Factors involved in home administration
Factors involved in home management
Factors involved in domestic management

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Resumen

El objetivo de esta investigación fue identificar los factores principales considerados en la administración del hogar para luego señalar su relación con el nivel educativo, la edad y el género. Para ello, se realizó un análisis directo de la forma en cómo se ha presentado el ingreso y gasto a nivel nacional, a partir de la Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH) 2022, con un total de 37 millones de viviendas analizadas. Como complemento se efectuó una encuesta con una muestra de 212 casos para identificar y contrastar la forma en que algunas familias administran sus hogares (caso de estudio) a través de la prueba de ji al cuadrado, utilizando el *software* IBM SPSS Statistics 23. Los resultados señalaron que la principal fuente de ingreso de los hogares fue el trabajo, que sumó el 65.7 % del ingreso total, posteriormente las transferencias y la estimación del alquiler de la vivienda, que representaron el 17.2 y 11.8 %, respectivamente. El gasto corriente por grandes rubros fue para alimentos, bebidas y tabaco, posteriormente para transporte y en tercera posición para la educación. Los hogares de la CDMX, Baja California y Querétaro presentaron el mayor gasto promedio mensual. Igualmente, los resultados del caso de estudio mostraron que únicamente el 56 % reconocen que administran sus hogares y de ellos 58 % son mujeres. Finalmente se acepta la H0, ya que el resultado de la prueba fue mayor que 0.05,

es decir, no existe una correlación directa entre la administración del hogar con la edad, el género ni el nivel de educativo.

Palabras clave: administración familiar, educación, movilidad urbana y vivienda.

Abstract

The objective of this research was to identify the main factors considered in home administration, specifically pointing out their relationship with educational level, age and gender. It is hypothetically stated (H0) that educational level, age and gender do not present a direct relationship with family administration.

A direct analysis was carried out of the way in which income and expenditure has been presented at the national level, taking as a direct reference the National Survey of Household Income and Expenses (ENIGH) 2022, with a total of 37 million homes analyzed. As a complement, a survey was carried out with a sample of 212 cases, to identify and contrast the way in which some families manage their homes (case study) through the chi-square test, using the IBM SPSS Statistics 23 software package, to perform is statistical analysis. The results indicated that the main source of household income was work, which amounted to 65.7% of total income, followed by transfers and estimated housing rent, which represented 17.2 and 11.8%, respectively. Current spending by large items was for food, beverages and tobacco, later for transportation and in third position for education. Households in CDMX, Baja California and Querétaro presented the highest average monthly expenditure. Likewise, the results of the case study showed that only 56% recognize that they manage their homes and of them 58% are women. Finally, H0 is accepted, since the result of the test is greater than 0.05, which shows that there is no direct correlation between home administration and: age, gender or educational level.

Key words: family management, education, urban mobility and housing.

Resumo

O objetivo desta pesquisa foi identificar os principais fatores considerados na administração doméstica e depois apontar sua relação com escolaridade, idade e gênero. Para tal, foi realizada uma análise direta à forma como as receitas e despesas têm sido apresentadas a nível nacional, com base no Inquérito Nacional ao Rendimento e Despesas das Famílias (ENIGH) 2022, com um total de 37 milhões de lares analisados. . Como complemento, foi realizado um inquérito a uma amostra de 212 casos para identificar e contrastar a forma como algumas famílias gerem as suas casas (estudo de caso) através do teste do qui-quadrado, utilizando o software IBM SPSS Statistics 23. Os resultados indicaram. que a principal fonte de rendimento do agregado familiar era o trabalho, que representava 65,7% do rendimento total, seguido das transferências e da renda estimada de habitação, que representava 17,2 e 11,8%, respetivamente. Os gastos correntes por grandes itens foram para alimentos, bebidas e fumo, depois para transportes e na terceira posição para educação. As famílias em CDMX, Baja California e Querétaro apresentaram as despesas médias mensais mais elevadas. Da mesma forma, os resultados do estudo de caso mostraram que apenas 56% reconhecem que gerem as suas casas e destes 58% são mulheres. Por fim, aceita-se H0, uma vez que o resultado do teste foi superior a 0,05, ou seja, não há correlação direta entre administração domiciliar com idade, sexo ou escolaridade.

Palavras-chave: gestão familiar, educação, mobilidade urbana e habitação.

Introduction

Nowadays, it is essential that people not only know, but also be able to distinguish between income and expenses so that they are able to identify when an expense is a need, a taste or a desire that exceeds the family's real economic possibilities (Berger, 2018). This is because the home is the natural environment of the human being that must provide security, comfort and status to its inhabitants, as well as seek inclusive, safe, resilient and sustainable communities (UN-Habitat, 2018).

In the case of Mexico, article 4 of the Constitution establishes that every family has the right to enjoy decent and decent housing (Medina and Flores, 2019). However, reality shows that in said country there is a marked and unequal distribution of wealth, which is reflected in family income. According to data from the National Institute of Statistics and Geography (Inegi) (Macedo, 2019), in 2018 the average family income in Mexico was 16,539

per month, which is a figure lower than the monthly income of 17,249 pesos recorded in 2016. Data that is confirmed by an investigation by *Forbes Staff* magazine (August 1, 2019).

Now, when trying to define how to measure or understand poverty in Mexico, article 36 of the General Law of Social Development (National Council for the Evaluation of Social Development Policy [Coneval], 2019) establishes that a person is considered in poverty situation when they face at least one social deficiency and when they have an insufficient income that does not allow them to acquire the goods and services necessary to satisfy their food and non-food needs.

Family management

Family finances involve variables that include the effective management of a family's monetary resources in order to achieve optimal financial health, for which key elements such as perceptions, timely and objective actions of the budget, spending and savings with the purpose of achieving efficient money management.

According to the European Postgraduate Center (CEUPE), family finances aim to maintain a healthy economy, which implies, first of all, an objective administration that allows effective control of expenses, the search for debt relief, the maintaining an emergency fund, saving and, whenever possible, acquiring material goods. Likewise, it is crucial to have and maintain secure sources of income in order to contribute to family well-being (European Postgraduate Centre, 2023). Table 1 shows the objectives of efficient administration according to CEUPE:

Table 1. Family finance objectives

No.	AIM	DEFINITION
1.	Quantify income	Specify the income received daily, in such a way that it allows specifying and classifying savings and spending strategies.
2.	Evaluate income and its sources	Recognize the security of the sources of monetary income to view only the sources of income that are secure.
3.	Know and control expenses	Specify the expenses of family members in a timely manner to distinguish the cause and indicate its relevance.
4.	Analyze the degree of debt	Specifically measure the needs of the home to avoid debt.
5.	Use the available resources intelligently	Effectively and efficiently manage credit resources.
6.	Save	Develop the savings culture objectively.
7.	Make an emergency fund	Have a savings fund, which is preventive in the event of a contingency.

Source: Own elaboration with data from CEUPE (2023)

Living place

Housing plays a fundamental role as a determining indicator in a person's quality of life, since it is considered the individual's natural habitat and represents the access point to basic services and adequate sanitary conditions. The survey collected information on the total number of homes in the country, as well as some of their characteristics and the households that occupy them (ENIGH, 2022). Among the basic services present the following are mentioned:

Services

- Electrical energy: This aspect focuses on the availability and supply of electrical energy in homes. In this sense, various sources of this service were considered, such as public supply, private plants, solar panels, among others. According to the data collected in the survey, the public service is the main source, and by 2022 a supply will be achieved in 99% of the homes surveyed (ENIGH, 2022).

- Water: Access and availability of water is considered a fundamental human right. In Mexico, by 2022, approximately 77.3% of the 37 million homes had piped water inside their homes (ENIGH, 2022).

- Home: Refers to the safe coexistence space where one or more people, whether family members or not, reside and share common expenses. Within the household, there are the recipients, that is, the members who receive income from various sources. In Mexico, between 2016 and 2022, the average household size decreased from 3.7 to 3.4 people (ENIGH, 2022). Within the home, aspects of great importance are distinguished that are fundamental in family finances, such as family income, which comes from various sources, whether in the form of money or in kind, such as work, various social programs, savings, among others. others. Precise knowledge of these factors should theoretically improve the design of public policies, the planning of services and, most importantly, the fight against social inequality (ENIGH, 2022). On the other hand, the expense or expenditure at home represents the disbursement intended to satisfy various needs and effectively comply with financial commitments. Knowing this variable in advance allows us to understand the different economic patterns and priorities within households (ENIGH, 2022).

Urban mobility

Mobility is one of the fundamental needs of human beings and is defined as movement within the territory. This displacement is not limited only to transportation, but also covers the way in which it is carried out (Gutiérrez, 2012). One of the most significant effects of urban growth is the notable increase in the trips required for people's subsistence, so it is crucial to take into account the individual conditions of each person, which are linked to their movement abilities, as well as consider the infrastructure and availability of transportation, along with other relevant aspects (Cerón-Aparicio, 2018).

Education

Human formation, which is based on education, is considered an inalienable, human and essential right, and constitutes the pillar on which peace will be built and sustainable development will be promoted. Education promotes the generation of knowledge, skills and values, and fosters proactive attitudes for the sake of a more equitable and sustainable society for all (UNESCO, 2018).

Methods and materials

The present research was based on three levels of abstraction: exploratory, descriptive and correlational, for which a mixed approach (deductive-inductive) of the quantitative method was used (Hernández *et al.*, 2014). To justify the topic addressed, a bibliometric analysis was carried out to identify and understand the relevance and importance of the main factors and aspects that directly and indirectly influence home administration. Then, a detailed analysis was carried out of how income and expenditure has been presented in Mexican households, based on direct data from the 2022 National Survey of Household Income and Expenses (ENIGH).

Subsequently, a specific questionnaire was designed using Google Forms, which was applied remotely using ICT in order to investigate how some families manage their homes. Initially, an evaluation of the questionnaire was carried out as a pilot with 38 people (Padua, 2016). The survey was mixed in nature, that is, quantitative and qualitative measurement parameters were considered, with ordinal scales, exclusive scales and nominal descriptions. Once reviewed and adjusted, the final survey was carried out, which covered a sample of 212 people in Mexico City and some municipalities in the State of Mexico.

The design of the questionnaire addressed the following specific aspects: i) general data, ii) income, iii) mobility, iv) housing, v) infrastructure (services in general), vi) social support, vii) attitude towards the covid pandemic -19, and viii) management of resources at home.

Participants were selected randomly for convenience, requesting participation from those with a total household income of up to $14,239.52. This research, of an exploratory and descriptive nature, was conceived as a diagnosis that, through an analytical process, sought to identify the way in which a segment of the population traditionally manages material and natural resources in their homes.

To analyze the correlation between the variables, the chi-square test was used as a coefficient using the IBM SPSS Statistics v *software,* 23. The base formula was the following:

$$X^2 = \sum \frac{(fo - fe)^2}{fe}$$

It was started from the inference that age, academic level and gender directly impact the individual's response to managing their resources at home. Likewise, H0 was proposed (hypothesis null), that is, there was no relationship between the variables considered.

Variables considered and classified

Income administration (dependent)

Figure 1. Measurement level: nominal variable of numerical type, label: 1-YES, 2–NO

	Cambiado	Perdidos	Recuento	Valor	Etiqueta
1			119	1	SI
2			93	2	No
3					

Source: CHI.spv-IBM SPSS, Statics Visor

Age (independent)

Figure 2. Level of measurement: ordinal variable of numerical type

	Cambiado	Perdidos	Recuento	Valor	Etiqueta
1	☐	☐	8	1	menor de 18
2	☐	☐	123	2	18 a 20
3	☐	☐	21	3	21 a 24
4	☐	☐	11	4	24 a 26
5	☐	☐	4	5	27 a 29
6	☐	☐	9	6	30 a 34
7	☐	☐	7	7	35 a 39
8	☐	☐	4	8	40 a 44
9	☐	☐	8	9	45 a 49
10	☐	☐	9	10	50 a 54
11	☐	☐	5	11	55 a 59
12	☐	☐	3	12	mayor que 60

Source: CHI.spv-IBM SPSS, Statics Visor

Genre (independent)

Figure 3. Measurement level: nominal numerical variable. Tag: 1-woman, 2-man

	Cambiado	Perdidos	Recuento	Valor	Etiqueta
1	☐	☐	112	1	Mujer
2	☐	☐	100	2	Hombre
3	☐	☐			

Source: CHI.spv-IBM SPSS, Statics Visor

Education level (independent)

Figure 4. Level of measurement: ordinal variable, numerical type, label: 1-secondary, 2-high school, 3-higher, 4-postgraduate

	Cambiado	Perdidos	Recuento	Valor	Etiqueta
1	☐	☐	9	1	Secundaria
2	☐	☐	111	2	Media Superior
3	☐	☐	87	3	Superior
4	☐	☐	5	4	Posgrado
5	☐	☐			

Source: CHI.spv-IBM SPSS, Statics Visor

To indicate the correlation of the variables, the following model (figure 5) and the variable table (table 2) are planned.

Figure 5. Model
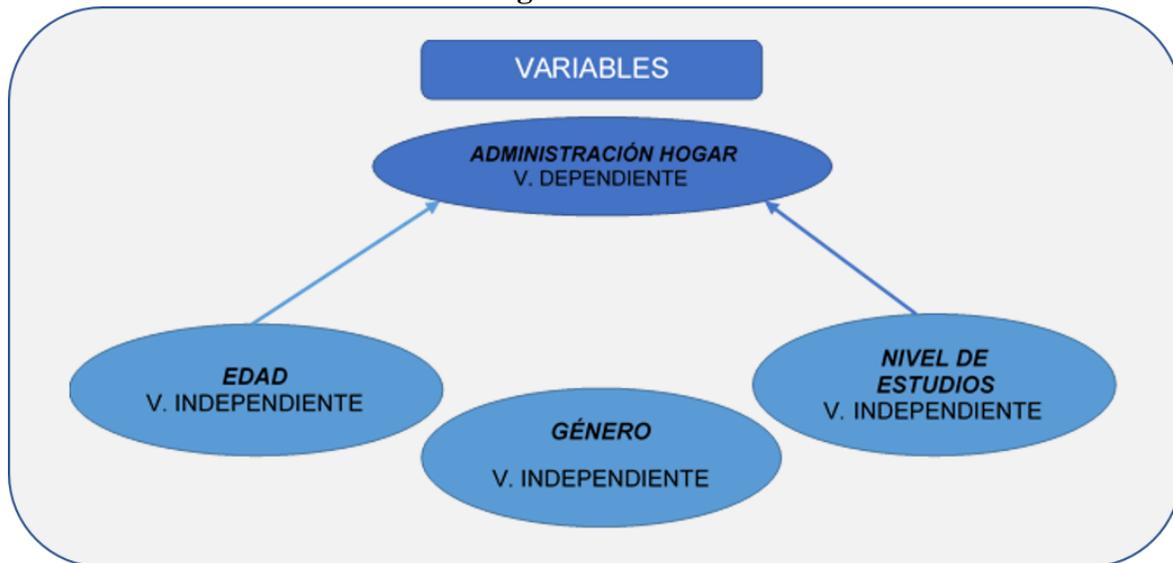
Source: self-made

Table 2. Variables

VARIABLE	CONCEPTUALIZATION	DIMENSION	MEASUREMENT P.
INCOME MANAGEMENT	DEPENDENT VARIABLE	SAMPLE CDMX, EDO. MEX and OTHERS	EXCLUSIVE VARIABLE But
AGE	INDEPENDENT VARIABLE	IDEM	VARIABLE ORDINAL-ASCENDING
GENDER	VARIABLE INDEPENDENT	IDEM	NOMINAL VARIABLE Women Man
LEVEL OF STUDIES	Academic level	IDEM	1-Secondary 2-Upper middle 3- Superior 4- Postgraduate

Source: self-made
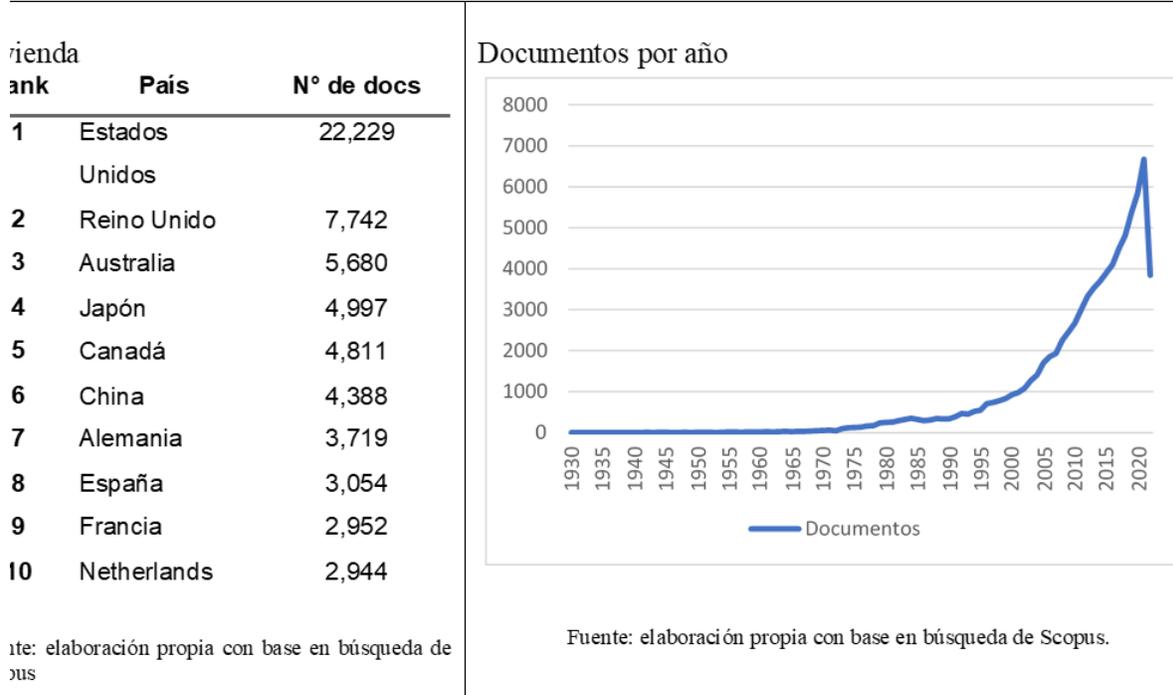
Results

From the bibliometric analysis the following was observed.

Living place

Figure 6. Documents by year

vienda ank	País	N° de docs
1	Estados Unidos	22,229
2	Reino Unido	7,742
3	Australia	5,680
4	Japón	4,997
5	Canadá	4,811
6	China	4,388
7	Alemania	3,719
8	España	3,054
9	Francia	2,952
10	Netherlands	2,944

Documentos por año

nte: elaboración propia con base en búsqueda de
ous

Fuente: elaboración propia con base en búsqueda de Scopus.

Figure 6 presents in descending order the countries with the greatest number of documents related to the topic of housing. First, the United States tops the list with 22,229 documents, followed by the United Kingdom with 7,742, Australia with 5,680, Japan with 4,997, Canada with 4,811, China with 4,388, Germany with 3,719, Spain with 3,054, France with 2,944, and Netherlands with 2944. Half of the countries in this *ranking* are European and two are from America, which indicates the absence of Latin American countries in the first ten places, as well as a lack of published documents on the subject of housing in the region.

Figure 6 also shows the number of documents per year over time. Although the topic began to be developed more than a hundred years ago, the number of documents was initially low. It was from 1950 that 12 documents were published, and since then the number per year has been increasing, reaching 6,681 in 2021, which indicates a growing interest in the topic over the years.

Figure 7. Co-occurrence of keywords for the housing variable

Source: self-made

Figure 7 shows the result of the analysis of the co-occurrence of keywords between the documents found. The words "aging", "middle age", "activity of daily living", "risk factors", "prevalence" and "cognition" stand out, which represent the main clusters and mark the beginning of a varied list of words. clue.

Urban mobility

Figure 8. Documents by year

umentos por país para la variable
novilidad urbana

nk	País	N° de docs
1	Estados Unidos	607
2	Italia	553
3	Brasil	495
4	Alemania	347
5	España	335
6	China	318
7	Reino Unido	314
8	Francia	267
9	Portugal	218
0	India	177

te: elaboración propia con base en
 queda de Scopus

Documentos por año

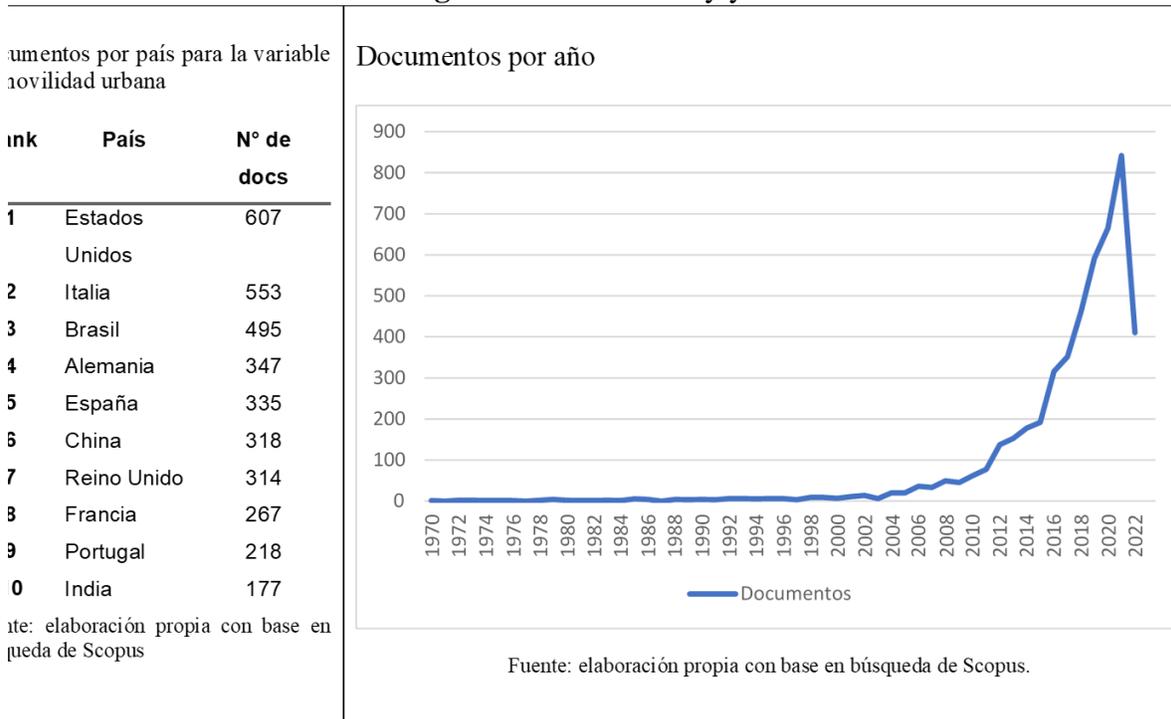Fuente: elaboración propia con base en búsqueda de Scopus.

Figure 8 lists the 10 countries with the most published documents. In first place is the United States with 607. Furthermore, most of the countries belong to Europe, although it should be noted that Brazil occupies one of the first three places. It can be stated, therefore, that it is a topic of interest within the continent and that its research/development will allow us to contribute more to its exploration.

Figure 8 represents an ascending graph of the number of documents published per year. This variable began to be worked on in 1970 with between one and six documents published until 1996. However, starting in 2001, more than 10 documents were published until recent years, reaching up to 842 documents in 2021 as its maximum number.

Figure 9. Co-occurrence of authors for the urban mobility variable
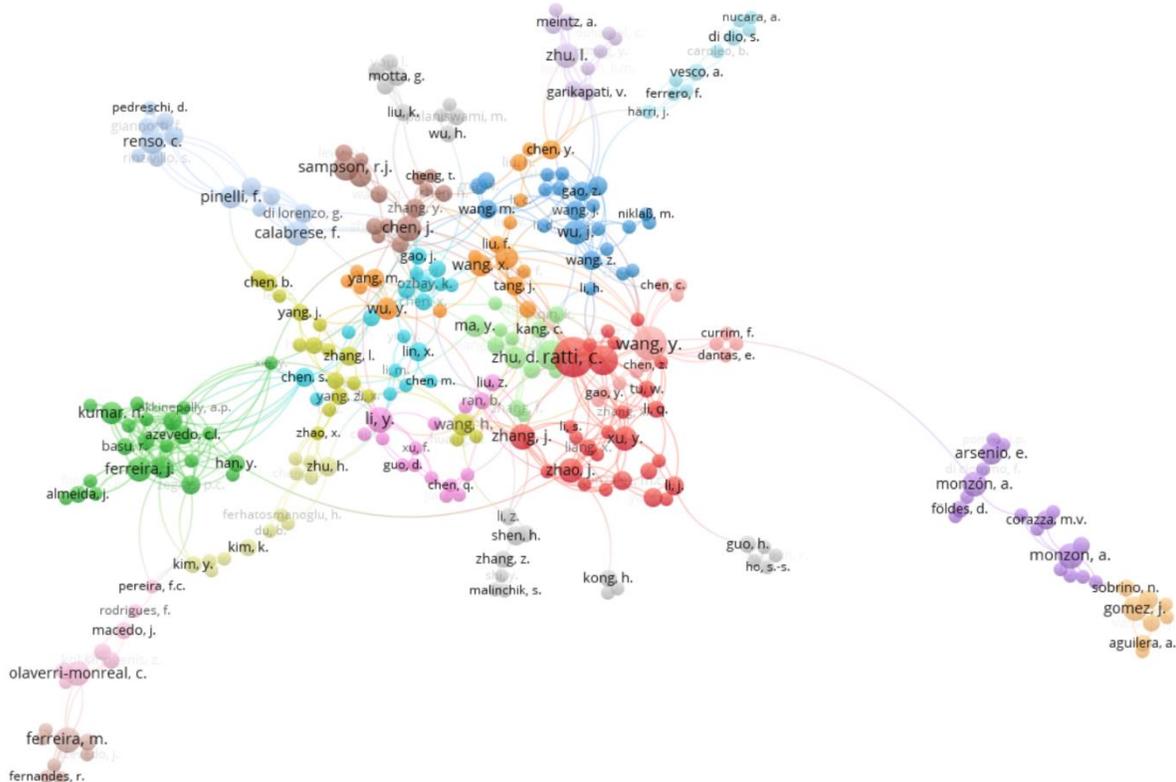
Source: self-made

The co-occurrence analysis of authors shown in Figure 9 results in 23 clusters, where authors who generate links with their author documents stand out, such as Ratti, Xie, Wang, Calabrese, Chen, Wu, to mention a few.

Family management

Figure 10. Documents by year

Documentos por país para la variable administración familiar		
Rank	**País**	**N° de docs**
1	Estados Unidos	388
2	Reino Unido	71
3	China	70
4	Australia	62
5	Italia	55
6	Alemania	41
7	España	40
8	Canadá	36
9	Francia	32
10	Basil	28

Fuente: elaboración propia con base en búsqueda de Scopus

Documentos por año para la variable administración familiar

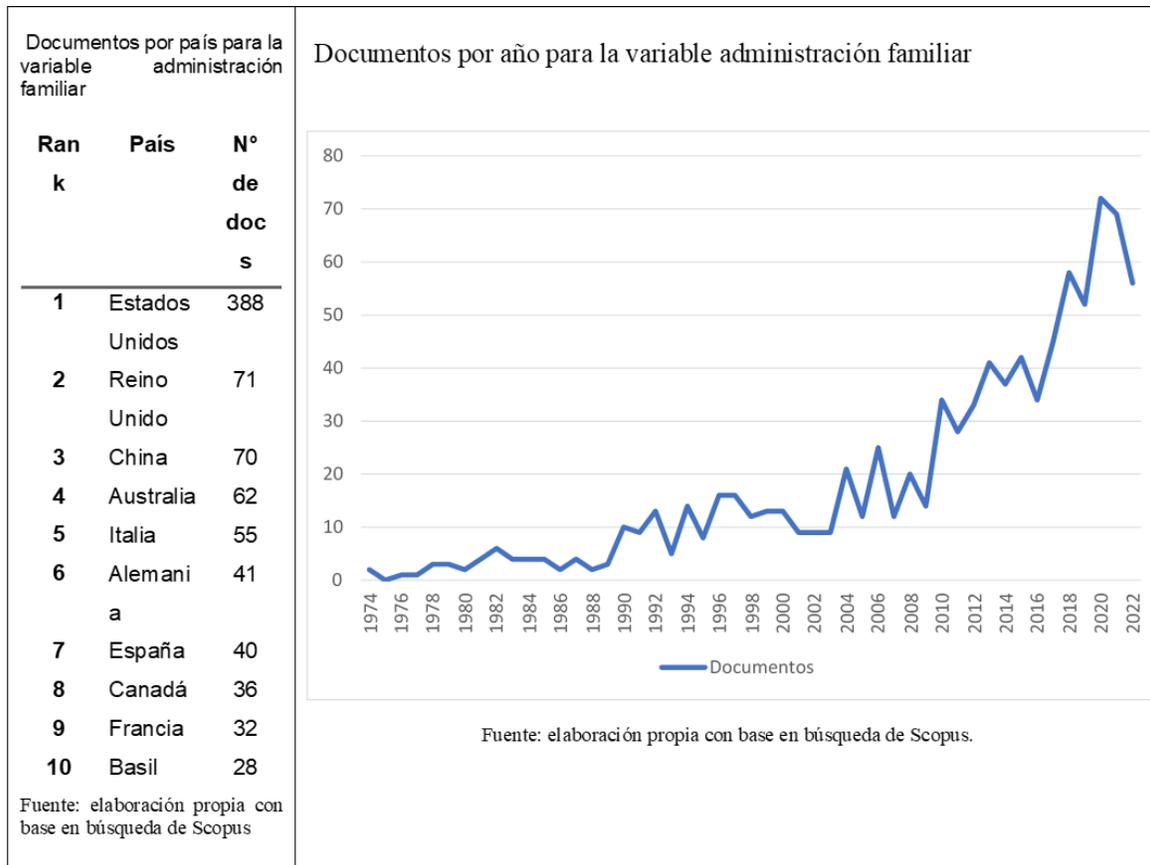Fuente: elaboración propia con base en búsqueda de Scopus.

Figure 10 presents a list of the 10 countries with the most documents, led by the United States with 388 documents. Most of the countries on this list are European, but the presence of Brazil, a Latin American country that occupies last place with 28 documents, is notable. This indicates that the topic has been addressed in this region of the continent, although in few countries, which makes this research a development of interest that seeks to expand its analysis in Latin America, especially in Mexico.

The first documents on the topic of family management were published in 1974, but the number of publications did not exceed six until 1990. Since that year, it has been increasing, with a maximum of 69 in 2020 and 56 in 2021. This demonstrates growing interest in the topic over time and underlines the continued relevance of this research, which will continue to complement and innovate current research.

Figure 11. Co-occurrence of keywords for the *family administration variable*

Source: self-made

Figure 11 exhibits the same pattern of thematic areas that was observed during the analysis of this variable, but now represented and connected with keywords, with a total of 7 clusters. Words such as "family management", "family therapy", "risk factors", "parent-child relationship", "psychological adoption", "parenting", "adolescent behavior", "schizophrenia" and "family history" stand out. These words are distributed in different clusters, but show connectivity between them. In a cluster that is only connected to family management, the main keyword is "family businesses", where terms with a more economic meaning such as "family participation", "industry" and "family control" are found. Therefore, it can be concluded that the most prominent themes focus on adolescents and family adaptation.

Education

Figure 12. Documents published by year

Documentos por país para la variable educación		
Rank	País	N° de docs
1	Estados Unidos	753,068
2	Reino Unido	215,740
3	Australia	107,035
4	Canadá	94,714
5	China	92,656
6	Alemania	70,309
7	España	58,695
8	Brasil	45,734
9	India	42,908
10	Netherlands	40,938

Fuente: elaboración propia con base en búsqueda de Scopus

Documentos publicados por año

Fuente: elaboración propia con base en búsqueda de Scopus.

Figure 12 lists the 10 countries with the most documents, led by the United States with 753,068 documents. Most of the countries on this list are European, with Canada representing North America, and Brazil representing South America. There is a low presence of Latin American countries in this list, which suggests that the research could contribute to the increase of research on this continent, especially in Mexico.

The topic of education has been the subject of extensive analysis, as can be seen in figure 12, which shows a graphic representation of the documents published by year. The analyzes began in 1865 with eight documents, and since then there has been a constant increase in the number of documents published each year, reaching 88,135 documents in 2022. The year with the most documents was 2021, with 147,089, demonstrating the current and transcendent importance of education.

Of the four variables analyzed in this research, education has been addressed in more thematic areas.

Figure 13. Co-occurrence of authors for the education variable
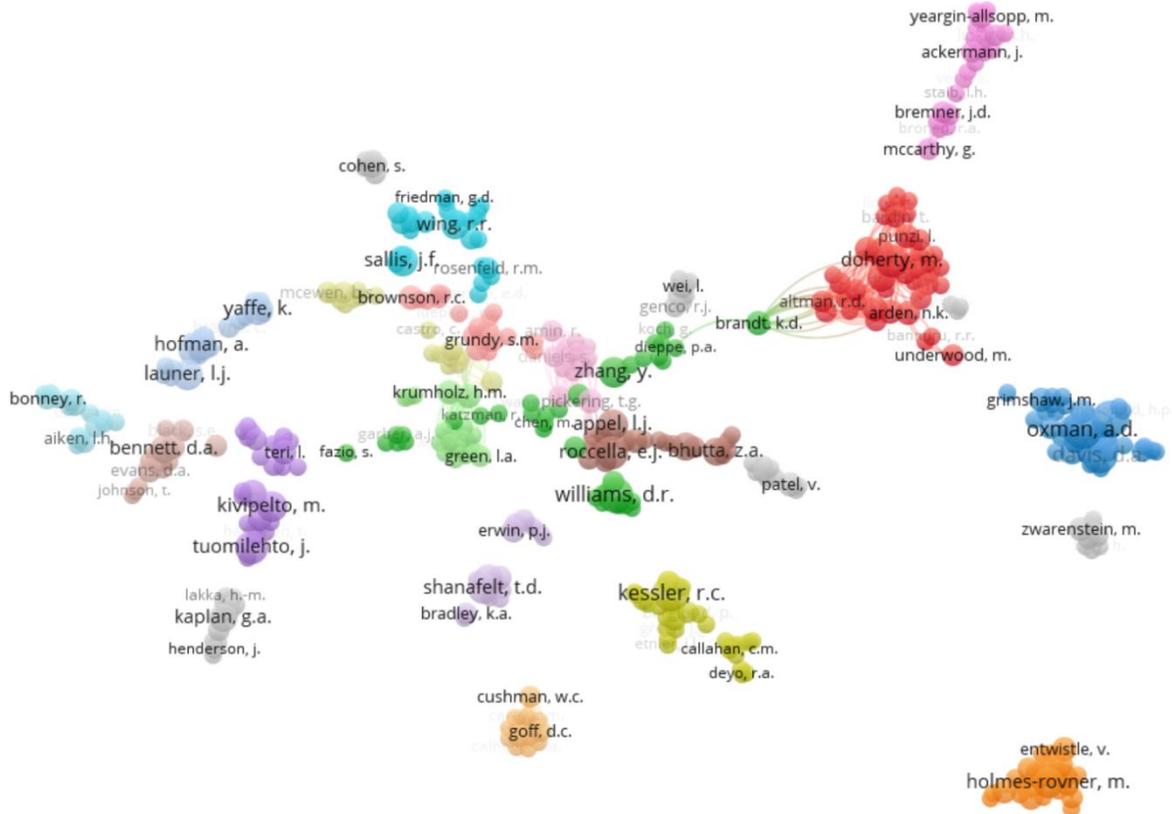
Source: self-made

Figure 13 presents a visualization of the authors of the topic under analysis, divided into 24 clusters. Some of these show significant interrelationships with each other, while in others the interrelationships are less frequent. This can be attributed to the wide variety of thematic areas in which the topic has been developed and the large number of documents in each of them.

The main authors who generate correlations between the clusters are Brandt, Grundy, Pickering and Smith. In the clusters without correlation, authors such as Oxman and Williams, Kessler, among others, stand out. This lack of correlation may be because these authors focus on specific topic areas that do not overlap with other clusters, suggesting a hierarchy of topics within the analysis.

National Household Income and Expenditure Survey. Editions 2016-2022

By 2022, a total of 37 million homes were analyzed, a figure that contrasts with what was reported in 2016.

Households

The home can be considered as a place delimited by walls and ceilings where people prepare food, sleep and protect themselves from the environment. From 2016 to 2022 it had an increase of 2.3% each year (35,234,822 in 2020, and 36,968,871 in 2022) (figure 14).

Figure 14. Dwellings and homes
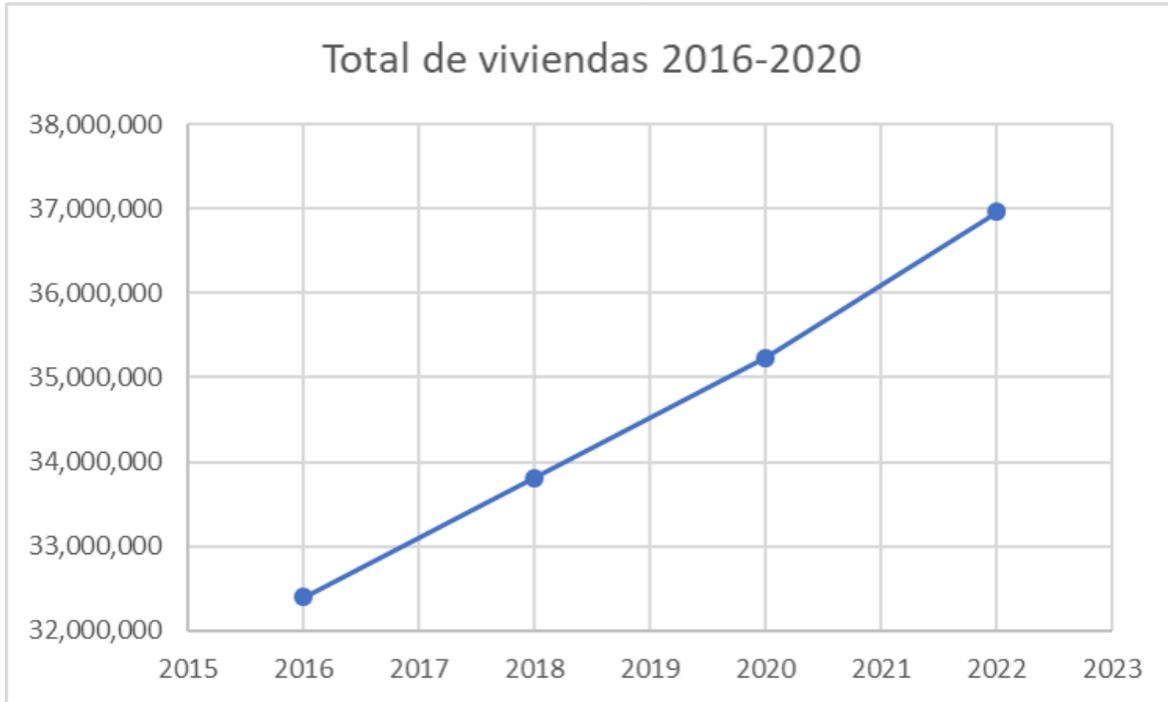
Source: Own elaboration with data from Inegi

Analyzing the services, a comparison is made between 2020 and 2022 (table 3).

Table 3. Dwellings and Homes
Availability and obtaining of electrical energy. Percentage of homes according to the source of obtaining electrical energy 2020-2022

Fountain	2020	2022
Public service	99.21%	98.94%
Private plant	0.11%	0.11%
Solar panel	0.10%	0.22%
Other source	0.28%	0.37%
Without electric light	0.30%	0.37%

Source: Own elaboration with data from Inegi

In contrast, the number of homes without access to electricity increased from 106,445 in 2020 to 135,613 in 2022. Regarding water service (table 4), in 2022, 77.3% of the 37 million homes in Mexico had piped water inside the house. However, for the same year, 6.9% of homes did not have water at home, which represents a decrease of 0.3 percentage points compared to 2016.

Table 4. Water service

Year	Piped water inside the home	Piped water outside the home, but inside the land	No water at home
2016	23,728,970 (73.30%)	6 326 401 (19.50%)	2,336,745 (7.20%)
2018	25 137 336 (74.30%)	6,289,089 (18.60%)	2,387,707 (7.10%)
2020	27 093 339 (76.90%)	5,823,848 (16.50%)	2,317,635 (6.60%)
2022	28,561,859 (77.30%)	5,860,490 (15.90%)	2,546,522 (6.90%)

Source: Own elaboration with data from Inegi

Homes

The home is defined as the space inhabited by one or more people, whether family or not, who share common expenses. Within this, the recipients are those who receive income from various sources. In Mexico, between 2016 and 2022, the average household size decreased from 3.7 to 3.4 people. In 2022, in Mexico there was an average of 2.2 recipients per household, as shown in figure 15.

**Figure 15.** Size and recipients of households
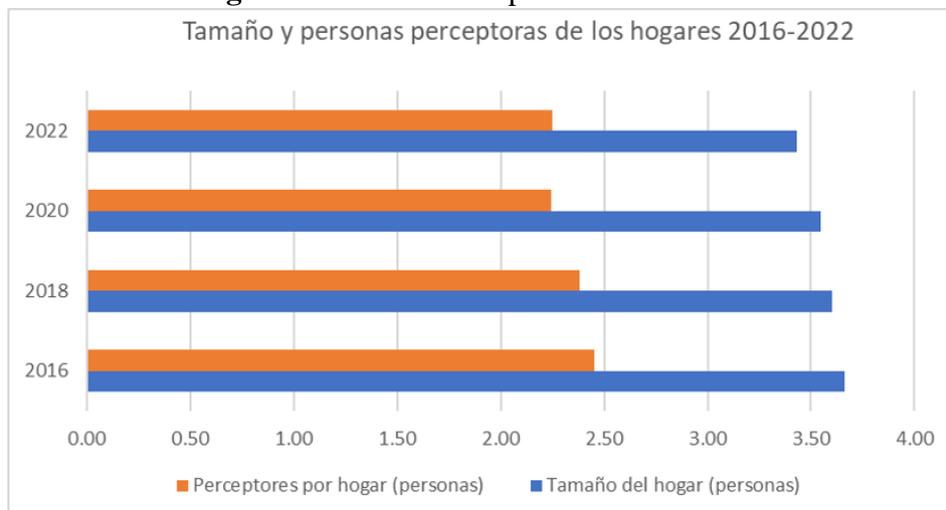
Source: Own elaboration with data from Inegi

Income

In 2022, the total monthly income accumulated in all households in Mexico amounted to 797.5 billion pesos, which represents an increase of 98.8 billion (14.1%) compared to 2016. During the period from 2016 to 2022, the average annual increase in household monthly income was 3.8% (figure 16).

Figure 16. Total monthly income

Ingreso total mensual 2016-2022 (pesos) Ingreso total
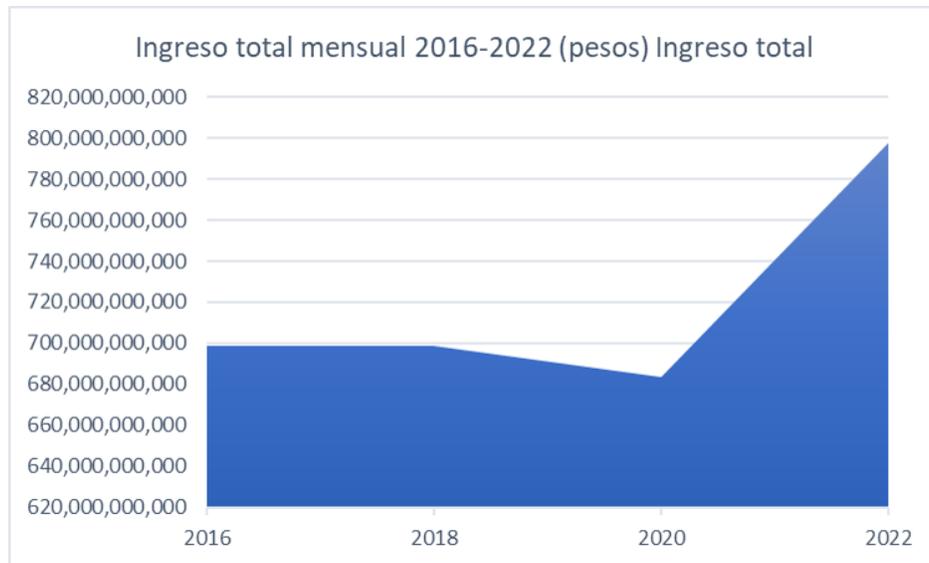
Source: Own elaboration with Inegi data

In the National Survey of Household Income and Expenses (ENIGH), the main sources of income were specified (table 5), which were 1) work, 2) property income, 3) transfers, 4) estimated rent of housing and 5) other current income (table 5). In 2022, the main source of household income was work, which represented 65.7% of the total. They were followed by transfers and the estimate of housing rent, with 17.2% and 11.8%, respectively. During the six-year period, transfers increased by 26.1%, while income from work increased by 16.8%.

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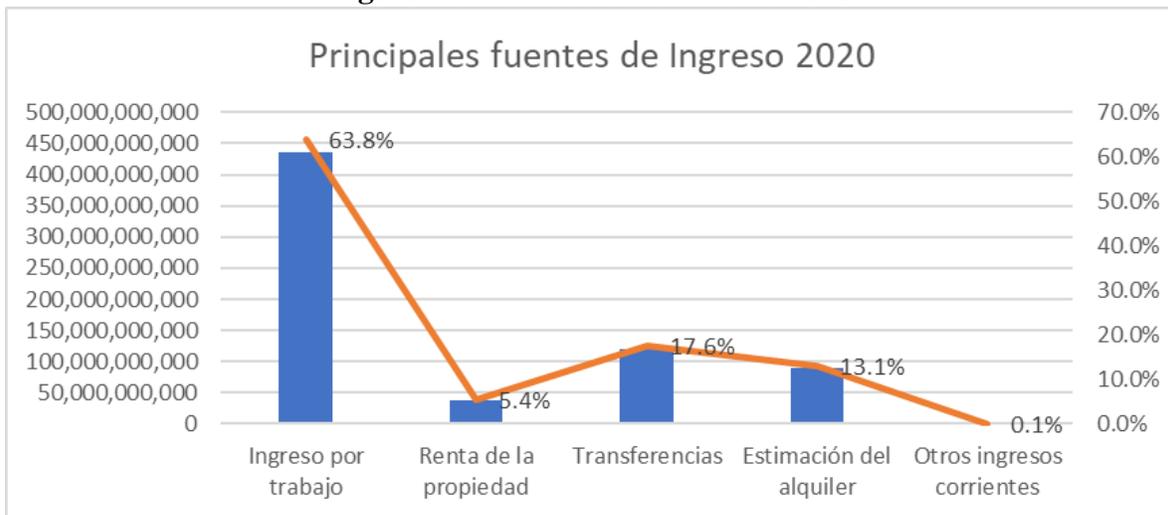**Table 5.** Main sources of income

Note: Total current income by main sources of income 2016-2022 (pesos)

| Year	Income from work	Property income	Transfers	Rent estimate	Other current income
2016	448 894 312 431	61 836 290 015	108 496 264 186	78 849 887 076	604 260 283
	64.2%	8.9%	15.5%	11.3%	0.1%
2018	470 102 727 635	41 178 512 908	107 101 427 794	79 512 831 888	614 187 500
	67.3%	5.9%	15.3%	11.4%	0.1%
2020	436 291 740 331	36 957 923 119	120 544 340 873	89 258 517 705	601 130 856
	63.8%	5.4%	17.6%	13.1%	0.1%
2022	524 087 574 406	41 460 436 753	136 820 040 069	94 403 740 877	697 952 317
	65.7%	5.2%	17.2%	11.8%	0.1%

Source: Inegi

As can be seen in figures 17 and 18, there was only an increase in income from work of less than 2% (in the others it was reduced).

Figure 17. Main sources of income 2020

Source: Own elaboration with Inegi data

**Figure 18.** Main sources of income 2022
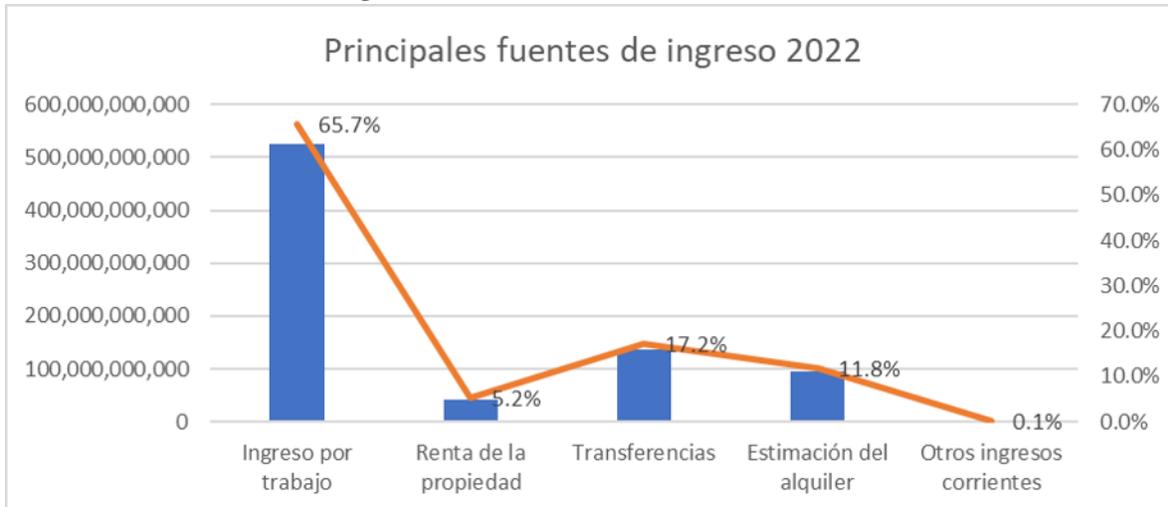
Source: Own elaboration with data from Inegi

Spent

The disbursement made at home is considered to meet needs and meet commitments. Understanding spending is crucial to understanding household consumption patterns and financial priorities. Total accumulated spending in Mexican households increased 18.5% from 2016 to 2022, going from 422.5 to 500.4 billion pesos. Specifically, in the health sector, an increase of 47.9% was observed, going from 11.4 to 16.8 billion pesos.

In contrast, for the years 2020 and 2022, the areas of education, transportation and food continued to increase (figure 19).

Figure 19. Current monthly monetary expenditure by major items 2020-2022
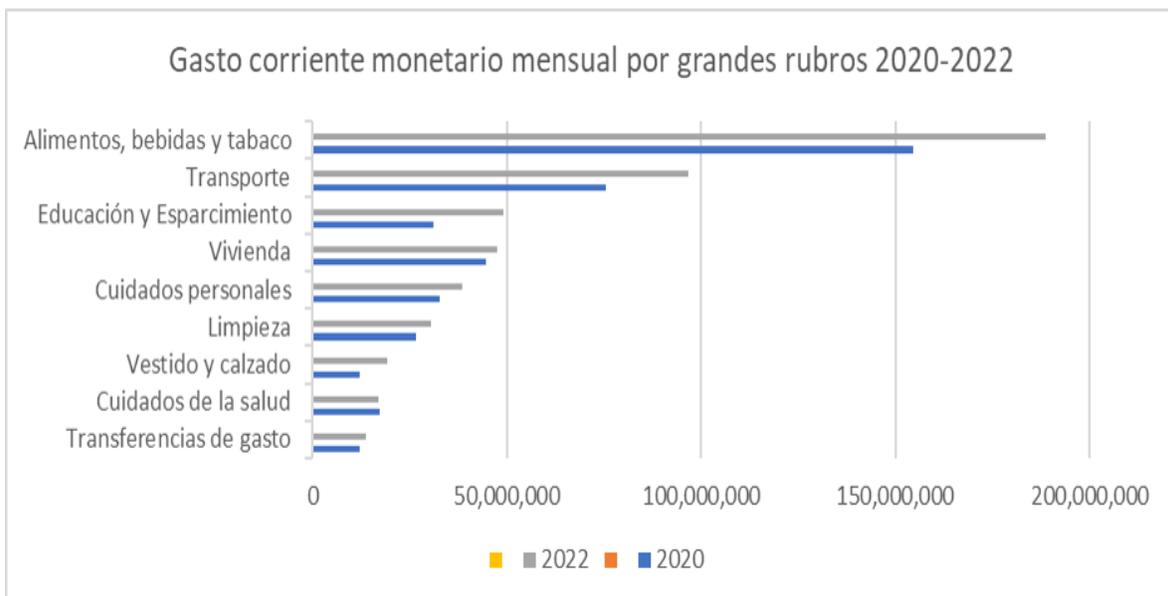
In this section, *expenditure* refers to the average monetary current expenditure of households: sum of the regular expenditures that households directly make on goods and services for their consumption. The expense that modifies the household's assets is not considered.

Note: All results are presented at constant 2022 prices.

Source: Own elaboration with data from Inegi

As an example, in terms of average monthly income in 2022, the states with the households that have the highest income were Baja California Sur, Mexico City and Baja California. On the other hand, Chiapas, Guerrero and Oaxaca were the states with the households that receive the least income (figure 20). It is important to highlight that Chiapas was the state that increased its income the most between 2016 and 2022, with an increase of 26.0%.

Figure 20. Average monthly income (2016-2022)

Source: Inegi

As an example of monthly expenditure in 2022, it is observed that households in Mexico City, Baja California and Queretaro have the highest average monthly expenditure. In contrast, the households with the lowest spending were found in Veracruz, Oaxaca and Chiapas. Between 2016 and 2022, it was the state of Michoacan that increased its spending the most, with an increase of 23.8% (figure 21).

**Figure 21.** Average monthly expenditure (2016-2022)
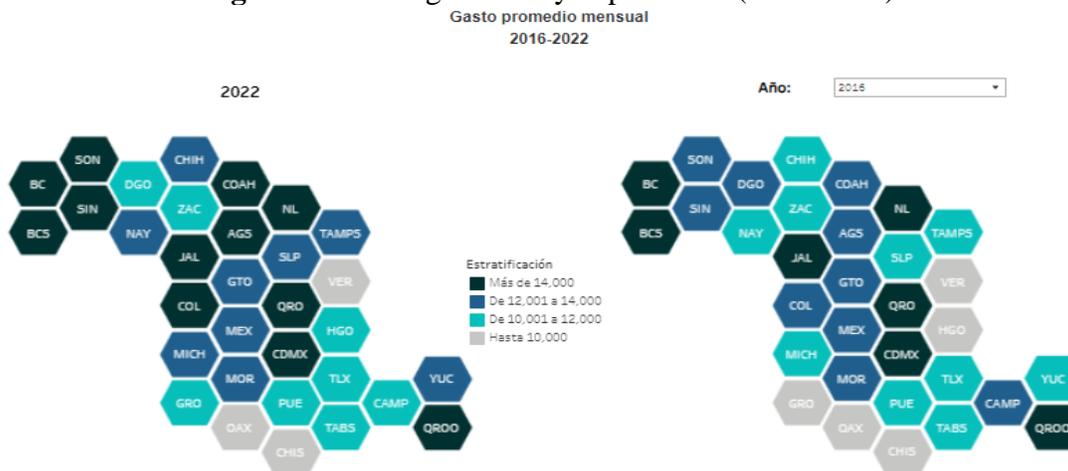
Source: Inegi

Regarding spending by items for 2022, it is observed that the largest proportion of household spending was allocated to the acquisition of food. Chiapas was the state that dedicated the highest percentage of its spending to this area, with 45.0%. In contrast, Sonora only allocated 31.2% of its spending on food. On the other hand, Oaxaca was the state that allocated the highest percentage of its spending to health care, with 5.9%, while Baja California was the one that allocated the lowest percentage, with 1.8%.

Subsequently, to complement the study, a sample of 212 cases was carried out, the results of which are presented in figure 22.

Figure 22. Expense management
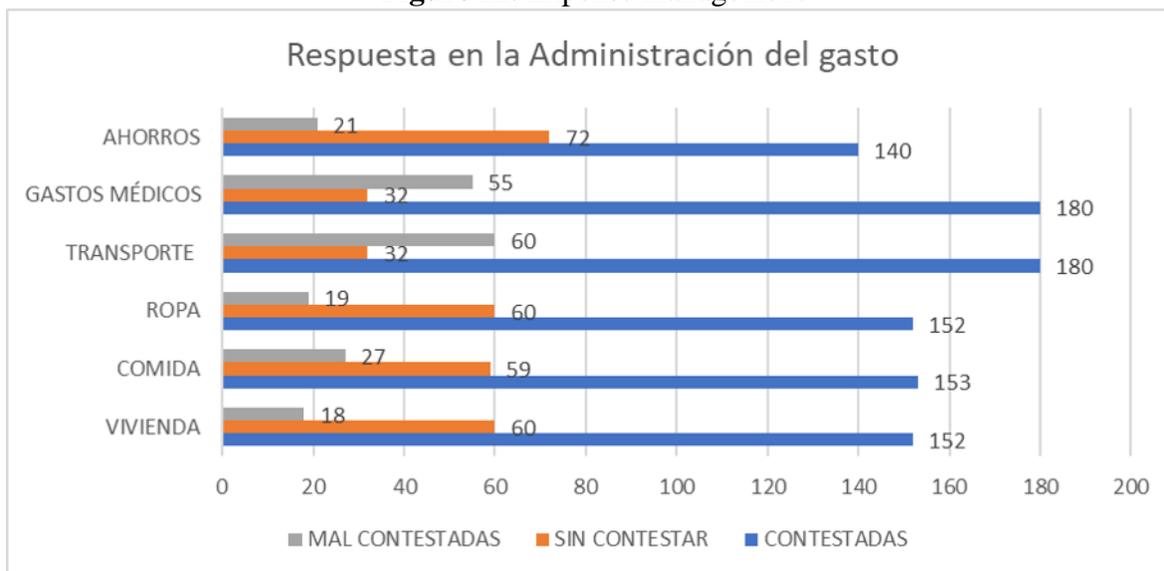
Source: self-made

Due to the condition of the covid-19 pandemic and the online application of the measuring instrument, the following is observed: only in the health and transportation areas, the percentage of erroneous or unanswered responses was 85%, with the 41% for health and 43% for transportation.

The other aspects that also had an erroneous or unanswered response were expressed as follows: savings with 44%, clothing 37%, food 41%, and savings 37%. This led us to decide to only consider a binary response (yes or no) regarding whether or not they managed their expenses at home. This analysis was carried out through a correlation. Additionally, the following was observed:

- Of the total respondents, 53% were women and 47% were men. The ages ranged from over 18 to over 60 years old. The largest number of participants was in the average age range of 45 to 49 years, with 58%.

- Regarding the academic level of the respondents, 54% were located in the upper secondary school and 41% in the upper secondary school.

- Due to the confinement situation derived from covid-19, 61% of those surveyed stated that they were not working formally.

- Regarding the type of work, 67% did face-to-face work, 18% *home office* and 15% mixed, which demonstrates the needs for participation in the family economy.

- Regarding family income, 32% received 1 to 2 salaries per month, while paradoxically another 32% received more than 6 salaries. More than 50% of households expressed the need for both father and mother to work.

The survey results revealed several important aspects about the living conditions of the respondents:

- Most respondents described the condition of their home as fair, rating 6 to 10 on a scale of 1 to 10.

- Although 86% of those surveyed stated that they were in a risk area (characterized by lack of security, risk of floods, earthquakes and crime), 66% own their own home.

- Regarding family size, 65% indicated that more than three people live in their home.

- Regarding the number of people per room, 61% mentioned that there are more than two people sharing the same room.

- The majority of respondents have basic services such as drinking water, electricity and sanitary drainage, as well as infrastructure services such as schools, hospitals and sports spaces.

Revista Iberoamericana para la
Investigación y el Desarrollo Educativo
ISSN 2007 - 7467

- In relation to public services, the majority have access to garbage collection, lighting, paving and internet.
- Regarding subsidies, only a small percentage of respondents indicated having some type of support to pay for their housing or domestic services, both before and after the health emergency.
- In terms of mobility, 73% of respondents mentioned having had the need to leave home for reasons other than work.
- The majority of those surveyed expressed a co-responsible attitude towards prevention and protection against the pandemic, although they also noted an impact on their emotional health as a consequence of confinement.

To substantiate the results obtained, a statistical analysis was carried out using the chi-square test, with the IBM SPSS Statistics 23 *software,* considering the correlation between the dependent and independent variables (tables 6,7,8,9 and 10).

Table 6. Variables

Statisticians					
		GENDER	AGE-INTERVAL	SCHOLARSHIP	MANAGE
N	Valid	212	212	212	212
	Lost	0	0	0	0

Table **7.** Gender

		Frequency	Percentage	Valid percentage	Accumulated percentage
Valid	1	112	52.8	52.8	52.8
	2	100	47.2	47.2	100.0
	Total	212	100.0	100.0	

Table 8. Age -interval

		Frequency	Percentage	Valid percentage	Accumulated percentage
Valid	1	8	3.8	3.8	3.8
	2	123	58.0	58.0	61.8
	3	twenty-one	9.9	9.9	71.7
	4	eleven	5.2	5.2	76.9
	5	4	1.9	1.9	78.8
	6	9	4.2	4.2	83.0
	7	7	3.3	3.3	86.3
	8	4	1.9	1.9	88.2
	9	8	3.8	3.8	92.0
	10	9	4.2	4.2	96.2
	eleven	5	2.4	2.4	98.6
	12	3	1.4	1.4	100.0
	Total	212	100.0	100.0	

Table 9. Scholarship

		Frequency	Percentage	Valid percentage	Accumulated percentage
Valid	1	9	4.2	4.2	4.2
	2	111	52.4	52.4	56.6
	3	87	41.0	41.0	97.6
	4	5	2.4	2.4	100.0
	Total	212	100.0	100.0	

Table 10. They manage

		Frequency	Percentage	Valid percentage	Accumulated percentage
Valid	NO	93	43.9	43.9	43.9
	YEAH	119	56.1	56.1	100.0
	Total	212	100.0	100.0	

```
CROSSTABS
/TABLES=Administration BY Age Gender Education
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ
/CELLS=COUNT
/COUNT ROUND CELL
/BARCHART.
```

Revista Iberoamericana para la
Investigación y el Desarrollo Educativo
ISSN 2007 - 7467

Cross tables

The summary of the processing of the cases is presented in tables 11 and 12 and the correlation between the variables and the chi-square coefficient.

Table 11. Case processing summary

	Cases					
	Valid		Lost		Total	
	N	Percentage	N	Percentage	N	Percentage
Indicate whether you manage your income or not * Age of the respondent	212	99.5%	1	0.5%	213	100.0%
Indicate whether you manage your income or not * Gender of the respondent	212	99.5%	1	0.5%	213	100.0%
Indicate whether you manage your income or not * Educational level of the respondent	212	99.5%	1	0.5%	213	100.0%

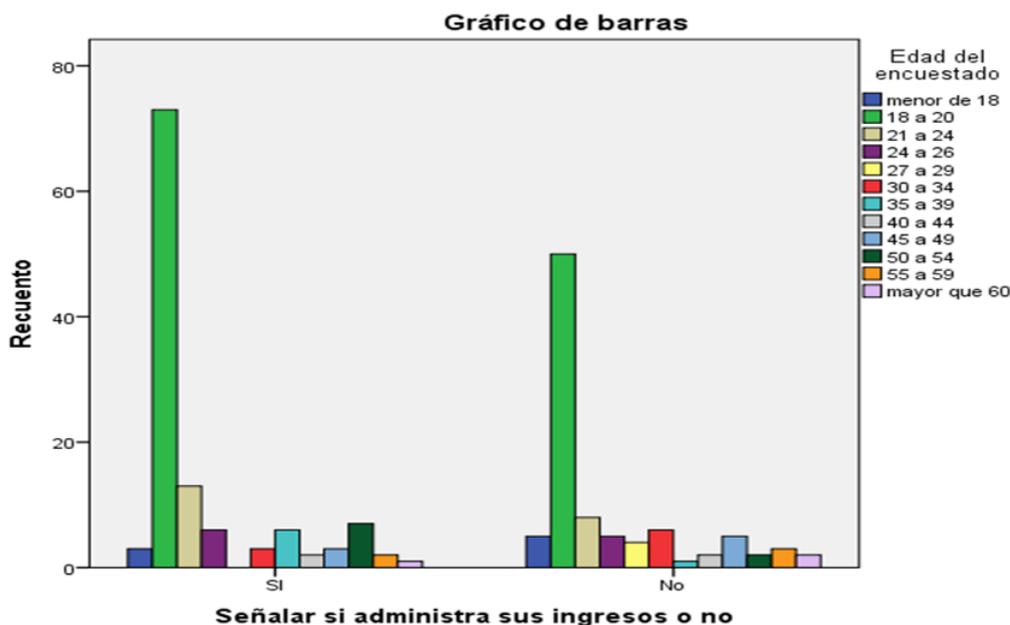**Table 12.** Indicate whether you manage your income or not (age of the respondent)

Cross table														
Count														
		Respondent's age												Total
		-18	18 to 20	21 to 24	24 to 26	27 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	+ than 60	
Indicate whether you manage your income or not	YEAH	3	73	13	6	0	3	6	2	3	7	2	1	119
	No	5	fifty	8	5	4	6	1	2	5	2	3	2	93
Total		8	123	twenty-one	eleven	4	9	7	4	8	9	5	3	212

Revista Iberoamericana para la
Investigación y el Desarrollo Educativo
ISSN 2007 - 7467

Chi-square tests			
	Worth	gl	Asymptotic significance (bilateral)
Pearson chi-square	15,509 [a]	eleven	.160
Likelihood ratio	17,443	eleven	.095
Linear-by-linear association	.385	1	.535
No. of valid cases	212		
to. 17 boxes (70.8%) have expected a count less than 5. The minimum expected count is 1.32.			

In figure 23 you can see the comparison of the population that manages its resources in relation to its age. Paradoxically, it can be seen that the youngest people try to build the culture of administration.

Figure 23. Age with administration
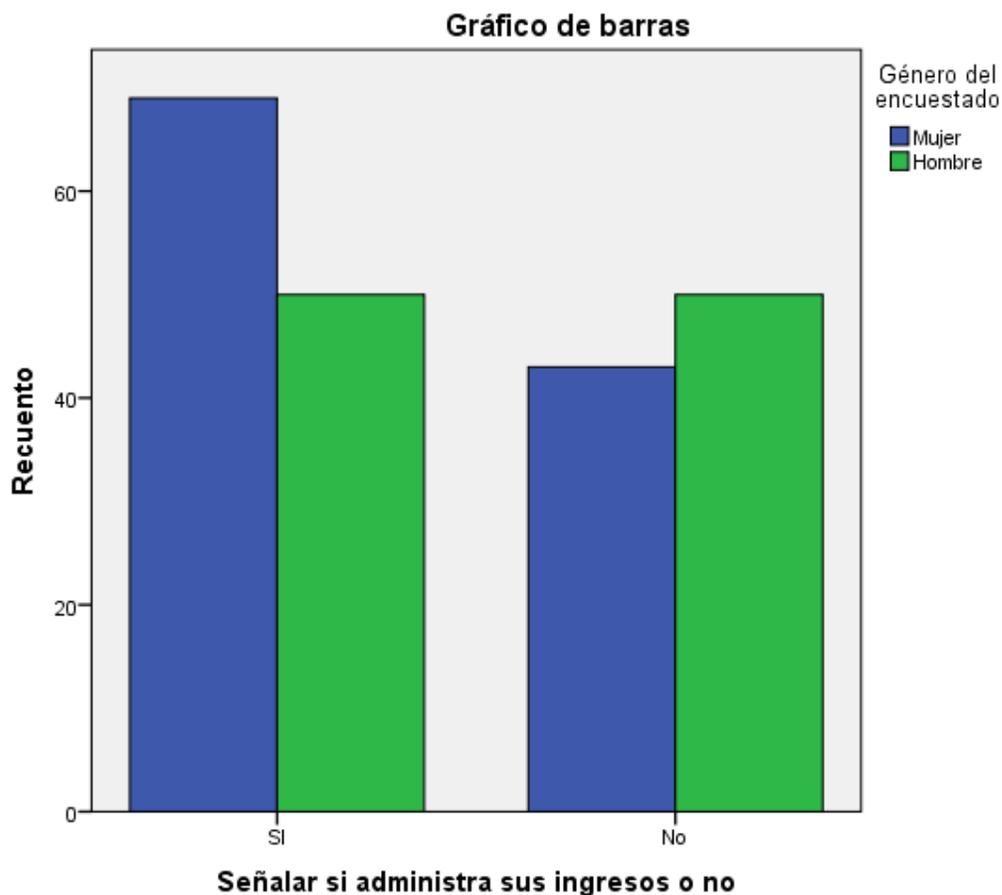

Source: self-made

Table 13 and Figure 24 show a positive bias for the administration of their income descriptively and inferentially, paradoxically it is not significant.

Revista Iberoamericana para la
Investigación y el Desarrollo Educativo
ISSN 2007 - 7467

Table 13. Indicate whether you manage your income or not (gender of the respondent)

Cross table				
Count				
		Gender of the respondent		
		Women	Man	Total
Indicate whether you manage your income or not	YEAH	69	fifty	119
	No	43	fifty	93
Total		112	100	212

Chi-square tests					
	Worth	Gl	Asymptotic significance (bilateral)	Exact significance (bilateral)	Exact meaning (unilateral)
Pearson chi-square	2,891 [a]	1	.089		
Continuity correction [b]	2,438	1	.118		
Likelihood ratio	2,894	1	.089		
Fisher's exact test				.098	.059
Linear-by-linear association	2,877	1	.090		
No. of valid cases	212				
to. 0 cells (0.0%) have expected a count less than 5. The minimum expected count is 43.87.					
b. It has only been calculated for a 2x2 table					

Figure 24. Gender with administration

Source: self-made

As can be seen in table 14 and figure 25, the level of education does not determine its administration either.

Table 14. Indicate whether you manage your income or not (respondent's educational level)

Cross table						
Count						
		Educational level of the respondent				
		Secondary	Upper Average	Superior	Postgraduate	Total
Indicate whether you manage your income or not	YEAH	4	63	51	1	119
	No	5	48	36	4	93
Total		9	111	87	5	212

Chi-square tests			
	Worth	gl	Asymptotic significance (bilateral)
Pearson chi-square	3,387 to	3	.336
Likelihood ratio	3,474	3	.324
Linear-by-linear association	.008	1	.929
No. of valid cases	212		
to. 3 cells (37.5%) have expected a count less than 5. The minimum expected count is 2.19.			

As can be seen in tables (13 and 14), when using the chi-square test as a reference, a result greater than 0.05 is obtained. Consequently, the null hypothesis (H0) is accepted, which indicates that the resource management variable at home is not linked to the independent variables of age, sex and educational level.

Given this circumstance, it is necessary to use other correlational methods and consider expanding the sample.

Figure 25. Level of studies with administration
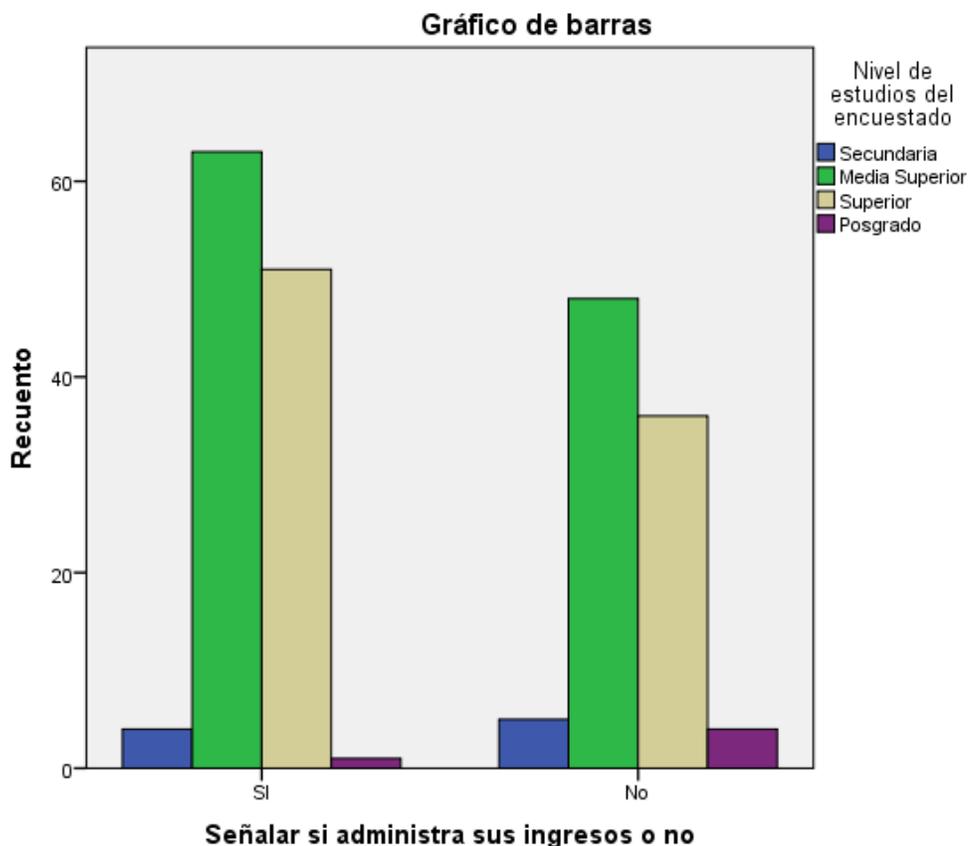
Source: self-made

Table 15. Descriptive analysis

Descriptive statistics					
	N	Minimum	Maximum	Half	Standard deviation
Respondent's age	212	1	12	3.63	2,825
Gender of the respondent	212	1	2	1.47	.500
Educational level of the respondent	212	1	4	2.42	.614
Indicate whether you manage your income or not	212	1	2	1.44	.497
Valid N (per list)	212				

Source: self-made

In the descriptive analysis (table 15), a slight correlation is seen between the dependent variable and the independent variables, having results above 50% respectively in each cross table.

Discussion

The study conducted by Deschenes *et al.* (2020) addresses the prevailing need to explore and adopt behaviors and strategies that optimize the organization of household activities, including work responsibilities and financial management. In this regard, the relevance of considering divergent interests and preferences within couples is highlighted, especially regarding the use of household resources and the possible consequences of such discrepancies. This article examines the extensive literature available on the domestic decision-making process, the strategies used by individuals to ensure their access to private resources, and the impact of the constantly changing economic environment on these mechanisms. In addition, the key actors in this context are analyzed, as well as the importance of policy design and the formation of alliances that foster cooperation and promote the efficient use of resources.

On the other hand, family financial management has traditionally been approached from a conventional perspective, that is, focused on specific aspects such as spending, savings and efficiency in the use of available resources at a given time, beyond merely considering the financial aspects (Riveros-Cardoso and Becker, 2020).

Now, after the covid-19 pandemic, significant changes have been observed in the dynamics of most families. For example, a study conducted by Brock and Laifer (2020)

shows that the stress generated by the pandemic has led families to adapt to a new reality, which has caused a considerable increase in stress, especially associated with the loss of employment.

Finally, it should be noted that the planning of fundamental aspects in the home, such as the assignment of responsibilities, is also crucial to guarantee optimal functioning, since - as mentioned in ENIGH (2022) - this process provides clear guidance to children. members of the family and establishes the importance of their co-responsibility in the family context.

Conclusions

From the bibliometric analysis carried out in this work, it can be indicated that there are well-studied aspects. For example, in terms of housing, most of the research comes from Europe, the United States and Canada (table 7). However, it is worth mentioning that, although the topic has been studied for more than 100 years, academic production was quite limited until 1950, when only 12 documents were published. Since then, there has been steady annual growth, reaching 6,681 in 2021 (figure 2). Likewise, what was revealed by the co-occurrence analysis of keywords is interesting, where topics related to age, daily activities, risks, among others predominate (figure 3).

On the other hand, considering urban mobility, studies with documentary publications from the United States predominate in this analysis (table 8). Likewise, although most of the countries belong to Europe, Brazil also appears in the top three places. This suggests a growing interest in this topic within the continent, and its research and development can significantly contribute to its exploration. Regarding the number of publications, a significant increase is observed starting in 1996, exceeding 10 documents per year starting in 2001. Figure 4 shows an increasing trend in the number of documents published per year, highlighting a greater focus on this topic since the 1970s, especially in recent years. In relation to the co-occurrence of keywords, the participation of authors of Asian origin is observed.

Regarding the dependent variable, family management (see table 9), again the United States leads the list with 388 published documents, followed by a predominant European bloc. The presence of Brazil is also highlighted here, which highlights the interest in this research and its potential to expand its analysis in Latin America, especially in Mexico. Figure 6 shows that this topic has been of great interest since 1974, consolidating especially in the last decade. Furthermore, in Figure 7, it can be concluded that the most prominent themes focus on adolescents and family adaptation.

Regarding the *education variable*, once again the United States leads the list (see table 10), followed by European countries, along with Canada and Brazil. The limited presence of Latin American countries in this analysis is highlighted, which suggests that research in this area could contribute to the increase of research on the continent, especially in Mexico. It is important to highlight the relevance of this topic (figure 12), with significant contributions since 1865, when eight documents were recorded, and a constant increase in the number of documents year after year, reaching 88,135 documents in 2022. To date, the year with the most documents was 2021, with 147,089 documents, demonstrating the continued and transcendental importance of education.

Finally, in the case study, the results were the following (see figure 18): due to the condition of the covid-19 pandemic, it is important to highlight the complexity involved in carrying out this study, although it was managed to adapt appropriately. Likewise, coincidences were found in expenses related to mobility, education and food, as observed in the treatment at the national level. The process was described as follows: of the total respondents, 53% were women and 47% were men. Ages ranged from over 18 to over 60, and the 45 to 49 age group was the largest, with 58% of participants. It is important to highlight the academic level, since 54% had a high school level of education and 41% had a higher level of education.

On the other hand, it is worth noting that, due to confinement as a result of covid-19, 61% stated that they were not currently working formally. Regarding the type of work modality, 67% did face-to-face work, 18% did it from home (*home office)* and 15% had a mixed modality, a situation that was driven by the needs to contribute to the family economy.

In relation to family income, 32% received 1 to 2 salaries per month, and another 32% received more than 6 salaries. In addition, more than 50% of households expressed the need for both the father and the mother to work.

Regarding housing, 66% indicated that they owned it. Regarding the number of people who live there, 65% indicated that there were more than three. Likewise, 61% mentioned that 2 people occupied the same room, 24% specified that 1 person and 10% 3 people.

Regarding services, the majority have piped drinking water (92%), electricity (98%) and sanitary sewage (98%). Likewise, 93% said they had infrastructure services such as schools, hospitals and sports areas. Regarding public services, most have garbage collection service, lighting, paving, internet, among others.

On the other hand, due to the pandemic, they were asked if they had any subsidy to support the payment or expense of their housing, before and after the health emergency. 5% indicated that they did have this support and 2% for support for domestic services. Regarding mobility as a need outside of work, 73% mentioned that they felt the need to leave home. The majority expressed having a co-responsible attitude of prevention and protection against the pandemic. A large majority also stated that they had experienced effects on their emotional health as a result of confinement.

Finally, the objective of this research was achieved by identifying the main factors that influence home administration. In this regard, it was demonstrated that there is no association between the administration variables and age, gender or educational level.

Likewise, although in the descriptive analysis a slight correlation was observed between the dependent and independent variables, with results above 50% respectively in each cross table, when obtaining a result greater than 0.05 in the chi-square test tables, it was establishing independence between them. Therefore, it is recommended to carry out a subsequent study with an increase in the sample and precisely detail the section on the way in which family resources are managed. This will allow you to obtain objective information on how resources are managed and, in this way, have a clear and defined vision that facilitates the improvement of family finances.

Future lines of research

The future focus of the work should focus on more specific diagnostic aspects, highlighting co-responsibility in the management of the family economy, with the aim of promoting broader comprehensive social development that goes beyond simple finances. To do this, it is necessary to carry out a broader sampling that allows exploring the relationship between family administration and educational level in greater depth.

Thanks

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