilla, Medellín, and Cali during the 2023–2024 period. To achieve this, we followed a mixed-methods evaluation that triangulated quantitative and qualitative impact evaluation methods. We demonstrate that improving household conditions has multidimensional impacts, for example, it can lead to better family relationships, it improves children's physical health and cognitive development, lower rates of infant mortality and communicable diseases such as diarrhea and increases the overall well-being and life satisfaction of all household members (Sclar, Garau, & Carolini, 2005). These improvements are positive for the people directly involved and benefit society.

In this article, we focus on the qualitative methodology, exploring its challenges, potentialities and limitations for impact evaluations. Particularly, we address the need for defining the role of each component within mixed-methods evaluations and the importance of methodological innovation to adapt to research demands. We also highlight the importance of qualitative research in the understanding of intervention's impacts from beneficiaries' perspectives and facilitating knowledge transfer from the Healthy Housing program to other key stakeholders and for future interventions.

## Background

### *Qualitative housing deficit*

The housing deficit reflects an insufficiency in quantity (quantitative deficit) and in conditions (qualitative deficit: materials, services, habitability) (CEPAL - Comisión Económica para América Latina y el Caribe, 2012). In Latin America,  $\approx 1$  in 3 households faces housing shortfalls, with urban and vulnerable groups most affected by demographic pressure and poverty (ONU-Hábitat, 2020) (Bouillon, 2012). In Colombia, a high qualitative deficit persists relative to the quantitative one (DANE, 2021).

**Table 1. Colombia: deficit overview**

Indicator	2020	2021
Quantitative deficit (% of households)	8.0	7.5
Qualitative deficit (% of households)	23.4	23.5
By area (2021)		
Area	Housing deficit (% of households)	
Populated centers	20.4	
Populated & dispersed rural centers	68.2	
Qualitative deficit breakdown (Colombia, 2021)		
Component	Households (approx.)	
Poor-quality floors	500,000	
Kitchens / water for cooking	1,700,000	
Sewage & waste collection	1,700,000	
Estimated total	$\approx 4,000,000$	

Source: own elaboration based on (DANE, 2021).

**Table 2. Study cities: urban scale & satisfaction**

City	2024 Population (millions)	Area (km <sup>2</sup> )	Density (inhab/km <sup>2</sup> )	Housing satisfaction 2023 (%)
Medellín	2.62	380.6	6,883.8	81*
Cali	2.89	564.0	5,124.1	84
Barranquilla	1.20	166.0	8,012.0	83

\* In Medellín, the **quantitative deficit in 2023** was **14%**, and satisfaction fell from **87% to 81%** (Medellín Como Vamos, 2024)

**Source: own elaboration based on Medellín/Cali/Barranquilla Cómo Vamos (2023–2024).**

### ***Hogares Saludables program***

Hogares Saludables (HS) is a social program implemented by Cementos Argos, Colombia's largest cement producer, which seeks to promote an inclusive society through two complementary components: (i) reducing the qualitative housing deficit and (ii) developing life and work skills. The first component focuses on improving housing infrastructure conditions by providing materials and labor to improve floors, kitchens, and/or bathrooms. The second component focuses on promoting the acquisition of life and work skills among beneficiaries. Beneficiary families receive training in the fundamental elements of construction and other skills to facilitate the adoption of healthy habits at home.

HS adopts a holistic and participatory approach, with the community and local stakeholders involved from the beginning to the end of the intervention. This approach has two main outcomes. First, empowering families to reduce the housing deficit could increase their sense of belonging to their homes and drive a series of future improvements. The second outcome relates to the strength of the social network derived from the program through ongoing community interaction.

The program has been implemented in Medellín, Colombia, and will expand to Cali and Barranquilla, covering several neighborhoods in the country's second, third, and fourth largest cities, respectively. HS activities are divided into four phases: Identify the territories and beneficiaries, Budget, Training and Construction. These interventions are in line with some Sustainable Development Goals such as SDG-1,3,4,5,8,10,11.

In the long term, some effects can be expected, based on international literature. First, the path of change related to healthier and more dignified housing improves expectations of overcoming poverty. Second, the path of change related to better physical health is expected to reduce cases of anemia in adults and children. Third, the path of change related

to beneficiaries' employability is expected to experience long-term increases in income. Fourth, greater community interaction increases participation and consensus-building in the territory, so it can be expected that the capacity for organization and self-management of projects of collective interest will increase in the long term.

The expected impacts are defined based on the pathways for change.  
The HS impacts are:

1. Improved social capital:
2. Improved quality of life
3. Reduced social exclusion
4. Reduced socioeconomic vulnerability.

**Table 2: Pathways, time horizons, and evidence**

Dimension	Short-term outcomes	Longer-term expectations	Indicative evidence
Housing → Health & well-being	Healthier, safer spaces; improved family interactions; lower stress; less time cleaning.	Lower anemia (adults/children), sustained mental-health gains; better child cognition and school attendance.	Replacing dirt with cement floors reduces parasites and GI illness; reported cuts in diarrhea (49%), parasitic infections (78%), anemia (81%), stress (45%) and depression (52%). (Pérez-Casas, 2017) (Cattaneo M. G., 2009) (Galiani S., y otros, 2017).
Gendered time & care work	Reduced unpaid domestic burden; improved daily routines and perceived dignity.	Greater agency and participation outside the home.	International literature linking domestic effort relief to women's well-being.
Skills → Employability & income	Construction know-how; lower course attrition via on-site training.	Higher employability and income; improved food security.	Training/practice embedded in HS delivery.
Social capital & collective efficacy	Denser neighbor networks; visible co-production of improvements.	Community self-management of projects; stronger voice in service provision.	Engagement of local leaders and iterative collaboration.

**Source: Own elaboration.**

## Materials and methods

### *Challenging impact evaluation formulas*

The complexity of the program made it evident that we needed a broader methodological strategy to understand how it impacts people's lives. Recognizing the potentialities of articulating qualitative and quantitative methodologies in the assessment of development programs (Plano Clark, et al., 2013), we conducted an impact evaluation based on a mixed-method approach between 2022 and 2025 in the three cities of implementation. This implied that, as a research group, we were including for the first time a qualitative component into our research process.

Expanding on previous experiences, the quantitative component consisted of a Randomized Controlled Trial (RCT) to assess the causal impact of a housing intervention, using a sample of 1200 households divided into two groups: a treatment group composed of 600 households and a control group also composed of 600 households. Further description about the quantitative research process can be found in (García, Saiz, Muñoz-Mora, Lalinde-Velásquez, & Mejía-Tejada, 2025).

Unlike the quantitative arm, the qualitative component had to be built from scratch, which required methodological innovation. We clarified its role within and vis-vis the impact evaluation, then tested, combined, and created methods tailored to the study's needs. The next section details this process and contributes to debates on the potential and challenges of qualitative approaches to assessing social interventions, as well as the opportunities created by methodological complementarity.

#### *1) The role of qualitative methodology in a mixed-methods approach*

There is a growing interest in mix-method approaches (Fàbregues, et al., 2023) and consensus on their capacity to provide the most comprehensive understanding of interventions' impact (Lipman, et al., 2010). However, the tendency to ignore the paradigmatic differences between quantitative and qualitative approaches has limited the scope of the studies implementing it (Drabble & O'Cathain, 2015). There is a lack of engagement with the tensions that can arise when comparing RCT, which require adherence to predetermined protocols, control over the context and assumptions of generalizability, with qualitative methodologies which emphasize flexibility, focus on context and subjectivity, and employ inductive analysis (Drabble & O'Cathain, 2015). This has resulted in the imposition of quantitative values and principles, relegating qualitative components to a secondary role where its methods and results are only meant to validate or confirm the dominant quantitative ones (Hesse-Biber, 2012; Drabble & O'Cathain, 2015; Hendren, Luo, & Pandey, 2018).

To overcome these limitations, a deliberation process was required to establish the way in which quantitative and qualitative components are integrated and, likewise, their role throughout the research process (Drabble & O’Cathain, 2015). Tracing the shortcomings of traditional quantitative evaluations reported in the literature, we identified an emphasis on the effectiveness, outcomes and impact of interventions that neglects the process and context (Drabble & O’Cathain, 2015; Nastasi & Schensul, 2005). On that account, traditional approaches have had a limited understanding of how and why interventions work, how people experience them, what are the associated meanings, and which are the emergent manifestations of expected outcomes that may not be reflected in standardized instruments (Nastasi & Schensul, 2005).

On the contrary, qualitative research concerns how the social world, conceived as complex, multi-layered and textured, is interpreted, understood, experienced, produced or constituted (Mason, 2002). It focuses on social meanings, interpretations, practices, discourses or processes, while being sensitive to the context in which they occur (Mason, 2002). It introduces flexibility as a key strength (Drabble & O’Cathain, 2015), aiming to generate rich, nuanced and detailed data that nurtures a comprehensive understanding of reality (Mason, 2002). For impact evaluation studies, this translates into the identification of the experiences and context of the people affected by an intervention; the understanding of how such intervention influences and interacts with them, as well as how it is perceived and received by the target population; and the establishment of the most valued outcomes and impacts, expected or unexpected, by the intervention's stakeholders (Fetters & Molina-Azorin, 2020).

We advocate then for the principle of complementarity between the methods. Neither of the components was designed to facilitate the other, instead, both were employed to enable differentiated, but dovetailed contributions (Flemming, Adamson, & Atkin, 2008). In this sense, defining a research question was crucial to determine the qualitative contribution to the impact evaluation and, consequently, how to articulate this component with the RCT without losing its independence (Plano Clark, et al., 2013; Flemming, Adamson, & Atkin, 2008; Nastasi & Schensul, 2005; Brady & O’Regan, 2009). Two additional decisions were needed in this regard, in which stage(s) of the evaluation process - planning, data collection and interpretation - to facilitate the integration of the methods (Flemming, Adamson, & Atkin, 2008) and when to conduct the qualitative data collection in relation to the intervention - before, during or after - (Drabble & O’Cathain, 2015; Plano Clark, et al., 2013).

Resulting from our deliberation process, three main questions emerged associated with the potential of qualitative research: How do beneficiaries experience the changes that resulted from their housing improvements developed by HS program? What are the HS program's strengths and areas for improvement? How to facilitate transfer of knowledge from HS

program to other stakeholders and for future interventions? The literature review made it clear that these questions could be best answer by collecting data once the intervention was over (Fetters & Molina-Azorin, 2020; Drabble & O’Cathain, 2015; Sandelowski, 1996; Creswell, Klassen, Plano Clark, & Smith, 2011). Likewise, the pilot trial informed us of the need to wait for several months to avoid limited opinions or feedback from the participants, given their high expectations and continued interest in the program’s benefits. These same reasons, as well as some evaluation constrains, let us to the conclusion that methods should be articulated during interpretation. Thus, the results from each component were used to generate a third layer of analysis within impact evaluation.

## 2) Methodological innovation

Interventions aim for change; however, to fully understand their impacts, it is essential not only to measure the magnitude of this change, but also to explain its significance. Working on the latter, our research focused on people’s experiences of change arising from the physical transformation of their houses. For us, the beneficiaries’ perceptions and meanings associated with the intervention were key to determining its effects and informing the debate about development programs. Nevertheless, we needed a method that would allow us to address these experiences, while considering the demands of an impact evaluation: efficiency in data collection and a diverse target audience. This led us to a process of methodological innovation where semi-structure interviews were redesigned through the integration of three techniques, the most significant change - MSC, photo-elicitation and body mapping, as shown below.

Apart from the three cities addressed by this evaluation, HS program is implemented in several locations across the country, involving many diverse stakeholders. Engaging with the needs of such complex and participative interventions, Rick Davies and Jessica Dart developed the Most Significant Change – MSC technique to complement other monitoring and evaluation strategies (Serrat, 2009) (Serrat, 2009; Wilson, 2016). Two key processes define this technique, the collection of stories that account for the most significant changes experienced by a program’s participant (Choy & Lidstone, 2013) and the deliberation between its stakeholders to select the stories that reflect its most relevant outcomes and impacts (Serrat, 2009). This way, the MSC offered us an opportunity to explore and highlight participants’ personal experiences of change through the production and dissemination of short (multimedia) narratives, while fostering greater engagement of the stakeholders with the information generated by the evaluation (Zucchini, Carbon, Bosch, & Felloni, 2022).

According to the MSC’s developers, the stories of change can be collected by asking *What is the most significant change you have experienced because of your participation in the program?* Along with other supplementary questions to gain a clearer understanding of

when and where the change occurred, the actors involved, the reasons behind choosing the story, among others (Dart & Rick, 2003). However, our previous experiences implementing this technique showed that a complementary strategy was needed to produce narratives that allow a deeper level of analysis. Additionally, we needed to trigger stories connecting tangibles changes in people's houses with more intangible changes in their bodies, emotions and relationships. After reviewing possible methods that could respond to the needs of the evaluation and applying a pilot trial conducted in Medellin with five households, two other methods were integrated into our data collection strategy.

As part of the visual methodologies (Rose, 2016), photo-elicitation can be understood as "any form of interviewing that incorporates images in the data generation process" (Kyololo, Stevens, & Songok, 2023, p. 1). By facilitating exchanges where the brain processes both images and words, this method evokes different kinds of information (Harper, 2002). It sharpens participant's memory (Richard & Lahman, 2015; Harper, 2002), allowing them to reflect more deeply about their life experiences, along with the values, beliefs, and meanings shaping them (Richard & Lahman, 2015; Kyololo, Stevens, & Songok, 2023). Thus, photos of the spaces taken before the intervention were used to guide the semi-structure interview with the beneficiary households, aiming to trigger memories of the old spaces and reflections on the real impact of physical changes in their houses.

The pilot trial, which articulated MSC and photo-elicitation techniques, made us aware of something was missing in our method. In the context of informality, where people build their houses from scratch amid violence and high vulnerability, any alteration to a house and its related impacts reflects not only on their everyday life, but also on their lifetime project. Therefore, to fully understand the effects of housing improvement, the tradeoffs between time and space needed to be considered beyond the intervention's presence. Aligned with the identified gaps in the trial, body mapping emerged as a method that could help us explore people's life stories (Solomon, 2007) from a broader perspective and through the embodied experiences, emotions and thoughts (Gastaldo, Magalhães, Carrasco, & Davy, 2012; Gunn, 2017) associated with their houses. Additionally, it could provide an alternative way of telling stories by connecting "times and spaces in people's lives that are otherwise seen as separate and distal" (Gastaldo, Magalhães, Carrasco, & Davy, 2012, p. 10) and producing multimedia narratives to stimulate knowledge translation and exchange (Gastaldo, Magalhães, Carrasco, & Davy, 2012).

This methodological innovation process led to the development of a data-generating method called Home Biographies based on the integration of the three techniques — MSC, photo-elicitation, and body mapping — in a semi-structured interview. The photos of the household were then used to trigger a 45-minute conversation during which the story of the house was reconstructed through people's (embodied) life experiences, emphasizing understanding the role played by program in this story. As a result, stories of change

emerging from the program were produced using diverse formats to facilitate knowledge dissemination and deliberation among its stakeholders.

### 3) Research Design

The sampling strategy followed estimations reported in the literature, which state that 40 to 50 cases are sufficient to achieve thematic and meaning saturation in the analysis of a dynamic phenomenon (Schumacher et al., 2021). Thus, a total of 45 households participating in the program were interviewed, fifteen in each city - Medellín, Cali and Barranquilla. Diversity was guaranteed in terms of family composition (number of members), head of the household (female or male) and presence of children (with or without).

The home biographies were collected several months after the housing improvements, between October of 2023 and June of 2024. Interviews lasted around forty-five minutes and conversation revolved around four sets of questions: the story of the house, how it was built and the meanings associated to it; the spaces and how they were inhabited before the intervention, what were the thoughts, feelings and sensations they evoked; the transformation of the spaces, how was participating in the program, how the spaces are being inhabited, what are the thoughts, feelings and sensations they evoke; and the future of the house, the desires and aspirations associated to it.

The audio recordings and body maps collected were transcribed based on an interpretive reading of the data (Mason, 2002). The codification process followed a conventional content analysis using NVivo software where observation was prioritized over theory (Hsieh & Shannon, 2005). Therefore, the information was initially coded according to a temporal framework, and the themes addressed during the interviews, but the final categories of analysis were derived from the data generated during the research process.

## **Discussion**

The achievement of in-depth results has been possible through the implementation of conventional long-term methods. Nevertheless, these time-consuming methodologies are often unviable for applied research. This dilemma has resulted in methodological innovations aiming to create alternative routes to understanding (Pink, Tutt, Dainty, & Gibb, 2010). Aligned with these efforts (Pink, Tutt, Dainty, & Gibb, 2010), our research shows how qualitative research, through reflexivity and creativity, can offer new routes to understand the impact of housing improvement, while positioning participatory practice in housing development studies. A practice that recognizes multiple perspectives, especially the ones excluded from planning, and facilitates communication of knowledge and collective learning through the production of and dialogue around multi-media narratives.

## ***The relevance of qualitative research in the understanding of the impacts***

### *a. Looking into the present*

As widely reported in the literature, our findings reflect a connection between the physical home environment and the health, safety, and welfare of its inhabitants (Peek, Greder, & Berry, 2021; Fisher-Mclean & Turcotte, 2021; Cattaneo, Galiani, Gertler, Martinez, & Titiunik, 2009). Focusing on the everyday practices and interactions, the qualitative approach provided a deeper understanding of three pathways by which housing improvement affects the quality of life of household members.

The first pathway suggests that everyday use of household spaces constitutes a multi-sensory experience (Pink & Leder Mackley, 2012), which directly impacts both physical and mental health (Palimaru, McBain, McDonald, Batra, & Hunter, 2021). On the one hand, housing characteristics can lead to an uncomfortable experience (Rolfe, et al., 2020; Galiani S. , et al., 2017), triggering feelings of shame, stress or sadness that, daily, impact mental health. On the other hand, these characteristics can represent chemical or biological exposures as well as higher risk to accidents (Palimaru, McBain, McDonald, Batra, & Hunter, 2021) (Cattaneo, Galiani, Gertler, Martinez, & Titiunik, 2009) having a concrete impact on physical health,

I didn't like that when we took a bath, the water was soaking. That worried me a lot because of the mosquitoes that could transmit a disease to the boys. Sometimes it even gave me scratchy feet (...) I don't even want to remember that part anymore because, oh no! Sometimes you wanted to have everything very well organized, but it was impossible because you didn't have the resources. Before, my children were too lazy to take a bath, now they don't want to get out of the bathroom. With this, you kind of focus more on thinking about them, on improving their conditions. (Fragment of a story of change, Cali, 2024)

Now using the kitchen is much more comfortable and cleaning is easier. I was terrified that the wall would get greasy (...) For me, the kitchen and the bathroom are the most important parts of the house. If the walls are full of grease, the house is infested of cockroaches. You tell me, what does it feel like to sit or bathe in a dirty bathroom? When my house is clean, I feel light, I feel good. I see my home with more light, with a different mood, more cheerful. I feel like getting up and being in my home. (Fragment of a story of change, Medellín, 2024)

The second pathway points out how everyday interactions with household spaces imply psychosocial processes through which self- and external perceptions are shaped, impacting

households' well-being (Gibson M. , Thomson, Kearns, & Petticrew, 2011; Brickell, Nowicki, & Harris, 2023; Pink & Leder Mackley, 2012): "Tell me something, when you go out in the street without taking a bath, what do you feel? That you are dirty, but it is something that only you know, nobody else realizes it" (Fragment of a story of change, Medellín, 2024). Likewise, there is a strong link between these perceptions and aesthetic judgements that can translate into either a sense of status or exclusion (Brickell, Nowicki, & Harris, 2023; Rolfe, y otros, 2020),

One must have a good house, or all the time is going to be like... For example, what will you say or what impression will you get if you ask me for the bathroom and it looks like the one in this photo? If you see me drinking beer, you will say that I have enough money for a drink, but not to put it in my family's house. (Fragment of a story of change, Barranquilla, 2024)

Our research also allowed the emergence of a third pathway barely explored in literature. From a gender perspective, the additional effort needed to maintain and clean inadequate spaces indicates a connection between housing improvement and a relief on the double burden -of paid work and unpaid domestic labor- affecting women's health and well-being (Väänänen, y otros, 2005; Idris, Azit , Abdul Ghani, Syed Nor, & Mohammed Nawi, 2021; Raj, Keshari, Shankar, & Kesarwani, 2021)

I get up at two o'clock in the morning to go out to work (...) Before, one would arrived home, organize and organize, but everything would look the same or worse because there was no space (...) When the house is dirty, you feel stressed. I used to come home from work and get stressed thinking Where do I start? What do I do first? Organize the kitchen, sweep, mop...? Now one arrives and sees the kitchen is organized, the house looks nice. (Fragment of a story of change, Medellín, 2024)

### *b. Looking into the past and the future*

Contrary to the most common approaches to housing development and informality, which tend to underestimate the study of events, relations and processes in place (Marx & Kelling, 2019), we needed to reframe our understanding of self-build housing from households' perspective to fully understand the impacts of the HS program. From conventional approaches, the houses intervened are characterized by a combination of qualitative and quantitative housing deficits (CEPAL - Comisión Económica para América Latina y el Caribe, 2012) (CEPAL - Comisión Económica para América Latina y el Caribe, 2012). However, the description given by their owners referred to them as a blessing or wealth associated with the effort made, the guarantee of security and stability and the building of family ties: "my house is, mainly, peace and calm", "my house means a lot, it's the great achievement, all

the efforts and all years worn out", "my house is everything". By exploring the intersection between material and symbolic realities (Brickell, Nowicki, & Harris, 2023) (Kirk, Potter, & Wilking, 2022) qualitative research allowed us to acknowledge these houses as a lifetime project that requires significant efforts and, given the contexts of high vulnerability, are easily threatened by external pressure.

Following the work of (Sou, 2017) on integrating risk reduction into self-build housing, by conceiving houses as "more than a physical resource for shelter or to accumulate assets in order to reduce vulnerability", we can "identify the underlying and often hidden mechanisms that influence and catalyze the self-build housing process". In the case of our impact evaluation, the understanding of self-building housing as a lifetime project provided a new angle for analysis: time. Consistent with existing research addressing informal housing practices, time emerges as a central feature (Clough Marinaro, 2020) , this shifts the focus on assessing physical environments and deficient infrastructure to understanding the process of change moved by the "dynamic yet prosaic productive efforts of the residents" (Lombard, 2013).

"Foregrounding temporality offers access to residents' constructions of individual and collective identity, in terms of generating meaning through connecting past, present, and future narratives of home and place" (Lombard, 2013). Thus, when addressing the program's role within the household's lifetime project, it is possible to see its impact from a broader perspective. The housing improvements introduced by the program influence people's perceptions not only of their present, as shown in the section above, but also of their past and future. There is an impact of people's relationship with their own life-stories that, consequently, redefines their self-identities. Looking into their past, the achievement of better housing after years of hard work and dedication -despite moments of deprivation and continuous frustration- brings a sense of fulfillment, self-improvement and life-satisfaction,

To be able to see my bathroom well organized represents a different quality of life because there is self-improvement, there is a feeling of personal satisfaction. I started on land and boards. I had to borrow the bathroom from the neighbor or take the children to the bush; it was the only option we had. That's how we all started here (...) It is hard because in all these years, one has stopped eating something, going out, wearing something or going for a walk to buy a lump of cement or sand to build a column or beam. So, you end up being cohibited from everything. I'm not lying, almost all these 17 years I was frustrated and locked up, always thinking about building. (Fragment of a story of change, Medellín, 2024)

Looking into their future, the current achievement of goals opens possibilities for change in the years ahead. This way, the housing improvements awaken households' motivation, while leaving them with greater availability of resources, enhancing people's agency,

Seeing how the house has changed is good because my grandpa has been trying to make progress in the house for a long time, but because of problems, which are always there, he has not been able to do so. He has a lot of enthusiasm for the house, but he has been deprived of doing many things to try to improve it. It is no secret that with a basic salary one goes from living to surviving, so it becomes very difficult to set aside money to make the improvements that the house needs. When the changes were recently made, my grandpa was very happy and encouraged. He said that since he had been able to start with the improvements, he is going to finish the house. (Fragment of a story of change, Medellín, 2024)

There is a clear connection between the built environment and the perceived quality of life, which “encompasses multiple domains of individuals’ well-being, including physical, mental, and social functioning, material wellbeing, personal development, rights, inter-personal relations, and self-determination” (Palimaru, McBain, McDonald, Batra, & Hunter, 2021). The exploration of the home biographies allowed us to identify the mechanism mediating this relationship to analyze the impacts of HS program from an in-depth perspective (Gibson M. , Thomson, Kearns, & Petticrew, 2011). Through the articulation of spatial and temporal dimension, missing in housing development studies but addressed in geographic debates (Lombard, 2013), our qualitative approach provided significant insights on how change can be generated –directly and indirectly- by housing improvement interventions.

### ***Participatory Strategies as Catalysts for Change***

The integration of qualitative techniques in our evaluation not only deepened the understanding of the program’s impacts but also fostered the active participation of their beneficiaries. The participatory strategies implemented, particularly through the Home Biographies methodology, enabled a shift from asymmetrical research dynamic, to a more horizontal one where residents have a saying in knowledge production. This section explores two key dimensions that emerged from the analysis: the inclusion of diverse perspectives, and the social dissemination of knowledge.

#### ***a. The Inclusion of Diverse Perspectives***

By using photo-elicitation and Body Mapping together with the Most Significant Change (MSC) technique, our study enabled participants to take an active role in the interviews. These techniques foster empowerment by giving participants control over what is highlighted when sharing their experiences (Richard & Lahman, 2015), while encouraging a reflective process that helps clarify their values and interpretations (Gunn, 2017; Gibson M. , Thomson, Kearns, & Petticrew, 2011). This aligns with the photo-language approach (Rey &

Retamal, 2020), which facilitates narrative expression in socially marginalized populations. In our study, participants were able to select the photos reflecting greater impacts on their body, relationships and everyday life and expand on both tangible transformations and symbolic meanings associated to them — for example, what it “felt like” to have a new floor, or how a new bathroom became a metaphor for reclaimed dignity.

Recognizing that housing is not merely shelter but a form of participating in urban transformation (Vasudevan, Brickell, & Lombard, 2020), our qualitative approach not only focused on the impacts, but also on the process. By sharing their experiences with the program, beneficiaries identify two critical aspects for housing interventions. On one side, communication needs to guarantee informed decision-making. Counseling, active listening and negotiation are crucial to promoting coherence between the new spaces and people's needs and preferences. On the other hand, local leaders must be seen as essential actors, instead of mere facilitators. Establishing a relationship based on collaboration with them enables interventions that are more sensible to local dynamics, avoiding leaders' fatigue, disruptions on social fabric or other negative effects on communities.

Despite the need for inclusive approaches (Kirk, Potter, & Wilking, 2022), urban and housing development are often limited to technical-economic criteria. In a country like Colombia, where the qualitative housing deficit affects millions of people, we believe that placing beneficiaries' voices at the center is crucial to achieve change. It is not only about evaluating the functional impact of a housing improvement, but about recognizing what these spaces mean to those inhabiting them. In this sense, by incorporating qualitative methodology in the evaluation of their social programs, companies like Cementos Argos engage with alternative pathways for transformation, while subverting assistencialist practices. The recognition of their beneficiaries' experiences, knowledge and perspectives has the potential to enrich corporate social impact policies and reinforce their commitment to social transformation.

#### *b. Social Dissemination of Knowledge*

The evaluation also aimed to promote the social dissemination of knowledge through a participatory communication strategy. The use of multiple formats can enable the return of findings in accessible and emotionally resonant ways. The main artefact created to achieve this was a series of postal consisting of a story of change and a photo of the house associated to it, intervened to highlight the meanings behind space transformation (See Figure 1). Understanding the postal as something that travels, connects experiences and is kept as something precious, this strategy allowed greater engagement of key actors and facilitated the use of results for dialogue, advocacy, and the design of future interventions (Dart & Rick, 2003).



One December 31<sup>st</sup>, I had an accident while cooking, the stove turned over on the counter and the pot of lentils fell on me, it burned my whole hand. But now I don't get burned, the stove doesn't turn over anymore. Seeing what the floor was like before makes me sad. With the floor like that you couldn't clean it well, at least now you sweep it and it's clean. But before with the floor you couldn't mop or broom. I, for example, work in a family home doing housekeeping and there I work hard so that everything looks nice. I remember that when I finished, I used to think "I would like to see my house like this someday". One, above all, wants to have a good presentation. One has personal motivation, one looks for improvement, always improving. But sometimes being here alone, working for days, I can't make it. I'm too small. One would like to be able to make all the arrangements, but it's difficult. One does it little by little, but with what strength was I going to do all this? without this support it would have been very difficult. (Story of change, Barranquilla, 2024)

As noted by (García Lamarca, 2020), housing programs are frequently driven by efficiency and marketization criteria at the expense of democratic deliberation. In contrast, our strategy sought to democratize evidence, amplify marginalized voices, and foster collective reflection, turning knowledge into a tool for transformation. Considering the challenges posed by informality, inequality, and housing deficits, it is crucial to promote methodological innovations that enable impact evaluations to acknowledge the social, political, and cultural context in which interventions occur. Hence, our work sought to draw on methodological creativity not as an academic luxury but as an ethical and political necessity to understand and transform complex realities.

The participatory strategies employed in this research strengthened both the epistemological and political dimensions of impact evaluation. They contributed not only to the generation of richer and more nuanced data but also to a more ethical and empowering relationship between researchers and participants — a necessary step toward reimagining how development programs are understood and improved through participatory impact evaluations.

## Conclusions

This evaluation acknowledges the inherent limitations of qualitative methods, which prioritize the richness of narratives over the volume of data. While this approach offers depth and contextual understanding, it may also mean that not all voices and experiences are fully represented. For this reason, we clarify that the results do not aim to be exhaustive but rather to open new lines of inquiry, guide future research, and enrich the interpretive frameworks available for assessing the impact of social interventions.

The impact evaluation of the Hogares Saludables program demonstrated that qualitative approaches —when grounded in reflexivity and creativity— complement quantitative research by revealing deeper dimensions of impact that are often invisible to traditional indicators. This complementarity allows us not only to observe "what changed," but also to understand "how" and "why" these changes are meaningful to those who experience them.

Qualitative approaches provided a situated and in-depth perspective on the realities of the intervened households, enabling the identification of three dimensions of impact that transcend the material: improvements in physical and mental health conditions associated with the home environment; a re-signification of the past and of family life projects framed by narratives of effort and achievement; and the projection of new, possible futures. For participants, housing improvement was not merely a functional or aesthetic change but a symbolic transformation of their spaces, relationships, and place in the world.

This approach also helped to surface gendered tensions associated with domestic labor, as well as the meanings that women attribute to order, cleanliness, and care within the home— dimensions often absent in conventional impact evaluations. Likewise, the inclusion of temporal perspectives (past, present, and future) enabled the articulation of life trajectories with the effects of the intervention, offering an intersubjective and political reading of change.

Moreover, the methodological commitment was guided by a concrete intention to recognize and uphold participants' dignity by placing their voices at the center of the evaluative narrative. This ethical and political stance was embodied in the use of participatory strategies such as Home Biographies, which enabled people to narrate the meanings of transformation from their own perspective. Additionally, a strategy for the social dissemination of knowledge was implemented, sharing findings through accessible formats such as videos, photo-stories, and community gatherings, which facilitated collective reflection and dialogue.

This process revealed that qualitative knowledge production with diverse and marginalized populations requires a particular methodological sensitivity. Evaluators must be able to

read the context, formulate appropriate questions, and foster conditions of trust that allow honest, complex, and emotionally significant narratives to emerge. This kind of knowledge enriches analysis and honors the lived experience of those who are often excluded from decision-making processes that affect their environment.

This evaluation calls for the creation of methodologies that combine academic rigor with social sensitivity. Such a combination makes it possible to produce evaluations that are not only technically robust but also capable of accompanying territorial transformation processes with human depth. These approaches are particularly valuable in social intervention programs operating in contexts marked by informality, inequality, or violence—settings in which only complex perspectives can offer relevant understandings and replicable insights.

## **Declarations**

### **Author's contributions**

MJR, PV, DM, and JCM: conceptualization and resources. DM, MJR, and PV: methodology. MJR, PV: qualitative analysis. DM, MJR, and PV: writing the original draft and review and editing. JCM: supervision and project administration. All authors contributed to the article and approved the submitted version.

### **Competing interests**

The authors declare that they have no competing interests.

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