



Impacts of the COVID-19 Pandemic on Residential Mobility: A Case Study in the Metropolitan Area of Vitória, Brazil

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RESEARCH ARTICLE



ABSTRACT

COVID-19 has impacted the population in their territories in different ways. Beyond mortality, residential mobility warrants closer attention due to its critical role in shaping urban life. Thus, this study aimed to analyze the impacts of the COVID-19 pandemic on the patterns and level of residential mobility of people living in urban expansion areas of the metropolitan peripheries. For this, a case study was carried out in the Metropolitan Area of Vitória in 2022, combining three methodological stages: quantitative research based on secondary data followed by two fieldwork movements, the first of which applied questionnaires and the second, qualitative with in-depth interviews. Results indicate that, despite political-territorial guidelines that sought to restrict mobility, social groups' needs and possibilities influenced residential guidelines. This reveals deep contradictions and social constraints that either suppressed aspirations for residential mobility or triggered movements to overcome the challenges posed by the pandemic.

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INTRODUCTION

The COVID-19 pandemic has significantly changed populations' spatial mobility. In fact, even after it, many of its dynamics are yet to be fully analyzed, and it is important to understand possible ruptures, continuities, and transformations. Migration studies have offered several contributions on travel restrictions and residential confinement measures (Rowe, Champion & González-Leonardo 2023), everyday mobility aspects (Checa et al. 2020; Peixoto et al. 2020), rural-to-urban migration (González-Leonardo, Rowe & Fresolone-Caparrós 2022), internal migration (Saavedra-Camacho et al. 2021), and international migration and border closures (Aja Díaz et al. 2020; Rocha, 2020).

With the COVID-19 pandemic, the existing social security mechanisms and the extremely fragile and unequal socioeconomic structure in developing countries proved unsustainable. The pandemic forced the implementation of global policy responses, as in the case of drastic lockdowns to curb the spread of the disease. Such response significantly challenged informal workers, especially those who depended on income earned daily by their everyday mobility. Brazil also applied this logic, abruptly paralyzing economic activities and interrupting income generation for millions of people, exacerbating poverty and needs in metropolitan peripheries. The restriction of daily mobility deprived these workers of their sources of livelihood, lunging them into a survival crisis that was described by The Lancet editorial as a humanitarian crisis in Latin America (Henry 2020).

Despite analytical efforts (Armstrong et al. 2021; Rowe et al. 2024), the literature on internal migration studies still lacks a robust discussion about the impact of the pandemic on residential mobility in Latin America, especially at the metropolitan scale. Thus, this study aims to contribute to the aforementioned discussion.

Analyses for the Global South seem even scarcer, and data on the pandemic period are often unavailable. Political and economic crises have postponed the extensive collection of censuses and even systematizations or official surveys on them in many countries, making such investigations even more challenging.

Thus, based on concerns about the relationship between families and residential mobility and motivations and aspirations to migrate, this study aims to analyze the effects of the COVID-19 pandemic on residential mobility in a Brazilian metropolitan area based on an interdisciplinary perspective in mobilities, operating between geography, demography, and sociology.

Its methodology combines an analysis of the 2010 Brazilian Census and the grid of census sectors of the 2010 and 2022 censuses and offered a case study of urban expansion areas in the Metropolitan Area of Vitória in 2022. To achieve its main objective, the case study articulates a set of information from a household

sample survey and a qualitative survey in a sequential explanatory logic (Creswell & Creswell 2017). Our analysis strategy involves assessing the impact of the pandemic on patterns of mobility and immobility among families in areas of urban expansion according to the resident population's socioeconomic characteristics. Hypothetically, the higher the level of vulnerability to poverty, the greater the difficulties in promoting residential mobility, resulting in the resilience of housing in hard-to-reach places and greater challenges to design urban policies.

SOCIOECONOMIC OVERVIEW OF RESIDENTIAL MOBILITY IN THE PANDEMIC AND POST-PANDEMIC PERIODS

To understand the impact of the COVID-19 pandemic on the metropolitan dynamics of poverty and residential mobility, one must comprehend the Latin American socioeconomic landscape during and after the pandemic. The region has a high prevalence of informal work, ranging from self-employed individuals to small, unregistered businesses. These activities, although without formal contracts or with limited labor rights—as in the case of delivery workers who work mediated by digital platforms—weaken and enhance citizens' vulnerability and constitute a fundamental axis of labor relationships and economic support for millions of local families (Jiménez Restrepo 2012; Lotta & Kuhlmann 2021).

The logics of informal work strongly mark social relationships in urban Brazil. According to Costa (2020), the accelerated industrialization in the 1960s and 1970s maintained informal work as the subsistence of a significant part of the Brazilian. These individuals faced low productivity and scarce social protection in a period of rapid and “disorderly” urbanization throughout the country. In the 1980s, in a scenario of economic crisis and rising unemployment, informality was deemed a structural problem linked to the failures of economic policies. During the 1990s, economic liberalization reforms and the flexibilization of labor relations led to a new trend of growth in informality, now mediated by forms of subcontracting of flexible logics in the labor market (Araújo & Lombardi 2013).

The Brazilian literature has widely analyzed the issue of local poverty and informality (Mattei & Heinen 2020; Souza 2020; Araújo & Brandão 2021) during the COVID-19 pandemic. In fact, the contamination of more than 22 million people, ranking Brazil as the one with the highest number of diagnosed in Latin America and the third on the planet, significantly exemplified the impacts of the pandemic in the country. As an alternative to economic and labor issues, an emergency cash transfer

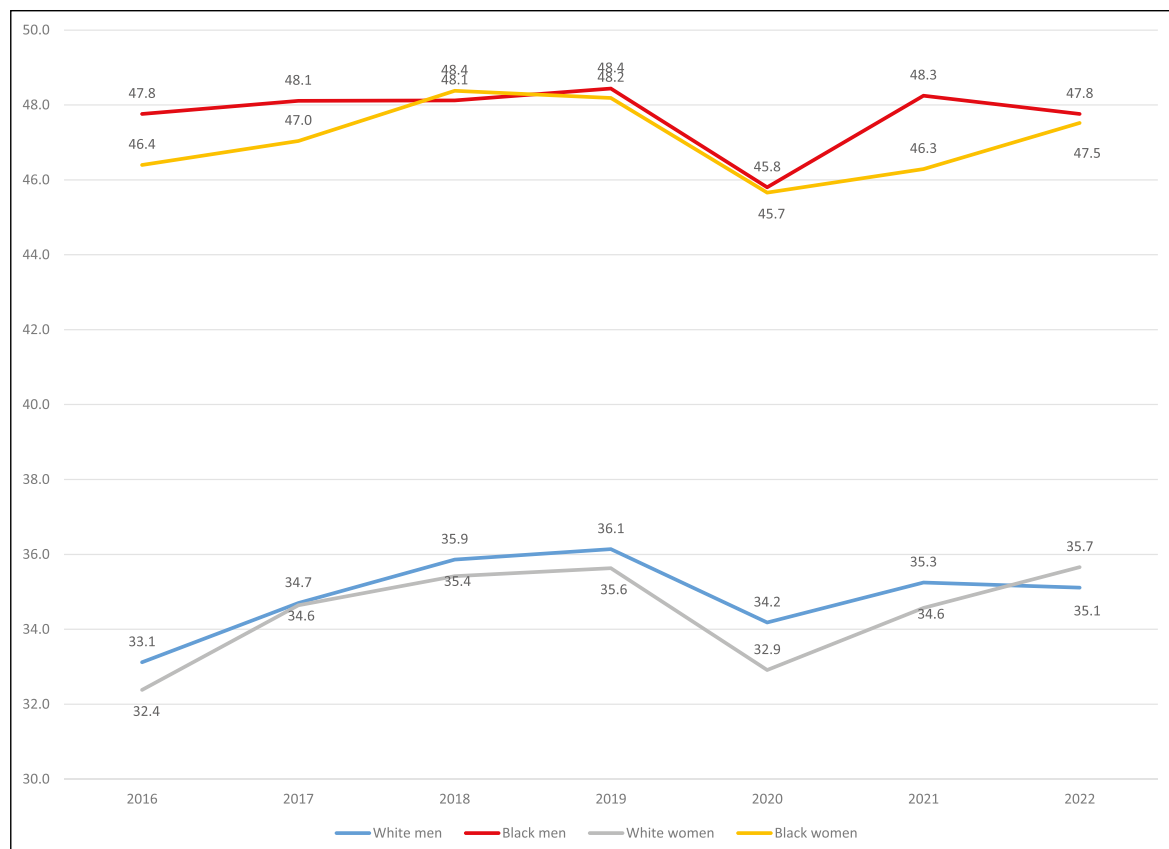
package was established, which included more than 68 million people during the pandemic. This transfer aimed to mitigate the drop in income and boost the poor population's consumption of essential products, minimizing the impacts of the crisis (Trovão, 2020), including food insecurity (Neves et al., 2021). However, these measures were unable to contain the poverty and inequality rates in the country. Unemployment reached 14.6% in the third quarter of 2020 (Banco Mundial 2022).

Informal employment rate of the occupied population aged 16 years and over remained the same from 2016 to 2022. However, it is noteworthy the persistence of differential patterns by race/skin color and sex among informal workers (Graph 1), which includes informal jobs: workers without labor bonds, self-employed, and domestic workers (IPEA 2024). On the one hand, women (predominantly engaged in informal domestic work and underrepresented in formal productive sectors) faced significant challenges. On the other hand, the pandemic affected the black population (relegated to the informal market and facing wage discrimination) even more (Mattei & Heinen, 2020).

How did the socioeconomic landscape affect the pattern and levels of residential mobility on a metropolitan scale in the pandemic period in Latin America? These scales show several residential mobility trajectories in the 2000s and 2010s that stem from

their geographic and socioeconomic characteristics, as Dureau et al. (2015) found in the metropolitan areas of Bogotá, Santiago, and São Paulo. Research on the trajectory of residential mobility evidently requires new analysis methodologies supported by longitudinal research, retrospective methods, and case studies (Dota et al. 2024).

Since economic difficulties after the pandemic have triggered migratory movements back to family members' homes in search of emotional stability and solidarity networks, the literature has begun to study changes of residence in the pandemic. These analyses focused on some aspects of the population's spatial mobility, such as the level of contamination associated with this mobility (Kubota et al. 2020; Sigler et al. 2021), control policies (Piccoli et al. 2023), and the measures to make productive activities and collective sociability more flexible (Rab et al. 2020). This migratory phenomenon continued despite the travel restrictions and the closure of municipalities and borders during quarantine (Baeninger et al. 2020; Rocha, 2020). However, certain aspects of migration in the pandemic received less attention, in particular short-distance migration and residential mobility, especially considering the inequality in large Latin American urban agglomerations, the analyses of which were halted by the postponement of censuses or the limitations of official data sources.



Graph 1 Informal employment rate of the occupied population aged 16 years or older by race/skin-color and gender (%) – Brazil, 2016 to 2022.

Source: IPEA 2024.

Analyses of internal migration during the pandemic have emerged after the pandemic. Latin America experienced a decline in the level of short- and long-distance internal movements, with the largest reductions occurring in the more populated areas of Argentina, Chile, and Mexico, according to Rowe et al. (2024). The COVID-19 pandemic has widened pre-existing socioeconomic inequalities and has redefined the role of some Latin American municipalities by changing the patterns of population spatial mobility in Colombia, Chile, and Argentina (Cabrera et al. 2025).

This study furthers the analysis of the impacts of the pandemic on residential mobility processes by analyzing the residential mobility trajectory of families based on mixed methods via census data and a case study carried out in 2022 in the metropolitan area of Vitória. According to Aparicio and Dota (2024), the transition to adult life and the phases of the family life cycle tend to affect the residential mobility trajectory according to the local vulnerability to poverty, relativizing the role of stabilizing factors such as household ownership.

The recent literature has no empirical analyses on how the pandemic affected the residential mobility patterns of families in metropolitan expansion areas and the motivations and aspirations associated with residential mobility, especially among vulnerable populations. These analyses constitute the innovative elements of this study.

MATERIALS AND METHODS

Quantitative and qualitative data collection and analysis procedures were combined in this mixed-methods research (Hay 2016; Creswell & Creswell 2017) to understand the effects of the COVID-19 pandemic on the residential mobility of families under social vulnerability in the metropolitan area of Vitória (RMV), Brazil. The methodological choice of integrating research strategies sought to articulate the statistical breadth of household analysis with the interpretative depth of qualitative listening due to the complexity of the studied phenomenon. These foundations were established based on the MigraFamília survey — “Family demographic dynamics and migration patterns in Brazil: transformations since the 1990s” funded by CAPES/SNF in the state of Espírito Santo, Brazil, via two research instruments: a household survey and a further exploration survey.

The investigation was structured in two complementary and interdependent stages: (1) a sample-based household survey that applied structured and semi-structured questionnaires and (2) a qualitative research via in-depth interviews and lexical analysis. Together, these phases could capture the objective patterns of mobility and the motivations, constraints, and meanings attributed by the subjects to their residential mobility trajectories.

HOUSEHOLD SURVEY

The household survey aimed to map patterns of residential mobility and characterize family arrangements in areas marked by varying degrees of socioeconomic vulnerability. Residents of permanent private households in census tracts in urban expansion areas in the RMV were chosen as the target population, identified via satellite images (2010–2020) and data from the 2010 Demographic Census and the geospatial base of the GEOBASES System of Espírito Santo.

Thus, the sample design selected census tracts with a high level of intrametropolitan migration according to income and the 2010 Census data in urban expansion areas (identified by satellite images from 2010 to 2020). Permanent private domiciles configure the reference and analysis unit. A random household survey in the households of the selected census tracts was chosen to ensure social and spatial representativeness.

Strictly speaking, the sampling of the household survey was carried out in two phases: in the first one, the census tracts were identified and drawn with their specific characteristics (clusters); in the second one, households in these sectors were drawn by systematic sampling (starting at a random point and choosing every third household).

In each census tract, the household configured the sampling unit for data collection. The head of household or, in their absence, the adult with knowledge of the family dynamics was chosen as the interviewee. Furthermore, to carry out comparative geographic analyses on the impact of socioeconomic and family conditions on the motivations and aspirations of residential mobility, a stratified sampling was carried out in census tracts with high and low socioeconomic vulnerability, ensuring statistical representativeness for these groups.

Data were collected from the household survey in June and December 2022 via a sample of 451 households in census tracts in seven RMV locations. In total, six census tracts lie in neighborhoods predominantly consisting of low-income families, in which 300 households were interviewed. Data were collected in a middle- and high-income neighborhood by interviews in 151 households (Figure 1).

A structured questionnaire was included in the first part of the household survey. The household sample survey characterized the residents via close-ended questions about education, labor market conditions, income, family composition, and workplace and sociodemographic information of the head of household, such as age, sex, race/skin-color, marital status, duration of the relationship, and housing occupation condition. The second part of this research directly deals with the residential mobility of families in the metropolitan area, which involved reconstituting the residential mobility trajectory of household arrangements via semi-structured interviews with the heads of household to find the origin, destination, and reasons for the displacements.

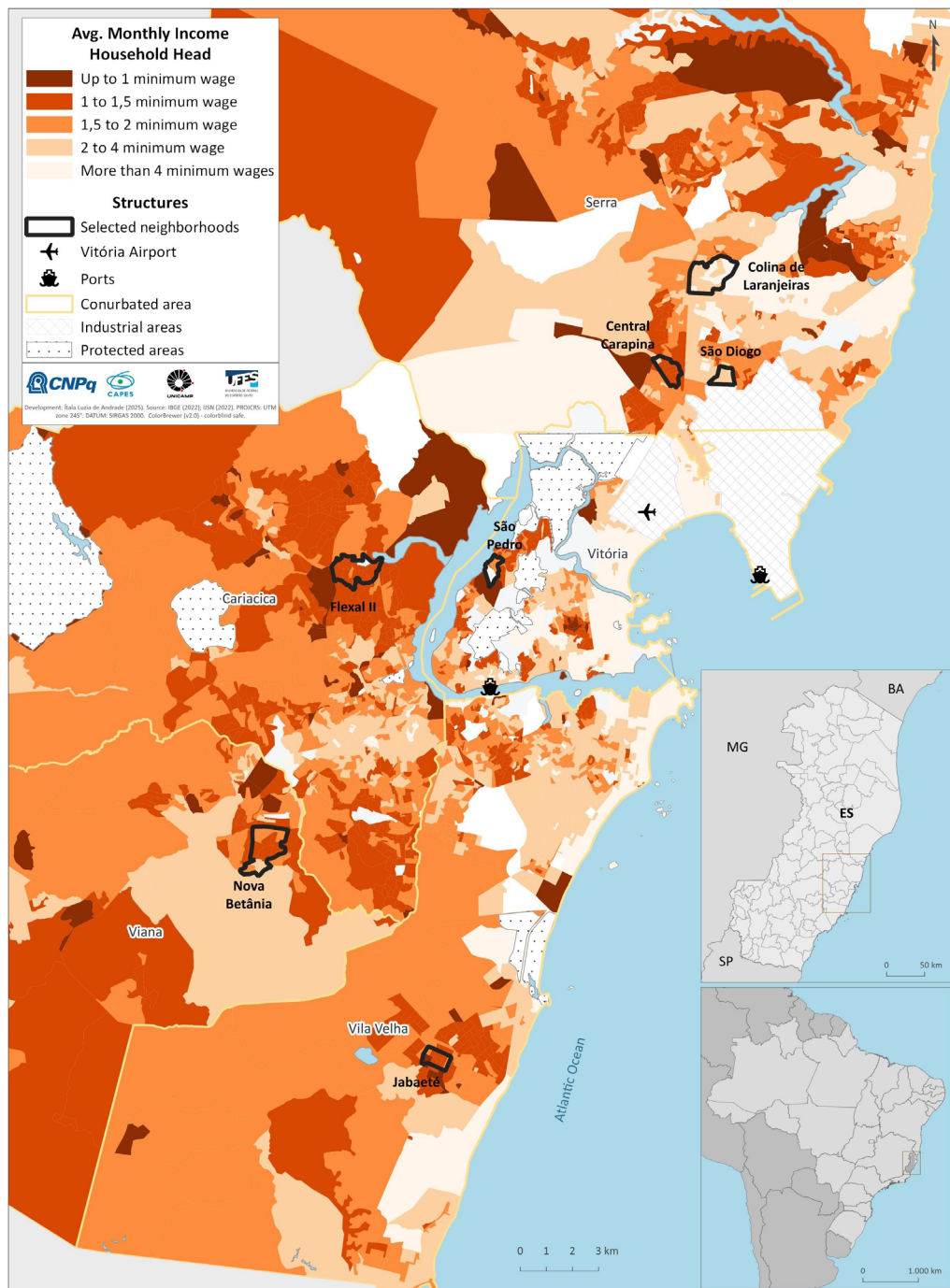


Figure 1 Distribution of census tracts according to individual average income sextiles and neighborhoods selected for the household survey, 2022.

since the formation of the current family group and their aspirations for residential mobility.

QUALITATIVE FURTHER EXPLORATION RESEARCH

In the second part of the survey, 16 families were chosen from the 451 sampled households for a further exploration questionnaire with a new methodology that considered the aspirations and motivations for residential mobility in the RMV. Of these 16 families, nine directly mentioned the impacts of the COVID-19 pandemic on their lives. Thus, only these nine were considered in the analysis of the effects of the pandemic.

The decision to delimit the empirical corpus was based on the need to ensure objectivity and comparability between reports, prioritizing evidence reported by the interviewees. Although the other interviews addressed elements related to the pandemic, such as unemployment, economic hardships, or changes in family dynamics, this absence hampered establishing a certain causal link between these events and the pandemic, which would compromise the validity of the analysis.

Thus, the analyzed qualitative sample was defined based on direct empirical evidence criteria, ensuring the coherence of the data with the objective of this research. The nine selected interviews enabled the

systematic investigation of the relationships between the pandemic and residential decisions, contributing to the identification of consistent patterns, constraints, and motivations in the analyzed period.

The study of the motivations for residential mobility of families and the typology adopted was based on Shapira, Gayle, and Graham (2019). The questions about aspirations to migrate were based on Carling and Mjelva (2021). The tabulations on the order of residential mobility were adapted from Bernard (2022) to the Brazilian metropolitan reality.

Whether in the first phase of application of the questionnaires or in the second phase of in-depth interviews, short answers, evasive response processes, or silencing certainly configured challenging expressions for this research.

The word cloud in this text belongs to the lexicometric technique on Iramuteq – *Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*, which was developed by Pierre Ratinaud. Iramuteq can condense a large amount of information and establish an interaction of discourses, favoring discursive statistical analysis. Iramuteq was chosen to relate pertinent information in interviewees' answers regarding the pandemic that could go unnoticed in decontextualized analyses.

RESULTS AND DISCUSSION

If residential mobility is related to individuals' life course event and families' life cycle, relevant differences in the pattern and levels of residential mobility of families are to occur according to household arrangements. This research evaluated the residential mobility trajectory of

the sampled families by studying heads of household's residential mobility motivations and analyzing their family life cycles according to these individuals' age groups.

The first graph in Figure 2 indicates that the survey universe showed a slight reduction in the intensity of residential mobility in 2020 and 2021 when compared to the previous period. It indicates little variation in the levels of residential mobility due to the pandemic. However, the analysis by age groups showed strong variations in residential mobility over time.

Firstly, note the shock in 2020 for young families, i.e., in the beginning and expansion of their life cycle. For the group whose heads of household were aged from 18 to 29 years in 2010 the series is stable from 2015 to 2019, with a strong drop in residential mobility in 2020 and a recovery in 2021. This result resembles that in Crawford et al. (2023), in which the younger group showed greater mobility during the pandemic in the USA. Wolday and Bocker (2023) also found nonlinear results by age in Norway, which points to the similar role of the variable age explanatory of residential mobility.

The group aged from 30 to 44 years in 2010 showed a relative decrease in mobility in 2019 that accelerated from 2020 to 2021. Families in the final stages of their life cycle (45 years or older in 2010) showed a lower intensity in the period. However, the pandemic had a different impact on older families compared to younger ones, increasing their residential mobility in 2020.

The remarkable age-based differences derive from the moment the families experienced in their life cycle. The pandemic, despite impacting everyone, has its effects felt and experienced in varying ways according to the economic, social, political, and environmental conditions



Figure 2 Intensity of residential mobility according to the age group of the head of household in 2010. Metropolitan Area of Vitória, 2022. Source: MigraFamilia, 2022.

of each family, in which the territory constitutes a fundamental variable to understand these differences.

Figure 3 shows the motivations for residential mobility by each head of household age group and the periods of analysis, i.e., throughout the 2010s and in 2020 and 2021. The differences observed between groups and periods enable the identification of important elements regarding the dynamics of residential mobility and experiences.

In 2010–2019, the groups aged from 18 to 29 years and from 30 to 44 years showed a relatively similar distribution of motivations for residential mobility, lending greater weight for homeownership (representing about half of the reasons for displacement), followed by relatively balanced housing and family and environmental reasons. These families usually find themselves in the phase of family expansion, i.e., the birth of children. The group aged 45 and over differed from the others as home ownership and family ratios equaled 28% of reasons for mobility each.

During the pandemic, motivations changed strongly for all age groups but differently across groups: for older individuals (45 years and over in 2010), mobility for housing reasons gradually gained importance during the pandemic. For the other groups, the pandemic changed the housing acquisition processes.

The group aged 18 to 29 experienced an abrupt decline in the intensity of displacements in 2020 that raised again in 2021 (Figure 1). The movements in 2020 mainly involved family and work issues, and only in 2021 the acquisition of one's own home again represented half of the reasons for mobility. The data indicate that the population group in this age group may have felt the impacts of the pandemic more intensely precisely because of their transition to adulthood. According to Vieira (2008), this transition shows important changes

in status, such as that from student to worker, from dependent member of a household to head of a new household, from single to married, or from child to parent.

These findings suggest that the health crisis postponed marriage and leaving the parental home. The literature indicates that young people in the middle and upper social strata have postponed their transition to adult life in recent decades. The novelty of the phenomenon refers to such postponement occurring in poor families or those vulnerable to poverty.

The reduction in mobility in the group aged from 30 to 44 years in 2020 and 2021 stemmed from the increase in housing and the environment as reasons for displacement. The results indicate that the varying residential mobility may be related to the vulnerability to poverty of the analyzed population groups.

Figure 4 shows that, despite similar dynamics in 2019–2021, the group with low vulnerability to poverty showed a considerably higher intensity in residential mobility variation, especially in the decrease in 2020 when compared to that in 2019. Considering rising unemployment and increased vulnerability to poverty, the intensity of almost null residential mobility in 2020 indicates involuntary immobility. Residential mobility recovered in 2021 due to the return of economic activities and the emergency aid program during the pandemic.

In short, a type of shock in residential mobility seems to have occurred in 2020, as Lee (1990) has argued regarding the demographic reaction in the face of economic crises.

The analysis of the similarities and differences across groups according to vulnerability points to the relevance of support networks (especially family ones) for the dynamics of residential mobility of families with a high vulnerability to poverty. The importance of the family for low-income household arrangements in Brazilian

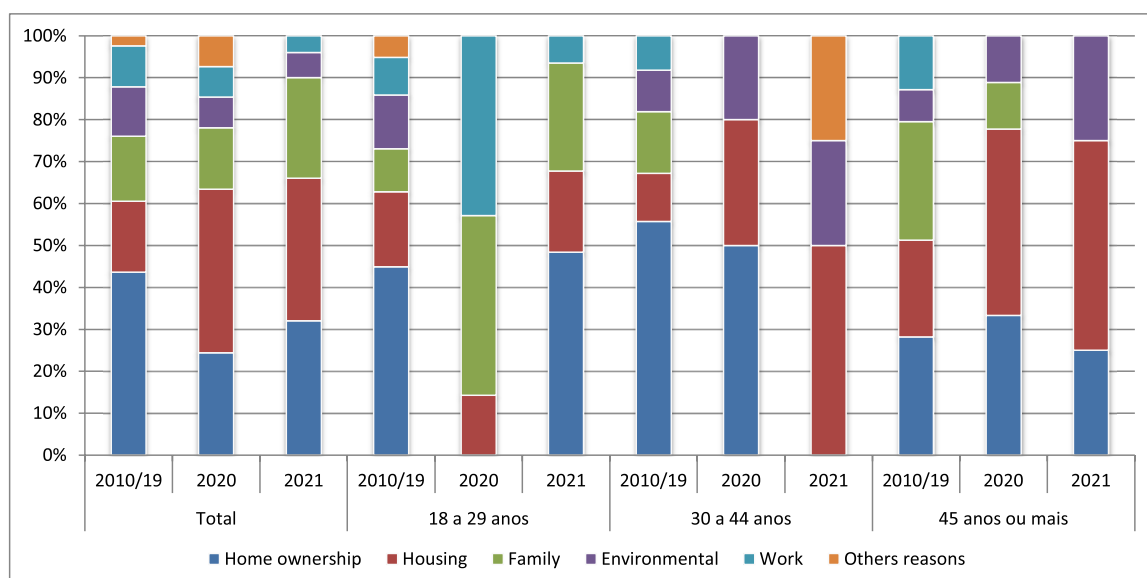


Figure 3 Motivation for residential mobility according to the head of household's age group in 2010. Metropolitan Area of Vitória, 2022.

Source: MigraFamília, 2022.

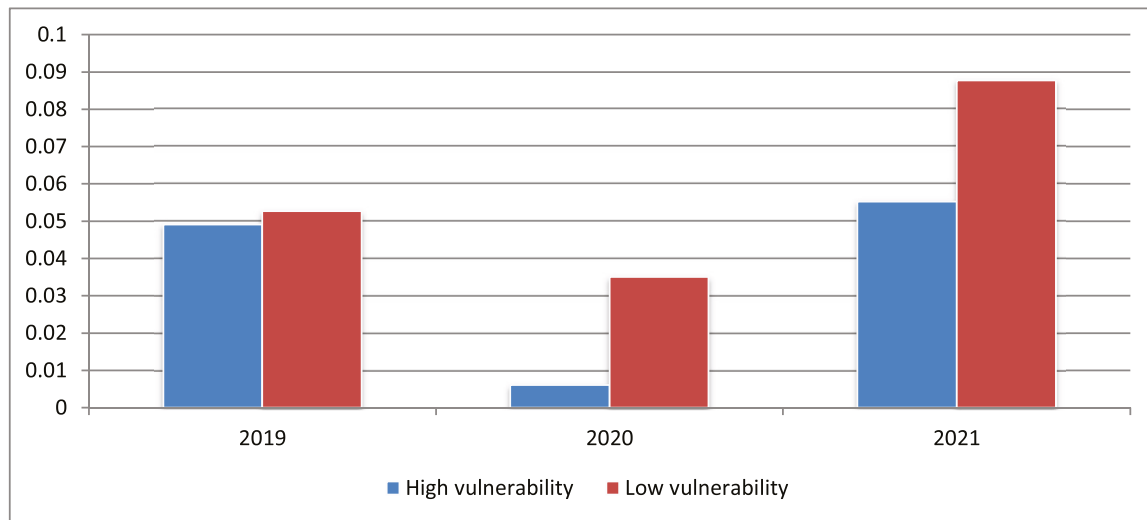


Figure 4 Intensity of residential mobility for head of household aged from 18 to 34 years according to vulnerability. Metropolitan Area of Vitória, 2022.

Source: MigraFamília, 2022.

metropolitan areas can also be observed in the economic crisis in the 1990s and 2000s (Montali, 2006). These data point to the need to deepen the analysis of the elements that shape these decisions for mobility and permanence. They also stress how these decisions are intertwined with solidarity networks (especially family networks), the environmental characteristics of locations (the surroundings areas), and daily practices in the use and interaction with the structures materialized in the metropolises.

ASPIRATIONS AND RESIDENTIAL MOBILITY DURING THE COVID-19 PANDEMIC

Contemporary theory on migratory aspirations distinguishes between aspiration to migrate, ability to migrate, and involuntary non-aspiration (Carling & Collins 2018). Aspiration represents the motivation from individual desires and needs, which are influenced by several qualitative variables, such as age, children, work, availability of public facilities, and political, social, and cultural support.

The ability to migrate precedes decision making and refers to the practical feasibility of mobility, indicating the possibility of migration. On the other hand, involuntary non-aspiration occurs when the absence of necessary conditions holds one's motivation to migrate. This phenomenon is particularly prevalent in peripheral areas, where layers of adverse conditions are usually found (Dota et al. 2024). Such conditions became even more evident during the COVID-19 pandemic, accentuating these populations' social and economic difficulties.

The in-depth interviews conducted in 2023 sought more detailed answers about interviewees' aspirations for migration, ties, social networks, the characteristics of

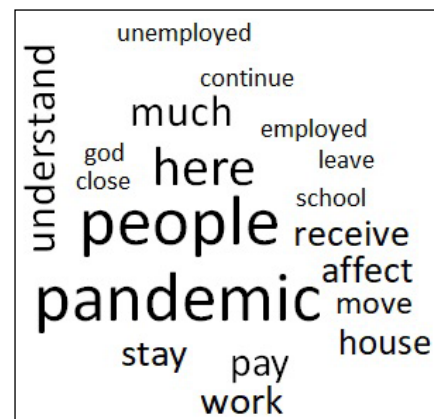


Figure 5 Cloud map by similarity: frequency of expressions in the interviews about the impact of the pandemic.

Source: MigraFamília, 2023.

the surroundings areas (especially the existence of public services and the perception of public safety and urban violence), the role of cultural and religious activities in staying in the place of residence, and the impact of the pandemic on their families. The inclusion of families that had participated in the previous phase of this research enabled a longitudinal follow-up of their trajectories and dynamics of residential mobility, enhancing the analyses.

The Terra Vermelha and São Pedro neighborhoods received more attention in this phase as their precarious housing pattern and greater involuntary immobility stood out in the first part of data collection.

The nine interviews that explicitly mentioned the pandemic enabled us to understand nuances in the constitution of family trajectories and in the identification of the challenges faced in residential mobility and interviewees' medium and long-term perspectives. We also conducted a similarity analysis of the responses that focused on the impact of the pandemic on families and their dynamics. From the statements obtained, we generated the following word cloud (Figure 5).

Word cloud analysis was used as an instrument to explore interviewees' discourse on the impacts of the COVID-19 pandemic on residential mobility. Although a useful visual aid for finding recurring terms, we must acknowledge its analytical limits. As per Lohmann et al. (2015) and Vilela, Ribeiro, and Batista (2020), word clouds cannot capture the semantic context or the complex relationships between concepts, requiring interpretations complemented with more in-depth discursive analyses.

Thus, we chose to integrate the theoretical support of theories of mobilities (Sheller & Urry 2006; Urry 2007) and migration aspirations (Carling & Collins 2018). These approaches emphasize that mobility processes are influenced by social relationships, individual aspirations, and structural constraints, dimensions that require consideration for the qualitative understanding of the data.

Notably, our exploratory, hypothetical, and preliminary reflections stand in the field of possibilities and limits due to the nature of the analyzed empirical material. Interviews encompassed issues and themes related to residential mobility in the Metropolitan Area of Vitória, suggesting several narratives and emphases in the reports. Table 1 summarizes the most frequent expressions and their associations identified in the interviews regarding the impacts of the pandemic.

The first consideration is related to the relevance of the word "pandemic," which suggests the importance of the event and its structuring role in interviewees' residential trajectories and daily experiences. The connection between "pandemic," "here," and "people" points to an affective and communitarian spatialization of the pandemic, dialoguing with the notion of fragilities and local solidarity networks as forms of resistance in the face of social vulnerability (Sheller & Urry 2006; Montali 2006).

The term "here" emerges as a marker of territorial permanence. In contexts of high vulnerability to poverty, as in Carling and Collins (2018) and Dota, Aparicio, and Robaina (2025), residential immobility may constitute a situation imposed by the scarcity of material resources and social capital rather than an active choice. Thus, "here" evinces not only a point in space or a place of residence but also the imposition of limits on possible mobility.

The frequency of words such as "to stay," "to pay," "home," and "move" makes explicit the tensions between the desire for change and the need for permanence. The pandemic has exacerbated conditions of economic insecurity that turned even precarious residential stability into an asset to be preserved (Neves et al. 2021). These elements seem to be tangential to studies that point to the postponement of migratory projects in crises (Lei & Liu, 2022; Rowe et al. 2024).

Another relevant aspect is the relationship between "people" and expressions such as "to receive," "to affect," and "to close." These associations indicate that social interactions mediated life during the pandemic, closing collective spaces (such as churches and schools) and impacting families' physical, social, and cultural mobility (Vilela, Ribeiro & Batista 2020).

Thus, terms such as "God" and "school" evince the centrality of interviewees' religious, educational, and sociability practices in the support networks and in the daily organization. As per Sheller and Urry (2006) and Ferreira, Vasconcelos, and Penna (2008), mobility should be understood as spatial displacement as well as a flow of social relations, affections, and meanings across networks and territories.

Thus, the analysis of word clouds from a theoretical and critical perspective shows that the COVID-19 pandemic not only limited residential mobility, but also reconfigured solidarity networks, migratory aspirations, and strategies for staying in the territory. This interpretation broadens the understanding of involuntary immobility as a profoundly social and relational phenomenon rather than only an economic or structural one.

The analysis of discourse by similarity also indicates that the impact of the pandemic is clear and has crossed residential mobility, based on economic and social relationships, which indicate that aspirations have changed due to affective bonds, the need for greater residential stability (in the acquisition of one's own home) and financial stability, greater quality of life in closer places with greater social security (whether by violence or factors such as sanitation, pavement, basic public services, etc.), and care.

MAIN CATEGORIES	PANDEMIC	PEOPLE	HERE	MUCH (MINOR DIMENSION)
Associated terms	To understand	To understand	God	God
	To move	To affect	Close	Unemployed
	To stay	To receive	To understand (between God and close)	To continue (between unemployed and employed)
	To pay	School	Much	Here
	House	Close	Employed	
	To work (between to stay and to pay)	Here	To leave School	

Table 1 Impact of the Pandemic – Most frequent expressions in interviews in order of relationship.

Source: MigraFamilia, 2023.

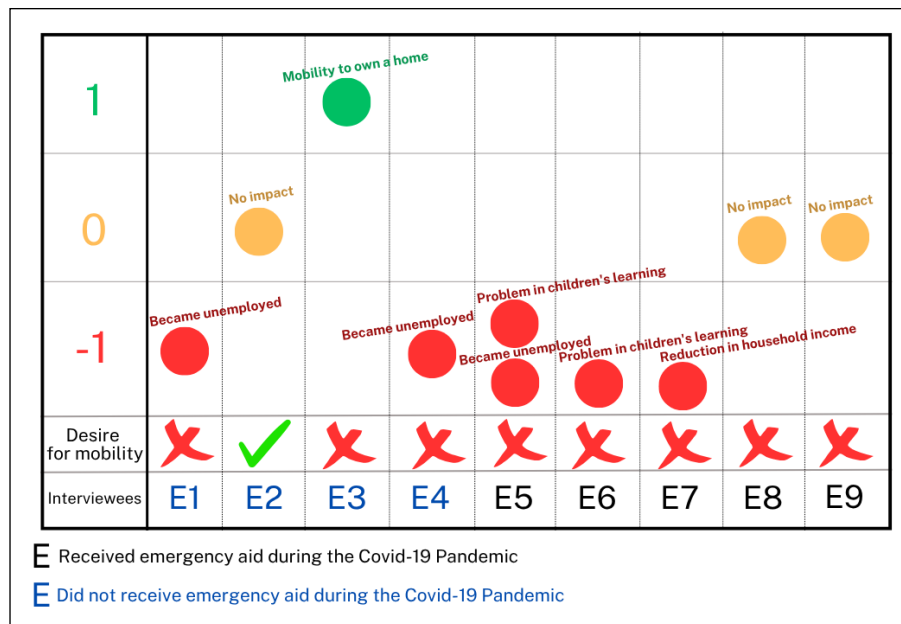


Figure 6 Relationship between the interviewees and the impacts on mobility during the COVID-19 Pandemic.

Source: MigraFamília, 2023.

A second moment of this research consisted of the individual analysis of the interviews to deepen and compare results in the light of participants' concrete experiences. Figure 6 was created as a visual support tool for this analysis, organizing the interviewees (E1 to E9) into two axes, the vertical axis (Y) expresses the perception of the impact of the pandemic on their lives (–1 for negative impact, 0 for no impact, and 1 for positive impact) and the horizontal axis (X), the desire for mobility and being a beneficiary of emergency aid. Although the figure uses graphic elements, its purpose is interpretative rather than statistical: to enable a sensitive reading of the factors that influenced the meanings attributed to the permanence or change of residence during the pandemic.

More than seeking rigid standards, it aimed to value the singularity of each report and the ambiguities in family decisions. In these contexts, residential mobility occurs neither linearly nor predictably as it is deeply intertwined with the material conditions of life, care relationships, community bonds, and insecurities. The data show that only one interviewee expressed a desire for mobility, doing so in a context of achievement: the acquisition of their own home. The other interviewees, even in the face of intense difficulties such as unemployment and decreased income, indicated no objective conditions to think about moving. Most individuals, whether directly or indirectly, mentioned that their resources were exclusively focused on ensuring survival.

Thus, permanence emerges as a possible arrangement amidst a set of adversities rather than as a full choice. Figure 6 evinces a kind of denied mobility—a contained or often unformulated desire—that shows the narrowing of the families' horizons of action. Decisions to stay or change, in this case, rather than understood based on

an individual logic, must fall in the context of historical inequalities, territorialized support networks, and the strategies that social groups develop before adversity.

The analysis of Figure 6 shows that the pandemic has worsened economic and social difficulties and imposed even stricter barriers to mobility. The only interviewee who expressed a desire for change (E2) exemplifies the ways in which personal trajectories, pre-existing conditions, and specific support networks help enduring crises.

For the others, immobility emerges as a result of lacking resources; but most importantly as a result of the way the access to housing was historically built in poor peripheries at the metropolitan area of Vitória. In total, five respondents reported that their inability to migrate was related to the acquisition of houses in areas of informal occupation before the pandemic. Without property titles, these residents face legal uncertainty and limited possibilities of selling, renting, or even accessing public housing programs. Informality in land tenure becomes a mechanism of territorial imprisonment in which the absence of formal rights severely restricts the ability to choose.

Moreover, some interviewees received no emergency aid during the pandemic due to bureaucratic exclusion or the lack of information and social capital necessary to access these instruments. Such condition evinces economic precariousness and a deeper dimension of political marginalization and fragmented and unequal full citizenship.

Even in adverse scenarios full of neighborhood conflicts, uncertainties about land boundaries, daily violence, criminal organizations, and drug trafficking, the interviewees expressed no aspirations for residential mobility. This apparent paradox can be understood by the

strength of the solidarity and social protection networks in these territories, particularly around younger children. The neighborhood, although crossed by multiple forms of vulnerability, constitutes a space of belonging and collective construction of meanings of life.

Permanence, in this context, rather than simply the result of the lack of economic alternatives, is sustained by affective, functional, and symbolic bonds with the territory. Neighborhood relationships, religious practices, school circuits, and the shared management of absences from the State build meanings—whether weak or strong—of stability, that are vital for reproducing daily life. As Montali (2006) and Dota, Aparicio, and Robaina (2025) suggest, peripheral family strategies combine practices of resistance and care, weaving support networks that partially compensate for material precariousness.

Thus, rational and affective cost-benefit assessments mediate possible desires for mobility: leaving can mean losing support networks and be exposed to new risks, often even more serious than those faced in the territory of origin. Amidst the economic and social uncertainties the pandemic worsened, staying in the neighborhood represented an active survival strategy for many families rather than simple resignation.

Ultimately, understanding residential mobility in these contexts implies recognizing that structural conditions of inequality, affective repertoires of belonging, and the selective and limited performance of public policies shape socially situated decisions to stay or move. The pandemic has only worsened and evinced these dynamics, exposing the unequal geographies of the right to the municipality and the possibility of moving within it.

CONCLUSION

This study sought to analyze the effects of the COVID-19 pandemic on the residential mobility of families vulnerable to poverty in the peripheries of the metropolitan area of Vitória, evincing how economic, institutional, and affective factors articulate permanence and (im)mobility. The results confirm the hypothesis of this study and suggest that, far from representing a voluntary choice, permanence in peripheral territories constitutes a survival strategy amidst severe constraints (from the legal insecurity of housing to the absence of State protection and resources for survival). Even in the face of unemployment, territorial conflicts, violence, and precarious public services, mobility fails to configure a viable horizon for most interviewees, whose permanence was supported by local support networks, care for children, and hopes for a better future.

As more direct results, the residential immobility in this study must be considered in light of the structural inequalities that configure metropolitan spaces. Even

before adverse situations, the desire for mobility failed to emerge in a relevant manner. The active presence of local support networks including neighbors, family members, and churches and domestic care arrangements (especially with children) function as social and affective anchors in vulnerable territories.

These findings seem to show that residential mobility, unlike medium or long-distance migration, is rooted in everyday housing relations, in which decisions about displacement or permanence involve rational calculations and affective meanings and strategies of social reproduction. Under scarce resources, maintaining housing, even in areas of informal occupation without land regularization, configures a viable alternative in the face of the uncertainty that change may represent. The analyzed family decisions show how care, the expectation of improvement, and community protection weigh more than conflicts and precariousness, shedding light to a paradox common to Latin American urban peripheries: the vulnerability that coexists with potent forms of resistance.

In this scenario, the COVID-19 pandemic constitutes a magnifying glass of pre-existing fragilities rather than a singular health event. The analysis also showed that the pandemic seems to have contributed to the postponement of milestones in the transition from adult life and residential mobility projects, as Rowe, Champion & González-Leonardo (2023) pointed out regarding internal migration. Many situations showed an aspiration toward mobility that was stifled by the scarcity of resources and the rationality of staying in a territory that concentrates support networks, care for children, housing informality, and the hope for a more stable future despite adversities. These factors show that decisions about where and how to live must include the material conditions of existence and the symbolic and practical networks that structure urban life in poverty.

Despite these reflections, some limitations deserve attention. The mixed nature of this research and especially its qualitative dimension based on the number of in-depth interviews do not allow for generalizations beyond the investigated context. Thus, more than statistically representing a population, this research aimed to capture the experiences in situations of vulnerability with interpretative depth. Moreover, the time frame centered on the most acute moment of the pandemic restricted the observation of long-term dynamics, especially regarding the transformation of family aspirations. Issues such as race, gender, and intersectionalities deserve further investigation in future investigations. This study offers an exploratory and situated contribution that proposes an interpretative framework and fosters new interdisciplinary, longitudinal, and territorially-rooted research agendas.

Finally, despite the historical, political, and spatial specificities that shape the Latin American metropolitan

areas, the elements in this study offer relevant subsidies for thinking about the health, economic, or political effects of crises on populations under structural vulnerability. Without pretense of direct comparability, especially due to the heterogeneity and complexities of the Latin American metropolitan contexts, our findings show how unequal urbanization produces territories in which immobility constitutes an imposed condition rather than a choice and how permanence reinvents itself as a form of daily resistance.

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COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR CONTRIBUTIONS

The authors worked together in the planning and writing of this article in its various stages. Ednelson Mariano Dota and Cimar Alejandro Prieto Aparicio generated the quantitative data. Isis do Mar Marques Martins carried out the similarity analysis. Igor Martins Medeiros Robaina generated the qualitative analyses.

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